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STANDARDIZING THE PROCESS OF SOURCING EXTERNAL RESOURCES IN KNOWLEDGE AND PROJECT BASED ORGANIZATIONS

Faculty of Management and Business
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ABSTRACT

Kamilla Kinos: Standardizing the process of sourcing external resources in knowledge and project based organizations
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The world of sourcing and critical core competences of organizations are currently evolving and changing rapidly. More and more organizations depend on expertise and knowledge of their employees especially in consulting and project based business environments. Managing human potential and resources is becoming the most important asset to many organizations. As business environments are transforming to more agile and quicker, organizations need to be able to offer a wide portfolio of expertise and response different customer needs flexibly. Business environment is shifting to a stage where organizations want to focus on their core competencies which form their competitive advantage and find alternative ways to produce less meaningful and valuable tasks by outsourcing them or using for example sub-contractors. On the other hand, organization can also gain competitive advantage through effective value co-creation. Whether to use internal or external resources to a project or maintenance work has formed a key question to many project and knowledge based organization. These decision-making processes to optimize utilization of labour or materials are called right-sourcing.

In this master's thesis, research focuses on availability, capability and profitability aspects of right-sourcing expertise and knowledge. Objective of the research is to understand how to optimize and standardize the process of sourcing external resources in knowledge and project based organizations. To achieve that, it is crucial to understand elements and decision-making chain behind these processes. In order to reach these objectives, the research is conducted in two parts: literature review and empirical study. With the literature review foundation and common understanding of the topic and areas such as competence management, strategic sourcing and value co-creation are gained. Following that the empirical study focus-es on a case study approach and information collected from semi-structured interviews executed with case company's employees. The research is made for a large Nordic IT-company which is used as the case company in the research. The company is specialized in information management, applications, platforms and analytics mainly in Finland and Sweden.

This research addresses many aspects of traditional sourcing and by combining them together with the competence management and human capital thinking these aspects can be transferred to context of this research. Based on the interviews, current state of the case company's sourcing processes is formed, and potential development areas and concrete action points are designed and presented in eight categorizes. As a second main result of the research, a framework for external resources right-sourcing is produced based on a combination of sourcing frameworks presented on the literature review and insights found on the interviews. Results of the research mainly focuses on the case company's point of view. However, the literature review and designed framework provide valuable insight to many organizations and their decision-makers.

Keywords: right-sourcing, competence management, knowledge and project based organizations, sub-contracting

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

TIIVISTELMÄ

Kamilla Kinos: Ulkoisten resurssien hankintaprosessien standardointi tieto- ja projekti-intensiivisissä organisaatioissa
Diplomityö
Tampereen yliopisto
Tietojohtamisen diplomi-insinöörin tutkinto-ohjelma
Toukokuu 2021

Organisaatioiden hankinta ja ydinosaamisen hallinta on jatkuvasti muuttuva ja kehittyvä alue. Yhä useampi organisaatio on riippuvainen työntekijöidensä osaamisesta ja tietotaidosta erityisesti konsultointi- ja projekti-intensiivisissä liiketoimintaympäristöissä. Henkilöpotentiaalin ja -resurssien hallinnasta on tulossa monien organisaatioiden tärkein pääoma. Liiketoimintaympäristöjen muuttuessa yhä ketterämmiksi ja nopeammiksi, organisaatioiden on pystyttävä tarjoamaan yhä laajempaa osaamisen portfoliota ja vastattava asiakastarpeisiin joustavasti. Liiketoimintaympäristöt ovat tilanteessa, jossa organisaatiot haluavat keskittyä heidän kilpailukykynsä mahdollistaviin ydinosaamisiinsa ja löytää vaihtoehtoisia tapoja tuottaa vähemmän arvokkaita työtehtäviä esimerkiksi ulkoistuksen tai alihankkijoiden kautta. Toisaalta organisaatiot pystyvät myös lisäämään kilpailukykyään hankinnan ja arvon luonnin kautta yhdessä sidosryhmiensä kanssa. Avainasemassa monissa tieto- ja palveluintensiivisissä organisaatioissa onkin kysymys siitä, tulisiko tiettyihin osa-alueisiin projekti- tai ylläpitotöissä käyttää sisäisiä vai ulkoisia resursseja. Näitä päätöksentekoprosesseja henkilöresurssien tai materiaalien optimoinniksi kutsutaan strategiseksi hankinnaksi.

Tässä diplomityössä osaamisen ja tietotaidon strategiseen hankintaan keskitytään saatavuuden, kyvykkyyden ja kannattavuuden kautta. Työn tavoitteena on kehittää ymmärrys siitä, miten ulkoisten resurssien hankintaprosesseja voidaan optimoida ja standardoida. Olennaista on ymmärtää elementtejä ja päätöksentekoketjuja prosessien takana. Tavoitteen saavuttamiseksi tutkimus on jaettu kahteen osaan: kirjallisuuskatsaukseen sekä empiiriseen tutkimukseen. Kirjallisuuskatsauksen avulla luodaan pohja aiheen ymmärrykselle muun muassa osaamisen hallinnan, strategisen hankinnan ja arvon luonnin aihealueiden kautta. Tämän jälkeen empiirisen tutkimuksen osa keskittyy tapaustutkimukseen yrityksen työntekijöiden kanssa tehtyjen haastatteluiden ja niistä saadun materiaaliin avulla. Tutkimus tehtiin tilaustyönä suurelle pohjoismaiselle IT-alan yritykselle, jota käytetään tutkimuksen empiirisessä osassa case-esimerkkinä. Yritys on keskittynyt erityisesti informaation hallintaan, sovelluksiin, alustoihin sekä analytiikkaan päätoimialueinaan Suomi sekä Ruotsi.

Diplomityö käsittelee monia perinteisen hankinnan aspekteja ja yhdistelemällä niitä muun muassa osaamisen sekä inhimillisen pääoman hallinnan kanssa, monet aspektit voidaan siirtää myös tämän tutkimuksen kontekstiin. Haastatteluiden perusteella muodostettiin käsitys yrityksen nykyisten hankintaprosessien tilasta sekä kehitysalueista ja luotiin konkreettiset listat kehitystarpeista kahdeksaan eri kategoriaan jaettuna. Tutkimuksen toisena lopputuloksena kehitettiin malli ulkoisten resurssien strategisen hankinnan tueksi kirjallisuuskatsauksessa esiteltyjen mallien sekä haastatteluiden pohjalta. Tutkimuksen tulokset keskittyvät suurilta osin työn tilanneen yrityksen näkökulmaan, mutta erityisesti kirjallisuuskatsaus sekä suunniteltu päätöksentekomalli tarjoavat arvokasta tietoa monille organisaatioille ja heidän päätöksentekijöillensä.

Avainsanat: strateginen hankinta, osaaminen hallinta, tieto- ja projekti-intensiiviset organisaatiot, alihankinta

PREFACE

This master's thesis marks the end of an era in my life. I started my studies in 2014 without a clear idea of what this school and degree could offer for me. Many times, all the courses seemed overwhelming, and I was questioning my own abilities to perform among such talented and smart people. However, as I am writing this preface, I can proudly say that these years have thought me enormous amount of knowledge on information and knowledge management as well as on many other areas of technology.

In addition to substance knowledge, these years have shaped the person I am today. Looking back, I can say from the bottom of my heart that I am forever grateful for the opportunity to study technology in our university. I will always cherish all the unforgettable memories I got to experience here.

Thank you Enfo for believing in me and giving me the opportunity to write this master's thesis. Thank you, Tomi Koskinen and Pasi Hellsten for your support, comments and insights through the whole writing process. It has been a long journey which finally comes to an end. I would also like to thank Nottikset and PILE for being there for me and sharing all the incredible moments this school has offered.

Finally, a special thank you to my loved ones: mom, dad, Pauliina and Eveliina. You have always believed in me and helped me to push forward even when I did not believe in the process or the direction I was going to.

I have now studied 19 years straight and I think it is the right time to move forward and see what life has stored for me outside of school classes.

Tampere, 2.5.2021

Kamilla Kinos

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1. INTRODUCTION

This introduction chapter presents background information and context around the research and Enfo Oyj's interest in research topic following research problem and questions. Chapter includes research limitations and scope to provide important outlines for the outcomes. Finally, the research structure is introduced.

1.1 Research background and motivation

In a continuously changing and developing business environment, companies need to be cautious of their assets and competitive advantages. The workforce in terms of human and social capitals could be seen as one of the most important assets in competitive advantage alongside technology and materials (Pfeffer, 1994). Management of workforces and human resources is therefore a core competence for companies and is a resource of stability. It can also be seen affecting the effectiveness and adaptiveness of a company. (Espedal, 2005) Especially in companies, where the expertise and knowledge of employees is a foundation for company's operations and projects, human resources and potential are the most valuable assets.

As the business environment is fast phased and evolving, agility is a target for many companies. In order to make rapid business decisions and maximize value, effective management of human resources and capabilities is in a key position (Espedal, 2005; Rafati and Poels, 2014). Many companies are nowadays in a constant process, where they need to evaluate, whether to stick with internal or buy external resources to help maintain certain parts of the projects and deliveries. These processes are called right-sourcing. Purpose of them is to optimize the use of resources such as workforce, capital, time and energy. (Rafati and Poels, 2014) Right-sourcing is an aspect of typical sourcing which can be determined as a process of choosing and procuring the optimal combination of human labor, materials and services inside and outside of an organization (Van der Ploeg, Dijkstra and Gøtze, 2013).

Decision-making behind right-sourcing is a crucial area when it comes to ensuring that the chosen way to act is in line with company's strategy, business models and values. At a strategic management level, all the decision makers need to have a common understanding of the wanted outcome and the tools to make right decisions (Rafati and

Poels, 2014). This is why finding the right and effective decision-making chain plays an important role in this research.

This leads us to the topic of this master thesis. The case organization Enfo has a strong will to improve many internal processes and as a result of mapping out possibilities amongst them, subcontracting and right-sourcing were highlighted. The main objectives business-wise for Enfo in the right-sourcing area are to improve agility in decision-making and with right business decisions maximizing the business value as well as the ability to act quickly to changing business demands. In company level the objective is to improve transparency among profitability, capacity planning and utilizations. The lean thinking is important also in this area: processes will be more effective and less time-consuming when there are common and well-known tools and framework which the whole company can use and understand.

The research therefore culminates in three areas: availability, capability and profitability. Company has to have information about availability of resources and the utilization of them. Other crucial aspect is the capability of the internal resources as known competence management. In any possible scenario, the profitability is in a big role and needs to also be considered when making decisions. In addition, risk management of external resources is brought up as one dimension to consider.

1.2 Research problem and research questions

The objective of this research is to define a standard framework for efficient right-sourcing and improve transparency, capacity planning and profitability within the case company. Research investigates the case company's current sourcing processes, the decision-making situation behind them and use of external resources and aggregates current challenges and areas to be improved in structured manner. Another sub-objective for this research is to offer a summary of possible development ideas for standardization of the current sourcing processes alongside the concrete framework. That way case organization gets a full picture of current situation in sourcing processes and the challenges in them as well as suggestions on how those challenges could be alleviated or completely solved in decision-maker's daily tasks. In order to achieve these research objectives, the following research question is set:

- How to standardize and optimize the process of sourcing external resources in knowledge and project based organizations?

To answer the question in detailed way, it is divided into sub-questions. Firstly, we need to study elements and aspects affecting the process of sourcing external resources management and how these element or processes should be handled. Before the actual decisions of sourcing can be made, organization need to be up-to-date in many areas for sourcing to be efficient and profitable. To understand the sourcing context and create base for the developed framework, the decision-making chain behind right-sourcing and usage of external resources is relevant and needs to be studied also.

- What elements affect the external resource sourcing processes?
- What is the decision-making chain behind right-sourcing and buying external resources in knowledge and project based organization?

The answers are achieved by investigating current protocol of sourcing processes and comparing, benchmarking and enhancing it with literature and cases from other functions and industries. Theory based literature review is complemented with interviews to find the fundamental understanding of the research questions and suggestion of improvements. Interviews also create deeper understanding of case company's situation and give concrete information alongside presented literature and theories. The first sub-question is answered mostly in the theory chapter based on literature review. The answer of the second sub-question is partly based of literature review and validated with interview results.

1.3 Research limitations and scope

The scoping of the research is mainly based on Enfo's needs and motivation to improve internal processes and subcontracting management. However, it is affected by academic requirements set to master's thesis. As mentioned before, subcontractors and partners are used in both Finland and Sweden due to which scope includes both countries. Purpose is to develop a framework and improvement action list which can be applied in both countries to standardize the ways of working and processes around right-sourcing within the whole company.

The research is focused on studying motivation of using external resources and elements affecting to ability of making right business decisions for the company. Because the scope is limited to management of subcontracting process, technology and any technology related issues are excluded from the thesis. In order to keep the scope suitable sized, people operations and actual leading of subcontractors and their work tasks are not in the research scope.

As a result of the research, a framework for right-sourcing process and decision-making is developed. To move forward from framework to actions, research includes summary of the development ideas which would increase standardization, transparency and profitability in case organization. Detailed implementation plan for the framework is not part of this master's thesis scope and therefore is also excluded.

Academic requirements set a few limits mainly concerning about research methodologies and practicalities around research process. These limits focus on selecting the appropriately sized research topic and perspective as well as approaching it with a research method suitable for the study. Enfo has reserved a six-month time period for this master thesis and the research needs to be concluded in that period. This sets boundaries in research process which are described in more detailed in section 2.2.1.

1.4 Research structure

This master thesis is a research that includes both theoretical and empirical studies. Theoretical background and literature review offer a base for understanding the topic and help to develop in depth knowledge on different elements related to the topic. Accumulated knowledge is used to form questions to interviews which form the empirical part of the research. Interviews are first used to get insights of current processes and decision chains within company and managers as well as validate relevant aspects of the literature. Secondly, the focus of the interviews is to find possible improvement suggestions, perspectives and new ways to formulate the framework for right-sourcing.

The research consists of nine chapters. Order of these chapters is presented in figure 1.

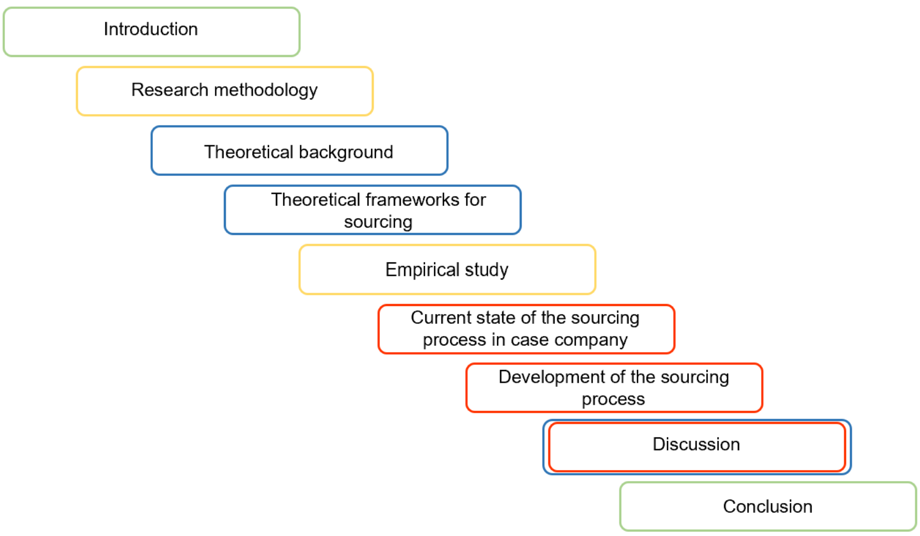

Figure 1. *Research structure of this master thesis*

Colors seen in the first figure stand for different bases or areas that the research covers. Green separated the introduction and conclusion chapters which does not include any theory or empirical study but set the tone for the whole research as well as present the summary at the end. Yellow chapters present actual theory behind the methodological side on how the research is conducted. Blue chapters are heavily theoretically based on the used literature and the red ones are formed from the interviews and insights gathered from them and they are called as the empirical part of the study.

As seen from the first figure, after this introduction chapter the second chapter presents theoretical information of chosen research methodologies for the study and background information of them. Chapter also includes more detailed overview of the constructive research method used in the study and describes the actual research process.

In chapters three and four, the theoretical part of the study is discussed, and literature review conducted. Chapter three focuses on creating the understanding of areas related to competence management, sourcing and aspects that affect on right-sourcing of the external resources based on founded literature. Chapter also sheds light on the relevancy of value co-creation and how organization might create competitive advantage with external resources. Chapter four continues with literature based theory and introduces ways to form a framework for sourcing as well as three already created frameworks with different emphasis.

After the theoretical parts of the research, chapter five presents methodology behind the empirical part. Chapter describes fundamentals behind interviews and how sample design was selected and evaluated for them. Later in the chapter interview structure and the implementation of it to actual interviews is presented. After the interviews conducted, all the data and information need to be analyzed. The end of the chapter five focuses on how that data is analyzed with four step process combined from Tuomi and Sarajärvi (2018) as well as Elo and Kyngäs (2008).

Chapter six starts the actual empirical study of the research. In this chapter the current state of the sourcing process is described as an overall picture based on interviewees insights and opinions. The current state is divided into segments for a more structured approach. Chapter includes description of current decision-making process and factors that are considered to be in it, the internal communication and documentation situation, what risks are noticed related to this area and how they are evaluated as well as the state of validation and evaluation of subcontractor’s performance. After this, all faced and identified challenges in current protocols and processes by interviewees are presented in eight categories.

After the current state is formed, chapter seven gathers possible development ideas from the interviews and presents them in the same eight categories, which were used in challenge delimitation. A summary of critical improvement ideas is also formed and presented in table form. Rest of the chapter describes the development and final outcome of knowledge and competence sourcing framework. Framework is handled step by step in this chapter and presented in Appendix X in its entirety.

Chapter eight sums up the theoretical parts of the research with empirical findings and insights. The purpose of this chapter is to bring up important aspects from the literature review and compare them with empirical study to find out how these areas complete each other and what differences can be found from them.

Lastly, chapter nine presents a compact summary of the whole research based on set objectives and the final results. In the chapter, academic contribution of this master thesis is also discussed and proposals for further research are described together with limitations and shortcomings.

2. RESEARCH METHODOLOGY

This chapter depicts the research methodology and selected philosophies and methods for the master thesis. The chapter presents causes and relationships behind every made decision and elaborates them on. Later in the chapter constructive research is introduced (2.2) and research process based on it is presented and discussed (2.2.1).

2.1 Methodology

The purpose of research is to find answers to research questions through the application of scientific procedures (Kothari 2004, p. 2) In order for the research to answer these questions, right research methods, approaches and tools need to be selected. Research methodology underpins philosophical choices about research strategy and approaches as well as data collection and analysis techniques and procedures (Saunders et al. 2019, p. 130). To illustrate the different layers of research methodology, Saunders et al. (2019) have developed the research onion. It consists of six layers, each focusing on one aspect of research methodology. Layers from the outer to the innermost are: philosophies, approaches, strategies, choices, time horizons and research techniques and procedures (Saunders et al. 2019, p. 130) Each philosophy and paradigm brings their own unique approaches and perspectives to business and management research and present their way of seeing business and environment.

It is crucial to understand that it is hard to draw a line and use only one paradigm from each layer. The nature of business and management research requires analyzing from different perspectives and multiple paradigms and methods can support each other and bring something new to the table. However, it is also important to be aware of the differences and disagreements between philosophies to make choices and justify them. (Saunders et al. 2019, p. 132) When understanding the bigger picture around the methodologies, it is easier to justify choices made for the selected research method.

