

Pekka Laaksonen

**THE ESOURCING CAPABILITY MODEL FOR SERVICE
PROVIDERS: THE PRACTICE ASSOCIATIONS TO
KNOWLEDGE MANAGEMENT PROCESSES IN DIF-
FERENT PARTS OF THE SOURCING LIFE-CYCLE**

TIIVISTELMÄ

Laaksonen, Pekka

The eSourcing Capability Model for Service Providers: Knowledge Management across the Sourcing Life-cycle

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Ohjaaja(t): Käkölä, Timo

Tässä kandidaatintutkielmassa selvitettiin sitä, miten the eSourcing Capability Model for Service Providers-mallin käytännöt (practices) ovat liittyneet tietämyksenhallinnan neljään prosessiin: tiedon luominen, varastointi/noutaminen, jakaminen ja hyödyntäminen. Tutkielma suoritettiin kirjallisuus katsauksena. Tutkimus ongelmaa lähestyttiin taulukoimalla mallin käytännöt matriisiin, jossa vaaka-akselilla olivat palvelutuotannon elinkaaren vaiheet ja pystyakselilla tietämyksenhallinnan prosessit.

Asiasanat: Tietämys, Tietämyksen hallinta, the eSourcing Capability Model for Service Providers

ABSTRACT

Laaksonen, Pekka

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In this bachelor's thesis the goal was to research how practices of the eSourcing Capability Model for Service Providers are related to four knowledge management processes: knowledge creation, storage/retrieval, sharing and application. Thesis was written as a literature review and research problem was addressed by placing the model's practices in a matrix which had the sourcing life-cycle in its horizontal axis and the knowledge management processes in its vertical axis.

Keywords: Knowledge, Knowledge Management, the eSourcing Capability Model for Service Providers

FIGURES

Figure 1: Data, information and knowledge (Turban et al., 2002, 389).....	8
Figure 2: Knowledge Management Processes and the Potential Role of IT (Alavi & Leidner, 2001, 125).....	10
Figure 3: The structure of the eSourcing Capability Model for Service Providers (Hyder et al., 2006a, 22).....	12
Figure 4: The Sourcing Life-Cycle (Hyder et. al, 2006a, 23).....	13
Figure 5: Capability Areas (Hyder et. al, 2006a, 25)	13
Figure 6: Capability Levels (Hyder et. al, 2006 a, 31)	14

TABLES

Table 1: Knowledge Management.....	17
Table 2: People Management	19
Table 3: Performance Management.....	21
Table 4: Relationship Management.....	24
Table 5: Technology Management	26
Table 6: Threat Management	27
Table 7: Contracting	29
Table 8: Service Design and Deployment	31
Table 9: Service Delivery	33
Table 10: Service Transfer.....	34

TABLE OF CONTENTS

TIIVISTELMÄ	2
ABSTRACT	3
FIGURES	4
TABLES	4
TABLE OF CONTENTS.....	5
1 INTRODUCTION	6
2 KNOWLEDGE AND KNOWLEDGE MANAGEMENT.....	8
2.1 Data, information and knowledge	8
2.2 Knowledge management and knowledge management processes	9
3 THE ESOURCING CAPABILITY MODEL FOR SERVICE PROVIDERS...11	
3.1 Model Overview	11
3.2 The Sourcing Life-Cycle.....	12
3.3 Capability Areas.....	13
3.4 Capability Levels	13
4 KNOWLEDGE MANAGEMENT IN DIFFERENT PARTS OF THE SOURCING LIFE-CYCLE.....	15
4.1 Research method.....	15
4.2 Associations between practices and knowledge management processes	17
4.2.1 Knowledge Management capability area	17
4.2.2 People Management capability area.....	19
4.2.3 Performance Management capability area	21
4.2.4 Relationship Management capability area	24
4.2.5 Technology Management capability area.....	26
4.2.6 Threat Management capability area	27
4.2.7 Contracting capability area	29
4.2.8 Service Design and Deployment capability area.....	31
4.2.9 Service Delivery capability area.....	33
4.2.10 Service Transfer capability area	34
4.3 Findings.....	35
5 CONCLUSIONS AND FUTURE RESEARCH.....	39
SOURCES.....	41

1 INTRODUCTION

Society in today's world is often described as information society and economy in such society is described as knowledge economy. Companies operating in knowledge economy utilize their knowledge to compete in their chosen field of business and increasingly, competitive advantage is based in company's knowledge on how to do things (Lubit, 2001). Knowledge and know-how is the main asset for these companies and those who utilize their assets the best, prevail. Therefore, managing knowledge has never been more relevant than it is now.

Focusing in core competencies has been a common trend and a natural consequence of transition to knowledge economy: companies do what know best and get rid of the rest. This has opened business opportunities for other companies: service providers produce and provide services to replace those functions that others have given up but still need, from janitorial services to whole business processes. External services are already a considerable market and it still it keeps growing. IT services market has grown and is expected to continue growing at 7-10% per year. Global IT outsourcing and business process outsourcing market is expected to exceed \$650 billion by 2011. (Willcocks et al., 2007.)

Knowledge is no less an asset for a service providing company than it is for company designing experimental aircraft. In order to carry out engagements successfully and further develop their capability to provide services even better, service providers need to collect, codify, disseminate and utilize knowledge. In other words, companies need to manage their knowledge to make out most of it.

This bachelor's thesis focuses in knowledge management from the perspective of the eSourcing Capability Model for Service Providers (eSCM-SP). The eSCM-SP is a "best practices" capability model with three purposes: 1. give service providers guidance that helps them to improve their capability over the sourcing life cycle, 2. provides means for client organizations for evaluating service providers, and 3. offer a standard for service providers when differentiating themselves from competitors (Hyder et al., 2006a). Knowledge management is a discipline that deals with creation, dissemination and utilization of

knowledge. Four basic knowledge management processes are found in literature: knowledge creation, storage/retrieval, transfer, and application. The eSCM-SP is still a fairly new model with its latest version published in 2006. Currently research on knowledge management and the eSCM-SP is lacking. This thesis attempts to shed light on this issue and provide a basic level of understanding of relations between knowledge management and the model's practices.

The goal of the thesis is to answer following research question:

In the eSCM-SP, to which knowledge management processes are practices and their activities related to in different parts of the sourcing life-cycle?

The research is conducted as a literature review.

In the second chapter, concept of knowledge and knowledge management are defined. First, relationships and differences between data, information and knowledge are explained. Second, knowledge management processes are explained. In the third chapter, the eSCM-SP-model is presented and the structure of the model is explained. In the fourth chapter, findings of this literature review are presented. First, the research method is explained and second, findings of the research are explained. Finally in the fifth chapter, thesis is summarized.

2 KNOWLEDGE AND KNOWLEDGE MANAGEMENT

Knowledge and knowledge management are defined in this chapter. In the first chapter, knowledge and its components are explained. Knowledge management is defined in the second chapter.

2.1 Data, information and knowledge

In the literature, knowledge is often distinguished from data and information. However, in everyday conversation, these three are often confused or used as synonyms. Therefore, before moving on to the field of knowledge management, knowledge and its components, data and information, need to be clearly defined.

According to Turban et al. (2002, 48) data refers to retrievable numeric or alphanumeric descriptions that by itself do not carry any specific meaning. Information is data that is organized so that it has a meaning to its recipient, whereas knowledge comprises data and information that is organized and processed to carry understanding, experience, accumulated learning and expertise as they apply to a problem or activity. (Turban et al. 2002, 48-49.) Relationships between data, information and knowledge are illustrated in figure 1.

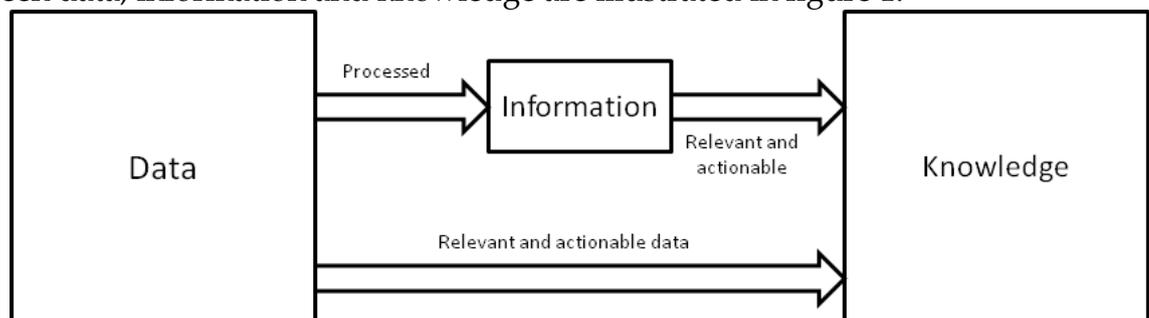


Figure 1: Data, information and knowledge (Turban et al., 2002, 389)

Knowledge is divided to tacit and explicit knowledge. Tacit knowledge is very personal and hard to formalize and, therefore, difficult to communicate to other people. (Nonaka, 1991) Tacit knowledge is, for example, experiences, know-how, understanding and organizational culture. Expertise or high level skill is often involved with tacit knowledge. (Turban et al. 2002, 390.)

