NTNU – Trondheim
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Implications of Selecting On-Site and Off-Site Outsourcing Projects

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Project Management
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- uttak av masteroppgave

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Oppgavetekst/Problembeskrivelse The main purpose of this master thesis is to look at the advantages and disadvantages of using on-site outsourcing compared to using off-site outsourcing in projects. Off-site outsourcing is here defined as both onshore and offshore outsourcing. This research will focus on different situations where either of the two practices are appropriate. The empirical data will be gathered through a survey among Atmel's project and program managers. Atmel is one of the leading electronics firms for development and production of micro controllers. They have used both on-site and off-site outsourcing in previous outsourcing projects.	
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4. Underskrift

Student: Jeg erklærer herved at jeg har satt meg inn i gjeldende bestemmelser for mastergradsstudiet og at jeg oppfyller kravene for adgang til å påbegynne oppgaven, herunder eventuelle praksiskrav.

Partene er gjort kjent med avtalens vilkår, samt kapitlene i studiehåndboken om generelle regler og aktuell studieplan for masterstudiet.

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Abstract

The purpose of this master thesis is to identify the advantages and disadvantages of selecting on-site and off-site outsourcing projects, in an attempt to strengthen the knowledge concerning this area of research. By looking at the selection criteria, risk factors and success factors, one can get a greater understanding of the implications of selecting one type of outsourcing over the other. A review of relevant theories is presented within the area of outsourcing, including the process of outsourcing and how it relates to organizational structures. A potential gap in the literature is identified, being that little empirical research has gone into investigating the different implications of location-based outsourcing and how these relate to each other.

The literature review is used to identify the advantages and disadvantages of on-site and off-site outsourcing. These are then used to construct a survey among the employees in the microcontroller-development firm Atmel, in order to see how these factors relate to real-life experiences. The findings from the survey were then used as a foundation for three in-depth interviews with managers at Atmel to further elaborate on the differences between on-site and off-site outsourcing.

The findings from this research indicate that on-site outsourcing is preferred over off-site outsourcing because of improved day-to-day communication and more effective management of expectations. Off-site outsourcing however, offers access to a greater pool of resources and talents. The survey found that more time was spent on the preparation phase in off-site projects, while training and managing the relationship was more time-consuming on-site. The interviews revealed that good communication in off-site outsourcing can be challenging, and developing a good relationship with the vendor is more of a challenge in off-site outsourcing relationships than it is for on-site. The practical implications of the physical distance between the outsourcing partners would dictate the client's ability to follow up and being able to influence the service provider during the outsourcing process. This conclusion is supported in the case of Atmel, where the levels of satisfaction are much higher in on-site outsourcing compared to off-site.

Sammendrag

Formålet med denne masteroppgaven er å identifisere fordelene og ulempene med å velge on-site og off-site outsourcing prosjekter, i et forsøk på å styrke kunnskap relatert til dette fagfeltet. Ved å se på valgkriterier, riskfaktorer og suksessfaktorer kan man få en bedre forståelse av implikasjonene ved å velge den ene typen outsourcing fremfor den andre. En vurdering av relevante teorier innen outsourcing er presentert, inkludert prosessen ved outsourcing og hvordan den relaterer til organisasjonsstrukturer. Det er identifisert en mulig svakhet i litteraturen, hvor lite empirisk forskning har fokusert på å utforske de forskjellige implikasjonene ved å velge forskjellige lokasjonsbaserte outsourcing-løsninger og hvordan disse relaterer til hverandre.

Teorikapittelet er brukt til å identifisere fordeler og ulemper ved on-site og off-site outsourcing. Disse er så brukt til å konstruere en spørreundersøkelse blant de ansatte i mikrokontroller-utviklings firmaet Atmel, for å se hvordan disse faktorene relateres til praktisk erfaring. Resultatene fra spørreundersøkelsen ble brukt som grunnlag for tre dybdeintervjuer med ledere hos Atmel for å videre utdype om forskjellene mellom on-site og off-site outsourcing.

Resultatene fra denne forskningen indikerer at on-site outsourcing er foretrukket over off-site outsourcing på grunn av forbedret daglig kommunikasjon og mer effektiv forventningsavklaring. Off-site outsourcing derimot, tilbyr tilgang til et større utvalg av ressurser og ekspertise. Spørreundersøkelsen fant at mer tid ble brukt på forberedelsesfasen i off-site prosjekter, mens opplæring og leveranseoppfølging var mer tidskrevende on-site. Intervjuene fant at god kommunikasjon i off-site outsourcing kan være utfordrende, og at å utvikle et godt forhold til leverandøren er en større utfordring i off-site outsourcing sammenlignet med on-site. De praktiske implikasjonene med den fysiske avstanden mellom outsourcing-partnerne vil diktere kundens mulighet til på følge opp og være i stand til å påvirke leverandøren under outsourcing-prosessen. Denne konklusjonen støttes av resultatene fra Atmel, hvor lederne var vesentlig mer tilfreds med on-site outsourcing i forhold til off-site.

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1 Introduction

This master thesis is the final stage of a master's degree in project management at the Norwegian University of Science and Technology. This study is undertaken in order to research the outsourcing experiences in Atmel, and to see how they relate to location-based outsourcing in general. The types of location-based outsourcing being researched in this thesis are on-site and off-site outsourcing. The purpose of this chapter is to introduce the problem definition for this thesis and explain the background for selecting its research topic.

1.1 Research topic

The research topic in this thesis was a result of an extension to a specialization project that the author carried out last semester. That specialization project focused mainly on the implications of involving suppliers in product development projects. It identified advantages and risk factors of such projects. This approach to outsourcing was more general, and this spawned the question of how such outsourcing projects would differ depending on the type of outsourcing arrangement undertaken. In addition to this research project, the research topic is a product of personal interest and builds upon the foundation provided by multiple courses in the master's degree concerned with outsourcing and supply chain management.

1.2 Outsourcing

Outsourcing is said to have been around since the Romans outsourced their tax collection (Kakabadse and Kakabadse, 2002). Arnold (2000) states that the origin of the word "outsourcing" is that it is short for "outside resource using". There are many definitions to what outsourcing is, and they often agree that outsourcing is a process where a business purchases a service from an external service provider that was previously executed internally. To use resources outside of a firm could give significant advantages, but it has also been proven to bring negative aspects if not utilized appropriately. Many are tempted by the

opportunity to use cheaper labor that is more specialized at a task than internal resources. In fact, within the IT-sector it has become a trend (A.T. Kearney, 2004). Gadde and Håkansson (2001) argue that businesses are becoming more focused on specializing within a small set of tasks, and look to outsource the remaining activities. Companies have begun to realize that there is a potential for value creation outside of their firm's boundaries.

KPMG's (2013) global outsourcing survey reveals that five out of ten major enterprises are planning to expand their outsourcing initiatives in application development and maintenance. Other interesting findings from the survey are that business process outsourcing (BPO) is outperforming IT outsourcing when it comes to cost reduction, effectiveness and process standardization. It also found that the main areas of strategic focus when choosing outsourcing is access to better talent, better technology and improved analytical capabilities. Because increasingly more activities are being outsourced, managing these activities are also becoming increasingly more important (Gadde and Håkansson, 2001).

1.2.1 On-site and off-site outsourcing projects

There are many different categories of outsourcing, based on the location of the project resources during the delivery of the service, such as offshore, near-shore, on-shore, far-shore, near-site, off-site and on-site. While offshore, near-shore, far-shore and on-shore are more concerned with the geographical location of the service carried out compared to that of the client, on-site and off-site is more of an overall view, where the service is either carried out at the service provider's location (off-site) or the clients location (on-site).

There are surprisingly little research that has gone into comparing these types of outsourcing strategies, and how and when they should be utilized to meet the right outsourcing criteria. Only a few scholars have done indirect or partial comparisons (Duppada and Aryasri, 2011; Pannirselvam et al., 2011; Wells, 2009; Lim et al., 2007; Balogun, 2010). It would then seem rather arbitrary which outsourcing solution is selected for a project if there are no guidelines or

framework that aids the business in selecting the right outsourcing solution. This does not mean that a business is not able to select the right solution, but rather that they are less educated in their decision, and that knowing the advantages and disadvantages of the different solutions could guide the different requirements for selecting one over the other.

1.3 Research aim and objectives

With regards to the previous subchapter, it is clear that studying location-based outsourcing could be beneficial in building upon existing knowledge about outsourcing. The purpose of this master thesis is to research the implications of location-based outsourcing. This is a broad topic, and the author has limited the scope of this study to focus on on-site and off-site outsourcing projects, as these would provide a more overall view on the different types of outsourcing and would therefor cover some of the previously mentioned outsourcing types as well. In order to strengthen the research with real-life experience and practical insight, a survey and interviews were carried out in a firm called Atmel.

The first part of this thesis will identify advantages and disadvantages of off-site and on-site outsourcing projects, together with literature concerning the outsourcing process and supply chain theories. This section will serve as the foundation for the next part of the thesis that will focus on Atmel's outsourcing experiences in off-site and on-site outsourcing projects. Then a discussion will be presented in regards to how their experiences relate to the theoretical frameworks presented in the literature review. This approach led to the following research questions:

1. What are the advantages and disadvantages of selecting on-site and off-site outsourcing projects?

2. What are the main differences in the outsourcing process of on-site and off-site outsourcing projects?

1.4 Atmel

Atmel is one of the leading firms for development and production of microcontrollers. They have a branch located in Trondheim, where the author was provided a desk to work at and make the process of data collection easier. The Tools-department, where the author was placed, develops tools to support and utilize the microcontrollers that Atmel creates. Their branch in Norway has around 200 employees, while Atmel as a whole consists of around 5100 employees. The Norwegian branch is involved in outsourcing projects in countries such as Norway, Switzerland, Malaysia, China and India. They have experiences with both off-site and on-site outsourcing projects, and the author considered them a good match as a case company for this research topic.

2 Literature Review

The purpose of this chapter is to review the theory related to the research questions asked in this master thesis. The main research topic is the difference between outsourcing work that is externally performed and managed (off-site) compared to outsourced work that is performed and managed locally (on-site). In order to better understand the different types of outsourcing and the implications of utilizing the one over the other, a review of outsourcing theories and supply network strategies will be assessed. Furthermore, the advantages and disadvantages of these outsourcing methods, as identified in the literature, will be compared and evaluated before moving on to the next chapter.