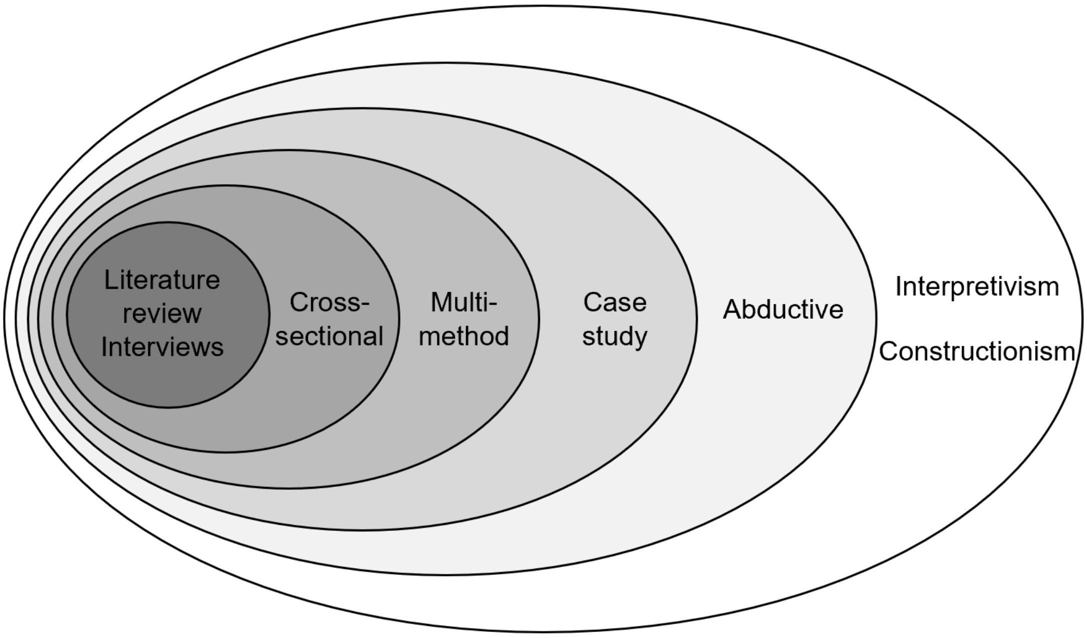

Figure 2. *Research onion model with selected methods (Adapted from Saunders et al. 2019 p. 130)*

In the figure 2, layers consist of selected methods for this research. In the outermost layer interpretivism and constructionism are chosen for the philosophies for the research. These two philosophies are often linked and presented together in the literature because they share some similar ideas and ideologies for the research. The purpose of interpretivist research can be seen as creating new and richer meanings, understandings and interpretations of social worlds and contexts. Interpretivism focuses on sense-making, complexity and perceptions in the business environment. (Saunders, Lewis and Thornhill, 2019, p. 149) These attributes fit greatly in the topic of this master thesis where aim is to create understanding of complex decision-making problem and develop a framework based on that.

Interpretative and constructionist research usually begin with the supposition that through social constructions, you can access to shared constructed reality (Eriksson and Kovalainen, 2008). Researchers are typically part of the research environment and because of that their interpretation of used materials and data play a key role in the research. (Saunders, Lewis and Thornhill, 2019, p. 149) Researchers and their approach are subjective and reflexive in the process as in this case.

Research has always had a special meaning of solving operational and planning problems in business and industry (Kothari, 2004, p. 6). It is argued that the interpretivist perspective is highly recommended in terms of project and management research because every situation in business is unique and complex (Eriksson and Kovalainen, 2008; Saunders, Lewis and Thornhill, 2019). The impact of people and environment needs to be taken into consideration in every situation.

The second layer of onion tells about the chosen approach for the research. Approaches can be divided in to three: deductive, inductive and abductive. Deduction starts with a theory, often developed from academic literature, and research process continues with a strategy to test the theory. Induction in turn starts with collecting data and building a framework or theory based on that. (Eriksson and Kovalainen, 2008, p. 22; Saunders, Lewis and Thornhill, 2019, pp. 153–154) However, it is quite rare that a research can strictly follow either one of the approaches presented before.

Abductive approach moves back and fourth of the deduction and induction by combining them (Saunders, Lewis and Thornhill, 2019, p. 155). The abductive approach is empirical based like inductive approach but it uses literature and theories as inspiration at early stages (Walton, 2004, pp. 4–5). People's meanings and descriptions move to concepts that create the basis or explanation to the described phenomena. The purpose of abductive approach is to generate and develop new ideas or hypotheses that can be modified when the amount of understanding increases. (Eriksson and Kovalainen, 2008, p. 23) In this research, the basic understanding of the topic is developed not only with scientific literature but also with case company's specific documents and data related to topic. After that qualitative data is collected with interviews and the first version of framework is validated through them. With the deeper knowledge developed with interviews, framework is modified to the final form. The research process is constantly bouncing and reflecting decisions between theory and empirical part.

After philosophies and approaches, some more concrete decisions need to be made. Research strategy tells how the research would actually be implemented. The purpose is to find a right research strategy to answer defined research questions. (Saunders, Lewis and Thornhill, 2019) The chosen strategy for this research is a case study. A case study is a research strategy which aims at description and explanation of entangled group of patterns, processes and structures. It is defined as holistic in nature and suitable for complex phenomena. (Verschuren, 2003, p. 137) Its idea is to investigate an object or a phenomenon in their real environment when the boundaries of the phenomenon are not clearly evident (Palakshappa and Gordon, 2006; Saunders, Lewis and Thornhill, 2019). Often case study is linked with qualitative methods such as interviews and surveys, but it can also be used with quantitative methods.

For this research it is quite clear to use qualitative methods as research choices. With qualitative methods, it is easier to create shared understanding and in-depth insight to the topic and investigate relationships between attributes (Palakshappa and Gordon, 2006, p. 400). This research has multiple data sources such as interviews, internal documents and literature review. In this light, right research choice is multi-method qualitative research as presented in the research onion (see Figure 2).

After research choices, time-horizon for the research have to be decided. This research is a cross-sectional study. Cross-sectional study has a short time-frame and it focuses on investigating current state of things instead of long-term effects (Saunders, Lewis and Thornhill, 2019). Because of the there is a six month period reserved for this master thesis, it would be simply too short for longitudinal study.

2.2 Constructive research

Constructive research in an approach aiming to define and solve problems or improve the existing system with different research tools. Novel solutions can be made for both theoretical and practical problems and are usually presented through construction of plans, frameworks or diagrams at the end of a research. (Oyegoke, 2011) Constructions provide solutions for example to change processes, processes of creating something completely new or in situations that produces new reality, and its usability can be demonstrated through the implementation of solutions. The essential idea in constructive approach is also that the accumulated theoretical knowledge will be the foundation in tying up the problem and the solution in the end. (Kasanen, Lukka and Siitonen, 1993; Oyegoke, 2011) Normally, constructive approach is associated with inductive reasoning and exploratory, qualitative techniques which emphasize contextual relevance (Pollack, 2007). Constructive research is linked in many literatures with interpretive or positivist. That is why interpretive philosophy is chosen for this master thesis to support constructive research approach and vice versa.

It is possible to use constructive research in many industries and business problems, but it is raised as potential research method especially in project management areas. Strengths of constructive research are in understanding the problems around value creation, project and social complexity and processes. (Pollack, 2007) It can help to move from methodologies and concepts towards value creation based problem solving in higher organizational levels or in individual project (Oyegoke, 2011). The research problem of this master thesis touches processes and projects in wide spectra within the case organization and therefore constructive approach supports greatly this kind of research.

2.2.1 Research process

As other research method, constructive research is based on phases that form the foundation to whole research. Phases various slightly depending on the literature, but there can be six phases recognized. Oyegoke (2011) and Kasanen et al. (1993) describe these phases as: 1) finding a practical relevant problem that has a research potential, 2) obtaining a general, comprehensive understanding of the topic, 3) innovating – designing a new construct, 4) demonstrating that the new construct (solution) works, 5) showing the theoretical connections and the research contribution of the solution concept and 6) examine the scope of applicability of the solution. Based on Oyegoke (2011) and Kasanen et al. (1993), similar six phases were shaped to this master thesis and presented in the figure 3 below.

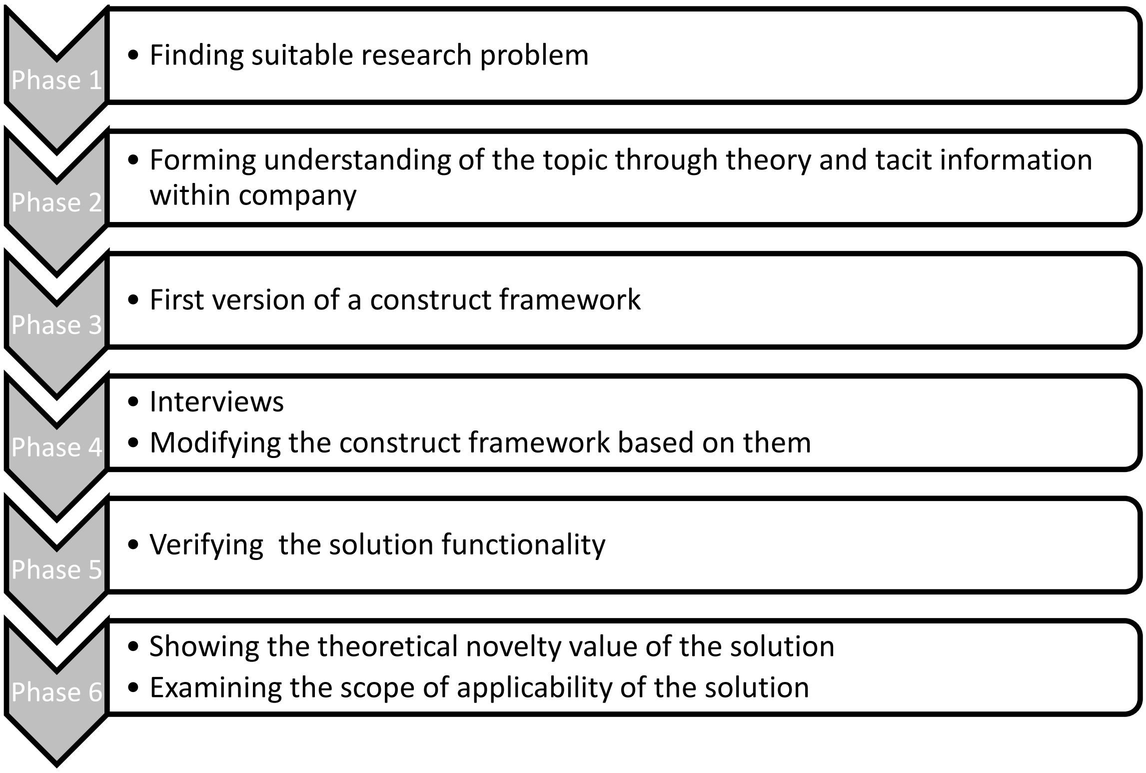

Figure 3. *Modified phases of the research process in constructive research*

Constructive research usually starts with strong grounding on research problem from practise and complemented by available literature. Research problem is followed by questions that address the problem. Through the steps of the process a construction is formed, and its functionality is tested to validate it. (Oyegoke, 2011) To fulfil all the needed aspects of the master thesis, regular phases were modified to suit the purpose of the research. For example, because the framework will be an internal tool, the verifying of the solution is done only by internal parties of the company. The time frame of the research also sets demand to keep steps simple in order for process to run smoothly.

3. THEORETICAL BACKGROUND

In this chapter, theoretical background for sourcing external resources in knowledge and project based organizations is covered with many aspects. Chapter starts with competence management and lifecycle literature (3.1) and moves on to strategic right-sourcing (3.2). Under strategic right-sourcing value co-creation with suppliers is discussed as well as the potential value of the suppliers in co-creation (3.2.1 and 3.2.2). Chapter ends with the describing of the actual external resources in the context of knowledge and project based organizations (3.3).

3.1 Competence management

When aim is to evaluate, select and implement the most suitable competence or knowledge management approach, it is not an easy task for any company. Especially if the company is multinational, rather large and knowledge intensive, task is even harder. (Hellstro, Kemlin and Malmquist, 2000, p. 99) Competence-based approaches were introduced to business environment around 1970 and from there on their usage as well as development has been rapid. (Draganidis and Mentzas, 2006, p. 52) This most likely is caused by the rapid growth of knowledge and expertise based organizations in the industries.

To understand competence management, term competence needs to be explained. Draganidis and Mentzas (2006, p. 53) describe a competence as a combination of skill and behavior which gives someone the potential to task performance. It can also be seen as a way to put knowledge, know-how and attitudes in practice inside a specific context and environment (Berio and Harzallah, 2005, p. 21). Marrelli (1998, p. 8) on the other hand states, that competencies are measurable human capabilities that are needed for effective work performance. In this thesis competence is used to describe individual’s expertise and skills to perform certain tasks.

Lache (2011, p. 126) presented three levels of competences that can be categorized. These levels are individual, collective and organizational. They are all connected to each other and listed in a figure 4 below from the “smallest” to “largest”.

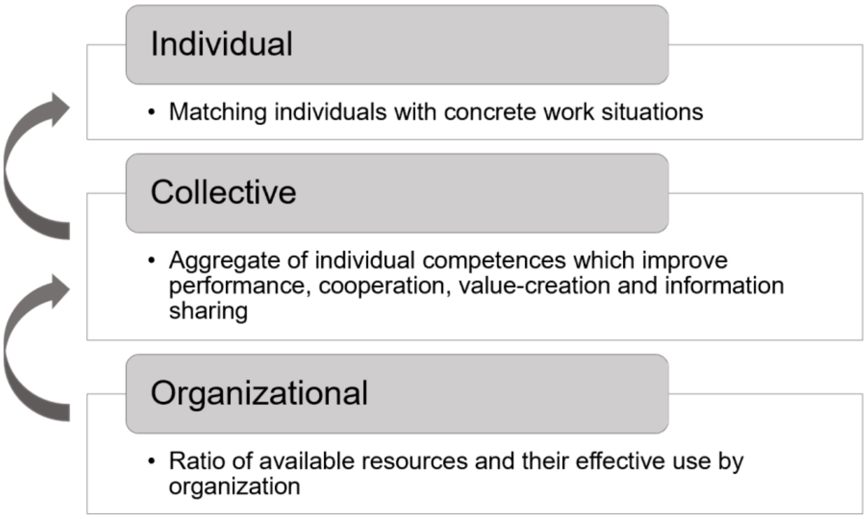

Figure 4. *Three levels of competence (Adapted from Lache, 2011, p. 126)*

Idea of these competence levels are that you have to break the organizational competence into pieces to understand the collective and individual competences lying inside the organization. Organizational competence is the ratio of available resources and their effective use by the organization when it consists of collective competence as aggregate of individual competences which together improve many processes inside the organization (Lache, 2011, p. 126). However, all of the competences are not easily categorized but this model serves as basic foundation for them.

Moving from competencies to managing them, Berio and Harzallah (2005) describe the way organization is managing the competencies of the corporation, the groups and the individuals as competence management. Broadly speaking, the aim is to define, acquire and maintain competencies according to the strategy and objectives of the organization.

Organizations often focus on defining their core competencies – collective knowledge and capabilities that are embedded in them. In literature, core competencies are seen as central determinants of organization’s competitive advantage due their resistance to imitation, key position to customer value and capacity to transform into new business opportunities (Lindgren, Henfridsson and Schultze, 2004, p. 436). Defining and analyzing these core competences is crucial for every organization because through it, organization is more easily able to focus on them and possibly find alternative ways to perform the less critical competences.

Lindgren, Henfridsson and Schultze (2004) state that core competence based view of strategic management is often linked to organizations that are resource-based and whose competitive advantage consist of the valuable, rare, and inimitable resources that they can manage and utilize effectively. When organizational knowledge is in key strategic position this view is well-suited for strategy formulation in knowledge-intensive organizations. (Lindgren, Henfridsson and Schultze, 2004)

In the world where more and more organizations are relying on their knowledge and workforce, competency-based people approaches are rising. Over time, these approaches have proved to be critical tools in many business functions, such as workforce and succession planning and performance appraisal (Draganidis and Mentzas, 2006, p. 52). There has been acknowledged clear benefits of using competence-based systems in various business environments as Marrelli (1998, p. 8) and Draganidis and Mentzas (2006, p. 52) have listed:

- Providing the quick and flexible set up to answer changing customer needs and business situations through competency-based deployment of employees
- Helping to recognize and acquire current and needed skills, knowledge, behaviors and capabilities to meet business demands
- Focusing on the individual and group development plans to eliminate the gap between the competencies requested by a project, job role, or enterprise strategy
- Pushing organizations towards the culture of continuous learning
- Creating opportunities and ways to achieve new knowledge and develop new skills for employees in exchange for their work and commitment

It is important to point out that competence management systems like any other business supporting tool should be used to improve the performance of the organization. Berio and Harzallah (2005, p. 24) point out that there is an explicit link between organization's objectives and competences and this link should be advocated to justify required competences. Other point of their article is that required and acquired competencies should be correctly described and there needs to be direct and robust way to access acquired competences. (Berio and Harzallah, 2005, p. 24) Seems that competence management is becoming widely used framework that enables organizations to make short and long-term plans and optimize decisions regarding of them.

When organization's aim is to move to competence based approach and management, Gilbert and Parlier (2008) have highlighted three principles to take into account:

1. Organization's strategy should provide a vision for addressing customer's needs and demand rather than competences acting as only drivers in projects.

2. By sharing responsibilities and cooperation with various employee groups, teams, unions and trade associations, organization will harmonize the economic efficiency with social one.
3. Engage all the managers and stakeholders in the competence-based approach in order to avoid counterproductive actions and further disruptions in the implementation of a project.

(Gilbert and Parlier, 2008)

As stated in the principles above, it is crucial for organizations to understand that in order to follow competence based approach or management, it all starts from the strategy and actions that support the approach throughout the organization.

3.1.1 Competence life cycle

In order to efficiently utilize and maintain competences, organization needs to be aware of the competence's life cycle and core application areas. Berio and Harzallah (2005) as well as Draganidis and Mentzas (2006) divide competence life cycle to four main phases in figure 5:

Figure 5. *Four phases of competence life cycle*

First phase is to identify and map out competences necessary to successfully fulfill organization's targets that are set through strategy, business plan, objectives and projects requirements as well as work requirements. Purpose is to provide overview of the current and needed competencies for the managers and ease up planning and managing them in real time.

After mapping, assessment of the competencies starts. Aim is to identify and present relationships between employees and required competences and describe how all the skill gaps could be filled. A skill gap analysis is essential to define the number and level of competencies employees hold and number and level of competencies needed for the organization or a project in a certain situation. (Gilbert and Parlier, 2008)

When organization knows which competences their employees possess and what is required, they can move into acquiring of them. Necessary competences may be found inside the organization from different teams or with training employees or these competences could be achieved from buying external resources.

Fourth phase is usage and monitoring of the acquired competences. This phase continuous where the third phase was left. Organization should monitor how competences are used within organization and projects and how the situation is evolving. Based on it, changes to competence mapping and assessment can be made. (Berio and Harzallah, 2005; Draganidis and Mentzas, 2006) These phases set the foundation and process essentials for every organization's competence management and can be modified to more detailed tasks depending on organization structure and strategy.

Hellstro, Kemlin and Malmquist (2000) conducted a case study regarding knowledge and competence management in a large, multinational company called Ericsson. The case study pointed out the importance of strategic management and knowledge management in corporate level but also on the local level. They shifted from the idea where only way to achieve new competences is to hire new employees or source it outside of the organization towards the idea were intensive knowledge and competence sharing as well as training and developing existing competences can fill detected competence gaps. (Hellstro, Kemlin and Malmquist, 2000) This shows that with competence-based approach, organization will be more aware of their existing knowledge and competences. With efficient management, processes and transparent communication it can be a huge competitive advantage in any business environment.

3.2 Strategic right-sourcing

Sourcing has grown from local activity due to geographical restrictions to global phenomenon since 1990's. Prior, organizations competed based on the assets they owned which is nowadays changing to more flexible and editable basis through sourcing. Critical problem for the organizations in these days is to figure out how to control and utilize their crucial competences and capabilities in the most efficient way. (Gottfredson, Puryear and Phillips, 2005, p. 133) A significant accelerator was the growth of IT and possibilities it created around automation and planning of assets and humans. Internet has also opened up the employee markets and removed the geographical restrictions due the ability to work from every corner of the world in same projects. (Van der Ploeg, Dijkstra and Gøtze, 2013) Digitalization and globalization have had enormous impact to sourcing equation in especially consult and expert businesses.