Explicit knowledge is the opposite of tacit knowledge. It is formal and systematic and can be communicated and shared easily (Nonaka, 1991). Examples of explicit knowledge are policies, guides, reports and core competencies. They are codified so that they can be distributed without interpersonal interaction, or transformed into a process or strategy. (Turban et al., 2002, 389.)

2.2 Knowledge management and knowledge management processes

Different authors give varying definitions for knowledge management. Greiner et al. (2007) define knowledge management broadly as a collection of activities that utilize knowledge to accomplish the organizational objectives in order to face the environmental challenges and stay competitive in the market place. Turban et al. (2002) define knowledge management as a comprehensive management of organization's expertise, involving collecting, categorizing and disseminating knowledge. According to Jennex et al. (2008), Knowledge management is a fusion of technical, organizational and social issues, which together form a discipline that supports decision making

Knowledge management contains four basic processes: knowledge creation, knowledge storage/retrieval, knowledge transfer and knowledge application (Alavi & Leidner, 2001, 114).

Knowledge creation involves developing of new content or replacing existing content in organization's tacit or explicit knowledge (Pentland, 1995, 3). Knowledge is created in four modes: socialization, combination, externalization, and internalization (Nonaka, 1994, 19). In the socialization mode, tacit knowledge is converted to new tacit knowledge through social interaction. Internship or other on the job training program is an example of socialization. In the combination mode, new explicit knowledge is created through merging, categorizing, reclassifying and synthesizing existing explicit knowledge. Literature based reports are an example of combination. In the externalization mode, tacit knowledge is transformed into explicit knowledge. An example could be articulation of lessons learned. In the internalization mode, new tacit knowledge is created from explicit knowledge. For example, understanding and learning resulted from reading or discussion. (Alavi & Leidner, 2001, 116.)

Knowledge storage, organization and retrieval, also called organizational memory, are important functions in effective knowledge management as organizations tend to forget what they have learned. Organizational memory includes knowledge residing in several forms, from written documentation to

databases and expert systems and documented processes and procedures to tacit knowledge of individuals. (Alavi & Leidner, 2001, 118.)

Knowledge transfer or knowledge sharing refers to process where knowledge is disseminated among individuals and organizations. Knowledge transfer occurs in various levels: between individuals, from individuals to explicit sources, from individuals to groups, between groups, across groups and from the group to the organization. (Alavi & Leidner, 2001, 119.)

Knowledge application is a process where organization's knowledge is turned into action and therefore improved organizational performance is created here (Alavi & Leidner, 2001, 29). There are three ways of integrating knowledge to create organizational capability: directives, organizational routines and self-contained task teams. (Grant, 1996) Directives refer to rules, standards, procedures and instructions developed through the conversion of specialists' tacit knowledge to explicit and integrated knowledge so that it can be easily communicated to non-specialists (Demsetz, 1988, 157). Organizational routines are task performance and coordination patterns, protocols and process specifications that allow individuals to apply and integrate their knowledge without having to communicate it to others (Alavi & Leidner, 2001, 122). The Self-contained task teams should be formed when complexity of problem prevents the specification of directives and organizational routines. In these cases, a group of individuals with prerequisite knowledge is formed to solve the problem. (Alavi & Leidner, 2001, 122.)

Figure 3 summarizes knowledge management processes and their supporting IT technologies.

Knowledge Management Processes	Knowledge Creation	Knowledge Storage/Retrieval	Knowledge Transfer	Knowledge Application
Supporting Information Technologies	Data mining Learning tools	Electronic bulletin boards Knowledge repositories Databases	Electronic bulletin boards Discussion forums Knowledge directories	Expert systems Workflow systems
IT Enables	Combining new sources of knowledge Just in time learning	Support of individual and organizational memory Inter-group knowledge access	More extensive internal network More communication channels available Faster access to knowledge sources	Knowledge can be applied in many locations More rapid application of new knowledge through workflow automation
Platform Technologies	Groupware and communication technologies			
	INTRANETS			

Figure 2: Knowledge Management Processes and the Potential Role of IT (Alavi & Leidner, 2001, 125)

3 THE ESOURCING CAPABILITY MODEL FOR SERVICE PROVIDERS

This chapter briefly introduces the eSCM-SP model and its dimensions, including the sourcing-life cycle.

3.1 Model Overview

The eSourcing Capability Model for Service Providers (eSCM-SP) is a “best practices” capability model with three purposes: 1. give service providers guidance that helps them to improve their capability over the sourcing life cycle, 2. provides means for client organizations for evaluating service providers, and 3. offer a standard for service providers when differentiating themselves from competitors (Hyder et al., 2006a).

The eSCM-SP is composed of 84 practices and each of these practices is distributed across three dimensions: Sourcing Life-cycle, Capability Area and Capability Level. The whole structure of the model and its dimensions are illustrated in figure 4.

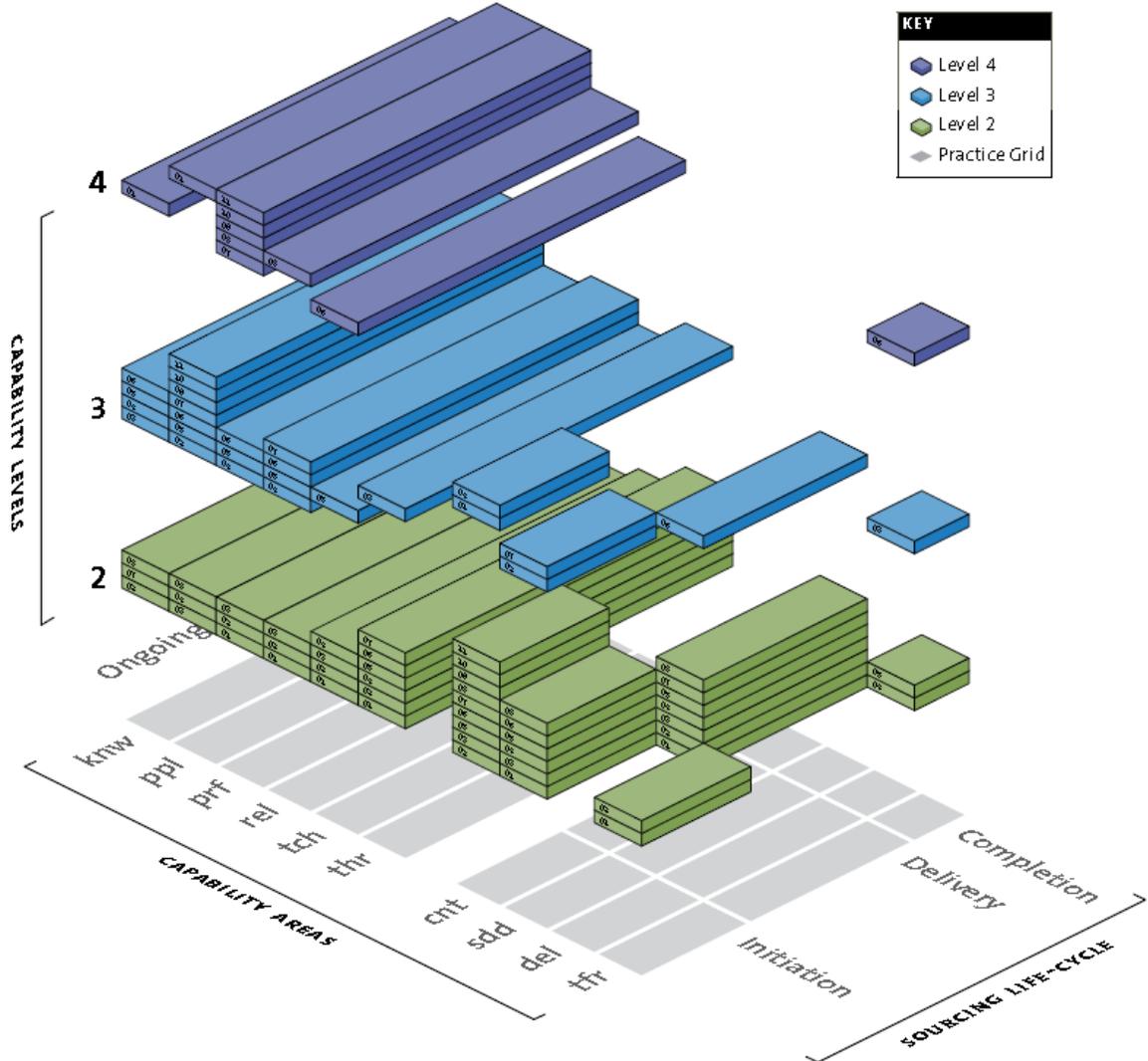


Figure 3: The structure of the eSourcing Capability Model for Service Providers (Hyder et al., 2006a, 22)

3.2 The Sourcing Life-Cycle

The first dimension in the eSCM-SP is the Sourcing Life-Cycle, illustrated in figure 6, which is composed of four phases: ongoing, initiation, delivery and completion. Ongoing practices are management functions that need to be performed across the whole sourcing life-cycle. (Hyder et. al, 2006a, 23.)