According to Perunovic´ and Pedersen (2007), the main theories used in the outsourcing literature to understand the complexity of the processes and the ability to manage them, are Transaction Cost Economics (including Incomplete Contracts), Relational View, Core Competencies, Evolutionary Economics, Resource Based View and Agency Theory. These are all utilized differently throughout the different phases of the outsourcing process. Perunovic´ and Pedersen (2007) created a table in order to understand which theories were most utilized during the different phases of the outsourcing process (See Figure 1). According to them, the outsourcing process can be divided into five phases, namely Preparation, Vendor(s) Selection, Transition, Managing Relationship and Reconsideration. Within the dataset of journals and case studies they studied, a large number of cases utilizing a theory in an outsourcing phase was identified as more then 7 (L), medium was between 4 and 7, inclusive 7, (M) and few was below 3, inclusive 3 (F).

	Preparation	Vendor(s) Selection	Transition	Managing Relationship	Reconsideration
Transaction Cost Economics	L	F		M	M
Relational View	M	F	F	M	F
Core Competences	M			F	F
Evolutionary Economics	F		F	F	F
Incomplete Contracts	F	F		F	
Resource-based view	F	F		F	F
Agency theory	F			F	F

Figure 1 - Most utilized theories and phases of the outsourcing process (Perunovic´ and Pedersen, 2007)

In order to compare the similarities and differences between locally performed and externally performed outsourced work, this research will build upon Perunovic´ and Pedersen's five phases in an attempt to understand the outsourcing process to the fullest. By comparing these phases and their respective outsourcing theories with outsourcing frameworks founded on these theories, the understanding of the situational boundaries linked to the different phases might improve the decision of selecting between locally performed and externally performed outsourced work.

The theories will be briefly explained, as understanding their value and limitations enables better discussion in chapter 2.2, which is concerned with their impact on the different phases of the outsourcing process. The one exception is Evolutionary economics, as Perunovic´ and Pedersen (2007) argue that it is rarely applied to the study of the outsourcing process and focuses more on process theory in general. It was included in their study for the sake of covering the theory, but the cases concerned with it was limited. It will therefore not be included in this research.

2.1 Outsourcing Theories

2.1.1 Transaction Cost Economics

Transaction cost economics (TCE) specifies the suitable conditions for when an organization should perform a process internally and when the process should be outsourced (Williamson, 1985). In other words, the outsourcing decision

favors reduced transaction cost, and the optimized decision for whether or not to outsource a process is determined by the associated transaction costs.

There are four primary factors that constitute transactional difficulties (McIvor, 2005). The first factor is bounded rationality, meaning that humans' ability to act rational is limited by their ability to process information. An actor might think he makes a rational choice based upon the consequences he is able to determine at that given point in time, but the rational choice is limited by his inability to see all possible outcomes of the decision made. The second factor is opportunism. Opportunism is an actors ability to deceit someone by placing self-interest above all else. This could be lying, falsifying documentation or similar cunning behavior that is not accepted in the business world. Opportunism is not an important problem when there are many companies to choose from. However, when the number of firms to choose from becomes rather small, the issue increases. Small numbers bargaining is the third factor of transactional difficulties. The last factor is information impactedness, meaning that between two collaborating parties, one party is more knowledgeable than the other (McIvor, 2005).

An example of such asymmetrical distribution of information would be if one oil company that has developed a small oil field, with a subsea solution tied back to the platform of a larger field located nearby and operated by another oil company, and outsourced the tasks of operating the subsea field for them. Then the oil company operating the two fields is in charge of collection and distribution of the oil. Without significant transparency into the process, the operator of the subsea field could trust that the payment they received from the operator of the platform field was accurately portraying their share of the total oil gathered, without having the information to back this up. The bigger firm could however leverage from this power position and balance the payments in favor of themselves, leveraging the opportunism at hand.

Williamson (1985) argue that the transaction difficulties will increase when transactions indicate asset specificity, uncertainty or infrequency. Asset specificity is here defined as a transaction of high investment for a specific

exchange relationship. Poppo and Zenger (2002) propose that if a situation of asset specificity would arise, contractual safeguards would benefit the relationship in minimizing opportunistic behavior.

A limitation of TCE is that it does not necessarily consider the long-term interests of the organization (Holocomb and Hitt, 2007), such as outsourcing a process based on transaction cost savings that would be crucial for the core competencies of the organization.

2.1.2 Relational View

The Relational View is the only outsourcing theory that has been utilized in all phases of the outsourcing process within the literature (Perunovic´ and Pedersen, 2007). Dyer and Singh (1998) argue that a firm's critical resources can also consist of inter-firm resources and routines, meaning that it is not only the firm's own resources that can be critical to their success, but also resources from collaborating firms contributing to their competitive advantage. In other words, inter-firm relationships can create competitive advantage, which makes the selection of a right outsourcing partner significant. The shared resources between two firms could potentially create greater competitive advantage than the resources would have made on their own within each of the firms (Dyer, 1996). According to McIvor (2005), the relational view is an evolvement from the limitations of transaction cost economics. It expands the boundaries of the firm through management of the firm's relationships with external entities in order to get a full understanding of the firm's competitive outlook. External entities is not only limited to suppliers in this scenario, but could also be customers, collaborating parties, government or any other external party that could offer mutual benefits.

A term used in regards to the relational view is relational rents. Dyer and Singh (1998) defined relational rents as being the profits that the two parties created together in the relationship that could not have been created by either of the firms alone, and only through the joint collaboration between the specific parties.

Furthermore, Dyer and Singh (1998) identifies four types of relational rents; inter-firm specific assets, inter-firm knowledge-sharing routines, complementary resource endowments and effective governance.

McIvor (2005) identifies a connection between the relational view and knowledge-based theory, as knowledge creation could occur within a relationship between firms. He argues that in many industries, most innovation and knowledge creation arises in inter-firm collaborations. Inter-firm relationships have been increasingly important among firms, and it has become more significant within new product and supplier development. As a result, increased outsourcing has created a higher degree of dependency on supplier networks. This adaption stems from the successful outsourcing practices observed in Japanese business culture, where suppliers are required to make investments specific to their relationships.

2.1.3 Core Competences

Core competencies are a bit different from the relational view in that it considers that a firm's potential for competitive advantage lies within the internal organization of the firm, rather than within the relationships with external parties (McIvor, 2005). Prahalad and Hamel (1990) stated that core competency does not involve physical assets; as they can simply be replicated or become obsolete no matter how valuable or innovative. According to them, the real foundation for core competency comprises of how well management is able to take advantage of the knowledge and technology available to the firm in the pursuit of and the ability to adapt to business opportunities. It is a continuous process to strive for improved learning and enhancement of production and integration skills.

There are offered multiple suggestions as to what characteristics a core competence should have (Hamel and Prahalad, 1994; Quinn and Hilmer, 1994; McIvor 2005), and in summary, a core competence should be crucial to the customer, offer the possibility of differentiation from the firm's competition and

it should be an activity that the organization executes better than any suppliers or competitors. In comparison, Venkatesan (1992) defines non-core activities as something that offers no strategic advantages or competitive differentiation. These are the activities that are suited for outsourcing.

According to McIvor (2005), there is an important issue to consider when outsourcing activities. Following the statement that only non-core activities should be outsourced, one could think that the activities offered by suppliers are of lesser importance to the firm. However, if a supplier is more competent at performing the activity than the firm, then it could still be seen as strategically important to manage and nurture this relationship. Another example is if a competitor exceeds a firm's ability to compete on an activity. Then, if an investment to keep up with the competitor is not deemed profitable, the option to outsource the activity could be a considerable option, and the activity would still be seen as important to the firm. By clarifying that non-core activities do not necessarily equal activities of no strategic importance, one can differentiate and adapt the management of these activities based on their implications to the firm. There is also important to recognize that outsourcing a non-core activity could have ramifications for the core activities if dependencies between the outsourced non-core activity and the core activities were in place (Bryce and Usseem, 1998).

2.1.4 Resource-Based View

The resource-based view is essential in order to understand the boundaries of the organization and linking the outsourcing decision with competitive advantage. It is the foundation for the core competences concept. Like the core competences, the resource-based view focuses on the firm's internal resources as the key factor for strategic advantage (Prahalad and Hamel, 1990). The academics supporting the resource-based view argue that the assets and resources within a company should be viewed as one unique collection that has the possibility of creating strategic competitive advantage if utilized right (Barney, 1991; Rugman and Verbeke, 2002; Lavassani et al., 2008). An extension

to this view is also provided, called the dynamic capabilities approach (Teece et al., 1997). It focuses on utilizing the internal and external competences of a firm in order for them to develop, deploy and protect the competences in pursuit of environmental change with increased attention to developing management capabilities (McIvor, 2005).

Barney (2002) argue that in order for a resource to offer the firm a potential for increased competitive advantage, four criteria must be in place; value, rarity, imitability and organization. In this case, resources are deemed valuable if they have the possibility to let the firm take advantage of opportunities while countering threats. Rarity is determined by how many competitors own the same resource, where the more rare the resource, the more chance it will offer potential for competitive advantage. A resource's imitability is concerned with how easy it is for competitors to copy the resource, as this will determine the sustainability of the competitive advantage provided by the resource. Lastly, the firm must be effectively organized in order to take advantage of the resources it has at its disposal.

2.1.5 Agency Theory

When a customer's profit depends on the behavior of a contractor, problems may arise. The economic theory investigating this research area is called Principal Agent theory (Keil, 2005), or the shorter version, Agency theory. Where the one who pays for the service has limited ability to monitor the service from the agent, an issue of trust can arise. Keil (2005) identifies 4 assumptions to the principal-agent relationship. The first assumption is that the agent and the principal behave rationally, both in regards to behavior and expectations. The second assumption is that the outcomes of the actions and activities the agent embarks upon will affect the principal's profit and success. Thirdly, the uncertainty between the principal and the agent will increase as the ability to control the agent's activity becomes smaller. The fourth assumption Keil (2005) mentions is that a divergence of interest exists, meaning that the agent display opportunistic behavior, putting his own interests of maximizing his return ahead of the goals of

the principal. The opportunistic behavior can take place in different forms, such as hiding the characteristics of the agent, such as his abilities and skills, holding a hidden intention that the principal is unaware of, or hiding actions that the principal cannot control. There are all factors to consider when finding an agent for an outsourcing arrangement. Even if the principal found out that the agent is maximizing his own profit instead of achieving the goals of the principal, the project may have progressed too far to change the agent, considering the sunk costs already invested and the switching cost associated with employing someone new to the project. This hold-up problem is an example of issues that needs to be mitigated when selecting and managing agents in outsourcing endeavors.

2.2 Outsourcing Phases

2.2.1 Preparation

In the beginning of the outsourcing process, it is important to understand how one can take advantage of the business opportunities that the market can provide in order to focus on core competencies and consider moving non-core activities outside of the company's boundaries (Willcocks et al., 1995). According to Perunovic´ et al. (2006), the question is no longer about whether and what to outsource, but how to outsource. The phrase "strategic outsourcing" emerged as to differentiate between core functions and functions that are needed to achieve the strategic goals.