It is crucial to remember, that sourcing is not synonymous with outsourcing. Sourcing should optimize the use of resources, capital, time and energy with considers of all organization's options – both internal and external. Sourcing equation also includes balancing with risks, value and legal rights. (Corrall, 2013; Rafati and Poels, 2014) As Gottfredson, Puryear and Phillips (2005, p. 132) describe, sourcing is developing into a process of organizing and adjusting the value chains. Crucial part in this process is to identify the skill gap withing organization's own individuals and core competencies. After the identification, actual sourcing comes to the picture as procuring of these needed competences. (Van der Ploeg, Dijkstra and Gøtze, 2013) To describe this complex process, term right-sourcing is often used in literature.

Strategic sourcing decisions must not be solely based on operational metrics such as cost, quality, and delivery, but also incorporate strategic dimensions and capabilities of suppliers such as emphasis on quality management practices, process capabilities, management practices, design and development capabilities, and cost reduction capabilities into the decision-making process. These supplier attributes provide information to organization's managers on the infrastructure and practices employed by the suppliers, which are key elements for long-term strategic relationships. (Talluri and Narasimhan, 2004, p. 236) When on many occasions organizations focus on the profitability and time reduction possibilities that sourcing brings to the table, focus should also be co-operational and communicational factors in order to create and maintain long-lasting partnerships. Loftin, Lynch and Calhoun (2011) also remind that focusing on possible supplier's capabilities and portfolios is crucial because in the future, firm's needs and projects may change and then it is critical to have relationships with suppliers that can meet these new requirements. Gottfredson, Puryear and Phillips (2005, p. 135) also continue with this subject and highlight the importance of identifying future scenarios of needed capabilities and competences. At the end, the strongest competitive advantage for the organization might be its ability to rapidly respond to customer's needs and competitors offerings. (Gottfredson, Puryear and Phillips, 2005, p. 135) To fill in new needs, both long- and short-term relationships are needed.

Organization's sourcing strategy should reflect organization's own needs, competitive advantages and core competences in its own business context as said both in present and for the future. A holistic approach to sourcing strategy brings economics of scale, avoid duplication and support continuous learning in the enterprise-wide view. (Corrall, 2013) Strategic right-souring provides great focus on organization's core activities and reduction in functional scope of the organization. Jennings (2002) and Corrall (2013) point out that often the complementary use of external resources can provide a chance for the organization for enhanced leverage of organization's competitive advantage and core activities as well as released resources for development and management.

On the other hand Loftin, Lynch and Calhoun (2011) argue that the idea of strategic sourcing is too much rooted in the idea that organization needs to have set of capabilities determined and ready to successfully perform its strategy. When transferring ideas to practice, it is often noticed that objectives and everyday tasks do not always go hand in hand. Decisions are made gradually and they might lead to detrimental effects in processes. (Loftin, Lynch and Calhoun, 2011) This is connected to Brannemo's (2006, p. 548) advice, that it is essential that organizations understand both advantages and disadvantages of sourcing since it is just employees and their skills which are responsible for the result of the decisions. Any sourcing decision should start with the evaluation of organization’s strategic needs which lead the way to developing a blueprint to cover all the aspects of a decision (Corrall, 2013). This leads the way to the importance of frameworks and common protocols as one tool of strategic sourcing.

Because situations where organization needs to assess right-sourcing possibilities are complex and multi-criteria, decision-making is often hard and made only with personal knowledge and opinions of individuals. Chen and Wang (2009) and Corrall (2013) emphasize the need of common protocols and analytical methods, such as frameworks or mathematical and statistical models in uncertain decision-making situations. In order to these constructs, models and processes to be effective and sensible to implement into decision-makers daily tasks, Chen and Wang (2009) described nine attributes which should be scrutinized and covered in them. These attributes are presented in Figure 6 below:

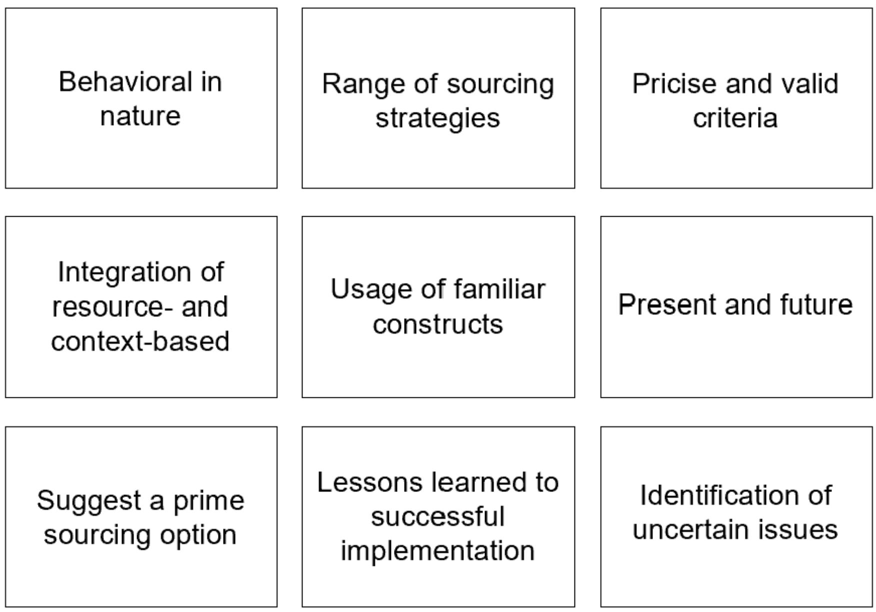

Figure 6. *Attributes for efficient strategic sourcing tool*

First, as Chen and Wang (2009) presented, tool should be behavioral in nature such as easy to approach but precise enough to support multi-stage decisions which involve analysis of the situation, assessment of the alternatives and possible factors of implementation. Tool needs to present wide range of sourcing strategies and encourage for right-sourcing between various options instead of just the offering of insourcing or outsourcing. Third attribute is to offer detailed and valid criteria to support decision-making and not just vague, high-level boundaries and lines. It sets concrete lines for the decisions and unify them organization-wide. Second row starts with the mention about integration of both resource- and context-based viewpoints on the tool. Decisions need to be made based on the capabilities of the organization but also the context and environment affect every strategic sourcing decision. Another important aspect is to use some familiar and already known constructs, so decision-makers feel comfortable and are more open to use these tools in their tasks. The sixth attribute is to combine both present and future roles of the activity in the consideration, when analyzing the sourcing possibilities of these activities. (Chen and Wang, 2009) These attributes should be used in the assessment and evaluation stages of the tool to help out transparent and logical evaluation and assessment of the possible suppliers.

Chen and Wang (2009) also highlight that the tool should suggest a primary sourcing option as a strategy to move forward and provide some sort of “lessons learned” to implement chosen strategy efficiently. Last attribute includes other relevant issues or areas that this tool did not cover but still should be considered such as certain consequences of selected sourcing strategy. (Chen and Wang, 2009) This list of attributes works well as an foundation for every strategic sourcing decision, not just for the development of the sourcing tools. Later, in the chapter four, actual decision-making process and assessment of organization capabilities as well as theoretical frameworks for sourcing are presented in more detailed manner to deepen the understanding of the subject.

3.2.1 Value co-creation through sourcing

Value creation is essential for all organizations by ensuring their legitimacy and acting as foundation for all business (Kuula and Niemi, 2016). One of the main purposes for the organization is to create value for their customers. By doing that, they also create value for themselves and other stakeholders. Widely known and used concept in literature to illustrate various categories of value is Porter's (1998) value chain model. Model is designed for production and manufacturing industries as well as other industries where goods are moved. Model consists of primary and support activities which covers the supply chain from raw materials to products as well as organization's support structures such as procurement, human resource management and organization's infrastructure (Porter, 1998). However, this model can be modified and used in many other industries such as knowledge and expertise intensive businesses to identify essential value streams of the processes.

Value can be divided into activities described earlier, but Pfeffer and Salancik (1978) remind that the price of the services and products which customers are willing to pay can be defined and measured as the value the organization is able to create. For it to be positive and organization to be able to create margin, created value needs to surpass the costs of producing the end product or service. Value-wise, the competitive advantage may be achieved by producing the product or service at lower costs or finding something to differentiate organization from its competitors. (Pfeffer and Salancik, 1978) This leads to competitive advantage creation through innovative and nurtured relationships with organization and its suppliers.

Many organizations focus on value transactions the most because there created value becomes measurable, visible and easier to handle. This leads to overlooking of the existing suppliers and relationships with them as well as underestimation of their importance to the whole organization. (Van der Ploeg, Dijkstra and Gøtze, 2013) In today's modern and networked business environment, every organization should emphasize their relationships with customers, partners and other stakeholders and treat them as a foundation for profitable business. Dobrzykowski, Tran and Tarafdar (2010) highlighted that in today's literature understanding of the collaborative value created with organization's relationships is widely defined, but literature still focus mainly on frameworks and theory for inter-organization value creation (Dobrzykowski, Tran and Tarafdar, 2010). Gradually, organizations and decision-makers are paying more attention to the collaborative value creation angle in organizations strategies and visions.

All industries have to identify current needs of the customers' but also pay attention to future and upcoming demands in order to deliver right competences at the right time. Organizations need to expand and change their service portfolio based on future needs and employee's expertise and competences. When organization take into account their suppliers and partners competences, possible value co-creation with them comes to the picture to achieve competitive advantage for both parties. (Kuula and Niemi, 2016) Value co-creation can be described in many ways depending on the literature. Dobrzykowski, Tran and Tarafdar (2010) identify it as cooperation between organization and its customers or suppliers which creates competitive advantage, differentiation and satisfy the needs of customers. In addition, Dobrzykowski, Tran and Tarafdar (2010) as well as Kuula and Niemi (2016) present value co-creation as part of the earlier portrayed Porter's value chain model as suppliers and their potential are placed inside the model rather than as separate actors outside of it. Therefore, suppliers and their actions can be seen as one component of the value stream for certain project or delivery (Kuula and Niemi, 2016). With good synergy and interactions between parties, suppliers can participate greatly in whole value creation process and delivery in every situation and project.

Having multiple beneficial and long-term partnerships and relations brings also their challenges to the game. Möller and Törrönen (2003) remind that when number or parties in organization's network expand, interactions and innovation with every partner requires even more time and detailed monitoring as well as control. This needs to be acknowledged on every level of the organization. On the other hand, Dobrzykowski, Tran and Tarafdar (2010) highlight that organization should not try to co-create value with every supplier and partner due to high requirements of actually makeing it beneficial. Instead focus should be on few trustworthy and valuable partnerships where both of the parties are willing to work together in complimentary way to find new, innovate ways to perform together and share competences. (Dobrzykowski, Tran and Tarafdar, 2010) As outlined earlier, organizations usually need both short- and long-term suppliers to balance out and react rapidly to possible industry changes. However, for control and management, keeping the supplier number minimal flattens the organization's network and saves time for critical development of the existing partnerships.

What is the purpose of trying to co-create value with organization's supplier's? Lei and Slocum (1992), Brannemo (2006) as well as Van der Ploeg, Dijkstra and Gøtze (2013) highlight various areas where value co-creation has a positive effect for both parties. These kinds of deeper relationships enable both parties to focus on their core competencies and strengthen their portfolio with other's supportive capabilities. It opens new market areas and potential customers and tendering options as well as consolidate their positions in industry compared to rivals. Innovative and on-going development work and experimental new business ideas increase significantly both parties competitive advantage. (Lei and Slocum, 1992; Brannemo, 2006; Van der Ploeg, Dijkstra and Gøtze, 2013) Crucial aspect for organizations is to learn how to make use of each other's portfolios, competences and technologies in most beneficial way without exploiting too much critical information or deskilling own expertise (Lei and Slocum, 1992). Value co-creation is ultimately not about revealing organizations' skills and knowledge but creating something needed which benefits both parties.

One example of the new level in partnerships are alliances. Simonin (2004) is describing them as consortiums of a client and one or more implementers, where the main difference for traditional deliveries is that parties have common goals for the benefit of the project. The parties are jointly responsible for planning and implementation but also share the risks and benefits of the project. These types of partnerships are used widely for example in construction businesses. (Simonin, 2004) In alliances, open communication and knowledge sharing might occur as a problem and need to be executed based on mutual agreements to ensure smooth cooperation between all parties. On the other hand, Lei and Slocum (1992) remind that in many alliance situations, organizations do not treat them as part of their business strategy and are only there to find short-term financial benefits. Their objectives are not in learning from their partners about the skills, technologies or knowledge in these environments or raising competitive advantage through them. (Lei and Slocum, 1992) With right mindset and attitude towards these partnerships, organizations might realize that successful alliance partners are also able to help to achieve their objectives eventually.

3.2.2 Supplier's value co-creation potential

The strategic importance and position of the suppliers and the relationships with them in customer's business strategy makes it crucial to identify and analyze supplier's value creation potential. However, the process of evaluating actual value is multi-dimensional and measuring both financial and non-financial aspects is difficult. This is because supplier's potential consists partly of tacit information and expertise and the future potential of the supplier is depending on many aspects such as technologies and relationships with other partners. (Möller and Törrönen, 2003) In order to find some answers to this question and organizations to be able to analyze and measure the potential of supplier-customer relationship, originally Pfeffer and Salancik (1978) and later on Möller and Törrönen (2003) presented the idea to review supplier's value through three functions in figure 7: efficiency, effectiveness and network.

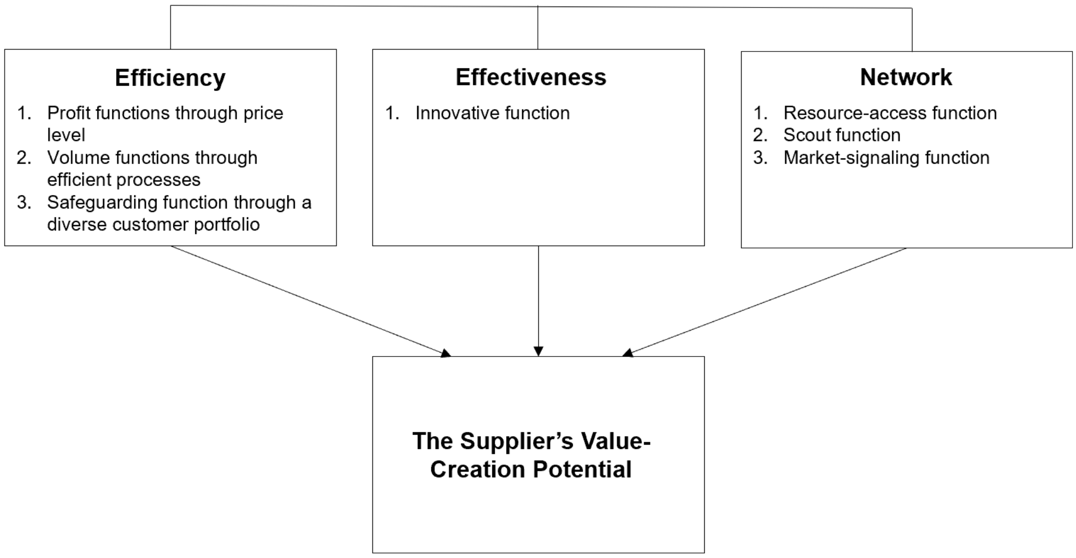

Figure 7. *Functions of supplier's value-creation potential (Adapted from Möller and Törrönen, 2003, p. 112)*

Efficiency of supplier is shown in the way they use their existing resources and what they get out of them. When efficiency is good, it transforms to decreased transaction or production costs through price or volume levels. Better efficiency can be reached with fine-tuning all the protocols and processes of both parties as well as between them. The effectiveness on the other hand refers to supplier's capacity to innovate and provide ideas and solutions beyond the existing need or offer. Lastly, network-function can be divided into three aspects: resource access, scout and market-signaling function. Resource access, as the name implies, refers to all the network connections that supplier have. These connections might offer links to other parties who have relevant resources for current or future needs. The scout function is about the information that supplier can provide about the market and the environment. Market-signaling potential is high if the supplier is valued and partnership with them might create a positive signal to other network parties. (Pfeffer and Salancik, 1978; Möller and Törrönen, 2003) Usually all described functions are not considered one by one but instead they are tied up with each other and need to be reviewed as a unit.

In order for the organization to understand partnership's dynamic in value co-creation, they also need to identify the influential capabilities of it. Chang, Chen and Huang (2015) describe them as two partner's ability to perform together, share and rearrange their competences and resources to provide best possible experience for both of their customers. They divide these capabilities into three categories to serve as different actions: information exchange, relationship-specific knowledge stores and joint actions. To start from information exchange, it is defined as partner's capability to share efficiently expertise with each other and linked to this category, relationship-specific knowledge stores are described as “banks” where parties keep and maintain their inter-organizational knowledge. Lastly, joint actions can be identified as capabilities where partners strive towards decided objectives and discuss the relational issues regarding them. (Chang, Chen and Huang, 2015) Analyzing these three categories gives organization another tool to estimate partnership’s current and future potential in value creation.

3.3 External resources in knowledge and project based organizations

Sourcing in knowledge and project intensive organizations has increasingly moved towards more strategic approach due to modern and continuously changing competitive landscape. Organizations are challenged to survive in an environment where costs need to be reduced, expertise and human capital are even more crucial and organization needs to constantly find out ways to differentiate from its competitors. (Matusik and Hill, 1998) These aspects result different indications for markets such as dissolution of market areas, excessive price competition and decreased lifespan of technologies and products.

To answer these new challenges, knowledge and project based organizations are using various segments of employees. Organizations have normal full-time employees but in addition, they are increasingly using more external resources and employees as temporary or subcontract employees to meet customer demands in most efficient and profitable way (Lepak and Snell, 1999). Atkinson (1984) has presented the concept of flexible firm which has been widely cited in literature afterwards. It discusses that organizations use the segmentation between employee categories and contracts in order to create flexibility in two categories: functional and numerical flexibility. When the first is created with high expertise internal employees with full-time contracts, the latter is enabled with external contingent workers. (Atkinson, 1984) However, newer articles have disapproved this model in knowledge intensive organizations. Ruiner, Wilkens and Küpper (2013) for example highlight that contingent workers are usually experts in their areas and therefore bring both functional and numerical flexibility to the table. With external resources, organizations are trying to increase specialization in needed areas and build both functional and numerical knowledge buffer to ensure project deliveries and wider competence portfolio. (Ruiner, Wilkens and Küpper, 2013) That is why segmentation based on functional and numerical flexibility is not valid or at least as strict in knowledge intensive industries as for example in manufacturing industries.

When comparing to “traditional” manufacturing industries, these human resource management decisions in knowledge intensive industries can also be broken into make-or-buy decision. Organizations need to decide if they want to use an internal employee and build their knowledge and skill base with training for certain areas, hire a completely new internal employee that has needed competences or if they want to use external resources to outsource some function or parts of the project to subcontractors or so called independent contractors and consultants. (Matusik and Hill, 1998; Lepak and Snell, 1999) From strategic point of view, it is not always ideal to split these decisions into “either/or” situations. Employment types or segments have nowadays many various possibilities and number of them is growing, which makes decision-making even more complex, situational and related to organizational asset management (Lepak and Snell, 1999). That is why these decisions could be described more as make and buy ones.

As discussed in earlier chapters, using external resources can bring many beneficial aspects to organization’s cost structure, product and strategic portfolios, flexibility and core competences. Matusik and Hill (1998) highlight that especially in knowledge and expertise intensive organizations, using contingent work can both decrease costs and cost structure and same time add more flexibility and quick adaptation to changing demands and environmental shifts. However, because these organizations are adding competitive advantage through human capital, many situation-specified aspects need to be taken into account to get these humans to cooperate in best possible way and utilize their expertise efficiently.

4. THEORETICAL FRAMEWORKS FOR SOURCING

This chapter describes the decision-making chain behind right-sourcing based on founded literature and theories. After that, three different theoretical sourcing frameworks from Fill and Visser (2000), Mcivor (2000) and Cánez, Platts and Probert, (2000) are presented to form a understanding of existing models and their contents. These frameworks are originally developed mostly for manufacturing and supply chain sourcing but comprehending the principals of them also defines a core for knowledge and expertise sourcing.