Practices in initiation, delivery and completion phases are performed only in specific points of sourcing life-cycle. Initiation practices are focused on capabilities that are needed to effectively prepare for service delivery, such as negotiating, contracting, planning and gathering requirements. (Hyder et. al, 2006a, 24.) Practices in delivery phase focus on successfully delivering service to the client. Capabilities in delivery are involved with, for example, verification that commitments are being met and financial management. (Hyder et. al, 2006a, 24.) Completion is the last phase in sourcing life-cycle. Practices in this phase focus

on capabilities needed to successfully close down an engagement at the end of the sourcing life-cycle. (Hyder et. al, 2001, 25.)

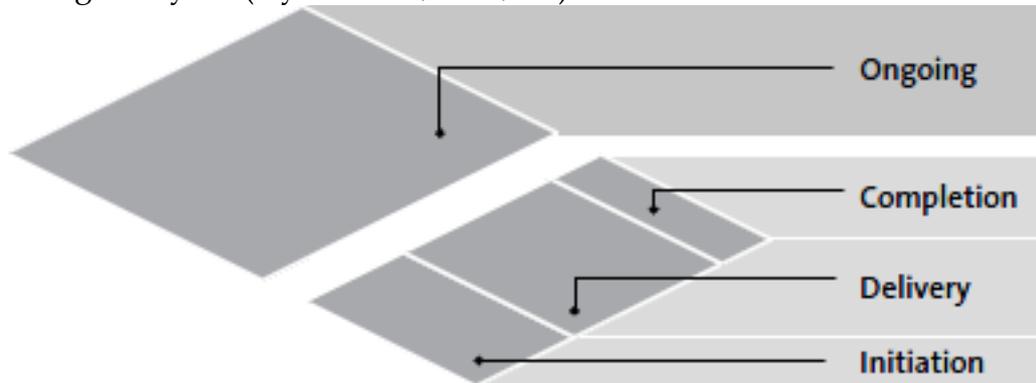


Figure 4: The Sourcing Life-Cycle (Hyder et. al, 2006a, 23)

3.3 Capability Areas

The second dimension of the eSCM-SP is Capability Areas in which the practices are grouped. The Capability Areas are illustrated in figure 7. All ongoing practices are grouped in the first six of the ten capability areas: Knowledge Management, People Management, Performance Management, Relationship Management, Technology Management, and Threat Management. Rest four capability areas contain practices that are performed only in specific points of the sourcing life-cycle: Contracting, Service Design and Deployment, Service Delivery, and Service Transfer. (Hyder et. al, 2006a, 25)

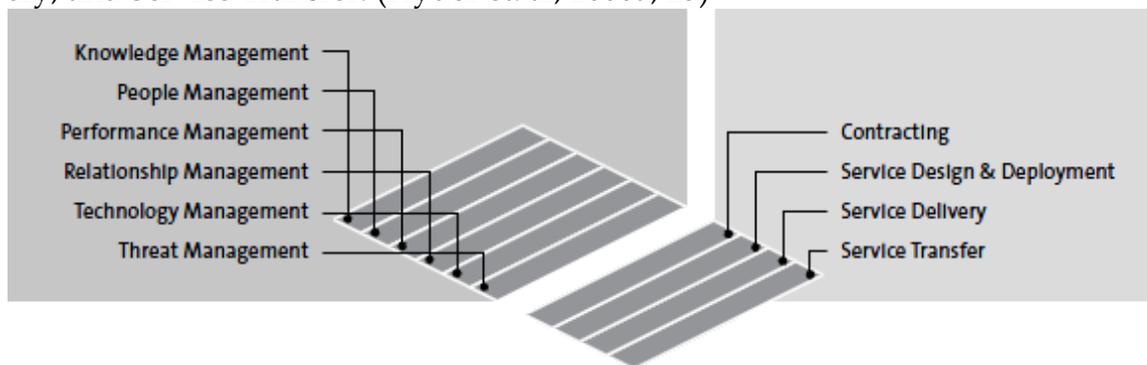


Figure 5: Capability Areas (Hyder et. al, 2006a, 25)

3.4 Capability Levels

The third dimension in the eSCP-SP is Capability Levels which describes an improvement path that service providers implementing the model are expected to follow. Path starts with simply providing services and final level is a stage where organization has ability to sustain excellence. (Hyder et. al, 2006a, 31.) Capability levels are illustrated in figure 8.

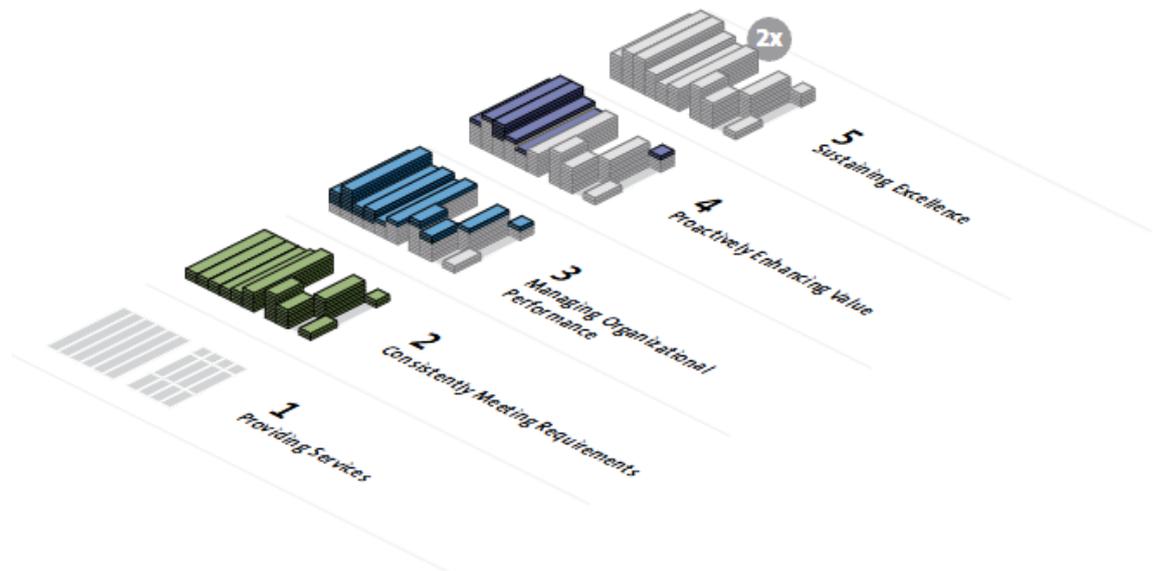


Figure 6: Capability Levels (Hyder et. al, 2006 a, 31)

First capability level is providing services. Service providers at the first level may have some practices of the eSCM-SP implemented while some provides might have none of these practices implemented. Therefore, working with level one service providers should be considered risky, as they promise more than they can deliver. (Hyder et. al, 2006a, 31.)

Second capability level is Consistently Meeting Requirements. Service providers at this capability level have formalized procedures for capturing requirements and meeting commitments made to the client and other stakeholders. (Hyder et. al, 2006a, 32.)

Third capability level is Managing Organizational Performance. Service providers at this capability level are able to deliver services according to requirements even if they differ significantly from service provider's experience. Service provider is able to manage performance across the organization; understand targeted market services and their requirements; identify and manage risks and design and deliver services based on established procedures. (Hyder et. al, 2006a, 32.)

Fourth capability level is Proactively Enhancing Value. Service providers at this level are able to continuously innovate to add value to services they provide for clients and other stakeholders. Service provider is able customize its approach and service for clients and prospective clients, understand client perceptions, and predict its performance based on previous experiences. (Hyder et. al, 2006a, 32.)

Fifth and final capability level is Sustaining Excellence. Service providers have demonstrated measurable, sustained, and consistent performance excellence and improvement by implementing capability levels 2, 3 and 4. (Hyder et. al, 2006 a, 32-33.)