The foundation for the outsourcing relationship is determined in this initial phase, and deciding the nature of this relationship early on is therefore important. This will be affected by factors such as risks, opportunities and the level of core functionality of the activity outsourced. Willcocks and Choi (1995) argue that the level of preparation an organization does before they start developing a relationship with a supplier will greatly affect the future success of the outsourcing relationship. Perunovic´ et al. (2006) argue that organizations should benchmark all their different strategic options and activities in order to answer the following questions:

1. **Whether** to outsource?
2. **What** to outsource?
3. **When** to outsource?
4. **Where** to outsource?
5. **How** to outsource?

The answers to these questions will guide the final decision regarding an outsourcing arrangement. The outsourcing arrangement should be approached differently, depending on the supply market risk and the activity's effect on the firm's competitive advantage. If the risk is low and the activity is critical to competitive advantage, McIvor (2005) suggest a competitive collaborative relationship strategy. However, if the supply market risk is high, a close collaboration strategy should be utilized. For non-critical activities with low risk, an adversarial strategy should be applied, or a secure supply strategy if the risk is high. Perunovic´ et al. (2006) states that a company that is pursuing outsourcing will seek to reach one of two extremes, being either a short-term transaction relationship or a long-term relational relationship. In other words, it will either strive for a contractual relationship or a collaborative relationship. The longer the project, the closer collaboration is needed to mitigate risk.

Greaver (1999) identified certain characteristics associated with when short and long-term contract where used. He argued that long-term contracts are utilized in more strategic relationships, where the outsourced activities are closer connected with core competencies of the firm. Other characteristics that encourage long-term contracts are significant investments from the vendor or significant assets moved from the customer to the vendor. On the other hand, short-term contracts are more utilized when there are significant uncertainties associated with the outsourcing arrangement, or when the characteristics are opposite of what would encourage a long-term contract (i.e. non-strategic relationship or non-core function).

2.2.2 Vendor selection

The vendor selection phase is a critical phase for a successful outsourcing process, seeing that the vendor selected will affect the future performance of the organization. Perunovic´ et al. (2006) states that if the preparation phase did not identify a final candidate to start contract negotiations with, there need to be a carefully designed screening phase in order to find the most appropriate vendor. The steps suggested by Perunovic´ et al. (2006) is writing a request for proposals from vendors, defining what the vendor will be evaluated on, followed by evaluating the vendors and select the most appropriate one for the outsourcing arrangement. Then, a contract negotiation begins, before the contract can be finalized. The contract is the final output, and ultimately the goal, of the vendor selection phase.

When writing the request for proposals from vendors, there are a few critical factors to consider. Corbett (2004) argues that firms need to focus more on the objectives and results of the outsourced work, rather than the resources and methodologies used to achieve them. Explaining what factors will be used to evaluate the proposals and how they are weighted will allow the vendors to know what the most important areas to focus are. It is also important to explain what the problem areas are with the current solution, and how this is affecting the business. Because of the collaborative nature of an outsourcing arrangement, it is also important to present the firm and the work in such a way that the vendors perceive them as a valuable potential customer.

For the actual selection of the vendor, there are twelve capabilities that the supplier should be evaluated on (Fenny et al., 2005):

1. **Domain Expertise** - Ability to allocate and deliver enough professional knowledge of the process to meet the user requirements.
2. **Business Management** - Ability to meet both the client service-level agreements and its own business plans. The supplier have to make money too in order to stay in business, and in a collaborative outsourcing arrangement there should be a mutual understanding that one does not

want the other party to lose money because it will negatively affect the other party as well.

3. **Behavior Management** - How well the supplier is at training, managing and motivating their employees.
4. **Sourcing** - Capacity to allocate the necessary resourced to reach the service targets of the customer (i.e. economies of scale or lower labor costs).
5. **Technology Exploitation** - How quickly and efficiently they are able to implement technology to support critical service improvement targets.
6. **Process Re-Engineering** - Ability to adapt the service process to meet improvement targets through designing and implementation of changes.
7. **Customer Development** - Suppliers need to think of their users as customers, and in order to maximize their chances for success they need to select suppliers that are capable of managing the transition from user to customer.
8. **Planning and Contracting** - Ability to create and implement business plans that both the customer and the supplier will profit from on a long-term basis.
9. **Organization Design** - Evaluate if the supplier is capable of delivering the necessary resources to implement and fulfill a business plan, considering their organizational structure and processes.
10. **Governance** - How well suppliers' governance structures are at tracking and evaluating performance of services over time (i.e. reporting processes and procedures for dealing with escalating problems).
11. **Program Management** - Project management is vital for a sustainable customer-supplier relationship, but if this relationship is bound to be long-term, it is important to also step back and look at its program management capabilities.
12. **Leadership** - The individual fulfilling the supplier leadership role has a significant impact on the success of the relationship. Factors such as the relationship between the supplier's leader and the client's leader and the relationship between the supplier's leader and the top management of the supplier will be important to the project success.

Feeny et al. (2005) divides these twelve capabilities between three different competencies, namely delivery competency, transformation competency and relationship competency. They argue that all suppliers operate within these parameters and can be evaluated on how they have positioned themselves between them. Figure 2 displays how the capabilities are related to each other and the competencies they relate to.

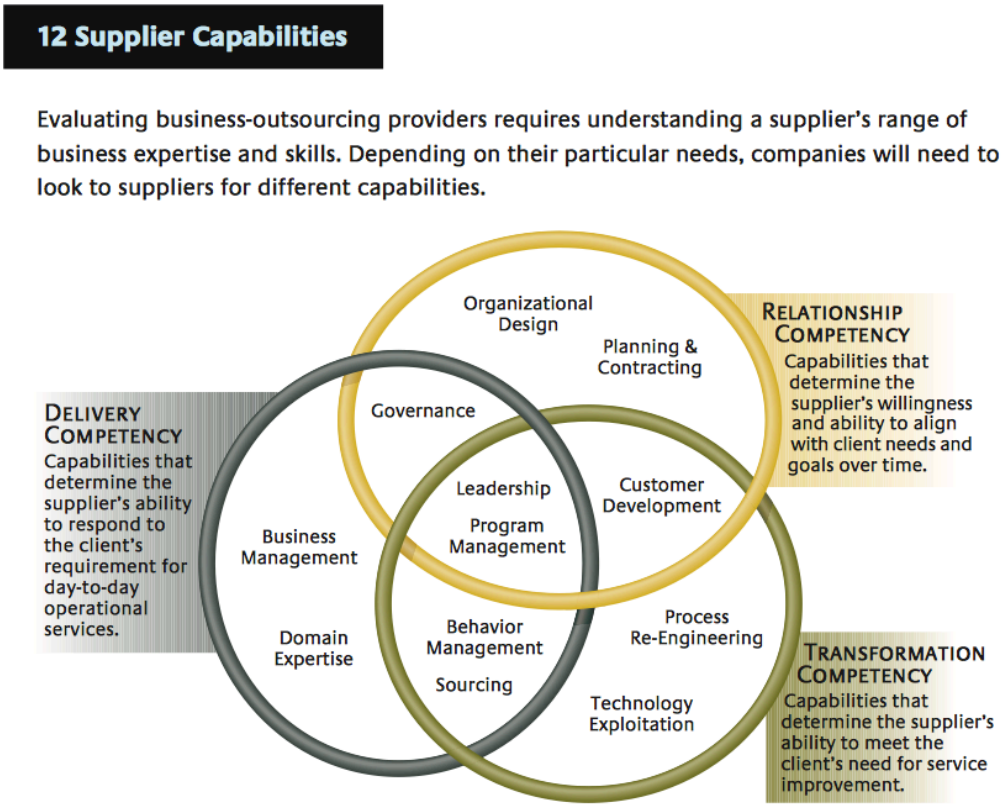

Figure 2 - 12 Supplier Capabilities (Feeny et al., 2005)

In addition to these twelve capabilities, there are also others that should be considered. These are compliance, the ability to comply with all national and international regulations regarding corruption, bribery, relations with covered individuals, ethics, conflict of interests, inside trade, anti boycott regulations, international sanctions and import/export regulations. Some clients also require that suppliers has one or more of ISO-certifications, Achilles certification or similar.

The selection phase should answer the question: **Whom** should one outsource to? The only way to ensure that the expectations from the outsourcing relationship are upheld is through a contract. This contract should be negotiated so that both parties can create greater value for each other than they could have done on their own (Click and Duening, 2005), where one plus one equals three rather than two.

2.2.3 Transition

The transition phase begins when the vendor is chosen and the contract is signed. It is now important to make sure that the outsourced function is no longer carried on internally, as this will prevent the vendor from beginning to provide their service (Perunovic´ et al., 2006). Cullen and Willcocks (2003) state that this is the phase where the planned activities are starting to be initiated, and the goal is to make the transition of resources efficient. They refer to these resources as physical assets, employees, contracts, technology and projects. Of these resources, the transition or termination of employees are extremely sensitive areas that need to be handled with grace. The supplier's ability to adapt to changes might become important for successful performance in this phase (Momme, 2001; Click and Duening, 2005). This phase also raises another question of **how** the outsourcing process will be performed.

2.2.4 Managing Relationship

According to Felton (2005), the managing relationship phase is where most of the effort will be required. The reason for this is that the chance of problems arising is greatest in this phase. One needs to look beyond the products and services, and focuses more on the compatibility between the elements in the process. Continuous assessment and calibration is key to a successful client-vendor relationship. Both parties need to display trust, commitment and allow for flexibility (Lee, 2001).

There are four different relationships that client and the vendor can engage in, namely reciprocal, client dominant, vendor dominant or preferred vendor (Pinnington and Woolcock, 1997). Such relationships could also change over time, from a short-term to a long-term collaboration. Barthélemy (2003) argue that there are three ways to maintaining an outsourcing relationship: through trust, hostages or contracts. He looks at management of relationships based on trust as a soft outsourcing management style, while management through contracts are perceived as a hard outsourcing management style. Both hard and soft management techniques should be implemented in order to increase the chances of a successful outsourcing relationship (Perunovic´ et al., 2006). It should be noted that in some cultures, management through contracts with intense and tough negotiations is a necessary step to develop mutual trust and understanding that both parties means serious business and will deliver according to scope of work and payment terms in the contract. A successful negotiation process, leading to a signed contract, can pave the way for a strong relationship between client and vendor, governed by a soft management framework.