4.1 Decision-making chain behind right-sourcing

Make-or-buy decision is a basic management question that every organization is considering on a daily basis. If organization decides to make, it will perform the task internally within other teams or parts of the organization. If the decision is to buy, organization will contract with other organization. In both cases, it is important to know and define the decision standards in order to understand decision-making behind sourcing. (Fill and Visser, 2000, p. 43)

It is quite clear, based on sociocognitive theory, that humans make rather rational decisions but when it comes to organizations, decision-making might not be as rational or easy. Sourcing decisions are occasions for sensemaking. Organizations more often search answers from routines and scripts which are developed through individual knowledge and past actions – successes and mistakes. (Shook *et al.*, 2009, p. 6) Even though strategic implications of sourcing are discussed for many years, sourcing decisions are usually made based on individual knowledge and organizations lack systematic evaluation of decisions and reasons for certain outcome. (Brannemo, 2006, pp. 548–549) Sourcing decisions are thought as complex and hard, and many organizations are lacking organization wide frameworks or models to help or create a foundation for these crucial decisions.

Loftin, Lynch and Calhoun (2011) have created a basic decision logic to develop a sourcing canvas for the organization (Figure 8). It can be used in any business areas and modified to answer specific business needs that organization have because of the neutral approach. Logic starts from building a capability model. Model will organize the capabilities that organization have in very structured way so that they are easily visible based on every area or team. When capability model is built with time and expertise it will serve as basis for structured learning, efficient sourcing and accelerated improvements.

Second step is to assess capability value contribution. Every capability contributes differently and should be handled accordingly. Loftin, Lynch and Calhoun (2011) divided capabilities in four categories: advantage, strategic support, essential and business necessity. These are seen in a figure 8 below.

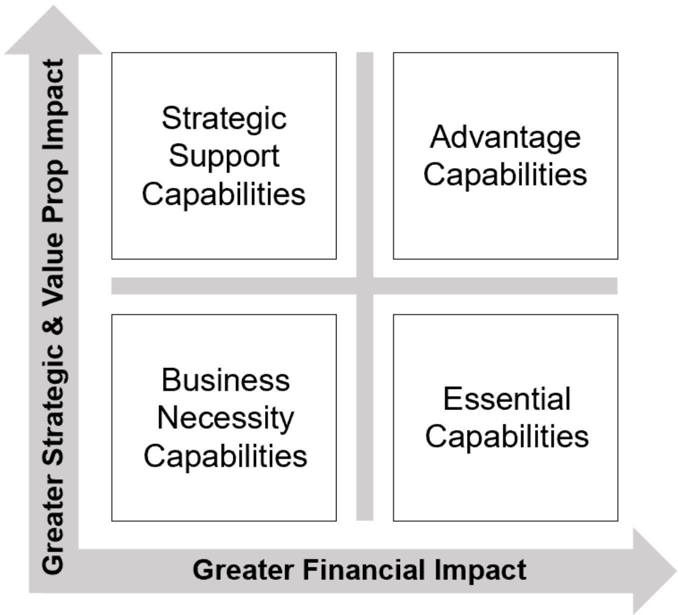

Figure 8. *Capability value contribution (Adapted from Loftin, Lynch and Calhoun, 2011, p. 7)*

Starting from the upper right corner, capabilities that can be categorized as advantages are creating competitive advantage to organization and need to be performed at top-level. Strategic support capabilities are work that can be seen enabling competitive advantages to happen. On the bottom right corner are the essential capabilities that may not create huge amounts of direct customer value but contribute to organization's business focus and financials. Last square is about business necessity capabilities. They need to be performed at industry parity below competitors' cost in order to contribute value to organization. These are the capabilities that might be candidates to sourcing.

After evaluating capability values, the business case needs to be built and sourcing objectives determined. With clear business case, it is easier to list all the capabilities related to it and after that their sourcing objectives. Creating clarity to setting objectives and agreeing those with all the stakeholders guide process to right path from the start. Fourth step is to determine the type of knowledge required by target capability. What is needed to perform the capability at the highest level? Important aspect is to identify unique organizational knowledge and make sure that any advantages or crucial information is not moving from the organization to third parties.

Fifth step is to form a sourcing canvas and sixth to review it. Competences required together with capability value contribution lay the foundation for it. Capabilities that create competitive advantage and are require unique or proprietary knowledge should always be insourced. On the other hand, business necessity capabilities that don't fit neither of those categories need to be sourced. When strategic support or essential capabilities are not core activities, have not proprietary and the knowledge is sharable they can be strategically sourced to achieve and maintain long-lasting partnerships.

Seventh step is assessing continuously enterprise portfolio and sourcing opportunities withing organization. Sourcing canvas provides a great tool to look all the capabilities and their place in organization in order to create a bigger picture in a holistic way and develop organization's sourcing strategy.

In the next few chapters, three different sourcing frameworks are introduced and described more detailed. They provide different ways to see souring decisions and present numerous attributes to take into consideration behind every decision.

4.2 Framework 1 - A simple approach to make or buy decision

The first framework is a simple model which describes the essential process and criteria of outsourcing. Model is developed by Fill and Visser (2000) and it is presented in article *"The outsourcing dilemma: a composite approach to the make or buy decision"*. Developed framework is designed for manufacturing industries but there are parts that are relevant also in other industries.

As seen in a figure 9 below, framework presents three key categories of factors driving the sourcing decision: contextual factors, strategy and structure related factors and transactions costs. Contextual factors can be internal and external ones and are described as beliefs of the factors that are associated to the process that might be outsourced such as stability of employment, manageability or confidentiality. Second category is strategy and structure related factors. This covers factors from organization's strategies and visions as well as aspects from organizational structure that affect the decision-making in certain situations.

Last category is the costs associated with the process under the eye. Costs are usually difficult to assess and to review them more easily, they can be divided in to two: production costs and coordination or transaction costs. Often production costs might be lowered when process is outsourced but coordination costs increased because customer needs to monitor supplier’s actions. These costs become even higher if customer has multiple alternative suppliers. To lower coordination costs, attention needs to be paid to contracts and details in them to avoid extra costs related coordination.

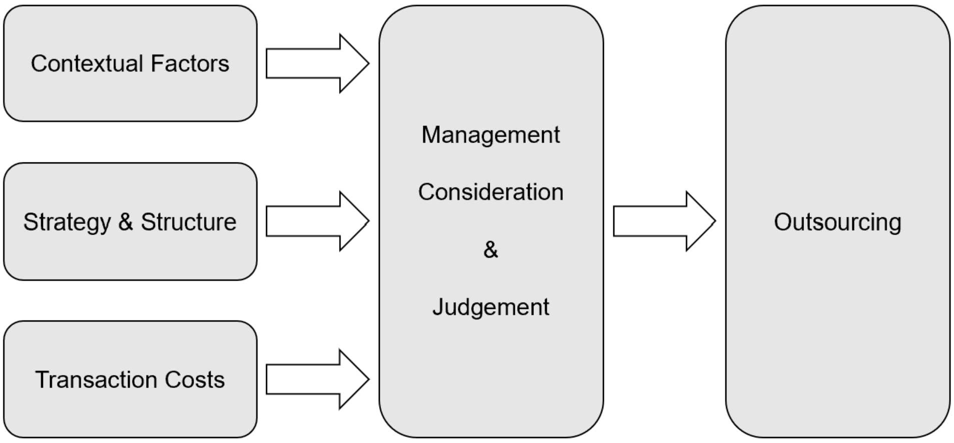

Figure 9. *Outsourcing decision framework (Adapted from Fill and Visser, 2000, p. 46)*

After careful consideration of these three categories and their impact, organization should think through the management questions related to outsourcing and consider up- and downfalls of the decision before making the final call. This rather simple model consist of three independent categories and linking elements between them might need to be added also to build more comprehensive picture of the situation.

For the topic of this master’s thesis, model can be used to perceive the current situation of the certain process or service in higher level. All three categories are relevant in IT or consultancy business and need to be considered. Transaction costs are formed in consultancy business differently than for example in manufacturing industry, but same elements and ideas apply also there. However, process model of the first framework does not provide detailed information or help in actual decision-making because of the simplicity and limited amount of information that model contains.

4.3 Framework 2 – A practical approach with decision tree

Second framework presents a more detailed process model and help for decision-making during the whole evaluation process through a decision tree. Framework is introduced by Mcivor (2000) in article *“A practical framework for understanding the out-*

sourcing process". Framework focuses more on core competence and value chain thinking and provides outcomes for every step of the process. Figure 10 shows four stages that tie the model together and grey circles indicate whether process or task should be performed internally or outsourced.

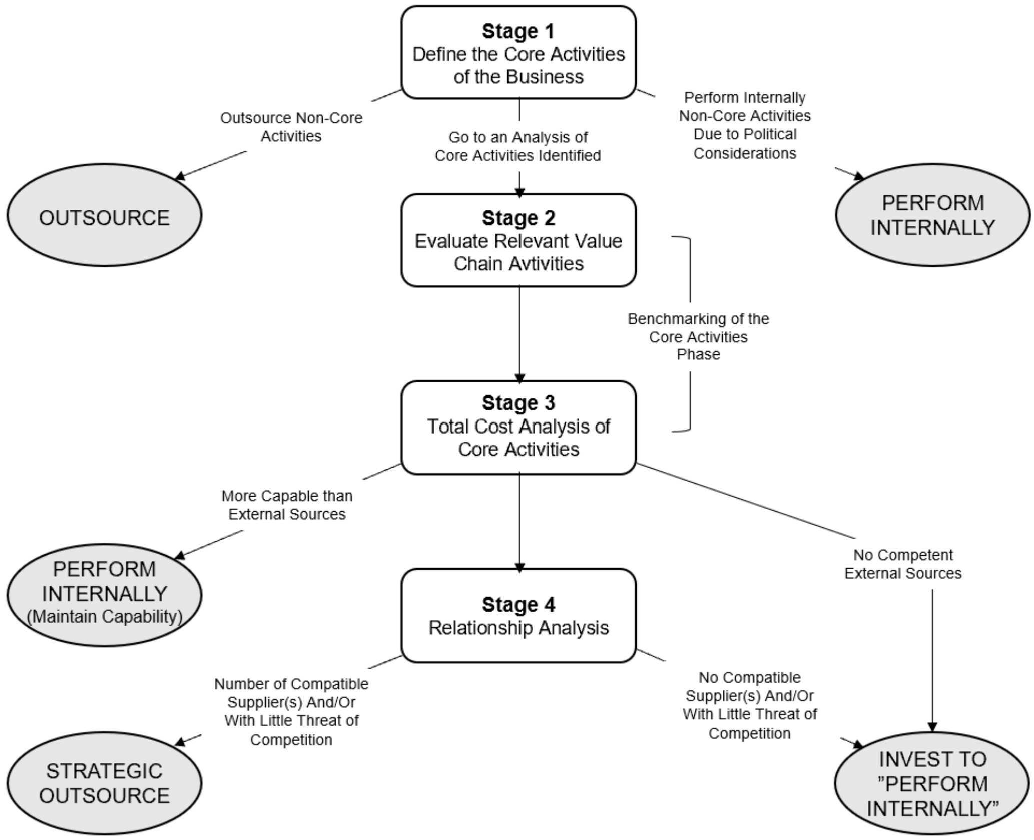

Figure 10. *A framework for evaluating the outsourcing decision (Adapted from Mcivor, 2000, p. 29*)

Framework starts with defining the core competencies of the organization. As opened up earlier in theory sections, core competence analysis is crucial in order to define activities that need to be performed in-house due to their critical place in organization or knowledge they require to successfully serve the needs of the customers. Activities that are non-core could typically be outsourced, but organization needs to consider if some of them should however be performed internally for example due to political considerations or securing competitive advantage.

Second and third stage are related to each other. Purpose of these stages are to analyze organization's competencies in these defined core activities in relation to external resources. Mcivor (2000) suggests doing this with two different analysis:

1. Evaluating the relevant value chain objectives
2. Total cost analysis of the core activities

First step is to benchmark each defined core-element against capabilities of all the external suppliers for the specific activity. It allows organization to look beyond the products or services objectively to identify and evaluate operating and management skills that produce the product or service. When evaluating organization's value-chain in-depth, benchmarking produces relevant external information to validate organization's performance or about competitor's capabilities which can be as important to know as their market shares.

The third stage, total cost analysis of the core activities, includes calculations of all the actual and potential costs linked to sourcing a certain activity internally or externally. Calculations need to focus on estimating not only purchasing costs but all the other cost included in performing a certain activity. With these two analyses, organization should have formed an insight about how current practices are executed and how costs of each activity are formed. Results of these analysis should guide the organization towards appropriate actions.

If organization decides to move towards outsourcing of specific "core" activities, then the process continues to stage four – relationship analysis. Organization should carefully consider what is the objective of the relationship with other the organization or supplier. It is crucial to maintain the knowledge that enables organizational competitive advantage and future growth within organization without revealing it to suppliers. Often it is recommended that goal is to build long-lasting partnership type of relationship where both organizations gain from each other and develop the relationship mutually. However, to point out possible disadvantages, organization might be more flexible if it is not locked into long term relationship if the supplier does not meet the standards or follow for example latest technology innovations in the future. With relationship analysis, organization will decide what kind of sourcing arrangement will bring the most benefits for them and weigh all possible options to find the most suitable ones.

This framework brings more detailed overview and analysis to support decision-making through sourcing. Framework is not developed for a certain industry or business area, so it is versatile and suitable also for IT and consultancy businesses. Often outsourcing or subcontracting is linked to certain parts of the project or continuous services, so "core activities" or competence analysis needs to be performed differently than if organization is looking forward to outsource whole warehousing or delivery function for example. Value chain and total cost analysis are relevant and important for subcontracting and when organization's goal is to increase value creation through more efficient sourcing, relationship analysis is mandatory for successful partnerships.

4.4 Framework 3 – A detailed approach with internal and external factors

The third and final reference framework is the most detailed one and focuses on pointing out internal and external factors which affect decision-making rather than creating a ready path for final decision. Cánez, Platts and Probert, (2000) developed the framework based on literature and practice through multiple interviews with different stakeholders from various industries and presented it in article *"Developing a framework for make-or-buy decisions*". Its aim is to provide a representation of why make-or-buy decisions are made and what dimensions needs to be studied before making that decision. As seen in figure 11 the process starts from triggers that external environment brings. These can be anything from economical to social or political elements as well as triggers related to competition or potential suppliers. Possible reasons to answer question "Why?" are also listed on top of the figure.

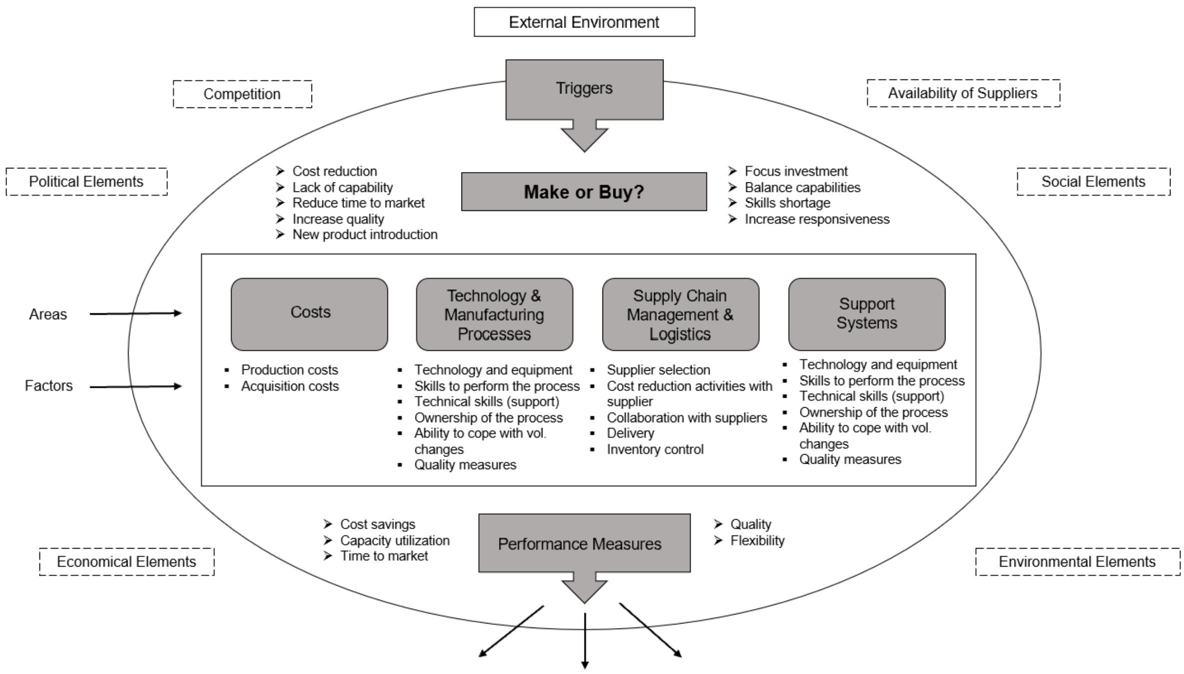

Figure 11. *Make-or-buy framework for sourcing (Adapted from Cánez, Platts and Probert, 2000, p. 1322)*

Inside a rectangle in the middle of the model can be seen four categories where framework clusters relevant factors for make-or-buy decision: costs, technology and manufacturing processes, supply chain management and logistics, and support systems. Under each category, there are several factors listed that need to be thought out regarding the decision. Purpose of these lists are to provide criteria to evaluate together with performance measures the extent to which the goals suggested by triggers are achieved. Depending on the triggers for the make-or-buy situation, there can be found one or two main performance measures, for example for trigger "Increase responsiveness" key performance measure could be "Flexibility". However, other measures should not be forgotten or overlooked, because situation needs to be tackled from many sides. At the bottom of the figure, arrows are indicating the fact that business situations are changing and moving constantly in external environment and decisions made from one process might trigger another make-or-buy question.

4.5 Summary of the frameworks

All the presented frameworks focus on different levels and contents seen from the detailed descriptions. None of them was directly used for sourcing certain knowledge as a competence but rather for manufacturing and supply businesses. However, there are many aspects that have influence on decision-making despite the business area and can be used also in this master's thesis as highlighted next.

When comparing the frameworks and their contents, cost calculations are included in all of them. Cost analysis and calculations are crucial foundation for every sourcing decision. Organization wants to have certain margins and profitability for every outsourcing or subcontracting decision and due that cost calculations needs to be part of all frameworks for sourcing. When sourcing knowledge and specific competences, competence analysis and defining core competences are naturally part of the framework. In these three frameworks, core competences were only highlighted in the second one.

To alleviate decision-making, benchmarking is commonly used to compare different options and create bigger picture of the context. That is something that can be transferred from manufacturing and supply chain sourcing to competence and knowledge one. Framework's 2 and 3 used that as one stage of their processes.

All of these parts described have to be tied up to organization's strategy. If sourcing is not part of the strategy, it will be a separate area and for example value creation through it becomes harder. As highlighted in frameworks 1 and 2, strategies set guidelines for sourcing and link it to organization's other activities and visions for the future.

Even though all of the three frameworks are usable, they provide a limited vision for the sourcing situation. They do not present a sufficiently wide range of options or attributes to consider and as seen, they all have different emphasis. In addition, they do not mention the importance of context and organization's already gathered documents or knowledge which could be combined with the process that framework presents. These frameworks can be definitely used for the foundation when the new model is developed for this master’s thesis and despite them being fragmented, they include important aspects and steps for every sourcing framework.

5. EMPIRICAL STUDY

This master thesis is commissioned by Enfo Oyj. Enfo is a large Nordic based IT-company aiming to enable customers' data-driven business transformation with more than 900 employees and 55 years of experience in the industry. Enfo is specialized in information management and applications, analytics as well as data integrations and platforms to name a few. Enfo operates in multiple industries and offers consultancy services, IT outsourcing, partnerships in cross platform environments and development, management and integration of applications. (Enfo 2020) Author has been working in the company for four months as a Junior SAP Consultant before starting the master's thesis project. All the interviews are made internally, and interviewees are Enfo's employees from both Finland and Sweden.