4 KNOWLEDGE MANAGEMENT IN DIFFERENT PARTS OF THE SOURCING LIFE-CYCLE

This chapter addresses the research question:

“In the eSCM-SP, to which knowledge management processes are practices and their activities related to in different parts of the sourcing life-cycle?”

4.1 Research method

In order to gain insight to the research question, a matrix containing knowledge management processes and phases of the sourcing life-cycle was created. In horizontal axis is the sourcing life-cycle and in vertical axis are the knowledge management processes.

Next, each practice was read through and placed in the matrix according to following two criteria:

1. Practice’s position in the sourcing life-cycle
2. Knowledge management process or processes that the practice is related to.

Allocating practices according to the first criteria is very straight forward as each practice in the model is already placed in the sourcing life-cycle. For second criteria, a set of requirements for each knowledge management process was defined.

Each practice in the eSCM-SP contains three major activities: “a”, “b”, and “c”. Major activities “a” and “c” are concerned with supporting the creation, maintenance, and implementation of the practice. Major activity “b” is concerned with documenting and implementing the work products and tasks of

the practice. (Hyder et al, 2006b, 14) Because the tasks and work products are implemented in major activity “b”, the practice allocation is based on its sub activities. While support activities are definitely important part of the practice creation, maintenance and implementation, activity “b” is involved with how work is done in the organization when the practice is implemented. Therefore, major activities “a” and “c” are excluded from this analysis.

Practices allocated in knowledge creation process are practices that are involved with knowledge creation through four knowledge creation modes described earlier. Examples of knowledge creation could be identification of specific knowledge from larger bodies of information or analysis of collected information, where bits of data and information are combined and new knowledge is created. For example, practice cnt04 – Market Information is associated with knowledge creation process. Activity no. 1b requires identification of sources and types of market information. Activity no. 2b requires collection of market information which is a knowledge storage/retrieval activity. Activity no. 3b requires analyzing information. This is considered to be knowledge creation process as information from different sources is thoroughly examined, combined, and researched to gain understanding about the market situation and prospective clients. Finally activity no. 4b requires using market information as appropriate, which is a knowledge application process.

Practices in knowledge storage/retrieval process are involved with storing knowledge in different forms from written documentation to digital repositories. For example, practices requiring collection of information or creation of documentation are placed in this process. While gathering of data or information does not directly mean storing of data or information, gathered information has to be stored in some form in order to be used later. For example, practice knw05 is associated with knowledge storage/retrieval. Here activity no. 3b requires that engagement knowledge is collected and maintained. This is considered to be a knowledge storage/retrieval process as collected information or knowledge is stored for later use.

Practices placed in knowledge transfer process are involved with transferring, communicating or sharing knowledge among individuals and organizations in various levels. For example, practice ppl02 – Participation in Decisions is associated with knowledge transfer. Activity no. 1b and 2b require communicating purpose of the practice and potential work commitments to the personnel. Activity no. 3b requires obtaining feedback from the personnel, which is also a knowledge transfer activity. Another common example is approving contracts or plans with the relevant stakeholders. Plans and contracts are reviewed, clarified, and discussed with the stakeholders and this is where knowledge transfer between individuals occurs.

Practices in knowledge application process are practices that are involved with integrating knowledge in three different ways: by creating directives, organizational routines or self-contained task teams. For example, practices that require company to create plans or procedures based on existing or created knowledge are based in this process. For example, practice knw08 – Resource

Consumption is associated with knowledge application. Activity no. 6b requires that opportunities on using the data about resource consumption are identified. Activity no. 7b requires that based on opportunities identified in previous activity necessary actions are taken, which is a knowledge application activity as knowledge is literally turned into action.

Practice allocations were made according to the rules described here as strictly as possible. Speculation, assumptions, or reasoning of what knowledge management processes would be utilized, should be utilized, or could be utilized in practices was avoided.

4.2 Associations between practices and knowledge management processes

Matrixes with allocated practices are listed below. First, a short description of the capability area is given. Second, each practice's associations to knowledge management processes are given with a short description of the practice's content on which the practice's allocation to the matrix is based on.

4.2.1 Knowledge Management capability area

	ongoing	initiation	delivery	completion
create	knw04, knw05, knw08			
store/retrieve	knw02, knw03, knw04, knw05, knw06, knw07, knw08			
transfer	knw01, knw02, knw04			
apply	knw05, knw08			

Table 1: Knowledge Management

Knowledge Management capability area focuses in managing information and knowledge systems in order to provide personnel access to knowledge that is required to perform their work. Most practices in this capability area were associated with knowledge storage/retrieval process which reflects the focus of the capability area.

Practice knw01 - Share Knowledge is associated with knowledge transfer. This practice requires setting up a policy to share knowledge among stakeholders which facilitates learning, improves performance, and strengthens the relationships between them.

Practice knw02 - Provide Required Information is associated with knowledge storage/retrieval and transfer. This support practice requires identification and controlling essential information and providing it to personnel so that they can perform their work. This practice responds to information needs of other practices where knowledge is applied. However, activities in this practice do not include actual knowledge application tasks and therefore it is considered not to be associated with knowledge application process.

Practice knw03 - Knowledge System is associated with knowledge storage/retrieval. This support practice requires creation of knowledge system where relevant information is stored and made available to personnel.

Practice knw04 - Process Assets is associated with knowledge creation, storage/retrieval, and transfer. This support practice requires that a set of process assets are created, stored, and made available to stakeholders. Process assets help organization to achieve economies of scale and apply best practices from prior engagements. Activities include creation of a repository where data collected for process assets is stored. This knowledge is applied in several other practices of the model.

Practice knw05 - Engagement Knowledge is associated with knowledge creation, storage/retrieval, and application. This practice requires that engagement knowledge is collected, analyzed and used where appropriate. Knowledge is stored as it is collected. Analysis of knowledge creates new knowledge as, for example, points of improvement are identified.

Practice knw06 - Reuse is associated with knowledge storage/retrieval. This practice requires that reusable work products are identified, collected, reviewed, modified as needed and made available for reuse. While reusable work products have to be created before they are stored for reuse, they are not created here. There are no activities in this practice explicitly requiring creation of new knowledge through different modes of knowledge creation identified in the work of Alavi and Leidner (2001). Reusable work products are later made available through practice knw04 - Process Assets.

Practice knw07 - Version & Change Control is associated with knowledge storage/retrieval. While this support practice does not require storing new knowledge, it requires controlling the knowledge already residing in organizational memory.

Practice knw08 - Resource Consumption is associated with knowledge creation, storage/retrieval, and application. This practice requires that data on resource consumption is collected, analyzed and used where needed.

4.2.2 People Management capability area

	ongoing	initiation	delivery	completion
create	ppl01, ppl04, ppl05, ppl06, ppl07, ppl08, ppl09, ppl10			
store/retrieve	ppl04, ppl05, ppl06, ppl07, ppl08, ppl09, ppl11			
transfer	ppl01, ppl02, ppl07, ppl08, ppl09, ppl10, ppl11			
apply	ppl01, ppl03, ppl04, ppl06, ppl07, ppl08, ppl09, ppl10, ppl11			

Table 2: People Management

People Management capability area focuses in managing personnel so that they perform their work effectively. Practices in this capability area are distributed uniformly across the knowledge management processes.

Practice ppl01 - Encourage Innovation is associated with knowledge creation, transfer, and application. This practice requires creation of environment that supports innovation. Actions that practice proposes include fostering communication, learning and creative thinking. The practice also requires that innovative ideas are applied where appropriate.

Practice ppl02 - Participation in Decisions is associated with knowledge transfer. This support practice requires that personnel are involved with decision making process which improves the quality of decisions made and increases stakeholder commitment in implementing the decisions.

Practice ppl03 - Work Environment is associated with knowledge application. This practice requires that characteristics of an effective work environment are identified and the work environment is designed based on those characteristics.

Practice ppl04 - Assign Responsibilities is associated with knowledge storage/retrieval, creation, and application. This support practice requires identification and documentation of roles, responsibilities, authority needed to perform work according to requirements. Identified roles need to be analyzed to find out their competency requirements. Personnel with required competencies are then assigned to defined roles.

Practice ppl05 - Define Roles is associated with knowledge storage/retrieval and creation. This support practice requires identification and documentation of the functional areas needed within the organization and their tasks. Also, all personnel roles, responsibilities, and authority need to be documented and documentation maintained. This practice builds upon practice ppl04 - Assign Responsibilities. Roles and responsibilities identified and analyzed in ppl04 are in this practice aligned not only with engagement objectives but also with long-term organizational objectives. However, role definitions contain a great deal of details and they might not be clear to all individuals. Therefore, creation of new explicit knowledge might also be required.