In relationships where knowledge sharing is part of the outsourcing arrangement, the success will be influenced by the capabilities of the employees to present this knowledge (Lee, 2001; Mahnke, 2001). The less capable they are, the slower and more expensive the outsourcing process will be. Perunovic´ et al. (2006) argue that success in management of outsourcing relationships are significantly influenced by the establishment of proper communication and information between the parties. Once again, this phase raises the question of **how** the outsourcing process will be performed.

2.2.5 Reconsideration

The last phase is called the reconsideration phase, and this should have companies think about what will happen from here on and out. Many companies forget about this phase (Perunovic´ et al., 2006). There are many reasons why an outsourcing contract can be terminated: change in control, convenience,

insolvency, breach of contract, default, voluntary termination or expiration of contract (Cullen and Willcocks, 2003). The three options given in this phase is to continue with the outsourcing partner, find a new outsourcing partner or insource the function. A problem with changing the supplier or insourcing the function is the potentially high switching-costs associate with it (Whitten and Wakefield, 2006). So the question that needs an answer in this phase is: **What now**?

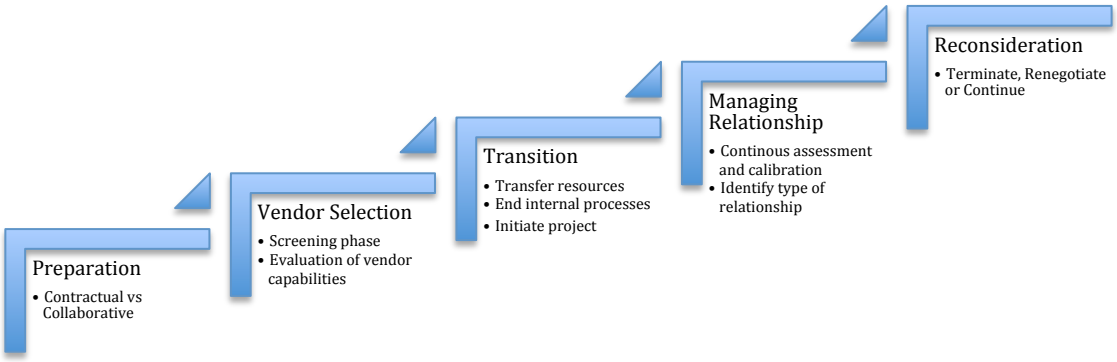

Figure 3 - The outsourcing process

2.3 Organizational structures in outsourcing

Plugge (2012) argue that in order for a service provider to meet the client's requirements, their sourcing capabilities must be dynamic, meaning that they are continuously improved. If the dynamics of the market in which the vendor operates is moderate, then the changes in the marketplace are predictable, with well-defined boundaries and players within it. However, in high-volatile markets, the changes are more unpredictable, making it more difficult to determine the market's boundaries, business models and players. Plugge (2012) then connects the sourcing capabilities with the organizational structure of the firm, explaining that in markets where quickly generated situation-specific knowledge is linked

to competitive advantage, organizational structures will be affected by their ever so changing capabilities. To better understand how organizations are affected by outsourcing, and reasons for type of outsourcing selected, this chapter will briefly review organizational structures.

Mintzberg's "Structure in 5's" (1980) offers five elements that usually are part of any organization: The operating core, strategic apex, middle line, technostructure and support staff (See Figure 4).

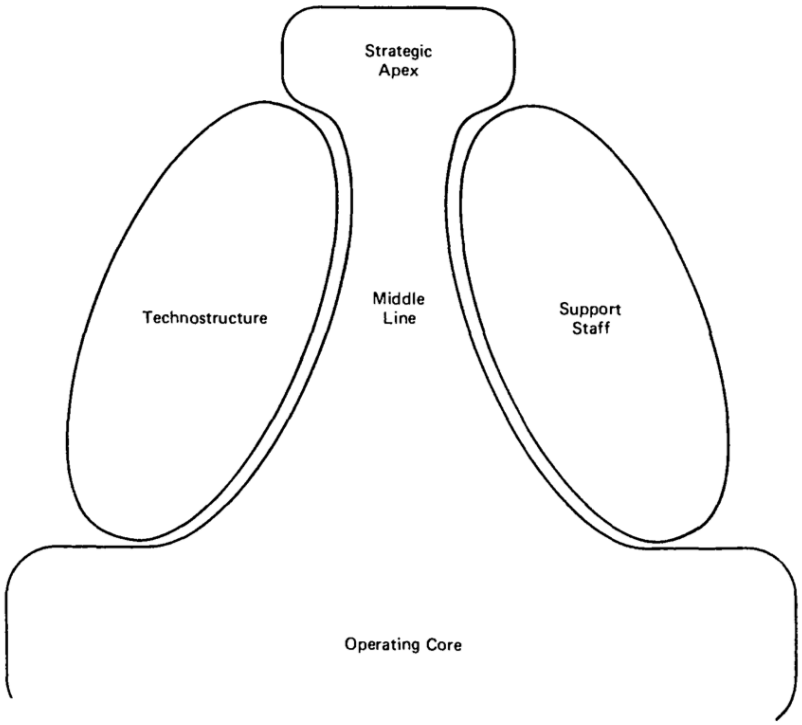

Figure 4 - The five basic parts of the organization (Mintzberg, 1980)

These elements can be organized through five different types of configurations: Simple Structure, Machine Bureaucracy, Professional Bureaucracy, Divisionalized Form and Adhocracy. There are five mechanisms of coordination within these configurations: Mutual adjustment, direct supervision, and standardization of work processes, outputs and skills. Mintzberg (1980) states that each of the configurations tends to focus on one of the five parts of the organization, with support from one of these coordinating mechanisms.

The design parameters within the structure are: Job specialization, behavior formalization, training and indoctrination, unit grouping, unit size, action planning and performance control systems, liaison devices, vertical decentralization and horizontal decentralization. At last, five contingency factors are identified: Age, size, technical system, environment and power.

The Simple Structure focuses on the strategic apex, meaning that the organization is coordinated through direct supervision. This is a highly centralized structure that is applicable to small, new organizations with dynamic environments and strong leaders. It could also be applied to organizations in crisis. The Machine Bureaucracy is coordinated through the level of work standards that follow the technostructure of the firm. The power here is centralized vertically, with little horizontal decentralization. The Machine Bureaucracy is usually found in stable environments with highly specialized and formalized jobs. Such configurations are relevant for large organizations that have been in business for a long time, operating in technical areas of mass production. Professional Bureaucracy is used when the jobs are specialized, but not formalized, with standardization of skills at its core. This is found in complex and stable environments with high horizontal and vertical decentralization. Divisionalized Form supports delegation of power to units in the middle line, where they are coordinated through standardized outputs and performance measurements. This is found in large, mature organizations that operate in diversified markets. The last coordination is Adhocracy, which focuses on mutual adjustment and collaboration of the support staff. This is usually found in matrix-structured organizations that compete in complex and dynamic environments. They advocate decentralization with little formalization of jobs, but still require specialization and extensive training from their employees.

New emerging trends in organizational design go beyond the boundaries of the traditional organization (Daft, 2010). Outsourcing is one of these trends that blur the lines of the organization's boundaries. When a firm subcontracts most of its main functions or processes to other companies, it is called a virtual network structure, also known as modular structure (Daft, 2010). In such a structure, the

organization focuses on coordinating all these activities from its headquarter. A virtual network structure allows for extreme flexibility and enables quick response to chances in the market conditions. Daft (2010) argue that in such cases, the organization should focus on the key activities that creates competitive advantage and outsource the other activities to carefully selected vendors. One of the major strengths of this structure is its ability to take advantage of resources worldwide and be truly global. This global reach is also relevant for the sales and distribution of the products or services. Another benefit is that startups can rapidly increase their time to market without huge investments in factories, warehouses, etc. The reduced administrative overhead is another added benefit to this structure. The primary weakness of this structure is lack of control, with extreme decentralization. Other weaknesses are potential lack of employee loyalty, risk of failure among subcontractors and costs of managing relationships.

Mintzberg (1980) argue that organizations will adapt to the environments by favoring some of these configurations, whilst hybrid structures will be a solution when transitioning between configurations or managing contradicting pressures.

2.4 Types of outsourcing

This research will focus on two different types of outsourcing: off-site and on-site. There are several factors that determine whether or not an activity should be outsourced. Kremic et al. (2006) did an extensive literature review on the expected benefits and potential risk factors sought from outsourcing. The factors they identified can further be differentiated in this research to see how they relate to on-site and off-site outsourcing. Many of these factors might still be relevant no matter what outsourcing strategy is adopted, while others might become more or less significant depending on the outsourcing strategy selected. The following factors where identified as significant to the outsourcing decision:

Expected benefits	Potential risks
Cost savings	Unrealized savings or hidden costs
Reduced capital expenditures	Less flexibility
Capital infusion	Poor contract or poor selection of partner
Transfer fixed costs to variable	Loss of knowledge/skills and/or corporate memory and the difficulty in reacquiring a function
Quality improvement	Loss of control/core competence
Increased speed	Power shift to supplier
Greater flexibility	Supplier problems (poor performance or bad relations, opportunistic behavior, not giving access to best talent or technology)
Access to latest technology/infrastructure	Losing customers, opportunities, or reputation
Access to skills and talent	Uncertainty/changing environment
Augment staff	Poor morale/employee issues
Increase focus on core functions	Loss of synergy
Get rid of problem functions	Create competitor
Copy competitors	Conflict of interest
Reduce politic pressures or scrutiny	Security issues
Legal compliance	False sense of irresponsibility
Better accountability/management	Legal obstacles
Potential transfer of knowledge	Skill erosion

Table 1 - Benefits and risks of outsourcing (Kremic et al., 2006)

These factors will be differently weighted depending on the organization and the circumstance of the outsourcing decision. For instance, Kakabadse and Kakabadse (2000) found that government outsourcing only achieved half the cost savings compared to what the private sector achieved. When considering different types of outsourcing, a factor such as loss of knowledge might be

reduced if the outsourcing arrangement was on-site, rather than off-site, as the knowledge-transfer mechanisms could be less challenging to put in place when there is less distance between the two parties. The following section will look at the different advantages and disadvantages of using on-site and off-site outsourcing, considering the factors listed in Table 1.

2.4.1 Off-site outsourcing

Off-site outsourcing means the outsourced work is carried out away from the site of the client's facilities. In this case the client will take advantage of the facilities of the supplier. Off-site outsourcing can either be carried out onshore (the same geographic region as the client's site) or offshore (away from the client's geographic region of activity and site) (Shinde, 2013).