5.1 Interviews

Interviews are one way to gather qualitative information to support and grow research around the research topic. Interviews focus on the contents of thought and aims to gather material that allows credible conclusions to be drawn about the phenomenon under research. It has to be remembered that the material gathered through interviewees is a subjective, personal interpretation of the subjects, events, and phenomena covered by the interview by the individuals selected for the sample. (Juuti and Puusa, 2020) Researcher makes own analysis out of these interviews and therefore final analysis presented in the discussion has researcher's own voice and is not a straight conversion to interviews.

In this research, interviews are identified as qualitative and semi-structured. Semi-structured interviews consist of pre-defined pattern of questions, but require open answers from interviewees (Saunders, Lewis and Thornhill, 2019; Juuti and Puusa, 2020). Advantage of semi-structured interviews is that researcher get vision from every interviewee to pre-defined topics and questions but with interviewee's own words (Juuti and Puusa, 2020). It lefts open the possibility that there might raise ideas or opinions by interviewee that interviewer has not been thought of before the interview. At the same time interview follows planned route and makes sure that all the defined areas are covered, and conversation remains around wanted topics.

Interviews for this master's thesis were executed via Teams conferencing tool due to remote work situation and because half of the interviewees were located in Sweden. Semi-structured interviews are conversation-like and it is recommended that they are recorded to ensure that interviewer can focus on listening, guiding interview forward and creating open and trustworthy environment to every interviewee (Saunders, Lewis and Thornhill, 2019). Notes can be made afterwards based on recordings like in this research. Because interviews were executed anonymously, all interviews were recorded and after analyzing the material, recordings were deleted.

5.1.1 Sample design and evaluation

The purpose of this master's thesis is to focus on right-sourcing and subcontracting processes and standardization of them internally, due to which interviewees were also selected among Enfo employees. Sampling technique used in this research is purposive sampling. It enables researcher to use judgement to select cases that might have the most understanding of the topic and can meet the interview objectives. It is also highly suitable for small sample sizes. (Saunders, Lewis and Thornhill, 2019, p. 321) However, purposive samples are not statistically representative of the target population due to picking the most informative cases for the study.

For this research, six Enfo employees were interviewed. All of them have background from handling external resources and are also doing it in their current position at Enfo. Through interviews, current knowledge and ways of doing things can be perceived and potential ideas and visions for future collected directly from people working with these topics. Supervisor of this master's thesis from the case organization, Tomi Koskinen, helped to identify potential cases inside Enfo and contacted all of them together first before researcher contacted them one by one later. Interviewees were business managers, team leaders and head of business units at Enfo. Important was also to get interviewees from both Finland and Sweden, so answers and practicalities could be comparable to find possible differences and similarities between countries.

Interviewees are presented in the Table 1 by ID number, role in case organization and country in order to ease up the following of the quotes in coming chapters.

Table 1. *Research interviewees*

ID	Role	Country
H1	Business Manager	Finland
H2	Senior Vice President	Finland
H3	Director	Finland
H4	Head of Integration Management	Sweden
H5	Senior Vice President	Sweden
H6	Manager	Sweden

Interviewees' anonymity was preferred to remain, but to get more insights and reliability to quotes and opinions presented later on, role of the each interviewee is presented.

5.1.2 Interview structure and implementation

All the interviewees were first contacted via email together where background of the topic and reason for the interviews were described. After that interviewees were individually contacted one by one and the suitable date and time for the interview were arranged mutually. Interview structure and questions were sent to every interviewee well beforehand so that they were able to read questions through and prepare themselves and for the interview. Interview questions were written both in Finnish and English and depending on the interviewee one of the structures was sent to them. Interviews were executed within 2,5 weeks and the planned duration of one hour was sufficient to every interview.

Interview structure and questions are presented in Appendix A. Questions were same for all the interviewees but translated in Finnish for the Finnish interviewees. The structure of the interview consists of three areas:

1. Background questions
2. Current state of right-sourcing and subcontracting process

3. Challenges and improvement ideas

First two questions are background questions related to interviewee's job history in Enfo and how familiar interviewee is with sourcing external resources. Third question is set to awaken the interviewee to think why subcontracting is used in Enfo and what is the value it can bring to the table. It leads the way to second part of the interview.

The purpose of questions number 4 – 12 is to form a picture of current state of subcontracting process at Enfo. This area includes aspects found from the theory and their aim is to get information from the start of the procurement process to the end of it. This part has questions about the decision-making process, factors that needs to be taken into account when making a buying decision, risks, continual improvement and validation of subcontracting work as well as what internal or external information is currently used to make the decisions.

After the current state of the process is discussed, last part (questions 13 – 2) of the interview covers challenges and improvement ideas that interviewee may have in mind. Area includes questions also related to contracts, documentation, process maintenance and possible framework. Purpose is that the interviewee can bring up big or small details of the process that needs to be reconsidered or changed in order for bigger picture to run smoothly and efficiently. To summarize, every question designed for the interview is based on the aspects found in the theoretical part of the research and aims to contribute to the framework and improvement ideas discussed later in the thesis.

As the sourcing process and contributing aspects differ between business units, it was essential that every interviewee understood the questions in the same way and are able to leverage opinions from there so the final answers are comparable and the conversation goes around same themes. The atmosphere in the interviews was relaxed, and it was essential that interviewees were able to speak freely and did not hesitate to bring out their own opinions and ways to approach the processes.

5.2 Analyzing gathered data

After all the needed data is gathered, it is essential to start analyzing them in systematic way. Because the primary data source in this research is the interviews, all the data is qualitative. There are various ways to analyze qualitative data in literature, but analysis method called qualitative content analysis is considered as basic method and suitable for most qualitative researches as a loose theoretical framework (Tuomi and Sarajärvi, 2018).

With content analysis, material can be analyzed systematically and objectively. It enables making replicable and valid conclusions from the data to deliver knowledge, new insights from the facts and a pragmatic pilot to action (Elo and Kyngäs, 2008, p. 108). The qualitative processing of the material is based on logical reasoning and interpretation, in which the material is initially broken down into parts, conceptualized and reassembled in a new way into a logical whole. (Tuomi and Sarajärvi, 2018) The purpose of the method is to achieve a summary and extensive description of the phenomenon with outcomes of themes or categories portraying the phenomenon. With these categories researcher is able to build usually a model or a conceptual system. (Elo and Kyngäs, 2008; Tuomi and Sarajärvi, 2018) However, it is essential to remember that content analysis only makes the collected data organized for drawing the conclusions and does not draw them directly.

For analysis process to work, following steps are formed by combining material from Tuomi and Sarajärvi (2018) as well as Elo and Kyngäs (2008):

1. Familiarization with the material and transcribing it

Every interview was recorded and therefore interviewer made only few essential notes by hand during interviews regarding follow-up questions or clarification of some answers. After all the interviews were executed, recordings were listened and detailed notes from every interview were made separately. Transcribing was not made word by word, because the purpose was to catch the essential opinions and ideas regarding every question. Some key quotes however were transcribed word by word so they could be included in the research text anonymously. Because half of the interviews were held in Finnish, it has to be taken into account that some phrasings and words used may slightly vary from the original interview due to translation to English. This also affects to validity of the research.

2. Creating coding based on themes from literature and interviews

Because the research is made with the abductive approach, it is natural to develop coding for the interview material from the themes found in the literature review as deductive approach suggests. Every interviewee had room to raise ideas and thoughts also about things outside of the exact interview structure which leans more towards inductive approach and allows new themes to rise. (Eriksson and Kovalainen, 2008, pp. 22–23)

3. Searching for similarities and differences and coding the material

After suitable coding was decided, material was gone through a couple of times by hand. Important part of the coding was to identify possible similarities and differences between every interview document in order to alleviate the next step of the analysis. Found similarities and differences were marked during this step.

4. Identification of themes or categories, grouping and evaluation of them

When all the interviews were read and coded, material was divided into themes found. The segmentation is based on eight categories identified from literature and also after all interviews: competence management, commitment, communication inside Enfo, documentation and transparency, contracts, finance, standardization and value co-creation.

After that the evaluation round were made to make sure all the categories were noticed and there was no material left outside of the review. Based on these themes or categories grouped, next chapter about current state of subcontracting process at Enfo was formed and results were utilized to form concrete improvement tasks and framework for buying external resources.

6. CURRENT STATE OF SOURCING PROCESSES IN CASE ORGANIZATION

This chapter constructs a big picture of the current state of sourcing processes and aspects related to them at Enfo. The interviews and the secondary data obtained formed the current situation regarding the level and functionality of sourcing in relation to subcontracting. After the current state is described, identified challenges in sourcing processes are presented in eight different categories.

6.1 Background information

Enfo has been growing mainly through acquisitions and the headcount of the organization has been varying roughly between 750 and 950 people during years 2015 and 2019 (Enfo 2020b). Because Enfo can be categorized into knowledge-intensive and consultancy based project firm, turnover of the employees has also previously been quite high. The history with many acquisitions has also set challenges to such a big company. Visibility and common processes within organization are lacking and common ways of performing internal tasks are yet to form in some areas. Enfo's desire is to unify all the internal processes and break down walls between business units to enhance value-creation not only Enfo-wide but with all the stakeholder groups as well.

In order to manage efficiently this large headcount and utilize skills and competencies to projects based on facts, Enfo launched a program called DUCK in 2018. The purpose of the DUCK was to increase visibility and transparency in customer interface. This includes definition and knowledge about Enfo's competence supply and how these competences can be matched to new and existing customer projects as well as possible sales opportunities. The aim was also to ease up communication and work tasks between different business units to create synergy and value throughout the organization.

The program was gradually implemented and moved to maintenance mode in Q2 2020 and is now called Competence management. This solution's main processes are: Opportunity Management, Resourcing and Net Sales Planning, Competence Database Management and Financial Forecasting. The solution includes all Enfo's internal employees and their competencies, but subcontractors and other external resources are not yet in the system.

Subcontractors are used in both; Finland and Sweden. In 2019 total subcontracting and offshoring costs were about 12,2 million euros which consists of 5 million euros used in Finland and 7,2 million in Sweden. The number of different suppliers or firms where external resources are bought from differ a lot between countries: about 70 firms used in Sweden and 25 in Finland in 2019.

Due to relatively large subcontracting network and costs Enfo-wide, the next step is to include these external resources to competence management and unify all the used procedures and processes. As discussed earlier in literature review, subcontractors and partners need to be seen more as a competitive advantage for case organization than expenditure and unknown resources. To map out possible improvement areas in sourcing processes, current state and challenges based on interviews are described in the next chapters.

6.2 Current state of the process

On the basis of the interviews the current state of the right-sourcing and subcontracting process were formed. In this chapter process and attributes related to it are presented through comments and notions which emerged from the interviews. Because there is currently no clear process model or a framework to follow, it was not possible to form a single clear process model from the decision-making process of the current situation in the form of an image, but the aim is to outline the chain with the help of text. Aim of the chapter is also to find differences s and common ways to perform right-sourcing between different units and countries.

Current state in general

Right-sourcing and subcontracting processes at Enfo are currently described by interviewees as functional but far from optimal. None of the interviewees brought up a situation where processes are not functioning at all, but every interviewee described challenges they face in the current situation. All interviewees were also able to present multiple improvement areas or ideas of how to develop and unify current ways of doing right-sourcing inside Enfo.

One of the crucial points is that even though procedures are quite similar throughout business units on higher level, major differences can be recognized in everyday work and policies. The main reason for this is that at the moment there is no common process model or approach provided that every business unit can use internally. Some of the units have comprehensive and well-thought routines that they follow, eg. Care unit in Finland,

"We are using a sourcing and partner management process developed by sourcing director, which defines a framework for managing an IT-service partnership." – H2, Finland

while others are following their own procedures proven to be good which pass from person to another through tacit knowledge (H1, H4, H5).

"We are making the decisions and work with the expertise that we have gathered along the years regarding this topic. There are not any documents regarding this, and you have to ask from the right people if you need any help." – H4, Sweden

All of the interviewees except H2 and H3 pointed out that there is currently no quantitative documentation or monitoring of the process which leads easily to unnecessary and duplicate work and decreases efficiency of the processes. Due to the lack of research and investigation of the bigger picture between different business units the functionality and incompatibility of the systems also cause a workload and take time, especially for managers in Sweden (H5, H6).

"At the moment process is little bit troublesome regarding Enfo's internal applications. Integration between Sympa and SAP is not always working smoothly and there is a lot of email exchange regarding new subcontractors and their accounts in every system." – H5, Sweden

Enfo has in Finland a sourcing director, who is not making sourcing first-hand but provides help to all business units for example in tendering, contract making, risks evaluation. She keeps contract archive and makes sure that partner, subcontracting and offshoring contracts are made in accordance with guidelines and regulations. However, as she stated in the interview, protocols and guidelines are not used through every unit that works with partners and subcontractors. Only part of the managers uses her help, some of the contracts do not pass through her desk and end up in the contract archive, and guidelines vary between units. It is obvious that the whole potential of her knowhow and existence is currently not used in Enfo, and it need to be changed.

Value of using subcontractors and partners

In the beginning of every interview, interviewees were asked to tell why they think Enfo is using subcontractors at the moment and what is the value that sourcing subcontractor work can bring to projects and teams. Answers were quite similar from all interviewees, but three main categories were found amongst them:

1. Flexibility

Every interviewee mentioned that flexibility in business and services is one of the primary reasons why subcontracting is used at Enfo. Subcontracting enables Enfo to focus on its core competencies and expertise. In situation where demand is only temporary, but team needs more expertise and knowledge in some area, subcontracting is often used. Focus on subcontracting is in areas that Enfo does not have know-how internally and that is not worthwhile to grow continuously. Flexibility also comes up in situation where increasing scalability is mandatory for a project or service to continue and subcontracting and partner organizations enables that. One example of that are the 24/7 services where Enfo uses partners to provide them in many cases.

Interviewee H1 pointed out another example of the value that flexibility offers. With partners and subcontractors Enfo is able to participate in certain projects in which they do not currently have enough or no expertise at all. This way Enfo can offer a wider portfolio to the customers which leads to new opportunities for larger or certain types of business cases. Partners and subcontractors create also the possibility to serve customers in different locations without needing to have office and more permanent presence there.

2. Cost effectiveness

In order for sourcing subcontractors to make sense, it needs to bring cost effectiveness to the table. In many situations buying subcontracting work for a certain amount of time is more profitable than recruiting a new employee with the needed competencies for the organization. This type of "demand related" sourcing brings value to project based work, but partners and subcontractors bring value also in service based business. Business units both in Finland and Sweden operates 24/7 services with partners, because it is more cost effective than perform these tasks internally. As interviewee H2 summed up:

"By focusing on our own core competencies, we are able to provide more cost-effective service to customers. These are also reflected right up to the customers in the prices."
– H2, Finland

The best possible cost effectiveness is something that every organization is seeking and right-sourcing provides important aspects to the conversation with partners and subcontractors.

3. Risk reduction

Third main category is risk reduction and value that risk sharing and decentralization can offer for the organization. Even though using subcontractors creates risks, it can also reduce them. As mentioned before, Enfo is consultancy and expertise based organization and delivering services to customers is ultimately dependent on people. With external resources it is easier to build up competence buffer for the organization when its decentralized and consists of more than internal competences. Financial risks can also be decreased when costs are shared between partners and Enfo is not only one responsible of all of them.

Decision-making process

Currently decision-making process for the external resource sourcing is rather light and straightforward in the case organization. In many situations the owner or manager of the business unit or a team makes the buying decision and is responsible for it. All the preparation work and proposals are usually made in the service function or team where the actual need lays. Enfo has defined purchase approval limits and subcontracting and partnership decisions are made according to them. If a purchase is large enough, higher level managers are also involved in the decision-making process.

Based on the interviews three possibilities of sourcing can be specified:

1. Familiar subcontractor organization
2. New subcontractor organization
3. Partners

Many of the business units are taking advantage of known contacts and using subcontractors and organizations they have already worked with in the past. When a unit has a need for a competence and they know a person or the organization that is able to deliver that, decision-making process is simple and quick. On the other hand, if a unit has a demand for a new competence or area of expertise, decision-making process becomes more complex. This is the scenario where answers also differ between interviewees. Interviewees H4 and H6 mentioned that they have only worked with small and familiar companies and are not sure who is the correct person inside the case organization to turn to if they need to find a new subcontractor. Other interviewees told that they would either contact the sourcing director or human resource team for help to find options for suitable subcontractors. This indicates the lack of information or communication within the organization as well as clear policies in each possible situation. The third scenario is partners. These are usually larger, deeper and more complex relationships between organizations and require more negotiations and higher level managers to build them.

Factors considered when making a buying decision

Interviewees were asked to mention factors that they personally consider when they are making a sourcing decision for their unit or team. All of the interviewees were able to name multiple factors, but only few managed to deliver a versatile list of them. The factors that occurred are summarized in the following table 2:

Table 2. *Factors considered when making a buying decision currently*

Factor	Description	Times mentioned in interviews
Demand	Internal assessment of a need. Can demand be fulfilled internally or through existing subcontractors and partners?	5
Price	What are the costs of the subcontracting work?	5
Location	From where the services will be provided and how?	4
Capability	Is the supplier capable to deliver everything needed? What is their service portfolio?	3
Strategic position of the service delivered	Are services that we are buying in the supplier's core functions? How are they fitted in their business strategy?	2
Co-operation	Will the co-operation with supplier be smooth and reliable?	2

Legal issues	Does the supplier have its statutory obligations fulfilled? Eg. taxes and insurances	2

As expected, demand and price were the most common factors with five mentions in the interviews. Most of the interviewees described that the process needs to start with the organization’s internal assessment of a need of the external resources. If the need is justified and cannot be met among Enfo’s own employees or already available subcontractors or partners, other factors need to be considered. Price was listed also five times in the interviews and clearly plays a big role in selecting suitable subcontracting organization. By default, subcontracting should be profitable for the buying organization but few interviewees (H5, H6) brough up that all the current partnerships are not profitable at the moment and the limits for needed margins are not clear in every business unit. As interviewee H1 said:

“It is also important to consider the price aspect in few different perspectives. It is not the best decision to always end up with the cheapest offer but instead review price versus efficiency aspect with every subcontractor.” – H1, Finland

Location was mentioned four times in the interviews. Location affects mainly in situations where customer wants services in certain language or provided from certain locations. Through subcontracting Enfo can on the other hand provide services in locations they do not have offices or people working currently. Other considered factor was capability of the supplier to provide all the needed services with three mentions. Buyer should review the service portfolio of the supplier to get the understanding of the organization and the possibility to create value through larger partnership. Interviewees also mentioned that it is important to know the subcontracting organization’s portfolio if the nature of the services needed changes or buying organization needs subcontractor work in other projects from reliable partner too.

The next factor with two mentions links to the previous one. When doing research of the possible supplier, buyer should also find out how the service needed is positioned in supplier’s strategy. Is it one of the core services provided or is the organization focused more on other services? As interviewee H2 brough up, weaker strategic position of the provided service might cause risks such as cessation of service provision in the future.

Interviewee H1 and H4 mentioned the importance of smooth co-operation between buyer and supplier. This factor might be harder to read from a completely new supplier, but it is especially considered when thinking about continuing relationship with certain supplier. Effective and professional communication and understanding builds trust between the parties. If relationship does not work and the performance provided is not at the required level, partnership will most likely be ended.

Lastly, the legal issues were brough up. Interpreted from the interviews, these were not issues that managers or the people making the buying decision often considered. Contracts were mainly looked through either sourcing director or the legal department and their job is to make sure all the legal issues are right and covered in the contracts. However, interviewee H3 mentioned that sometimes contracts do not pass through neither of them and in these situations legal issues might not be fully covered. It was also unsure within the interviewees whose task is to make sure the possible supplier ticks all the boxes and has its statutory obligations fulfilled. For example, in Finland the supplier needs to be part of the Vastuu Group (responsible partner network).