Practice ppl06 - Workforce Competencies is associated with knowledge creation, application, and storage/retrieval. Workforce competency refers to a set of personnel competencies that the organization needs to achieve its organizational goals. First, this practice requires that future workforce competency needs and existing workforce competencies are identified. Second, gaps between needs and existing competencies have to be analyzed and based on analysis; a plan for developing competencies is created. Finally, information about workforce competencies is stored and maintained.

Practice ppl07 - Plan & Deliver Training is associated with all the knowledge management processes. This support practice requires that needs for training are identified, training plans are created, and appropriate training is created or obtained. Knowledge transfer occurs when training is provided and feedback about the training is collected. Also, records about the training need to be set up and maintained.

Practice ppl08 - Personnel Competencies is associated with the knowledge management processes. Personnel competency is the combination of skills, knowledge, and experience that specific personnel in the organization possess. This support practice responds to personnel competency needs identified in ppl04 - Assign Responsibilities and requires that gaps in personnel competencies are identified and training is either created or obtained based identified gaps. Also, records about training need to be created and maintained. Knowledge transfer occurs when training is provided.

Practice ppl09 - Performance Feedback is associated with all the knowledge management processes. This practice requires that attributes for different types of feedback are identified. Based on identified attributes, information is collected, analyzed, documented, and performance feedback is provided.

Practice ppl10 - Career Development is associated with knowledge transfer, creation, and application. This practice requires that a set of career paths are identified, these paths are communicated to personnel and feedback from them is obtained. Personnel career path plans are then created, career development is assessed and feedback about the development is given to personnel.

Practice ppl11 - Rewards is associated with knowledge transfer, storage/retrieval, and application. This practice requires setting up a reward and recognition program and communicating its purpose to personnel. Measures to

encourage achievement of organizational objectives have to be determined, which requires creation of new explicit knowledge. Next, data based on defined measures is collected and rewards and recognition are provided to the personnel as appropriate.

4.2.3 Performance Management capability area

	ongoing	initiation	delivery	completion
create	prf01, prf03, prf04, prf06, prf07, prf08, prf09, prf10, prf11			
store/retrieve	prf01, prf02, prf03, prf04, prf05, prf06, prf07, prf08, prf09, prf10			
transfer	prf02, prf03, prf04, prf06, prf07, prf09, prf11			
apply	prf01, prf03, prf04, prf05, prf06, prf07, prf08, prf09, prf10, prf11			

Table 3: Performance Management

Performance management capability area focuses on managing organization's performance so that the client requirements are met, the organization keeps learning, and the organization improves its performance. Practices in this capability area are distributed quite uniformly across the knowledge management processes. Knowledge transfer occurs a little less frequently than other knowledge management processes.

Practice prf01 - Engagement Objectives is associated with knowledge creation, storage/retrieval, and application. This practice requires that measures for to track engagement performance are determined. Next, a plan for achieving engagement objectives is created and data on engagement performance is collected. Engagement status is tracked and if it deviates from plans, corrective actions are done.

Practice prf02 - Verify Processes is associated with knowledge storage/retrieval and transfer. This practice requires that data on process perfor-

mance is collected and reviewed. Possible nonconformances need to be documented and communicated to appropriate personnel.

Practice prf03 - Adequate Resources is associated with all the knowledge management processes. This support practice is closely related to knw08 - Resource Consumption. Resource requirements were determined in knw08 and this practice ensures that adequate resources are provided, thus making knowledge retrieval a relevant process. Activities in this practice require that required resources are identified, possible gaps between existing and identified resources are analyzed, and appropriate actions are taken based on analysis. Knowledge transfer is also a relevant process as the practice requires determining predefined steps that personnel need to follow when requesting additional resources.

Practice prf04 - Organizational Objectives is associated with all the knowledge management processes. Practice prf01 - Engagement Objectives is a level 2 practice and is focused in achieving objectives of a single engagement. This practice is a level 3 practice and focuses in long-term organizational objectives. At level 3, organizations are expected to establish engagement objectives so that they meet organizational objectives. Thus, this practice has a broader scope which is reflected in that it is associated with all the knowledge management processes. This practice requires that organizational objectives are determined and appropriate data is collected and analyzed. Organizational objectives need to be communicated to the organization and plans for achieving organizational objectives need to be created. The organization's performance has to be tracked against these plans.

Practice prf05 - Review Organizational Performance is associated with knowledge storage/retrieval and application. This practice requires that data on organizational performance is collected and reviewed. If deviations from objectives are noticed, corrective actions are done.

Practice prf06 - Make Improvements is associated with all the knowledge management processes. This practice requires that data on possible candidates for improvement is collected and analyzed. Based on analysis, an improvement plan is created, approved with the stakeholders, and improvement progress is tracked.

Practice prf07 - Achieve Organizational Objectives is associated with all the knowledge management processes. This practice is separated from prf04 - Organizational Objectives as it is a level 3 practice and this is a level 4 practice. Organizations at level 3 are not yet expected to meet requirements of this practice. This practice requires that programs required to achieve objectives are identified and business case for each of these programs are created. Based on the business cases, programs are prioritized and pursued. A program is defined as "a group of related projects managed in a coordinated way". (Project Management Institute, 2000) Before programs are started, plans for tracking program attributes are created, reviewed and approved on relevant stakeholders. Finally, program performance is tracked, and if deviations from objectives arise, corrective actions are taken.

Practice prf08 - Capability Baselines is associated with knowledge storage/retrieval, creation and application. This practice requires that capabilities to baseline are selected and measures to be used for capability baselines are identified. Data on selected measures is collected and analyzed to derive capability baselines. Organizational capability baselines can be, for example, time-to-deliver, time-to-respond, number of defects, and cost.

Practice prf09 - Benchmark is associated with all the knowledge management processes. This practice requires that processes for benchmarking are selected and "best practice" processes for comparison are identified. Next, approach for comparison is created and data is collected and analyzed to locate gaps in organizations performance. Finally needed improvement programs are identified as a result of benchmarking.

Practice prf10 - Prevent Potential Problems is associated with knowledge storage/retrieval, creation, and application. This practice requires that problem types to be analyzed are identified and documented. Next, analyses on identified problem types are done and corrective actions are taken.

Practice prf11 - Deploy Innovations is associated with knowledge creation, application, and transfer. This practice requires that candidate innovations are identified and analyzed. Next, program plans for selected innovations are created and implemented and their performance is tracked. Knowledge transfer is also occurs in this practice as innovations made by others are adopted by someone else.

4.2.4 Relationship Management capability area

	ongoing	initiation	delivery	completion
create	rel01, rel02, rel03, rel04, rel05, rel06, rel07, rel08			
store/retrieve	rel01, rel02, rel03, rel05, rel06, rel07, rel08			
transfer	rel01, rel02, rel03, rel04, rel06, rel07, rel08			
apply	rel01, rel02, rel03, rel04, rel06, rel05, rel07, rel08			

Table 4: Relationship Management

Relationship Management capability area focuses on managing client, stakeholder, supplier and partner relationships. Practices in this capability area are distributed uniformly across the knowledge management processes.

Practice rel01 - Client Interactions is associated with all the knowledge management processes. This practice contains many activities which include creating plans on how to manage client interactions, documentation of relevant information during interactions, approving documented information with clients, analyzing documented information for better understanding of the client requirements, and communicating relevant information to stakeholders.

Practice rel02 - Select Suppliers & Partners is associated with all the knowledge management processes. This practice requires that requirements for suppliers and partners are identified and based on these requirements; data on suppliers is collected and analyzed. Suppliers and partners are then selected based on analysis. Commitments between organization and suppliers and partners also need to be communicated and approved.

Practice rel03 - Manage Suppliers & Partners is associated with all the knowledge management processes. This practice requires that suppliers and partners are provided with resources they need to meet their commitments. Analyses on clarifications required by suppliers and partner have to be done and addressed by providing training as appropriate. Performance of suppliers and partners need also to be tracked and records of performance maintained.

Practice rel04 - Cultural Fit is associated with knowledge creation, transfer and application. This practice requires that cultural aspects affecting organiza-

tion and its partners are identified and a plan to achieve a cultural fit is created. Next, feedback about the plan is collected from stakeholders and plan is modified as appropriate. Finally, performance is monitored against the plan to achieve cultural fit and periodic feedback is collected and analyzed and actions are taken if necessary.

Practice rel05 - Stakeholder Information is associated with knowledge storage/retrieval, creation, and application. This support practice that types of stakeholder information needed is identified, collected, analyzed, and applied as appropriate.

Practice rel06 - Client Relationships is associated with all the knowledge management processes. This practice requires that key contact personnel for all stakeholders are identified and their roles are defined. Next, organization is required to determine and document how it will support clients organizational and business objectives, which requires creation of new knowledge. Finally, relationships with client's contact personnel are established and they are provided with regular communication channels.