2.4.1.1 Advantages of off-site outsourcing

If the off-site activity is carried out onshore, the client and the service provider will share a similar geographical background and culture, resulting in an advantageous understanding of each party's needs and concerns. This also allows for easier access to physical meetings and face-to-face communication on a regular basis. In case of loose requirements from the client, with expected changes along the way, close communication is a significant factor for success (McDermott and Handfield, 2000). By allowing the client to be closer geographically to the supplier, it might also create an increased sense of involvement and control in the development process. Shinde (2013) argue that in cases where a client requires the supplier to improve upon an existing activity, being able to visit the client's location and study the current activity is important. This is also relevant if problems arise after the implementation of the modification from the supplier. Advantages with an onshore outsourcing strategy are the potential for faster response when a client needs something changed, a clear perception of the task that lies ahead due to physical proximity and good synchronization through easier communication and coordination compared to an offshore strategy.

In an offshore outsourcing strategy, the project will be carried out at the service provider's facilities, located outside of the country that the client is present. A global supply of vendors allows the client to select among the service providers that fit best with the client's budget and knowledge requirements (Lee, 1994; Willcocks et al., 1995; Wright, 2001). Chances are there is someone in that international pool of talented employees that can do the work at the same quality for a lower price, or at the same price for increased quality. This will off course depend on the supply of this activity. There are also considerably lower overhead costs associated with offshore outsourcing, as there is no need to recruit, hire or train new employees. The same goes for other employee-related expenses that are no longer needed, such as insurance, workers being compensated, social security and company benefits (Howard and Ulferts, 2005).

2.4.1.2 Disadvantages of off-site outsourcing

There are negative factors to consider with off-site outsourcing too. One limitation of the onshore strategy is that the quality of the outsourced work is limited to the expertise and capabilities available in that geographical location. This further limits the cost reductions available from an outsourcing arrangement, since prices are determined by local supply and demand, rather than globally (Balogun, 2010).

Offshore outsourcing, compared to onshore and onsite outsourcing, makes face-to-face communication more difficult to achieve, and other types of communication is therefore necessary. Clear requirements and the vendor's ability to understand the client's needs is a prerequisite to this strategy. Expectations need to be effectively communicated in advance as well, as switching costs will be higher for such a project. A limitation in this approach is the possibility of a gap in communication and culture between the two parties. This could lead to misunderstandings and wrongful interpretations.

This leads to another issue with being geographically separated, namely knowledge management. Bresman et al. (1999) argue that, in global transfer of

knowledge, a problem arise when there is no personal relationship development. This fails to build trust in the relationship between the cooperating parties, and together with the potential cultural distance, this contributes to creating resistance and friction. Communication boundaries, such as time zones, distance and cultural differences, make it difficult to nurture transfer of knowledge in off-site outsourcing projects (Al-Azad et al., 2010).

2.4.2 On-site outsourcing

An on-site outsourcing arrangement is when the vendor positions their employees at the client's facilities throughout the outsourcing project. This allows the client and the service provider to continuously communicate and interact with each other. The only difference between the project being carried out in-house or through on-site outsourcing are the people involved. The service provider's employees will still work within the same environment as the client's employees would, if they where carried out in-house.

On-site outsourcing is similar to off-site onshore outsourcing, in that they are both in the same geographical area, making communication between the client and the vendor easier. There is however differences related to these outsourcing strategies, as there are advantages and disadvantages by placing the service provider's workers at the client's facilities.

2.4.2.1 Advantages of on-site outsourcing

One of the differences between off-site onshore outsourcing and on-site outsourcing is that on-site outsourcing does not limit the geographical reach of finding the right supplier (Torgan, 2010). If there are no suitable service providers in the nearest area or country of the client, the company can simply bring in workers from companies abroad.

There are multiple cases where an on-site outsourcing strategy could be relevant. If the project is repetitive in scope and without a defined end-date, or the requirements and end product is loosely determined, on-site outsourcing could

be a sound option. In cases where the client needs to be involved in all steps of the process, such as acceptance from the client after the end of each step of the process, on-site outsourcing is considered the only model to fulfill these requirements (Shinde, 2013).

One of the expected benefits from outsourcing, according to Kremic et al. (2006), is the ability to augment staff. Staff augmentation enables companies to increase their workforce when needed through a staff augmentation firm. This allows a company to respond to fluctuations in business demands, without allocating too much costs and liabilities in full time employees when business is slow (Richardson, 1997; Kakabadse and Kakabadse, 2000).

Drake (2012) states that while companies, to meet the needs for a large work force, often utilize “temporary help” and “contingency staffing”, the "flexible staffing"-strategy is what truly delivers measurable shareholder value. They define temporary staffing as short-term hire to meet immediate staffing needs and contingency staffing as a concept where companies allocate different types of staff over longer periods of time, like consultants and contractors, to meet strategic business needs. Flexible staffing on the other hand is when the business analyzes their business workload, for then to hire a contingent staff to supplement their permanent staff in order to optimize and maximize profits and productivity. This is more of a strategic business concept that recognizes that contingent staffing should be used for supplementation of the permanent workforce, rather than for a quick fix to replace absent workers or as a solution for downsizing or restricted budgets. Figure 5 illustrates how a flexible staffing solution mitigates costs associated with idle workers. Even though this method allows for rapidly changing staffing needs, it might not offer proper economies of scale, as the resources are often added incrementally and costs are on a per resource basis.

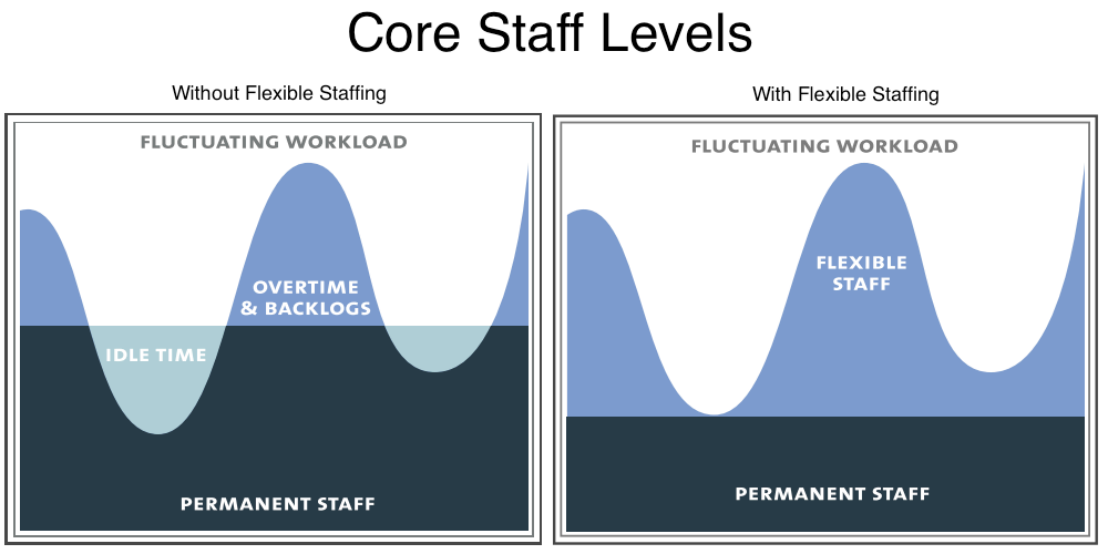

Figure 5 - Core staff levels with/without flexible staffing (Drake, 2012)

The advantages and disadvantages of on-site outsourcing are similar to the advantages and disadvantages of off-site onshore outsourcing. They might even become further intensified in the case of on-site outsourcing. Other advantages of on-site outsourcing relates to the close communication available between the client and the vendor. The ability to have continuous face-to-face communication between the parties allows the service provider to have a clear picture of what the client is expecting from the process and the results. This would also significantly limit the chances of a communication gap between the service provider and the client (Duppada and Aryasri, 2011).

2.4.2.2 Disadvantages of on-site outsourcing

One disadvantage with on-site outsourcing is that a great deal of the cost benefits often associated with outsourcing is no longer present. One can no longer take advantage of the vendor's facilities and infrastructure, and instead having to pay for them to stay at the client's facilities (Wells, 2009). In such cases where on-site outsourcing is happening, it might be more of the knowledge of the hired workers that are the motivation for the outsourcing relationship, rather then the cost savings. In certain cases, consultants present could significantly improve the business (Fahle, 2009). By bringing in consultants that are used to continuously

improving their skills, they will simulate creation and sharing of knowledge within the organization (Fahle, 2009).

A disadvantage with on-site outsourcing is the risk of external workers leaking knowledge out of the organization (Matusik and Hill, 1998). Project managers might for instance have given consultants or other temporary workers access to private company-specific knowledge during the project. When the project is then finalized, these workers will then bring this information back into the industry. A challenge here is that the client should provide the vendor with all the information they need to fulfill the project, but at the same time protect the secrecy of this knowledge. Ways to protect oneself against knowledge-leakage is through non-disclosure agreements and limiting access to activities and physical areas (Nesheim, 2004).

2.5 Summary of literature review

Insight into the outsourcing process and the most utilized outsourcing theories provides guidelines for which activities that should be outsourced and how that outsourcing process should be executed. These theories are all utilized differently throughout the different phases of the outsourcing process (Perunovic´ and Pedersen, 2007).

Mintzberg's (1980) views on organizational structures describe five ways that a firm can coordinate its organizational elements to create more effective structures; while Daft (2010) goes on to describe a virtual network structure that is heavily reliant on outsourcing. Plugge (2012) connects the sourcing capabilities of a service provider with the organizational structure of that firm, explaining that in markets where quickly generated situation-specific knowledge is linked to competitive advantage, organizational structures will be affected by their ever so changing capabilities. This section provides insight into how the organizational structure of both a service provider and a client could affect the success of the outsourcing relationship.

By beginning with the advantages and disadvantages of general outsourcing, as identified in a literature review from Kremic et al. (2006), an overview was presented that would serve as a basis for the research on on-site and off-site outsourcing projects. The advantages and disadvantages of on-site and off-site outsourcing projects were then identified, and this served as the basis for the survey questions and answer choices that would later be distributed to Atmel. If the advantages and disadvantages identified in this chapter is coherent with Atmel's experiences will be discussed in chapter 5.

3 Methodology

The purpose of this chapter is to explain which research approach was selected in order to investigate the research questions in this thesis. It will go on to explain how the data was collected for this research, how it will be analyzed and the process of selecting the theoretical frameworks to base this data collection on.

3.1 Research design

3.1.1 Research philosophy

Saunders et al. (2009) argue that there are mainly two kinds of research philosophies, namely positivism and interpretivism. A positivistic research philosophy views observable phenomena as the only means of achieving production of credible data. The validity of the data collected should not be able to be affected by the data collection process. In light of this philosophical view, Remenyi et al. (1998) states that the researcher and the research would therefore not be able to affect one another. Through structured methodological work, a positivistic researcher would allow for replication of his/her work, with emphasis on quantifiable observations (Gill and Johnson, 2002).