As a summary of current situation, there is no coherent list provided for managers both in Finland and Sweden to check every time they are considering the option of buying external resources. Especially interviewees H2, H3 and H4 highlighted the importance of unanimous protocols when it comes to optimizing sourcing protocols:

"If it is decided to start looking for a partner, the cohesive criteria must be defined in advance, against which the work will be taken forward." – H2, Finland

Internal information and documentation

All interviewees told that there is currently only little internal information or documentation available to support decision-making. There has not been made any process chart or framework about external resource procurement for the whole company to use. Currently only contracts are stored in one place by sourcing director, but other documentation is made case-specially, saved and used by every team and manager themselves. Systematic documentation is only made in Care FI for a few bigger partnerships. Based on the interview, other business units are not making any internal documentation about the buying processes and current relationships. Due to that there is not many internal documents shared or used to help righ- sourcing and decision-making.

Two interviewees (H4, H6) mentioned that only internal information that they use are previous contracts and price ranges from them to draft new contracts. Available external information listed were references from other companies and interviews with possible suppliers. In summary, the current state of the provided information and documentation is poor through the whole case company but especially in smaller units and interviewed teams in Sweden. There is no one internal place where all the needed information is stored and which is maintained by one person or a specific team at the moment. This causes duplicate work, miscommunications and lack of transparency in all sourcing processes.

Risks and their evaluation

Buying and using external resources such as subcontractors entails always risks. Based on the interviews, risks regarding sourcing are fairly well noticed and assimilated. Interviewees H1 and H4 mentioned that first risk occurs in the very beginning of the process:

"If I don't do my homework first and see if there is someone internally who could do the job, we might end up in a situation where Enfo employee doesn't get to work and we hire external person unnecessarily." – H4, Sweden

This quote highlighst again the importance of internal competence management and assessment as a first step of the whole right sourcing process. If a business unit or team ends up in the situation where they need to use external resources, person responsible of the sourcing makes a background checks on the partners with whom the negotiations are to be taken forward. These checks usually include both financial and strategical aspects which help to make a decision about the most suitable supplier.

Risks regarding the relationship with the partner organization as well as the subcontracting work are summed up from the interviews in the following four categories:

1. Financial risks

Risk that all of the interviewees listed was financial losses if the margin for subcontracting work is too low or pricings for example for time and material based billing from the customer is off. Other possible risk scenario mentioned by H1 and H6 is when the time and material based billing from the subcontractor increases a lot from the original plan. This might lead to customer refusing to pay for the extra costs and eventually to financial losses for the case company. Many of the following risks mentioned will also cause financial losses but are divided in different categories to present them into more cohesive and understandable groups.

2. Interruption of service continuity

Especially in situations where subcontracting company is relatively small and consist of only one or few employees, the risk of possible interruption of the bought expertise or service is considerable. These situations could be for example accidents, sickness or other cases of illness or possible bankruptcy of the company. Interviewee H2 remarked the importance of take into account that there would be more than one partner who is able to provide a particular expertise or service, especially in critical services. In this way the case company can patch and react rapidly if the original partner is not able to continue the relationship.

3. Enfo's position in the subcontracting company's portfolio

Next notable risks are related to business strategy of the subcontracting company. If the expertise or the service that the company is providing is a minor in their own service portfolio, it might not be their priority to invest in that area or maintain the highest level of service in there. Also, if the workload bought by the case company is rather small, it might be "left aside" by the subcontracting company and affect the schedule or readiness of the project.

Usage of external resources and companies always form a risk of competitive situations. If the subcontracting company is possible competitor to Enfo, there is always a risk of customer company ending the relationship with case company and continuing to buy needed services straight from the subcontracting company. Usually, these kinds of situations are denied with strict contract terms, but the possibility of the risk need to be noted and eliminated if possible.

4. Fluency of cooperation and mutual understanding

Fourth category of the potential risks is based on more human aspects. Specially interviewees H1 and H6 brought up the importance of a trustworthy subcontracting company or a partner when maintaining a valued and long-lasting relationship. Different personalities and working methods create a risk of ending the contract if teamwork is not functioning naturally. The risk should be considered from both sides – the terminating party may be both the buyer and the supplier. In some situations, risks might appear if the subcontracting company does not represent Enfo in a way they want or in any way violates the terms of the contract. Interviewee H5 also pointed out the risk that sometimes subcontractor might be more loyal to actual end-customer than to Enfo as an employer which leads to low control and trust issues between parties.

Other common risk that interviewees H1, H4 and H6 mentioned is the possibility that subcontractor doesn't understand the needed entity in a same way as the buyer company and eventually the delivered service does not correspond to the assignment. Interviewee H1 also described that if Enfo does not have any expertise in an area where subcontracting is used, risks might also appear:

"Buying subcontracting in an area unfamiliar to us is a real danger. We should have the know-how in the areas where we want to buy subcontracting, so that we can also monitor the work of the subcontractor. This thing has gone wrong many times before." – H1, Finland

This observation together with poor monitoring or control over subcontractor's actual work can create major risks to project deliveries and be hard to overcome.

Even though risks seem to be noticed and understood throughout the case company, every interviewee told that risks are evaluated only verbally and no formal evaluation of them is made. If the decision maker contacts the sourcing director, they will go through the possible risks together. One of the sourcing directors' tasks is to make sure that risks are considered and evaluated when the suitable subcontracting company is selected. However, there are situations where decision-makers do not contact the sourcing director when making the contracts and in these situations, it cannot be guaranteed that all risks will be taken into account.

Evaluation of the sourcing process and validation of subcontractor's work

When talking about evaluation of the sourcing processes in interviewees' teams, almost every interviewee told that they are not currently using any formal or coherent ways to assess how sourcing went and what could be improved in future:

"There is currently no such thing as sourcing evaluation process that we are using on regular basis. However, I really think there should be one in the future." – H5, Sweden

Only exception was the Care FI unit, where they make documentation of the major partnerships and write down "lessons learned" from the sourcing processes. Otherwise, if any evaluation is made, it is made verbally. It was made clear in the interviews that evaluations with smaller partners and subcontracting companies are made only if something goes wrong in the sourcing process or in the deliveries of bought services and expertise. The need and desire to document not only failed but also successful processes are high:

"I really think that we need to document more what things did not went as planned but also want worked and was efficient and good in the sourcing process, so we can fix the mistakes next time and improve processes constantly." – H4, Sweden

Interviewee H2 mentioned that it is a good thing that the sourcing director is involved in the procurement processes as early as possible and is aware that such procurement is planned. This way Enfo is able to tackle grievances earlier and even terminate the processes if they cannot reach the finish line for some reason. More effort needs to be done to make this the case in every sourcing process planned and made both in Finland and Sweden.

From the validation side, answers differ depending on the unit and size of the partnership. Interviewee H2 told that they have regular audits with the biggest main partners which helps them to assess and validate partner company's work. Some of the interviewees mentioned that with certain customers SLAs *(Service Level Agreements)* are used and subcontractors or partners need to also follow them. Other measurable methods are not in use when it comes to validation of subcontractor's work performance.

All of the interviewees reported that most of the validation comes from the customers and through their feedback. At least if something is not delivered as assigned or wrong, case company will most likely hear it. Interviewee H1 and H4 mentioned that in some situations validation is made also through so-called collegial peer review. In retrospect, there have been discussions with case company's own experts about whether the performance of the subcontractor was good or not and if everything was going smoothly throughout the project. Usually if the validation produce good results and case company is happy with of the subcontractor's work performance, cooperation will continue, and case company can even act as a reference for another organization. On the other, hand if the performance is not on the needed level there might be complaint discussions with the subcontracting company and cooperation often does not continue. (Interviewee H1) In extreme situations case company could even request for reimbursement of costs.

6.3 Challenges in the current process

One of the main ideas for the interviews hold was to map out all challenges that interviewees face in their daily work tasks related to sourcing external resources. Every interviewee was able to define several areas or situations were processes do not run smoothly, are time-consuming, need manual handling or could be done more efficiently in the future. Challenges were divided in eight main categories: **competence management, commitment, communication inside Enfo, documentation and transparency, contracts, finance, standardization and value co-creation**. All categories are presented next one by one with identified challenges attached to them. Competence management is the first main category from the defined challenges which is presented in table 3 below.

Table 3. *Competence management challenges*

Category	Challenge
Competence management	Awareness of competences inside Enfo is lacking
	Awareness of competences used from external resources is lacking
	Difficulty to find a partner that suits a specific need and the required skills in some situations

As said in the previous chapter, almost every interviewee described competence management as a base for the sourcing processes. Enfo has recently introduced a new competence management system which is a crucial for efficient and up to date management. Even though new systems are brought in to help to increase transparency Enfo-wide, interviewees mentioned challenges within the lack of awareness in competencies that are both inhouse but especially bought from external resources. Used external resources are not stored in one shared place which make it difficult for the managers both in Finland and Sweden to recognize the potential of used competencies and already existing partners and their portfolios. Interviewee H1 mentioned that it is sometimes difficult to find a partner that matches a specific need and required skills. The lack of visibility to possible and used organizations and their competences is not helping it by any means.

Table 4. *Commitment challenges*

Category	Challenge
Commitment	Teams do not follow given processes regarding sourcing
	Managers make decisions without consulting or informing sourcing director or higher manager

The second main category called commitment (table 4) was mainly brought up as a challenge from interviewees H2 and H3. Even though Enfo do not have any official guides or procedures for performing sourcing in all units, interviewee H3 brought up that some information meetings have been held, some materials have been handed to managers and they have been informed about the sourcing director and option to consult her. However, it seems to be the case, according to H3, that many managers follow their own familiar ways of doing sourcing and the commitment of following information given is lacking.

“I would assume that once we have committed and agreed to do so, process would also be followed but it seems not to be the case at the moment.” – H3, Finland

The second challenge in this category is also related to lack of commitment. In some cases, managers overly trust their know-how and do all the decision-making by themselves without even informing sourcing director or higher level manager. This causes the lack of vision of risks and how to manage them and ignorance of possible value co-creations.

Next main category is focused on communication challenges Enfo-wide and is described in table 5 below.

Table 5. *Communication challenges inside case organization*

Category	Challenge
Communication inside Enfo	Lacking communication and visibly when one team bought the external resources, but other team is responsible for managing actual work perform
	Lack of communication between different units both in Finland and Sweden

Interviewee H1 described that there can be situations where one business unit has bought the external resources for example for a project, but the actual work is monitored and managed by different team or unit inside Enfo. These situations create currently challenges both in communication and visibility. Many of the interviewees pointed out the lack of communication between different teams and countries which makes standardization and internal value creation hard.

Following communication challenges, below in table 6 is listed main challenges in documentation and transparency category.

Table 6. *Documentation and transparency challenges*

Category	Challenge
Documentation and transparency	One shared location for all guides and information does not exist

	Lack of documentation, no shared procedures or guides
	Uncertainty of persons responsible for documentation
	The organizations and partners used are not visible for every team
	Lack of documentation creates challenges in monitoring and developing processes through "lessons learned"

The documentation category was one of the most pointed out challenges in the interviews and especially by the Swedish interviewees. Two of the main challenges are the complete lack of documentation and that there is no one place maintained for saving all the guides and information about sourcing and subcontracting. Interviewees H4 and H5 told that because the information needs to be searched in different places and asked around, it causes confusion in sourcing processes. Interviewee H5 was also hesitant about the current protocol of where the contracts and other documents need to be sent to archive them. Because there is only very little of systematic documentation on sourcing processes Enfo-wide, it creates challenges in monitoring and developing processes as well as learning from the previous mistakes in sourcing.

Table 7. *Contract challenges*

Category	**Challenge**
Contracts	All contracts are not saved in contract archive
	The persons responsible for the contracts are currently not known with sufficient precision
	Contracts being made on your own without informing or consulting sourcing director or higher level manager
	All risks related to contracts are not checked before signing

Following category is related to the previous one but focuses on contracts (table 7). The main problem, pointed out by interviewee H3, currently is that all the contracts cannot be found in contract archive. Some contracts might only be on managers' desktop or in the worst case scenario, they are made by email and not with the official contract template. This causes problems with Enfo-wide transparency and monitoring of the current and past partners and processes. It also casts a shadow over objectivity of the chosen partner when a contract cannot be looked through later by any other employee.

Other challenge is that all persons responsible for contracts are not known at the moment. If an employee leaves Enfo, there is no complete certainty of all the contracts he or she is responsible for. This creates troubles for continuity of the services and loss of knowledge. Contracts are in some situations also made only by the decision-making manager which might end up with loose or superficial contract terms as well as lack of systematic walkthrough of risks related to different contracts.

Table 8. *Finance challenges*

Category	Challenge
Finance	Profitability is not measured enough
	Problems on validating cost ratio for each external resource
	No information or guidelines about wanted margins for subcontractors
	Profitability of the subcontracting work hard to follow in current systems

One of the main aspects when talking about sourcing external resources and using subcontractors is the financial side and profitability of a such work. All interviewees mentioned the importance of measuring profitability but at the same time brought up the difficulty of doing it properly. Especially interviewees H3, H4 and H5 told that profitability is currently not sufficiently measured. Interviewees thought that there is not enough information available when it is worthwhile to acquire external resources and when it would be more beneficial to use internal competences and experts. There seems to be big problems on validating cost ratios and margins for each external resource based on the interviews and quantitative data provided by case organization regarding subcontracting costs. This is summarized in the interviewee H4's comment:

"Currently there is no information or guidelines provided about wanted margins and every manager is deciding suitable margins by themselves, which is not ideal situation for the organization." – H4, Sweden

It is clear to see that most of the interviewees, especially in Sweden, wish for recommendations and shared information about wanted margins for every sourcing situation. Another challenge regarding monitoring profitability was highlighted by interviewee H5. She said that it is hard to monitor the profitability of only subcontracting work currently in PowerBI, because all done work and the profitability for a specific project is shown together as summarized and not specified for example to internal employees and subcontractors. Sometimes subcontractors do not even time report in same systems and inform their work hours by Excel or email, so monitoring the profitability is challenging and not transparent.

The following category

Table 9. *Standardization challenges*

Category	Challenge
Standardization	The person who manages and takes care of sourcing Enfo-wide is not clear
	Number of used subcontracting companies Enfo-wide is high
	External resources are not handled in competence management system
	Integration between different internal systems regarding handling external resources is not working smoothly and requires manual work
	Sourcing process is not controlled and is based on personal performance and self-monitoring

The lack of standardization regarding sourcing processes were pointed out many times over interviews with different observations. It may be interpreted from the interviews that even though Enfo has a named sourcing director, there is no one person or even one team who is managing sourcing Enfo-wide currently. The sourcing director is mainly focused on Care FI unit's larger partnerships and helps other teams and managers if they contact her. She does not have a clear understanding for example sourcing processes in Sweden which is a big challenge for standardization. Because there is not one person or team responsible for sourcing processes Enfo-wide, as interviewees H1 and H6 pointed out, these processes are now based on personal performances and self-monitoring.

Interviewee H2 highlighted that the crucial challenge for Enfo is also the high number of different subcontracting companies:

"Harmonization at the Enfo level is definitely the most important thing because I think that we are missing value-creation there now. At the moment, we have too many different suppliers, and I think we would be able to provide services more efficiently and sensibly than now." – H2, Finland

Because managers are not aware of all the used companies in different teams, value co-creation and synergies are widely missed, and the number of subcontracting companies used is growing. This problem is also the symptom of poor management of competencies in term of subcontractors. As interviewee H4 told, the process of handling external resources in current competence management system is unclear and not used by many units.

More observations and challenges regarding internal systems was pointed out by interviewee H5. She mentioned that integration between different internal systems, such as SAP and HR systems, is not working smoothly and there is a lot of manual work needed especially from managers when the new subcontractor is recruited. This takes a lot of unnecessary work and time out of managers daily tasks and creates room for errors and misunderstandings.

Table 10. *Value co-creation challenges*

Category	**Challenge**
Value co-creation	Enfo is not aware of the strategies and competences of partner companies

Last category of the current challenges is value co-creation with partners (table 10). Interviewee H2 mentioned that in order to take most out of external resources and make them as competitive advantage for the case organization, strategies need to be better linked with partners. Currently Enfo do not have enough information about all of its partners or subcontracting companies in order to co-create value with them and use competencies that each of the partners could offer wisely and cost-effectively. On the other hand, H5 also emphasized that partners do not know enough of Enfo's strategy and due to that communication needs to be open through whole sourcing process as well as in later stage maintaining the relationship.

7. DEVELOPMENT OF THE SOURCING PROCESS IN CASE ORGANIZATION

This chapter presents in structured way all the development ideas that were brought up in the interviews by interviewees. After all the ideas, summary of the most critical and needed improvements is highlighted. The rest of this chapter focuses on the development and description of the presented framework, formed based on theoretical frameworks and interview insights.

7.1 Development ideas from the case organization

Besides forming a great picture of a current state and challenges employees face regarding sourcing external resources, the third main focus of the interviews was to gather possible development ideas from the interviewees. All of them were able to suggest multiple areas or processes which could be improved towards more efficient, transparent or profitable state. Raised ideas are categorized to same eight categories as challenges in previous chapter: **competence management, commitment, communication inside Enfo, documentation and transparency, contracts, finance, standardization and value co-creation**. These categories include all the ideas interviewees were able to come up and are again analyzed one by one starting from the competence management presented in table 11:

Table 11. *Development ideas for competence management*

Category	Development idea
Competence management	Internal competences need to be up-to-date and maintained constantly in competence management system
	Add all the used external resources to the competence management system
	More accurate monitoring of existing competences and resources to avoid overlapping and unnecessary sourcing

For better competence management throughout Enfo, especially three ideas were raised from the interviewees. With the new competence management process and system (earlier DUCK-program) it is easier to follow the current needs, projects and competences they require. In order for competence management to be efficient it is crucial that all the availability information of internal competences is up-to-date and maintained on daily basis. A major development for the current state would be to add all the used external resources and competences to competence management system. At the moment these resources are not visible for anyone but the teams using them and therefore this improvement would increase significantly the transparency between business units and the directors.

The third idea combines the first two which enable this idea to be possible. When all the used competences and resources are visible in one place, more accurate and specific monitoring is possible. It would help to avoid overlapping of the existing competences as well as decrease the level of unnecessary sourcing processes. On the other hand, detailed competence management shows the possible competence gaps and areas where external resources are truly needed in order to deliver a project or service to client. Following in table 12 development ideas for commitment are presented:

Table 12. *Development ideas for commitment*

Category	**Development idea**
Commitment	Mandatory online trainings to all managers about common processes and protocols used Enfo-wide
	Faster response to situations where manager or team does not follow common processes and protocols

To increase the level of commitment to follow the given protocols and common processes Enfo-wide, interviewee H3 proposed the idea of mandatory online trainings for all the managers and employees who are working with partners and subcontractors and sourcing them. This way Enfo can be sure that all relevant employees know the latest protocols, where to find and save information or documents and who to contact when assistance is needed. These online trainings would need to be done both in Finland and Sweden to ensure Enfo-wide processes and unify the ways of performing sourcing. Trainings could be performed annually or whenever protocols or processes are changed.

Other solution for better commitment would be a faster response to situations where a certain employee has not followed common processes. It was perceptible from the interviewees that currently no one intervenes in these kinds of situations because everyone is doing sourcing on their own terms. When processes are unified it would be easier to give feedback to managers if some parts of the process are being neglected or sourcing is not done according to the agreed practices.

Table 13. *Development ideas for communication inside the case organization*

Category	Development idea
Communication inside Enfo	Better and more open communication between Finland and Sweden about partners
	Frequent meetings between "partner management" team or person responsible of them Enfo-wide and managers from every business unit to discuss about current state of the processes and possible challenges

Next development ideas for the internal communication category are described in table 13. Because sourcing external resources is done locally, and the decision-making involves only a few people, communication and knowledge sharing is minimal between the different business units and especially the countries. To develop sourcing towards more transparent and efficient processes, it is crucial to develop the communications and the ways to do it throughout Enfo to enable them. When used processes are standardized, tacit knowledge and the best practices are more easily shared and compared between all the units. With more open communication, processes are constantly considered and developed by the managers at the same time.

One concrete way to increase the level of communication would be to arrange frequent meetings between “the partner or sourcing management” team or person and the managers from every business unit. This way the sourcing management team/person would easily communicate with the different parts of the organization, get insights and feedback from the current processes and help the managers with possible challenges or questions. Meetings could be held also with all Finnish or Swedish units or alternatively mix these units to create knowledge sharing between both countries.