Practice rel07 - Supplier & Partner Relationships is associated with all the knowledge management processes. This practice requires that key contact personnel for critical suppliers and partners are identified and business cases on how they support the organization are created. Next, relationships with suppliers and partners are established and they are provided with regular communication channels.

Practice rel08 - Value Creation is associated with all the knowledge management processes. First, this practice requires that information about client's business objectives is collected and communicated to appropriate personnel. Second, value creation opportunities are identified and analyzed. Third, results of the analysis are communicated to clients and potential changes to services are approved with relevant stakeholders. Finally, services are modified as agreed with clients.

4.2.5 Technology Management capability area

	ongoing	initiation	delivery	completion
create	tch01, tch02, tch04, tch05, tch06			
store/retrieve	tch02, tch03, tch05			
transfer	tch04			
apply	tch01, tch02, tch04, tch05, tch06			

Table 5: Technology Management

Technology Management capability area is focused on managing and acquiring technology so that organization can perform its work effectively. Knowledge creation, storage/retrieval and application are the most frequently occurring knowledge management processes in this capability area.

Practice tch01 - Acquire Technology is associated with knowledge creation and application. This practice requires organization's needs for technology are identified and analyzed. Based on analysis, technology is chosen and deployed into the organization and its performance is tracked.

Practice tch02 - Technology Licenses is associated with knowledge creation, application, and storage/retrieval. This practice requires that licensing requirements are identified and analyzed and licenses are obtained based on requirements. An inventory of acquired licenses is created and maintained along with their associated documentation.

Practice tch03 - Control Technology is associated with knowledge storage/retrieval. This practice requires that changes to technology infrastructure are identified and documented. This documentation is maintained as changes to the infrastructure are done.

Practice tch04 - Technology Integration is associated with knowledge creation, application and transfer. This practice requires that a plan for integrating technology is created and required technology components are analyzed. When analysis is complete, the technology is integrated and progress of integration is tracked against the plan. Technology integration involves client, suppliers and partners and therefore, knowledge transfer is critical process in this practice.

Practice tch05 - Optimize Technology is associated with knowledge creation, storage/retrieval, and application. This practice requires that technology optimization targets are identified and analyzed in order to determine if existing technology meets them. Next, a plan on optimization is created and data on performance of technology infrastructure is collected and tracked. Finally, a

plan on maintaining optimization targets is created, taken into use, and progress is tracked against the plan.

Practice tch06 - Proactively Introduce Technology is associated with knowledge creation and application. This practice requires technology innovations are proactively identified and analyzed. Based on analyses, opportunities are identified and new technology is acquired and deployed.

4.2.6 Threat Management capability area

	ongoing	initiation	delivery	completion
create	thr01, thr02, thr03, thr04, thr05, thr06, thr07			
store/retrieve	thr02, thr03, thr06, thr07			
transfer	thr01, thr05, thr06			
apply	thr02, thr03, thr04, thr06, thr07			

Table 6: Threat Management

Threat Management capability area is focused on managing threats on organization's ability to meet its commitments. Practices in this capability area are focused on knowledge creation about the threats and risks and application of knowledge so that their impact on organization can be minimized.

Practice thr01 - Risk Management is associated with knowledge creation and transfer. This practice requires setting up a policy on risk management. Activities here require that purpose of the risk management is communicated to organization and that all the potential risks are identified and clearly communicated for the organization. Naming of this practice seems misleading. Risk Management refers to a very broad concept but the scope of this practice is much narrower. This practice deals with identifying potential risks and demonstrating management commitment to managing them. Thus practice could be named for example as "Policy on Risk Management".

Practice thr02 - Engagement Risk is associated with knowledge creation, storage/retrieval, and application. This practice requires that risks for each engagement are identified and analyzed in order to determine organization's risk exposure. After assessing the risks, they are prioritized and responses to them are created and documented.

Practice thr03 - Risk Across Engagements is associated with knowledge creation, storage/retrieval, and application. This practice expands on the previous practice, thr02, and requires that risks for the engagement portfolio are

identified and analyzed. Once risk analyses are done, risk responses are created and documented.

Practice thr04 – Security is associated with knowledge creation and application. This practice requires that all the security requirements of the organization are identified. Once security requirements are clear, potential threats to organization's assets need to be identified and analyzed. Security solutions to protect organization's assets are created based on analyses.

Practice thr05 – Intellectual Property is associated with knowledge creation and transfer. This practice requires that existing intellectual property is identified and its ownership is determined. Also, potential threats to intellectual property need to be identified and analyzed. Once rights, responsibilities and ownership of intellectual property are sorted out, they need to be approved with relevant stakeholders. Finally, current and future intellectual property need to be communicated and its usage tracked. While this practice requires tracking of knowledge application, the practice itself does not require knowledge application. Therefore this practice is not considered to be associated with knowledge application process.

Practice thr06 – Statutory & Regulatory Compliance is associated with all the knowledge management processes. This practice requires that statutes and regulation that the organization is involved with are identified and their impact is analyzed. Necessary actions to bring organization into compliance with statutes and regulations are determined based on analyses and these actions are taken. Information on statutes and regulations needs to be maintained so that changes can be negotiated and done easily if circumstances change.

Practice thr07 – Disaster Recovery is associated with knowledge storage/retrieval, creation, and application. This practice requires that information on potential disasters is collected and analyzed. Based on analysis, disaster recovery plan is created, tested and its performance is tracked in the event of a disaster.

4.2.7 Contracting capability area

	ongoing	initiation	delivery	completion
create		cnt01, cnt02, cnt04, cnt05, cnt06, cnt07, cnt08, cnt10, cnt11		
store/retrieve		cnt02, cnt03, cnt04, cnt06, cnt07, cnt08, cnt09, cnt10		
transfer		cnt05, cnt06, cnt08, cnt10, cnt11		
apply		cnt01, cnt02, cnt04, cnt05, cnt07, cnt08, cnt10, cnt11		

Table 7: Contracting

Contracting capability area is focused in the process of gathering requirements, analyzing them, and negotiating a formal agreement that describes how the organization responds to those requirements. Practices are distributed quite uniformly across the knowledge management processes while there is a slight emphasis on knowledge creation, storage/retrieval, and application. However, relevance of the knowledge transfer in this capability area should not be underestimated as clear understanding between the client and service provider is crucial in making contracts.

Practice cnt01 - Negotiations is associated with knowledge creation and application. This practice requires that organization's position on negotiations is determined and negotiation plan is created. This practice is related to cnt05 - Plan Negotiations but the scope of the practice is expanded to support organization's and client's long term business objectives. This practice also covers the planning but the main focus here is to provide consistency in negotiations across clients and organization's services.

Practice cnt02 - Pricing is associated with knowledge storage/retrieval, creation and application. This practice requires that pricing models for offered services are created and instructions on how to use pricing guidelines are documented.

Practice cnt03 - Confirm Existing Conditions is associated with knowledge storage/retrieval. This practice requires that data on organization's ability to meet client requirements is collected and confirmed. This practice is closely related to practice cnt07 which describes a feasibility analysis to ensure that or-

ganization is able to meet client requirements. This analysis depends on having correct assumptions about what will be transferred from the client and what will be required to meet service requirements.

Practice cnt04 - Market Information is associated with knowledge storage/retrieval, creation, and application. This practice requires that information about prospective clients is collected, analyzed and used.

Practice cnt05 - Plan Negotiations is associated with knowledge application, creation, and transfer. This practice requires identification of topics to negotiate and communicating them to the client.

Practice cnt06 - Gather Requirements is associated with knowledge storage/retrieval, creation and transfer. This practice requires that client requirements are gathered and documented. Also, client needs that are implied or unstated need to be identified and clarified with the client if needed.

Practice cnt07 - Review Requirements is associated with knowledge creation, storage/retrieval, and application. This practice requires collecting information on organization's ability to meet client requirements. Based on collected information, feasibility analysis is done to detect possible inability to meet requirements. The results of the analysis are used when responding to client requirements. This practice is closely related to practices cnt03, cnt06, cnt08. Requirements gathered in cnt06 form the base for the feasibility analysis. The analysis is dependent on the correct assumptions from cnt03.

Practice cnt08 - Respond to Requirements is associated with all the knowledge management processes. This practice requires that client requirements are documented and clarified with the client if needed. Responses to client requirements are then created based on feasibility analysis made in cnt07 and they are communicated to the client.

Practice cnt09 - Contract Roles is associated with knowledge storage/retrieval. This practice requires documentation of the organization's roles and responsibilities.

Practice cnt10 - Create Contracts is associated with all the knowledge management processes. This practice requires identification of contract requirements and creating contract based on them. The contract has to be approved with the client and it has to be explicitly documented. Therefore knowledge transfer and storage/retrieval are relevant processes in this practice.