Interpretivism is the opposite view from positivism. It criticizes the scientific model application adopted in positivistic research, and focuses more on social world studies (Bryman and Bell, 2003). It is important to be aware of the philosophical commitments that follow the selection of a research strategy in order to increase one's knowledge about its impact and improved insight into the research process (Johnson and Clark, 2006). Johnson and Clark (2006) argue that it is more important to be able to justify and reflect upon the philosophical choices made during the research process, rather than conducting a research that is philosophically informed. The research philosophy adopted in this research is more of an interpretivistic approach, as outsourcing is a dynamic business process that is constantly changing and difficult to quantify and replicate with numbers.

3.1.2 Research approach

There are two main research approaches, namely deductive and inductive. The deductive approach is more suitable for the positivistic researcher, while the interpretivist is better served with the inductive researcher (Creswell, 2002). When conducting a deductive research approach, it will begin with a hypothesis that will need to be tested. The inductive approach begins with a test, in order to later develop the hypothesis based on the empirical data and findings (Bryman and Bell, 2003). In other words, the deductive approach is a top-down approach, whilst the inductive approach is more of a bottom-up approach.

This research will focus on an inductive research approach, where a research strategy is designed to test the conditions of outsourcing, in order to develop a hypothesis based on the empirical findings. For the results from an inductive research to be generalizable, they need to possess the right generalization characteristics. The sample size needs to be of sufficient numerical size and the sample population needs to be representative for the rest of the population in order to view these findings as generalizable (Robson, 2002).

3.2 The research design process

3.2.1 Research strategy

A research strategy needs to be developed once the research approach has been selected. The objective of the research strategy is to enable the researcher to answer the research questions. In this study, a survey and interview research strategy is selected in order to get a greater view on the outsourcing experiences at the case company. This strategy will be used to analyze the outsourcing situation of that company, and how their situation might be relevant for other companies as well. It can therefore be said that the research strategy is a case study, even though it is limited by the boundaries of the organization and its outsourcing experiences. There are three types of case studies: intrinsic, instrumental and collective (Stake, 1994). An intrinsic case study aims to be exploratory in nature and the researcher is more focused on the case itself, rather than contributing to theory or generalizing the case. An instrumental case

study is more focused on understanding a particular phenomenon or process, and the case itself is less prioritized. A collective case study is focused on similar case studies in order to better understand a phenomena, process or population.

The case study in this research seems to be more of an instrumental case study, as this research is more concerned with the contribution to the theoretical outsourcing frameworks and how the experiences at the case company can be generalized.

3.2.2 Research method

There are two types of research methods: quantitative and qualitative. The quantitative research method is based on positivistic philosophies, and uses numerical data to test hypotheses. The qualitative method is focusing on interpretivistic philosophies, theoretical principles and non-numerical data (Saunders et al., 2009, Charles and Mertler, 2002). The qualitative approach is best suited for understanding a concept, phenomenon or something that is little researched. It is also adopted in research consisting of unstructured relations and processes in organizations.

The research method adopted in this research is more of a qualitative approach, as it intends to investigate the concept of outsourcing, with focus on a less researched area of it, namely on-site versus off-site outsourcing. This research will be conducted through a survey among the employees in Atmel that has been involved in outsourcing, in order to gather their experiences with different location-based outsourcing projects. The survey is used to obtain a larger picture of how the organization in question views their outsourcing initiatives. These data will then be used as a foundation for questions in follow-up in-depth interviews. Surveys can be both qualitative and quantitative, based on how the questions are formulated. There is also a possibility of reaching quantitative findings based on qualitative raw data (Saunders et al., 2009). In this case, the questions will be multiple-choice, with the option to comment on most questions

throughout the questionnaire. The data collected from the survey and the interviews will then be analyzed based on qualitative findings.

3.2.3 Primary data and information collection

The primary method of data collection for this research was a survey concerning the outsourcing experiences in Atmel. This survey was more qualitative in nature, as it focused more on mapping out experiences and allowing for comments along the way, rather than focusing on quantifying the overall outsourcing experience. The questions were structured with more than one possible answer, and a skip-logic were used to make sure that only the employees with certain experiences were allowed to answer the right questions. The first question in the questionnaire asked if the employee had any previous experience with outsourcing projects, and would be disqualified from the survey if they answered "No". This was an effort to make sure that only real experiences would be recorded. The survey was sent to the 200 employees working at the Norwegian branch of Atmel. It was originally planned that the survey would be distributed to Atmel's branches in other countries as well, but the HR managers in the other branches never replied to the requests from the HR department in Norway to further distribute the survey. This is a limitation of the empirical foundation of this research, and the research was therefore mostly limited to the Norwegians experiences with outsourcing. However, the survey was forwarded to 7 employees working abroad in other departments that were known to be involved in outsourcing.

To supplement the survey, three in-depth semi-constructed interviews were carried out with managers at Atmel. The questions were prepared in order to initiate and later guide the interview, if needed. The interviews often evolved into a conversation, and it was kept track of which questions got answered throughout the conversation. The interviews were carried out in the beginning of May; shortly after the survey was closed. Every interview was audio recorded, which allowed the interviewer to ask follow-up questions and pay more attention to asking the right questions, rather than being too focused on

remembering the answers. Yin (2014) states that limitations of the interview technique is that the answers could be biased and the interviewee could tell the interviewer what he thinks the interviewer wants to hear, rather than being honest. Using multiple sources to triangulate the answers was used to increase the quality of the information collected.

3.3 Research quality

Saunders et al. (2009) states that in order to have credible research findings they need to satisfy a level of reliability and validity.

3.3.1 Reliability

Reliability focuses on the ability of other researchers to reach the same findings as this study if they replicated the research methods and data collection techniques described (Easterby-Smith et al., 2008). If the data collection is to be considered reliable, they need, to a certain extent, to be able to reach consistent findings if repeated. Robson (2002) has identified four threats to this reliability, which are subject or participant error, subject or participant bias, observer error and observer bias. An example of subject or participant error is a survey among employees about their enthusiasm for their work, and the answers to the questionnaire could be different if they where asked Monday morning instead of Friday afternoon (Saunders et al., 2009). A subject or participant bias could occur if interviewees answer what they think their boss wants them to say in fear of employment insecurity. There are different ways of asking the same question, which could yield different results based on the formulation. A structured interview guide could reduce such observer error. Observer bias on the other hand is concerned with the many ways to interpret the answers from the interviewee.

3.3.2 Validity

Validity in research is focused on whether the findings from a research project are really what they seem to be, as well as how appropriate the choice of

research strategy is for answering the research questions, including the appropriateness of the data collection and the data analysis techniques (Biggam, 2008). A cause and effect between two variables could just be a misinterpretation of a causal relationship. Robson's (2002) six threats to validity are historical information, bias testing, instrumentation, morality, maturation of data and ambiguity about causal directions.

External validity can also be referred to as generalizability (Saunders et al., 2009). In other words, how generalizable the findings from a research are. If research is externally valid and applicable in other situations, then it is considered to be of greater research value. Quantitative findings might be easier to generalize than qualitative findings, since quantitative findings often deal with far less variables, and it is therefore easier to find cases of greater similarity (Adams et al. 2007).

External validity might be a limitation in this research, as it is focused on one organization in particular. It will therefore be more important to try to explain what is going on in this particular research setting and open up for follow-up studies to test the robustness of the conclusions from this research, rather than try to produce a generalizable theory.

4 Empirical data and findings

4.1 Survey respondents

The survey was distributed to 207 employees in Atmel, where 98 answered the survey. This gives a response rate of 47%. Out of the 98 people who answered the survey, 25 did not fully complete the survey and skipped at least one question. 53 employees in Atmel answered that they had been involved in an outsourcing project in the past (see Figure 6).

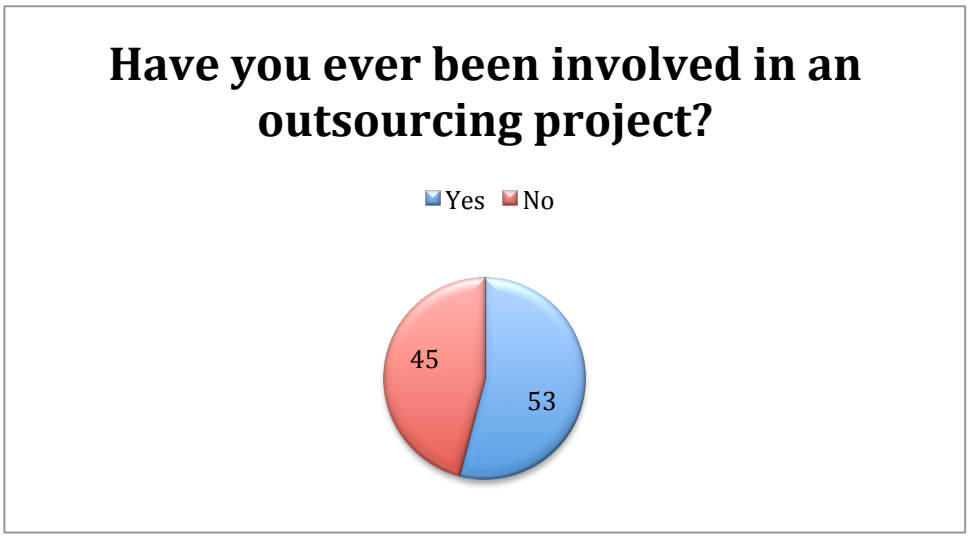

Figure 6 - Outsourcing involvement

The 45 employees that had not been involved in an outsourcing project were not allowed to continue the survey, as their responses would have been assumptions and not based on experiences. 28 employees finished every question they could answer in the survey. Engineers, project managers and program managers contributed to most of the answers in the survey (see Figure 7). There were also some functional managers and product managers that answered the survey. "Others" in Figure 7 is answers from team leaders, product owners and human resources. That most answers came from project managers and engineers were not surprising, considering they are the majority of the organization, and also those that often are directly involved in running outsourcing projects or working with external teams in development projects.