In table 14, development ideas for documentation and transparency are described:

Table 14. *Development ideas for documentation and transparency*

Category	Development idea
Documentation and transparency	List of forbidden organizations available Enfo-wide
	List of currently used organizations and their portfolios available Enfo-wide
	Guides of when to use subcontracting and when it is prohibited
	List of all the risks related to sourcing process to take into account
	Summary of the performed sourcing process documented (criteria, why certain partner was selected and other considered partners)

As documentation and transparency category was found to be one of the biggest challenges in current processes, the interviewees were able to innovate multiple development ideas for it. Every interviewee mentioned that simple and needed improvement would be to maintain lists of both forbidden organizations as well as current partner organizations and their portfolios. These could be maintained by the sourcing management team/person who would have a view to all partners and sourcing processes both in Finland and Sweden. Currently managers' visibility to any used organizations or forbidden ones Enfo-wide is purely based on conversations or rumors heard from other employees. This improvement would dramatically increase transparency and value co-creation with business units and current partners. Decision-makers could see this information through competence management system, but separate lists or for example Excels might be easier and quicker to use.

Other idea that came up in almost every interview was the idea of common guides and shared information about attributes and risks that need to be taken into consideration when thinking about sourcing external resources. Interviewee H4 summarized the potential and idea behind this improvement:

"I would like to use a list or guide of all the things and risks to think before making a buying decision and contract, so called "back-up list", which helps you to check every detail and make sure that every aspect is considered." – H4, Sweden

This would make the managers' work easier and more coherent between the teams and countries. Also the sourcing management team/person would know what things are always considered which will build trust and unify contracts.

Lastly, the interviewee H3 mentioned that especially for the sourcing management team/person it would be beneficial to get a short, documented summary of every sourcing process and buying decision. The document could include the criteria for the external resources, why a certain partner was selected and what were the other considered partners in that situation. This would help them to understand the decision-making behind sourcing and provide back-up if certain partner would need to have changed or contract between them and Enfo ends for some reason. It would also be easy to come back to those criteria and check if they were fulfilled. Moving from documentation to contracts, table 15 presents development ideas for them:

Table 15. *Development ideas for contracts*

Category	Development idea
Contracts	Coherent contract templates for both Enfo Finland and Sweden
	Shared list of the attributes that need to be included in the contract
	Clear process for contract approval and storing
	One place for all the external resource contracts Enfo-wide

The first part of developing contracts and their management would be to use coherent contract templates both in Finland and Sweden. Currently most of the teams are using Enfo templates but they vary between countries and even between business units. To standardize the whole process this would be an easy step to fix. The second idea links to the previous category: shared list of attributes that need to be included in the contract. This can be solved also with a contract template that requires all the needed attributes to be approved by the sourcing management team/person.

The third development idea was mentioned by nearly all of the interviewees. The approval and storing process of the contracts vary between countries and teams. Especially the Swedish interviewees expressed their concern of managers not following any process or knowing where to send their contracts. Enfo needs to create a one clear process that every manager can follow and where all contracts go through the sourcing management team/person for approval. They could also maintain the contract archive and when all the contracts will be passed to them for approval, all of them will also be found in the archive.

Table 16. *Development ideas for finance*

Category	Development idea
Finance	Clear percentages or numbers for profit goals
	References for typical price ranges in specific competences
	Precise cost monitoring throughout the project and afterwards
	Separated margins for every employee type (internal employee, subcontractor, off-shoring etc.) in cost monitoring systems

The sixth category presented in table 16 is about the finance and the profitability of the external resources. From the previous chapter it is clear to say that the lack of information and guidelines about wanted margins is one of the main issues in this category and was brought up especially by the Swedish interviewees. An obvious development step would be to announce clear profit goals for certain project or continuous work performed by external resources. Even though the interviewees H2 and H3 told that they monitor strictly bigger partnerships and their profitability in continuous services, many project-based teams were struggling with finding right margins. These managers hoped for clear percentages and numbers from the higher level management in order to ease up decision-making and have goals and set limits for profitability.

This same area includes also the second development idea. The interviewees wished more references for certain types of competences and typical price ranges for them. This could be accomplished by filling these reference price ranges to Enfo’s competence management system or to possible separate partner/supplier management system. This idea would help decision-makers to price certain competences and increase transparency for the whole organization.

The last two development ideas of this category relate to monitoring the profitability and spending. Interviewee H3 pointed out that she wishes more strict monitoring of the costs obviously when the project has ended but also throughout the whole project timeline:

“Reviewing and evaluating subcontractor spend during the whole project is crucial. Has as much money been spent as you think at the beginning of the project? If the spend is significantly higher, the consideration whether this knowledge may need to be found

within Enfo has to begin. Or are there any other opportunities how this knowledge could be acquired?" – H3, Finland

Amount spend could also be higher if estimated work hours for the subcontractors are underestimated. To improve this, there needs to be clear protocols Enfo-wide about who are authorized to order extra hours from subcontractors and where you need to inform that the spend has not been estimated correctly. In order for managers to monitor reported times and profitability of certain projects, interviewee H5 had idea of possible separated margins for every employee type in their cost monitoring system PowerBI. This would make the evaluating quicker and the managers could follow all the margins easily by different categories. Because the profitability of the subcontractors is one of the main things to focus when using external resources and why they are used instead of recruiting a new internal employee, making the monitoring and evaluation to meet the needs of managers should be top priority for Enfo. Following finance, category standardization is summarized in table 17:

Table 17. *Development ideas for standardization*

Category	Development idea
Standardization	Clear and unified processes and persons responsible for certain steps Enfo-wide
	One team or a person to handle and operate all the partner management Enfo-wide (one process owner)
	One shared place for all the needed information and the documents maintained by one team or a person
	New contract and supplier management system to ease up monitoring and transparency
	All the external resources need to time report to internal systems

Probably the most important category of these development ideas is standardization. To improve the processes and ways to perform sourcing, first thing is to standardize them Enfo-wide. In this master thesis framework for simple steps to sourcing is introduced later. Common goal is to simplify processes and set clear persons of responsible for certain steps Enfo-wide to create more transparent and efficient sourcing processes.

The development idea that came from all of the interviewees is to create one team or person who is responsible for all partner management Enfo-wide. Currently Enfo has a sourcing director, who is mainly focusing on bigger partnerships in Finland but helps all the managers if they need assistant in sourcing. Although this is not clear for everyone in the organization and in Sweden there is no person to manage the sourcing and partnerships locally. Next step would be to create preferably a team to this area. It could include the current sourcing director from Finland, but it would be beneficial to have a similar position in Sweden. They would be the process owners of this area and responsible for developing it together.

After creating the team, another idea that was brought out many times during the interviews is to create one shared place for all the needed information and documents that managers need to perform sourcing according to the standardized processes:

"There is currently not a place called "Here you find information about how you should handle your subcontractors". Something like this would be extremely beneficial to all managers!" – H4, Sweden

With this idea, all the knowledge would be easily found, shared and saved to one place and available to everyone from Finland and Sweden. The visibility of used frameworks and processes models would increase the transparency and level of standardization in the organization. Because different business units might have similar needs, the visibility of documents would benefit across business unit boundaries.

The interviewee H3 mentioned that a new contract and supplier management system would make a huge difference compared to the current state. The sourcing management team could save all the contracts there and mark the responsible managers easily there. It would improve visibility over all the contracts and make it easier to manage them efficiently. Transparency over partnerships and contracts may also give the business leaders better view and understanding of the benefits of them. This development idea has been on agenda for quite some time but has not made it to action.

The last development idea of this category was brought up by the interviewees H1 and H4. Especially in smaller projects or if subcontractor is working for a shorter period of time, it seems to be that often the subcontractors deliver their monthly time spenditure hours by Excel or some other document type. This adds a lot of manual and unnecessary work to the manager who needs to add them to the invoices in order to charge them. Because of this, it is crucial to get all the external resources to time report straight to Enfo's own systems. Weekly executed time reporting also eases up the monitoring part of the spend mentioned earlier. The managers can intervene to situations earlier if hours are reported for example on weekly basis to internal systems and not delivered in one Excel sheet at the end of the month. Altogether this would decrease the amount of manual work, save time from the managers and improve the transparency level once again.

Table 18. *Development ideas for value co-creation*

Category	Development idea
Value co-creation	Cross-utilization of partnerships and economies of scale
	Increased transparency towards partners
	Better mindset and willingness to create and maintain successful relationships with partners

The least category of the development ideas shown in table 18 is about value co-creation with Enfo's partners. Value co-creation can enable many things and it is a rising area in many organizations and requires special attention from the decision-makers. The main thing to pay attention to is the possible cross-utilization of current and new partnerships. To get there, the competence management system rises to an important role. When the managers and the sourcing management team are able to see all the used partners and their portfolios, cross-utilization is much easier and opportunities for economics of scale are recognizable.

"We need more ecosystem and common good perspective to this debate. We should move from mere supplier and subcontracting relationships to working together and creating value for customers. That is what we to take forward as an organization." – H1, Finland

It also requires such a way of thinking where potential of value co-creation is thought before sourcing another partner.

In order to create value for both parties, Enfo needs to be aware of the portfolios and strategies of its partners. The partners are often capable of delivering more competences that Enfo is currently sourcing from them. Enfo could get more out of these relationships with long-term partnerships if they would be more transparent about the relationships at whole Enfo level. As inside Enfo, the communication needs to be more open also outside of the organization towards its stakeholders in order to move closer to ecosystem thinking:

"I see this as a really important element to focus on. I believe that the ecosystem thinking will grow and that the focus on that own core competence will be emphasized, so

that as ecosystem grows, we will have more dependencies with different actors. In general openness and attitude towards ecosystems and relations between partners is an aspect that Enfo should also be able to build and utilize more widely." – H2, Finland

When the partnerships are experienced trustworthy and transparent, both parties have a feeling that partnerships are meaningful and value co-creation becomes possible. This is possible only if all levels of the organization pay attention and maintain these relationships.

The third point of this category is maybe the most important takeaway from it. The interviewees H2 and H5 had important thoughts regarding it:

"The mere attitude of being open-minded about not having to fear subcontracting, because it often has a negative connotation when talked about it. That is why I myself am talking about strategic partners, because we would not produce these services without them." – H2, Finland

"People should be more transparent and talk about the culture and work method differences more openly so that the work between these companies would be even more smooth and efficient and our employees would appreciate their work even more." – H5, Sweden

This requires a change of mindset fro all the Enfonians and willingness to create and maintain successful and respectful relationships with their partners. Value co-creation has a lot of potential to bring new business ideas and competitive advantage to Enfo when properly managed and designed.

7.2 Summary of the development ideas

Interviewees were able to come up with numerous development proposals in various areas related to the sourcing processes. Some of the ideas were smaller and easier to implement into daily tasks and some require systematic planning and detailed strategy to implementation in order to bring value out of them. To sum up previous segments, the most crucial and needed development ideas for Enfo based on the current state and interviews are presented by every category in Table 19. These are development proposals that at least have to be made to clear and unify the processes, increase transparency and profitability within both countries and create value out of such an important area in resource and knowledge based project organization.

Table 19. *The most crucial development ideas from all categories*

Category	Development idea
Competence management	Add all the used external resources to the competence management system
	More accurate monitoring of existing competences and resources to avoid overlapping and unnecessary sourcing
Commitment	Mandatory online trainings to all managers about common processes and protocols Enfo-wide
Communication inside Enfo	Frequent meetings between "partner management" team or person responsible of them Enfo-wide and managers from every business unit to discuss about current state of the processes and possible challenges
Documentation and transparency	List of forbidden organizations available Enfo-wide
	List of currently used organizations and their portfolios available Enfo-wide
	Guides of when to use subcontracting and when it is prohibited
Contracts	Shared list of the attributes that need to be included in the contract
	Clear process template for contract approval and storing
Finance	Clear percentages or numbers for profit goals
	Precise cost monitoring throughout the project and also afterwards
Standardization	One team or a person to handle and operate all partner management Enfo-wide (one process owner)
	One shared place for all the needed information and documents maintained by one team or a person
Value co-creation	Better mindset and willingness to create and maintain successful relationships with partners

From the competence management category two main steps are to add all the used external resources to competence management system to add visibility and ease up competence monitoring from both perspectives – the internal and external competences. This aspect is currently lacking and visibility over all the competences that organization is using is a key element to efficient utilization of them. It also decreases the possible overlap of competences.

For the commitment, the most important is to ensure all the managers and decision-makers are on the same page and know how they are expected to perform and operate. This can be ensured with mandatory online trainings. To increase the commitment as well as communication Enfo-wide frequent meetings with the partner management team and the decision-makers would increase transparency, trust and ability to take initiative if some team is not following processes or need help from the team.

For the documentation part, the critical improvements that need to be implemented first are the lists of forbidden and currently used organizations as well as their portfolios. In addition to them, unified guides of the cleared processes and lists of risks and things to take into account when filling in contracts are priority at the moment. All of these need to be maintained and saved to one shared place, for example Sharepoint, where every decision-maker will find them easily. In the next chapter, simple framework for the clear sourcing process is introduced to alleviate further standardization.

As mentioned earlier the main steps to standardize contracts would be to have shared lists of attributes to check and include to them. This would make them more on the same level despite the different units and countries and simplify the review work of the legal department. What is now missing is the common process for approving and saving those contracts which also needs to be clarified.

To increase the profitability, managers need to have better information of targeted profit and margin percentages. Now it is a responsibility of individuals and not communicated throughout the organization. Another step is to stress the importance of cost and reported hours monitoring from the beginning to end of a project.

The two crucial ideas for overall standardization are the creation of a partner management team and to have one shared place for all the needed information, documents, lists and frameworks maintained by the team. These have to be the first two steps to develop other areas even further and allow partner management team to maintain and monitor processes thereafter.

For the last category, all of the development ideas are important but in order to even have the possibility to co-create value from this area, the right attitude has to come from every employee. Although partner management team will handle partnerships in higher level, the open mindset and willingness to create successful cooperation and teamwork with other organizations have to be emphasized to and by every employee.

That creates the foundation where new ideas and ways to create value for both parties and customers will grow.

7.3 Framework for external resource right-sourcing in knowledge and project based organizations

The second objective of this master's thesis alongside identifying development areas and ideas is to develop a framework for external resource right-sourcing in knowledge and project based organizations. Case company, Enfo, has many different business units that use partners and subcontractors in specific business areas and projects. Every unit has its own characteristics and needs for subcontractors due to which this framework will be used as general process for sourcing. The objective of this framework is to guide the decision-maker through the process easily and present the main steps and attributes to take into consideration. It will unify the protocols and sets a standard for sourcing Enfo-wide both in Finland and Sweden.

Before moving to the actual framework, characteristics and theory from the chapter 4 need to be remembered. As Shook et al*.* (2009) and Brannemo (2006) resemble sourcing decisions are usually made based on individual knowledge and many organizations are lacking of systematic processes and monitoring of sourcing. In these situations, decision-makers are handling it on many occasions case by case with relying on their own routines and experiences.

The chapter also highlighted Loftin, Lynch and Calhoun's (2011) decision logic for developing a sourcing canvas for organization. This six step process should be performed by organization or a business unit before sourcing may happen. Model built in the process will serve as a basis for structured and efficient learning. It organizes the capabilities that organization have and gives an understanding of them to a business unit or a team. When the capabilities are divided into strategic support, advantages, essentials and business necessities, it is easy to identify the latest which are the potential areas for sourcing. Based on this, competence analysis is efficient and easier to make in every needed occasion.

The actual framework is developed mainly based on the interviews and insights found in them. Three theoretical frameworks described in chapter 4 provided important steps and attributes to use and be taken into account when developing sourcing framework such as competence and cost analysis which are used in this framework also. The whole developed framework is shown in Appendix B, but to give a more detailed walkthrough, it is presented on a header level in the figure 12 below. Later on, all steps and attributes on them are described one by one.

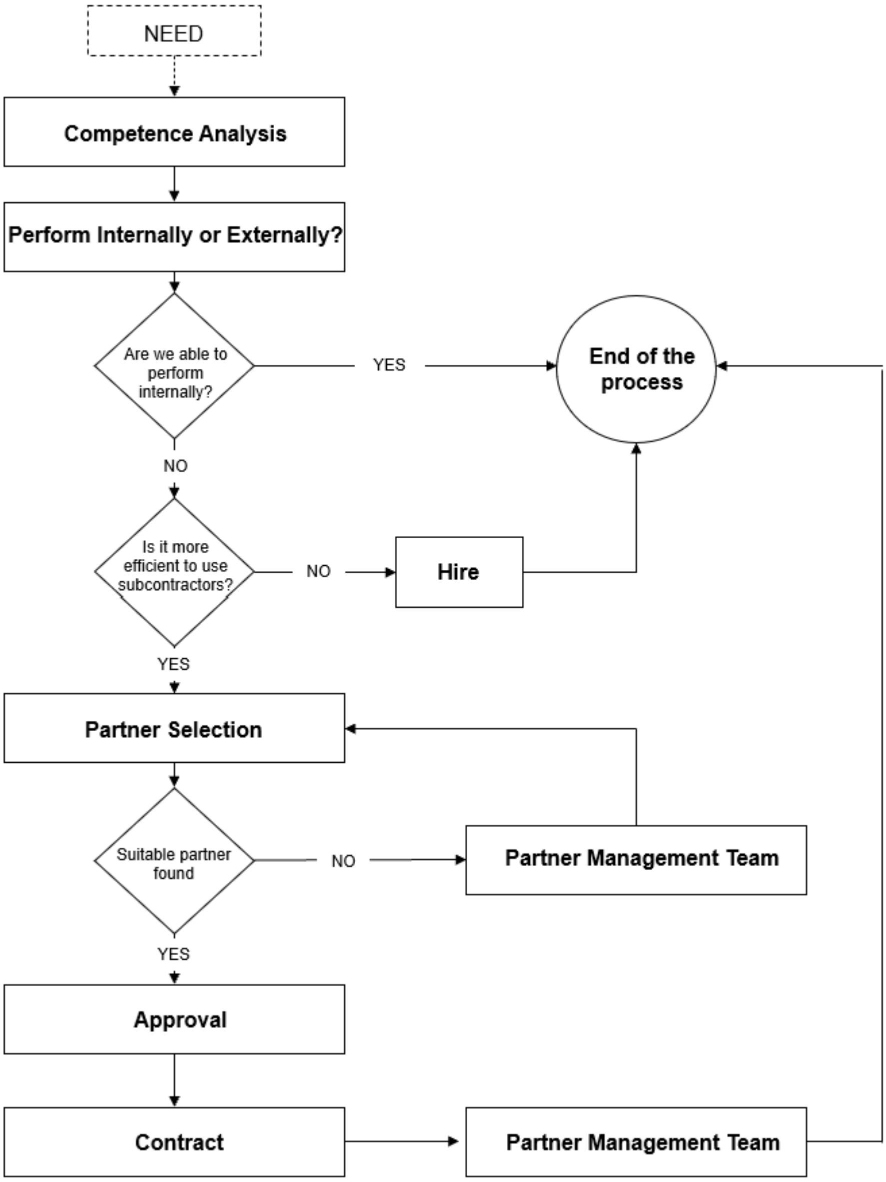

Figure 12. *Framework presented in header level*

In order to use this framework, organization or business unit have to have an identified need which triggers the whole process to begin. The actual process starts with two of the most important steps of the whole framework. The first step is a competence analysis that follows the analysis of whether needed competences will be performed internally or externally. If the answer after these steps is that it is possible to perform these tasks internally, process ends and internal employees will be used. If not, process continues with another question regarding whether it is more efficient to use subcontractors for the situation. If not, next step is to hire suitable competences and the process continues with partner selection. If even after careful consideration a suitable partner was not found, the partner management team will help to find more options and the partner selection step starts over. If a suitable partner is found, partner management team needs to approve it before continuing the process. After approval, next step for the decision-maker is to form a contract between Enfo and the partner organization. When ready, it needs to be sent over to perform the partner management team for final checks and after signings they will store and archive it, which ends the whole sourcing process.