Practice cnt11 - Amend Contracts is associated with knowledge creation, application, and transfer. This practice requires identification of conditions that require contract changes. Impact of these changes need to be analyzed communicated to shareholders. Service amendments also require reassessing pricing of service and identifying required partners to deliver amended services. Interestingly this practice is situated in initiation phase, while it seems to be an ongoing activity. Situations can change any time during the service provisioning and therefore this practice should be placed into ongoing phase of the sourcing life-cycle.

4.2.8 Service Design and Deployment capability area

	ongoing	initiation	delivery	completion
create		sdd02, sdd03, sdd04, sdd05, sdd06, sdd07, sdd08		
store/retrieve		sdd04, sdd05, sdd06, sdd07, sdd08		
transfer		sdd01, sdd04, sdd05, sdd06, sdd07, sdd08		
apply		sdd02, sdd03, sdd05, sdd06, sdd07, sdd08		

Table 8: Service Design and Deployment

Service Design and Deployment capability area focuses in translating client requirements into service design. Practices are distributed uniformly across the knowledge management processes in this capability area.

Practice sdd01 - Communicate Requirements is associated with knowledge transfer. This practice requires communicating client's requirements to service design and deployment team.

Practice sdd02 - Design & Deploy Service is associated with knowledge creation and application. This practice requires that service design and deployment plans are created. Planning includes analyzing service requirements and creating estimates on resource requirements. Next, service is designed according to plans. Finally, service is deployed and its status tracked against the deployment plan.

Practice sdd03 - Plan Design & Deployment is associated with knowledge creation and application. This practice requires creation of estimates on design and deployment effort. Estimates are created by analyzing design and deployment tasks and their resource needs. Next, plans for design and deployment are created and they are used to track their status and progress.

Practice sdd04 - Service Specification is associated with knowledge creation, storage/retrieval, and transfer. This practice requires that services to be provided are determined and documented. Knowledge creation is also involved as specification work combines tacit and explicit knowledge into new explicit knowledge. Once the service specification is ready, it is approved with the client, which makes knowledge transfer a relevant knowledge management process in this practice.

Practice sdd05 - Service Design is associated with all the knowledge management processes. This very broad practice requires setting up a service design

team and designing the service according to client's requirements. Designing the service requires creation of new knowledge and applying it as the work is done. Knowledge storage/retrieval is necessary as existing processes are used where possible and new knowledge is stored as specifications, processes, guidelines and procedures. Also, as this is a team work related practice and it requires approving design with the stakeholders, knowledge transfer plays an important role.

Practice sdd06 - Design Feedback is associated with all the knowledge management processes. This practice requires that feedback about the service design is collected from the client and analyzed. If needed, changes to the service design are done in practice sdd05 and documented.

Practice sdd07 - Verify Design is associated with all the knowledge management processes. This practice establishes more in-depth and rigorous review of the service design than the previous practice, sdd06. Here it is required that methods for reviewing the service design are determined and documented. Reviews are done prior to service deployment and service design is verified with the client, thus making knowledge transfer a relevant knowledge management process. Based on the reviews and verification, needed actions are determined and taken. If previous practices have created good quality work products, verification process is fairly simple. However, if major issues are spotted during verification, new knowledge has to be created in order to correct the design.

Practice sdd08 - Deploy Service is associated with all the knowledge management processes. This practice requires setting up a deployment team and defining roles of its members. Once the team is formed, client's requirements are communicated to it. Next, the service is deployed according to service design and its continuity is maintained. During the deployment, stakeholder feedback is collected and analyzed. Personnel competencies needed for the deployment team need to be reviewed periodically and if needed, teams' composition has to be changed accordingly. Once the deployment is performed in this practice, the service delivery can begin in practice del03.

4.2.9 Service Delivery capability area

	ongoing	initiation	delivery	completion
create			del03, del04, del05, del06, del07	
store/retrieve			del02, del04, del05, del06, del07, del08	
transfer			del01, del02, del03, del07, del08	
apply			del01, del02, del03, del04, del05, del06, del07, del08	

Table 9: Service Delivery

This capability area focuses in continued service delivery according to commitments made to the client. Practices in this capability area are distributed quite uniformly across the knowledge management processes but there is a slight emphasis on knowledge application as each practice in is associated with it.

Practice del01 - Plan Service Delivery is associated with knowledge application and transfer. This practice requires creation of service delivery plans based on service design and approving them with the relevant stakeholders.

Practice del02 - Train Clients is associated with knowledge storage/retrieval, transfer, and application. This practice requires providing training to the clients and maintaining records about it. Feedback about the training is collected and changes are made where needed.

Practice del03 - Deliver Service is associated with knowledge application, creation and transfer. This practice requires delivering the service according to service delivery plans. Planning and tracking activities are covered in practice del01 and deployment of the service is covered in sdd08. Therefore, this practice does not require setting up a separate team for delivery. During the delivery, stakeholder feedback is collected and analyzed and possible changes are done where needed.

Practice del04 - Verify Service Commitments is associated with knowledge storage/retrieval, creation, and application. This practice is strongly focused in storing knowledge for future usage. First, data on service performance is collected. Second, collected data is analyzed to detect gaps between the actual and planned performance. Third, actions are taken if gaps are detected. Finally, data and analyses are maintained for future use.

Practice del05 – Correct Problems is associated with knowledge storage/retrieval, creation, and application. This practice requires that service delivery problems that may need correction are identified and documented. Documented problems are then analyzed to find out their probable impacts and actions to respond these problems are determined and documented. Identified actions are then taken as necessary.

Practice del06 – Prevent Known Problems is associated with knowledge storage/retrieval, creation, and application. This practice requires that service delivery problems that require preventive action are identified and documented. Identified problems are then analyzed to find out their root cause. Next, preventive actions are determined based on analyses and a plan on how to take those actions is created.

Practice del07 – Service Modifications is associated with all the knowledge management processes. This practice requires that before making any modifications, their impact is analyzed and proposed modifications are approved with the client. Once modifications to service are done, they are documented and documentation is maintained.

Practice del08 – Financial Management is associated with knowledge application, storage/retrieval, and transfer. This practice focuses on managing the finances of an engagement. Activities include creation of budget, creation of financial reports, determination of actions to take when the engagement is over or under the budget, and approving the financial management processes with the relevant stakeholders.

4.2.10 Service Transfer capability area

	ongoing	initiation	delivery	completion
create		tfr02		tfr03, tfr04
store/retrieve		tfr01, tfr02		tfr05
transfer		tfr01, tfr02		tfr03, tfr04, tfr05, tfr06
apply		tfr02		tfr03, tfr04, tfr06

Table 10: Service Transfer

Service Transfer capability area focuses in transferring the service between service provider and the client. Knowledge transfer is the most frequently occurring knowledge management process in this capability area.

Practice tfr01 – Resources Transferred In is associated with knowledge transfer and storage/retrieval. This practice requires identifying communication channels for all organizations that are involved with the transfer. Resources that are to be transferred need to be approved before the transfer and records about transferred services need to be maintained.

Practice tfr02 – Personnel Transferred In is associated with all the knowledge management processes. This practice requires identification of personnel to be transferred to the organization. Information about the conditions related to the personnel is then collected and analyzed. Next, transfer approach is established based on analysis. Offers are then made to identified personnel and personnel of accepted it are transferred.

Practice tfr03 – Service Continuity is associated with knowledge creation, application, and transfer. This practice requires assessing the readiness of continuing service providing and creating a plan for maintaining service continuity. Different approaches, such as staged transfer of parallel service, should be considered based on importance of the service to the client. Status of the service is then maintained and actions are taken if it deviates from the plan. Approval for the service transfer is obtained from the client.

Practice tfr04 – Resources Transferred Out is associated with knowledge creation, application and transfer. This practice requires that estimates for required resources for transfers are created. Based on estimates, transfer plans are created and resources are transferred. Transferred resources are accounted for and they are approved with the client.

Practice tfr05 – Personnel Transferred Out is associated with knowledge transfer and storage/retrieval. This practice requires identification of personnel to be transferred out. Once personnel are transferred out, they and their competencies need to be documented and possible gaps in workforce need to be identified and addressed.

Practice tfr06 – Knowledge Transferred Out is associated with knowledge transfer and application. This practice requires identification of knowledge to be transferred and creation of knowledge transfer plan. Transferred knowledge needs to be accounted for and it has to be approved with the client.

4.3 Findings

This chapter describes the main finding made in the research. The most frequently occurring knowledge management processes for each capability area are also described and their possible implications are discussed.