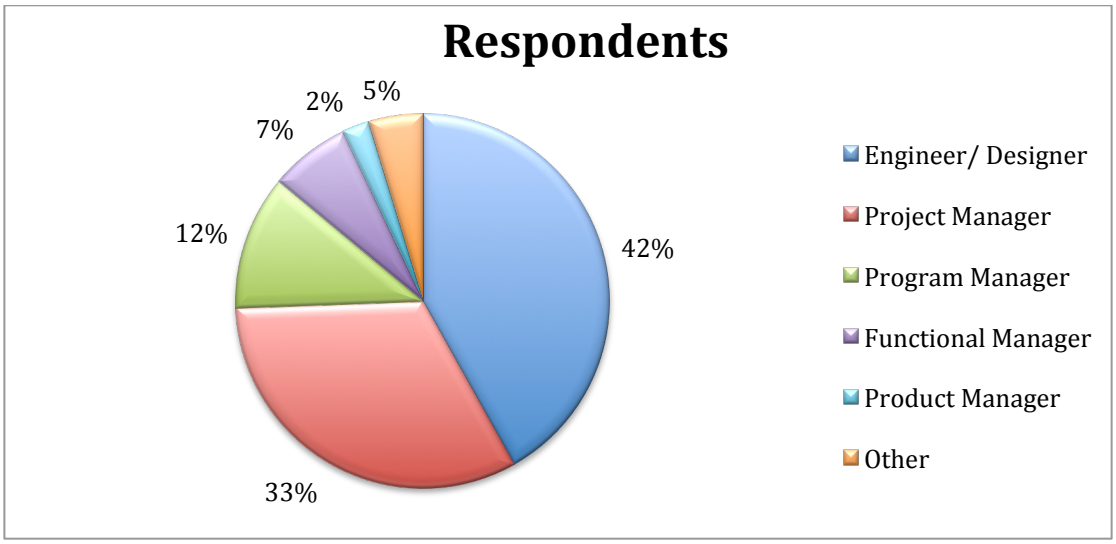

Figure 7 - Who answered the survey

When asked which option best described the outsourced business function the survey respondents were involved in, 93% answered information technology and engineering. Considering Atmel is a tech company, this was no surprise. However, during discussions with some of Atmel's employees it came up that sales/marketing, operations and human resources were also outsourcing services, but the response rate from these business functions were low, at approximately 2-3% from each, and was therefore less represented in this survey. Out of the 53 respondents that had been involved in outsourcing, 2 where based in Malaysia, 2 where based in France and the rest where based in Norway.

4.2 Overview of Atmel's outsourcing

To understand Atmel's overall outsourcing situation, the questionnaire asked what the objectives where for their most recent outsourcing projects and if these objectives where met. Increased flexibility/capacity were by far the most important driver for outsourcing in Atmel, followed by cost reduction and leveraging new technologies (See Figure 8). Increased revenue and gaining competitive advantage were also important factors identified. Only a few of the projects were initiated to increase customer service, access greater knowledge or to consolidate with others.

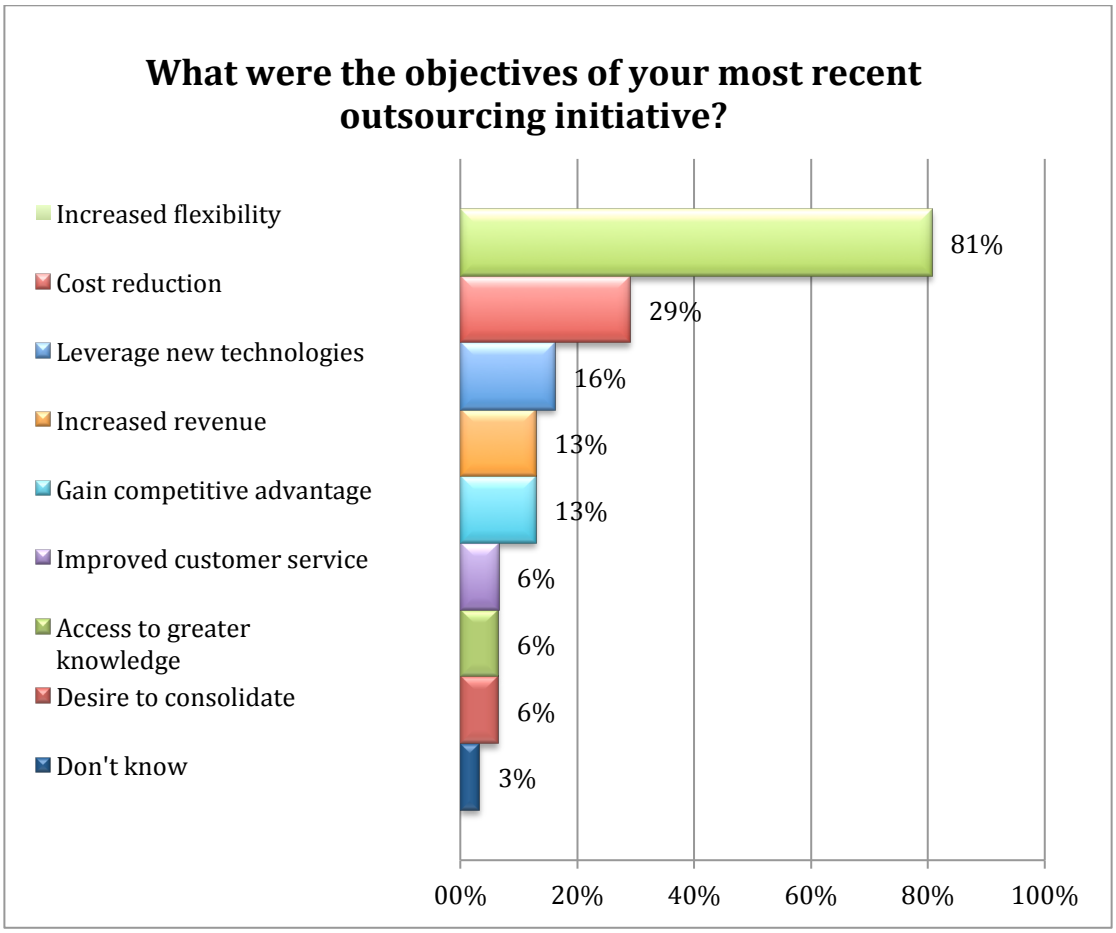

Figure 8 - Objectives of outsourcing

Comparing these findings with Figure 9, one can see that there are important differences between the objectives identified and the needs that where satisfied. The ranking of the objectives are quite similar, but the amount of objectives initiated compared to those that were met is quite different. Whilst 81% of the projects were initiated to increase flexibility, only 61% of the projects actually managed to provide the flexibility needed. In addition, almost half of the projects initiated to reduce costs were unsuccessful in doing so. The same is true for increased revenue. 10% answered that none of the initiatives where satisfied in their most recent outsourcing project.

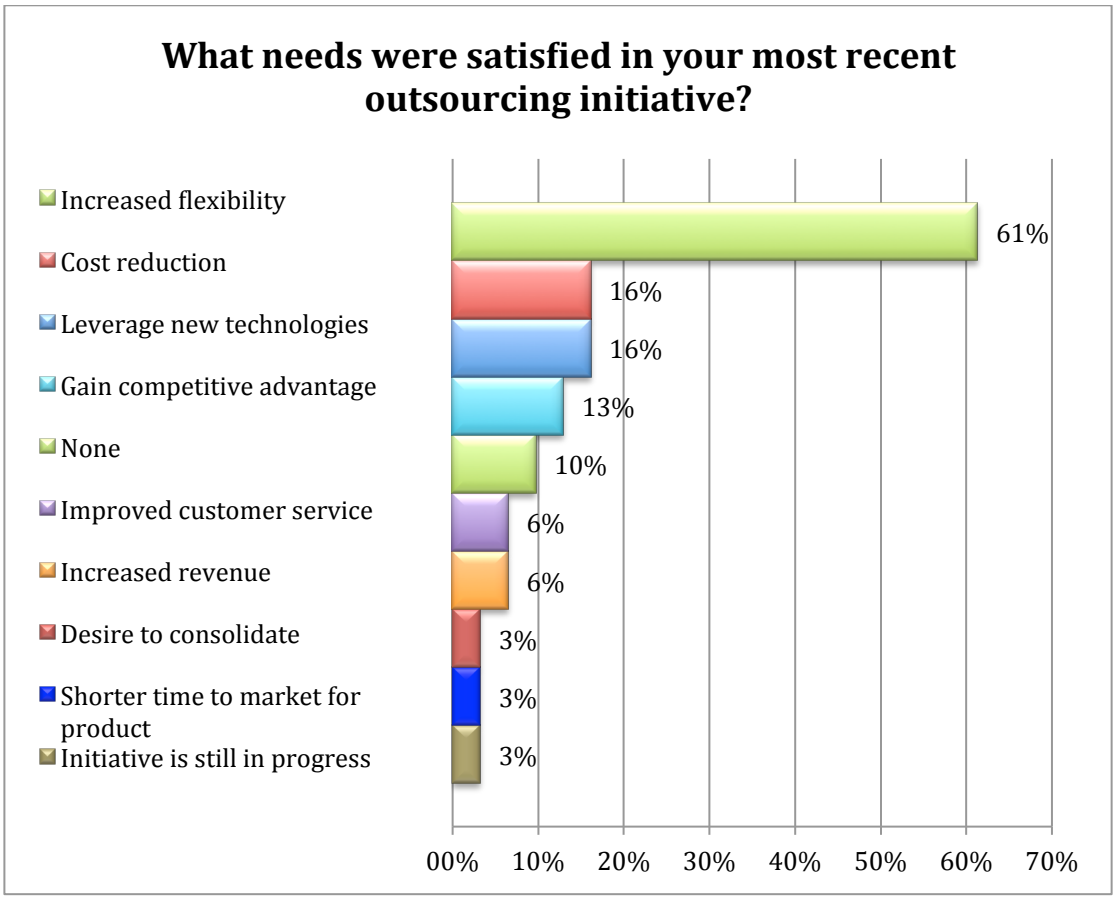

Figure 9 - Objectives met

4.3 On-site and off-site outsourcing

When comparing the employees' involvement in outsourcing projects, it was a clear majority of involvement in off-site outsourcing projects, and this seems to be the most used method of outsourcing in Atmel's Norwegian branch. 53% had been involved in on-site outsourcing and 83% had been involved in off-site outsourcing (see Figure 10). 43% of the respondents had been involved in both on-site and off-site outsourcing projects.