All of these steps include crucial attributes and phases which have to be performed for the standardized process. Steps presented above are described more specifically in the following paragraphs starting from the competence analysis presented in figure 13 below.

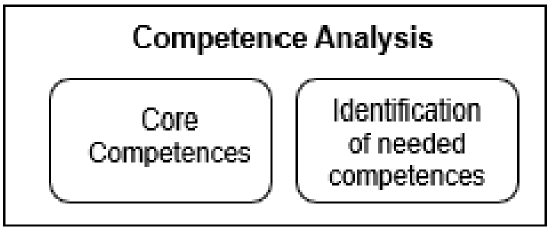

Figure 13. *Competence analysis*

This step includes two main phases: a core competence analysis based on sourcing canvas and identification of the actual needed competences. The organization's and the team's core competences need to be identified and understood in order to get competitive advantage from sourcing. Specific identification of the competences missing and needed combined with core competences give a foundation for the process.

Following the competence analysis, next question is to figure whether needed competences can be performed internally or need to be externally acquired as presented in figure 14 below. To get an answer, the decision-maker needs to form scenarios for training internal employee for needed tasks and knowledge, buying external knowledge from subcontractors or hiring a completely new employee to Enfo. To form these scenarios and to analyze their potential, decision-maker has to identify boundaries for timeline, costs, effectiveness, time consumption and Enfo-wide need for these competences.

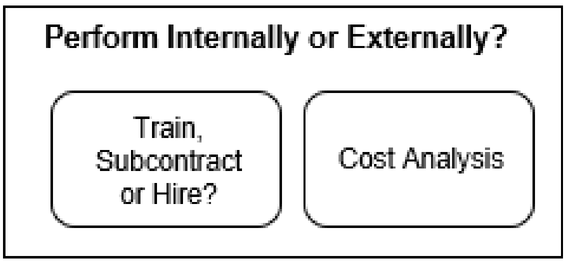

Figure 14. *Analysis of whether perform tasks internally or externally*

These previous scenarios include a cost analysis for each of them. One of the reasons for using subcontractors or completely outsourcing certain areas, is the profitability and cost effectiveness of doing it compared to training an internal employee or hiring a new one. That is why making cost analysis for each possible scenario provides crucial support for the decision-making.

Based on these two steps, decision-maker is able to decide if needed competences can be found internally and the sourcing process ends or if these competences have to be found externally. The second question about whether using subcontractors is more efficient way to continue includes the analysis of effectiveness in time- and money-wised as well as possible future Enfo-wide needs. If the answer is no, best option is to hire employee with these competences and knowledge to fulfill this need for a long-term basis. If answer is yes, process continues to partner selection.

Partner selection contains many attributes and need to be done carefully as showed below in figure 15. The most important and general categories are included in the framework to ensure certain level of standardization in every sourcing process.

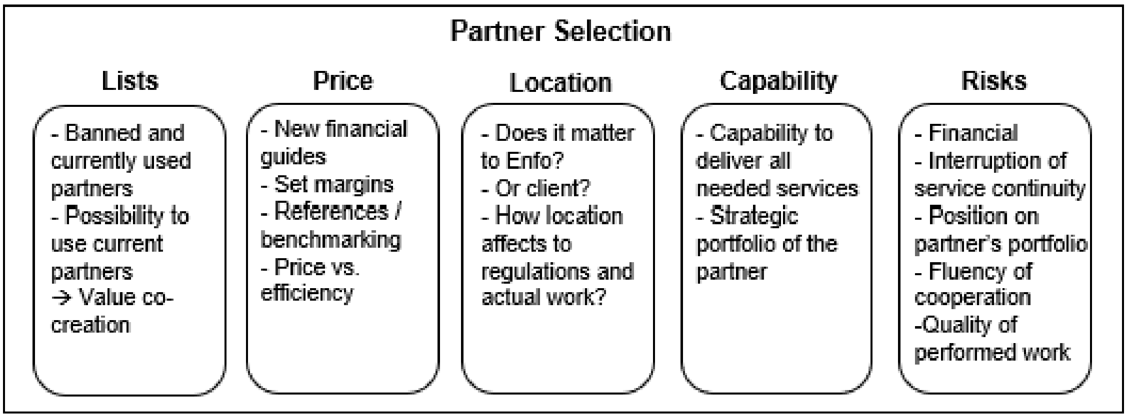

Figure 15. *Categories and attributes for partner selection*

First category in this step is the lists. This points to development idea of both banned and currently used partners, where decision-maker can find possible partners immediately and value can be co-created for both parties with economies of scale contracts and long-term relationships. Second category includes all money related attributes. With new financial guides including set margin objectives and references for certain competence prices will help to compare the possible partners. It is not always the best option to go with the cheapest offer, and price versus the potential effectiveness in performing needed tasks have to be considered also.

The third category is location. Does the country where service is performed matter to Enfo or to the end customer? And how it is affected by possible regulations such as GDPR (General Data Protection Regulation) or for example working hours? The fourth category for this step is the capability of the possible partner. It is important to clarify partner’s service and strategic portfolio in order to analyze its capability to deliver all the needed services and potential areas where partner can be used in the future if co-operation is fruitful.

The last category is about all the risks that organization might face when cooperating with partner and subcontractors. These risks are already presented earlier in this master’s thesis in chapter 7.2 and they include financial risks, interruption of service continuity, position on partner’s portfolio, fluency of cooperation and quality of performed work.

After careful consideration, the next step is whether suitable partner is found or not. If not, decision-maker should contact partner management team to get help in order to find potential partner options (Figure 16).

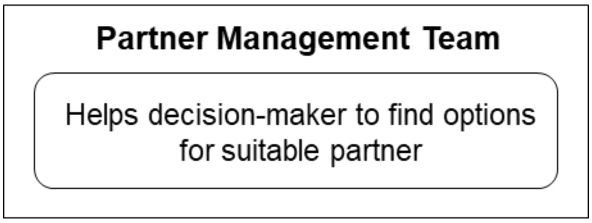

Figure 16. *Partner management team helps if suitable partner is not found*

From there, process goes back to partner selection step and continues normally with the help of partner management team as described in figure 17. On the other hand, if a suitable partner is found, the process continues with approval of selected partner with the partner management team.

Figure 17. *Partner management team approves selected partner*

After the approval, decision-maker can start formulating a contract with the partner organization. For contacts to be more consistent and standardized, the organization needs to provide unified templates for both countries and clear guides of the aspects that need to be covered and thought during the contract negotiations. These steps are shown in figure 18 below.

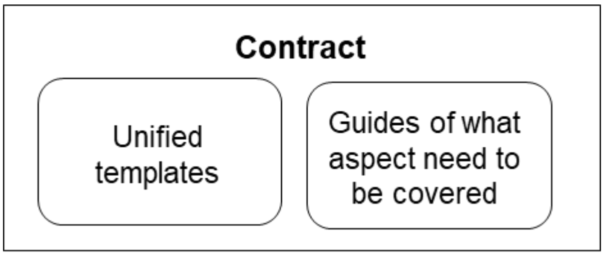

Figure 18. *Forming contracts with partner organization*

When the contract is ready, decision-maker sends it to the partner management team for legal checks and final go throughs as seen in figure 19. If contract passes all checks, it can be signed. After signing, the decision-maker have to send it back to the partner management team who stores and archives it to shared contract archive.

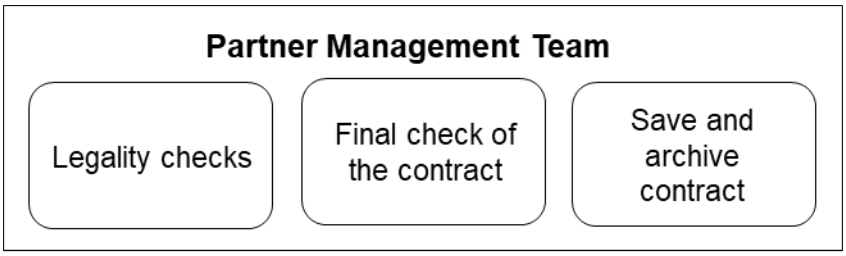

Figure 19. *Partner management team's obligations regarding contracts*

This step ends the sourcing process presented in framework. Important opinion from many of the interviewees was that the need for common process and framework is identified and real. Although it should not be too complex and multi-staged, so it will not take too much time and value out of performing sourcing and using external resources. Therefore, throughout the development of this framework simplicity has been the main approach.

8. DISCUSSION

This chapter consist of combining theoretical and empirical part of the research. Chapter describes critical segments of the conducted research and compares them to empirical findings from the interviews. Later on, most important aspects for the case organization are raised in chapter 8.2.

8.1 Characteristics of successful external resource sourcing in knowledge and project based organizations

The literature review revealed that research with actual frameworks or process models in sourcing area are mainly focused on "traditional industries" such as manufacturing, logistics and all in all processes where goods are moved from place A to place B. Knowledge and expertise intensive business environment has not been researched as much from the sourcing based view and therefore it was challenging to find references or best practices for framework development in this business area. Many of the information technology and knowledge intensive research also focus straightly to outsourcing and does not discuss the possibility of both insourcing and outsourcing. In chapter 4 three different sourcing frameworks were presented (Fill and Visser (2000); Mcivor (2000); Cánez, Platts and Probert, (2000)) and they were used to form a foundation for developed framework in this research.

As Marrelli, 1998 and Draganidis and Mentzas (2006) stated, in knowledge and project based businesses emphasizing human capital is essential to the organization's success and longevity. Detailed and up-to-date competence management helps to define and acquire needed skills, knowledge and capabilities to deliver projects and services as efficiently as possible. (Marrelli, 1998; Draganidis and Mentzas, 2006) Competence and capability management and analysis were pointed out as crucial and needed step before the actual sourcing can start in organization (Brannemo, 2006; Loftin, Lynch and Calhoun, 2011). The importance of them was highlighted also from the interviewees. All of the interviewees emphasized the need of competence analysis before every sourcing decision and it was wanted to be the starting point of the framework.

Loftin, Lynch and Calhoun (2011) presented a standard sourcing canvas and capability model for capability categorizing which can serve as a base for outsourcing or subcontracting possibilities. Model suggests that capabilities which have less strategic position and value should be handled with external resources. Based on the interviewees, that way of thinking might not serve knowledge and project based organizations in best possible way. In reality, organization needs to analyze every sourcing situation in more detail and external resources can be used also in more strategically crucial areas. As a sum, it is more complex to define strict categories where to use contingent work and in what areas not.

One crucial finding from both literature and empirical part of the research is that successful strategic sourcing is much more than focusing only on costs, profitability, time reduction or quality improvements. Talluri and Narasimhan (2004) remind to pay attention to supplier’s strategic dimensions such as process capabilities and design and development practices which provide information on supplier’s protocols and management practices. Interviewees brought up if external resources are needed, organization need to first check if they could use their current supplier portfolio and if not, selection should not be made solely based on cost. Detailed and thoughtful selection process will in best case produce long-term relations and partners which benefit the customer organization in the long run.

The next step in sourcing and partner management is to start creating even deeper and more meaningful relationships with current suppliers. In chapter 3.2.3 Möller and Törrönen (2003) discussed about the supplier’s value creation potential and highlighted the point that even though potential is hard to measure and analyze due to its multidimensional and non-financial characteristics it is necessary and recommended to every organization. Many interviewees pointed out the possibilities of the better utilization of already existing relations and openness towards supplier. With better management and assessment of existing partnerships, number of needed suppliers can be kept low and same time more value can be co-created together. From the interviewees it was clear to point out the importance of right mentality in customer organizations. Employees need to be open and trust their “co-employees” such as subcontractors or other external resources. With positive and candid mentality, relationships will be even more beneficial, and cooperation will grow to more innovative level.

8.2 Case organization’s point of view

Case organization gained a lot of new information and input to sourcing possibilities and strategies to make sourcing as standardized as possible. This research alone will not solve all the problems and challenges but propose a long list of areas and things which can be improved alongside the developed framework. Opinions and ideas to improvements and framework has been gathered from both countries and from different business units to create as truthful description as possible in the scope of the master's thesis.

First main takeaway from the research is that competence management and its importance is widely identified already, and case organization has good tools to make necessary analysis and conclusion to support decision-making. The challenge in this area is that all the available competences are not maintained or listed in current systems and are not available to everyone which causes overlaps and possible usage of unnecessary external resources. In current situation the utilization of organization competences is not optimal and effect to profitability massively.

Another main takeaway would be the importance of strategic thinking regarding sourcing and options it might bring to the organization. Many interviewees highlighted this area and possibilities to create even more interesting and innovative content with current suppliers to strengthen Enfo's position in current market and create competitive advantage together with them. Thus, to make this happen will require time and investments from the whole organization but many of the interviewees saw the potential in it and were eager to boost this topic. The potential value of the suppliers should be analyzed with the help of theoretical models offered in literature review and development with the most potential ones can be started.

Biggest challenges were faced in the standardization and transparency areas. Especially the lack of common protocols, guides and lists of the things that need to be taken into account created false information, different processes and missing documentation about crucial steps of the processes. Theoretical frameworks and models for many internal processes, as presented in chapter 4, would prevent this and ease up monitoring and developing of them in the future. Common protocols decrease time needed in internal processes and release it for more productive tasks organization-wide.

9. CONCLUSION

In this chapter, the research and the whole research process is analyzed and summed up. First, achieving set objectives and research questions are discussed in chapter 9.1 and after that the chapter 9.2. presents possible future research areas related to this master thesis.

9.1 Achieving objectives and the importance of results

The main objective of this master thesis was to develop a framework to support complex decision-making regarding sourcing external resources. This was done by combining literature review and empirical interviews, in order to create practical yet theoretically based model which is simple enough to use in all business units of the case organization. Development was successful and the whole framework is presented in Appendix B, and that is why this goal is considered as achieved. The second objective of this research was to create a clear picture of the current state of sourcing processes in case organization and based on the interviews collect all development ideas and present them in structured manner. Chapter 6 describes the current state of the sourcing processes as well as challenges interviewees has faced in them or in areas around them based on eight categories: competence management, commitment, communication inside Enfo, documentation and transparency, contracts, finance, standardization and value co-creation. In the chapter 7, all the identified development ideas are categorized in these same eight segments and also summarized in one table to highlight the most urgent and crucial improvement areas. Based on them, the second objective can also be justified as achieved.

The final contribution of this master’s thesis can be divided into three parts. It incorporates literature and theories from competence management, strategic sourcing and value co-creation to provide background knowledge and base for the whole research. Secondly, with combining these three areas, it introduces reader to sourcing external resources to knowledge and project intensive organizations, which is currently not largely represented in literature. The third contribution is the developed framework for decision-makers which presents a general process model for sourcing decisions and their approval in case organization.

In addition to reaching the set objectives, the validation of this master's thesis can be analyzed whether it was able to answer the research questions set at the beginning of the research in chapter 1.2. The main research question was about how the sourcing processes in knowledge and project based organizations could be optimized and standardized. This is a broad question and complete answer has aspects both in literature review and empirical study. For process standardization, competence management and analysis, better understanding of the capabilities of strategic sourcing, unified guides and protocols, more open communication and systematic documentation are key aspects. For the main research question, the whole research and areas it covered can be included.

The main research question has also two sub-questions. These break down the main question into smaller and easier areas to approach. The first sub-question regarded the elements that can be identified to affect sourcing processes. This question is answered mainly through the theory chapters and also touched on in chapter 4 and theoretical frameworks it presented. Interviews also created a great picture of what elements decision-makers usually go through before doing the final decision. This theme continued with second sub-question which was about the decision-making chain that lies behind right-sourcing. This was answered partly with interviews and opinion highlighted in them but also especially with chapter 4.

Otherwise than meeting the objectives and research questions, qualitative research can be assessed based on following criteria: clarity of the report, consistency of the methodology, analytical accuracy, theoretical aggregation and relevance (Tuomi and Sarajärvi, 2018). This report is done by all the criteria set for master thesis by Tampere University, it consists of needed areas and is done by using relevant references. It is also written to master thesis document table. From the methodological point of view, master thesis followed the selected methodological research process, and all the steps of the process are described and presented clearly throughout the research. The number of interviewees was quite low due to fact that research was done with one case organization. The number of interviewees affects to analytical accuracy by decreasing it and undermines its generalizability. Theoretical aggregation was challenging is this master thesis, because there is not much literature focused on knowledge intensive organizations and contingent work. However, by combining traditional sourcing literature with competence management and human capital thinking, theories can be used also in context and scope of this specified research. The research was order by case organization with a real life challenges which advocates the relevancy of this master thesis. The results of this research can be implemented to organization's daily work and have an impressive effect to current processes.

This research however did not take a stand in implementation part of the framework and development ideas. Next steps to reveal the true potential of the research needs to be considered carefully and with a well thought plan inside the case organization.

9.2 Proposals for further research

Traditional sourcing and models for it are covered quite largely in studies and articles with many different perspectives and contexts. However, knowledge and project based organizations are rising and even more employees compete with their expertise and knowledge. When doing the literature review, it was notable that sourcing in these organizations is area that lacks systematic review and new models. This research presents one option to fill this research gap, but topic can be studied a lot more and in detailed.

The framework developed in this research was purposefully quite simplistic and developed certain way to meet the demands of the case organization. If the framework could be tested and studied within different environments and industries, it could be generalized to fit into more organization's needs. Framework could be also studied in more detailed level and additional steps and decisions could be added to it for even more strict approach.

Another interesting area would be to study the cost analysis part of the framework. Employee costs differ from product and supply chain costs, and they need to be analyzed every time sourcing decision is made in these knowledge intensive organizations. It would add more theoretical aspect to this framework and increase its implementation. Leading there on, implementation of this framework would also be valuable proposal for further study in case organization to ensure as efficient and smooth implementation as possible.

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APPENDIX A: INTERVIEW STRUCTURE

Background questions

1. Would you tell shortly about yourself and your job at Enfo?
2. How is subcontracting aligned to your daily work?
3. Why subcontracting is used in projects and continuous services at Enfo?
    a. What is the value that subcontracting can bring to the organization and projects?

Current state of the subcontracting process

4. How do you think that the current state of subcontracting process works at Enfo?
5. Who are involved in the decision-making process behind buying subcontractor work?
    a. Who is making the decision of buying subcontractor work?
6. What factors are considered when making a buying decision?
    a. What do you think are the most important ones out of them?
    b. What internal or external information is available to support decision-making?
    c. Is there any internal systems or frameworks to help decision-making? Or existing contracts?
        - If yes, what and how they are used?
7. How the bidding or tender out between subcontractors is handled currently?
8. What are the identified risks related to buying subcontractor work?
    a. How you evaluate these risks currently?

9. How is the success of the procurement process assessed afterwards? (Continual improvement)
10. Validation: How you validate/ test that the quality of the work of subcontractors is at required level and profitable?
    a. Are the information/results regarding this used in any form later?
11. Are there differences between business units or teams on how they approach the resource sourcing and subcontractors?
    a. If yes, what are those differences?
12. Are there some parts of the procurement process that are not really anyone's responsibility?

How to achieve the ideal state?

13. What challenges or problems do you recognize in the current process?
14. How would the problems areas you mentioned be improved or solved?
    a. In terms of transparency,
    b. flexibility or
    c. profitability?
15. How the available information should be better used to support decision-making related to resource sourcing across the whole organization?
16. How would the risks related to buying subcontract work be better evaluated?
17. How pricing aspect or the profitability of subcontractor work could be improved?
18. What parts of the process needs to be documented and why?
    a. How the process could be improved continuously through better documentation?
19. Contracts: What aspects need to be taken into consideration when making contracts for subcontractors?
    a. How contracts are made currently and where they are saved?
    b. What are the areas where improvements are needed in this topic and how would you improve or solve them?

20. Process maintenance and development: Who should be responsible for developing resource sourcing strategies as well as this process?
21. What aspects need to be considered in the framework regarding different business-units and teams?

Ending

1. Is there any steps, aspects or things that were left uncovered during this interview?
2. Any other questions or comments?

APPENDIX B: FRAMEWORK FOR EXTERNAL RESOURCE RIGHT-SOURCING IN KNOWLEDGE AND PROJECT BASED ORGANIZATIONS