Two finding emerged from the analysis. First is that each practice in the eSCM-SP is associated with at least one knowledge management process but most practices are associated with more than one knowledge management process. This results from how practices are structured: practices contain several activities that need to be performed when practice is implemented and usually activities even in the same practice are associated with different knowledge management processes. In some capability areas, practice distribution clearly reflects the core function of the capability area. For example, knowledge management capability area focuses in providing access to knowledge that is needed to perform work effectively and thus; most practices are associated with knowledge storage/retrieval process. On the other hand, practices in People

Management, Performance Management, Relationship Management, Contracting, Service Design and Deployment, and Service Delivery capability areas are distributed more or less uniformly across the knowledge management processes. This indicates that individual practices in these capability areas deal with many different processes and it also makes it difficult to justify which of the knowledge management process is the most relevant.

The eSCM-SP contains a number of very large practices that are associated with all four of the knowledge management processes and also contain a large amount of varying and complex activities. This means that the work products of these practices require collection and storage of data or knowledge or both, creation of new knowledge, application of knowledge, and communication of knowledge to other people involved. Dividing these large practices into smaller ones or disseminating their activities to other related practices could produce practices that are more tangible, easier to implement, and less risky due to decreased complexity.

Second finding is that the practice's position in the sourcing-life cycle does not seem to have effect on which knowledge management processes the practice utilizes.

Knowledge management capability area forms an infrastructure for performing work in the organization. This is reflected in that most practices are associated with knowledge storage/retrieval. Relevant information is stored in different forms, such as databases and repositories, and made available to personnel.

People Management capability area focuses in managing personnel and putting right people in right places. Practices here are distributed uniformly across the knowledge management processes. Capability area focuses on collecting information about personnel, their competencies and needs of the organization and this knowledge is then turned into decisions about recruiting, training and personnel roles.

In Performance Management capability area practices are quite uniformly distributed among knowledge creation, storage/retrieval, and application processes. Managing organization's performance and, for example, finding points of improvement, requires a great deal of data collection, data analysis and usage of findings made in the analyses.

Performance Management capability area contains practice prf07 which seems to be a possible candidate for splitting into smaller practices. First, this practice is related to number of other practices which provide inputs for the practice's activities. Second, this practice has several phases that could be separated into own entities without breaking the main functionality of the practice. Third, this practice is related to each of the knowledge management processes, starting with knowledge creation and application when needed programs are identified and business cases for them are created. Next, programs are prioritized, estimates are created, and attributes that require tracking are determined. These are also knowledge creation and application intensive activities as bits and pieces of data are combined to create knowledge about the issue at hand

and this knowledge is then turned into estimates and trackable attributes. Next, knowledge storage/retrieval process is involved as methods for tracking are documented and plans for the programs are created. Creation of program plans also requires knowledge transfer as they are reviewed and approved with all the relevant stakeholders. Finally, performance is tracked against the plans and if it deviates from the plans, actions are taken which again requires application of existing knowledge. This practice could be divided at least into two separate practices, one which would address the issue of identifying required programs and creating business cases for them, and one which would take care of executing of these programs.

As in previous capability area, Relationship Management practices are also distributed uniformly across knowledge management processes. Collecting information on possible partners and analyzing it essential in the process of selecting partners. Managing relationships with partners and clients also require good communication channels thus making knowledge transfer an essential process in this capability area.

Practice rel01 - Client Interactions seems a possible candidate for splitting into smaller practices in this capability area. Activities 1-5 and 12-15 deal with client interaction team and activities 6-11 deal with dispute handling. This practice is also associated with each of the knowledge management processes. Since there are two distinguishable functions, they could be separated which would result in two smaller but more tangible practices. Another large practice that could be divided into smaller entities is practice rel03 - Manage Suppliers and Partners. This is similar to rel01 in that both practices require creating dispute handling methods but practice rel03 requires creating them to suppliers and partners. While clients and partners are usually managed through different processes, there could be a possibility to join these processes under one practice dealing especially with dispute handling.

Technology management focuses in managing the technology infrastructure that supports service delivery. Practices in this capability area distributed uniformly among knowledge storage/retrieval, creation, and application processes. Processes of technology acquisition, licensing, controlling, and integration require data collection and analysis so that understanding about technology requirements, licensing issues, conditions influencing technology integration, and future technology needs is obtained. This understanding is then turned into action when, for example, technology infrastructure with the suppliers are being integrated. Knowledge transfer occurs only once in this capability area, in practice tch04 - Technology Integration. However it is absolutely crucial process in this case as integration affects several stakeholders.

In Threat Management capability area knowledge creation and application play an essential part. Practices in this capability area are focused in analyzing information about potential threats and creating responses to them based on results of the analyses.

Practices in Contracting capability area are distributed uniformly across knowledge management processes. Creation of contracts requires gathering of

requirements and turning those into plan on how to meet them. When requirements are gathered, knowledge transfer occurs also.

Service Design & Deployment has also practices that are distributed uniformly across the knowledge management processes. This reflects the activities included in designing service: collected client requirements have to be clearly communicated and clarified if needed to teams designing and deploying the service. Teams then turn client's requirements into service design and deployment plans.

Service Delivery focuses in continued delivery of the designed service. Practices in this capability area are distributed uniformly across knowledge management processes but with slight emphasis on knowledge application. Knowledge creation and storage/retrieval processes are important processes as delivery requires data analysis and creation of documentation.

Activities in Practice del05 - Correct Problems does not contain any activities related to knowledge transfer. However, certain problems can be so severe or large that they require transferring knowledge between stakeholders or service design and deployment teams. Therefore, it could be beneficial to include activities where feedback from stakeholders and teams is collected so that documentation can be updated or changed where needed.

Service Transfer is the last of the ten capability areas. This capability area is mostly associated with knowledge transfer. When resources and personnel are transferred, knowledge is transferred with them.

5 CONCLUSIONS AND FUTURE RESEARCH

In this bachelor's thesis, the practices of the eSourcing Capability Model for Service Providers (eSCM-SP) were analyzed from the perspective of knowledge management. The goal of the research was to gain insight on which knowledge management processes are the practices of the the eSCM-SP related to in different parts of the sourcing life-cycle.

The work of Alavi & Leidner (2001) formed a theoretical base for this thesis. Alavi & Leidner (2001) have identified four basic processes that knowledge management contains: knowledge creation, knowledge storage/retrieval, knowledge transfer, and knowledge application. To address the research question, practices of the eSCM-SP were allocated into matrix based on two criteria: practice's location in sourcing life-cycle and practice's relation to the knowledge management processes. Relation to knowledge management processes was determined by analyzing sub activities under major activity "b" in each practice. Chapter 4.1 provides more detailed description on how practices were allocated into knowledge management processes.

Two general findings emerged from the research. First is that each practice of the eSCM-SP was associated with at least one knowledge management process. Most practices were, however, associated with several knowledge management processes. This is due how practices are structured. Practices are built on major activities and their sub activities that need to be done when the practice is implemented. Activities in most practices performed several different types of tasks which lead to utilizing different knowledge management processes. Typical example was collection of data (knowledge storage/retrieval), analysis of collected data, (knowledge creation), and creation of plans based on analyses (knowledge application).

In some cases, practice distribution followed the main focus of the capability areas quite predictably. However, in some capability areas practices are distributed uniformly across three or more knowledge management processes. Making conclusions on which is the most relevant knowledge management process is difficult in these cases. The eSCM-SP also contains some very large

practices that incorporate large amount of activities with varying tasks and also utilize all four of the knowledge management processes. Implementing these massive practices can be a very complex and tedious task. In order to reduce complexity it might be beneficial to divide some of these practices into smaller ones or, incorporating their activities into other activities. However, before such divisions or rearrangements can be done, empirical research needs to be conducted with organizations that have adopted the model in order to spot practices that might need reviewing. This thesis suggests two potential candidates that could be divided into two separate practices.

Second general finding is that the practice's position in the sourcing life-cycle does not affect on which knowledge management processes the practice utilizes. Differences are between capability areas, not between phases of the sourcing life-cycle.

Main limitation of this thesis is that there is no empirical evidence to support the claims made in this thesis. In order to verify these claims, empirical data on practices' performance would have to be collected from organizations that have adopted the eSCM-SP. At this point, results of this thesis are based on literature which raises a question whether they are reliable or not. Another limitation is that the major activities "a" and "c" were excluded from analysis. Including these two activities would have affected the results of the thesis.

Research area in this thesis was somewhat large for bachelor's thesis and previously unstudied. The eSCM-SP is fairly new model and previous literature on it is still quite scarce. This thesis can provide starting point for further research on knowledge management in the eSCM-SP context. In future, large practices of the eSCM-SP should be studied in order to determine if there is a possibility to divide them into smaller, more tangible practices. This thesis suggests two such practices but empirical studies might point out more of them. Another interesting subject for the future research would be that which contemporary IT technologies would support knowledge management processes in the eSCM-SP. Alavi & Leidner (2001) suggested supporting technologies for each knowledge management process but during the ten years since their article was published, new technologies have emerged.

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