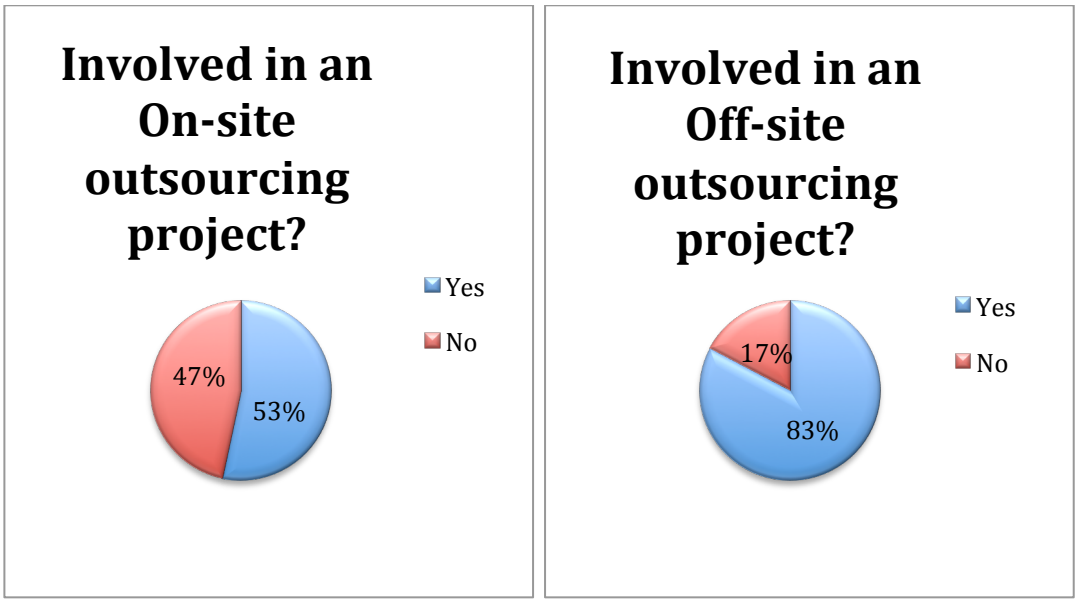

Figure 10 - Involvement in on-site and off-site outsourcing

36% of the respondents did not know if they distinguished between on-site and off-site outsourcing when deciding the outsourcing arrangement. A surprising 40% of the project managers gave this answer, whilst most of the other managers stated that there was a difference. The rest of the respondents that did not know were engineers, which is understandable if they do not take part in the selection phase of projects. 10% stated that on-site and off-site outsourcing was evaluated equally, which could be grounded in specific projects for these 10%. These findings indicate that information across the organization about how to distinguish between these two different ways of outsourcing might be lacking.

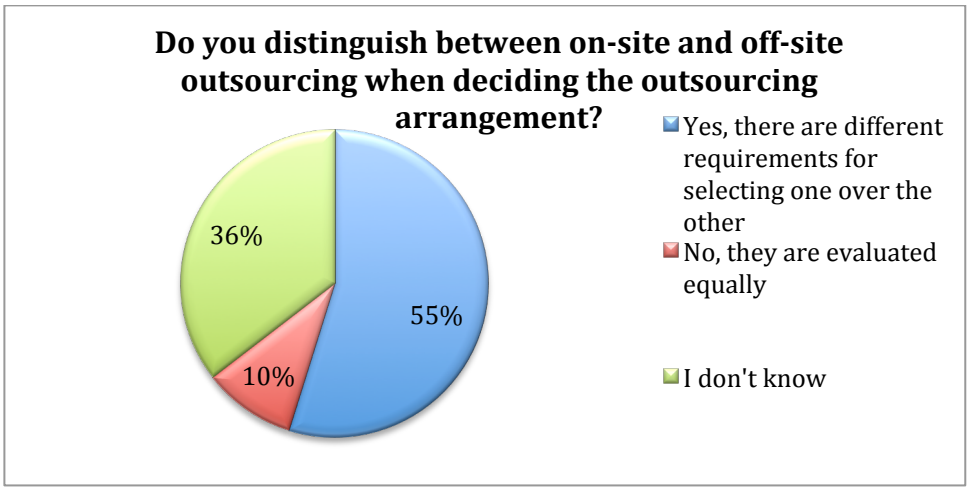

Figure 11 - Distinguish between on-site and off-site outsourcing

When asked what the main factors were for selecting an on-site or off-site outsourcing solution, some of the major factors identified where quite similar, whilst smaller, but still significant factors, differed greatly. Looking at Figure 12, one can see that flexible staffing, increased efficiency and better communication ties for the most important factor for selecting an on-site outsourcing solution, followed by knowledge transfer and better quality and control.

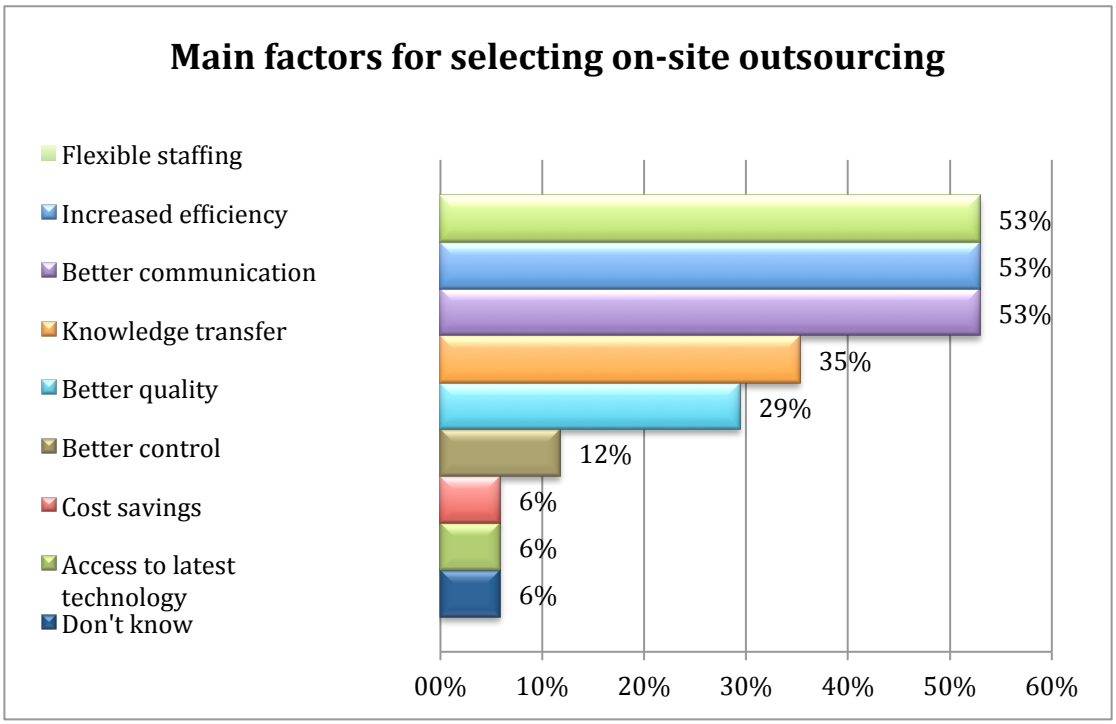

Figure 12 - Main factors for selecting on-site outsourcing

When comparing this to Figure 13, one can see that increased efficiency and flexible staffing is also the most important factors identified for selecting off-site outsourcing solutions. But here, better quality is ranked higher, which might be understandable, considering off-site outsourcing can access most global suppliers, securing the best quality available, whilst on-site outsourcing not always provides this option. Having access to the vendor's facilities, infrastructure and technology is also identified as important criteria for off-site outsourcing.

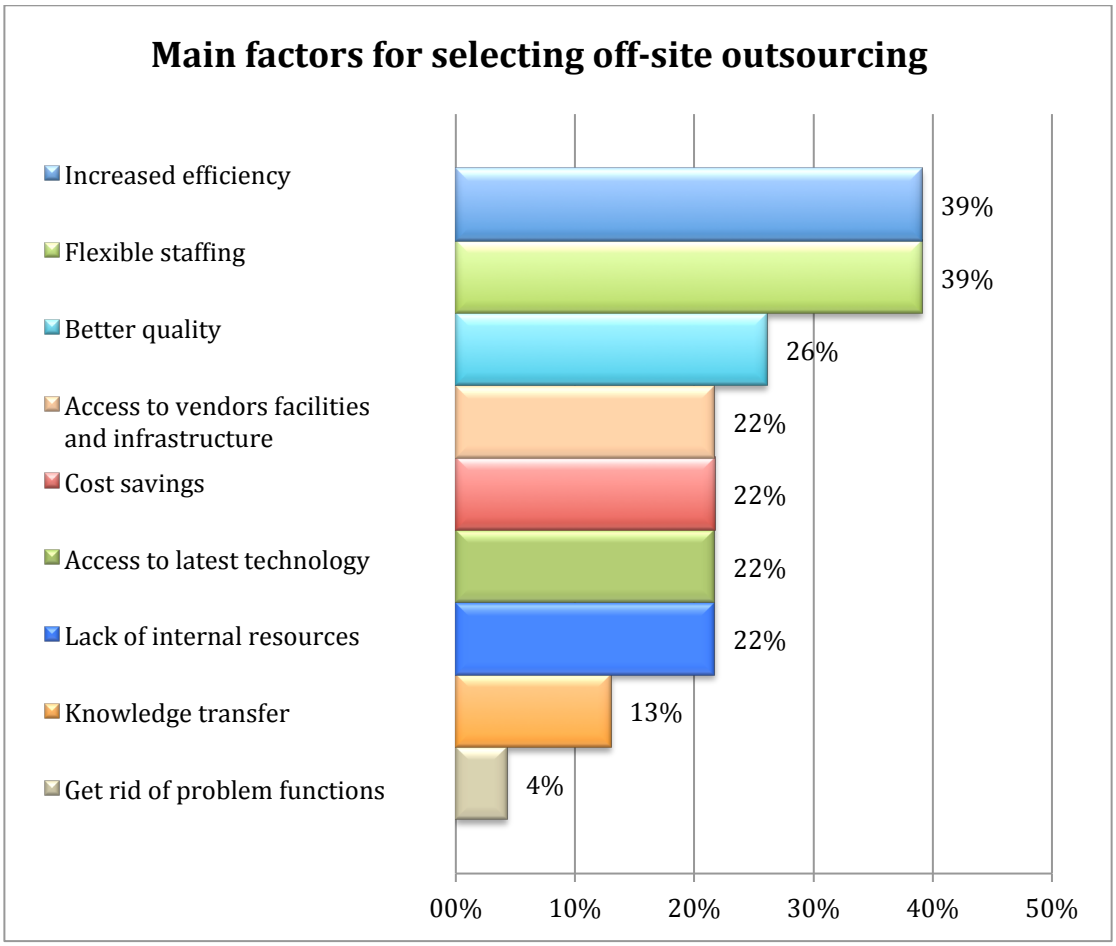

Figure 13 - Main factors for selecting off-site outsourcing

The satisfaction rate is significantly different when comparing off-site and on-site outsourcing experiences (see Figure 14). With 71% of the respondents being satisfied with on-site outsourcing experiences and non being dissatisfied, it is quite a surprising comparison to see only a 39% satisfaction rate from off-site outsourcing and a 30% dissatisfaction rate.

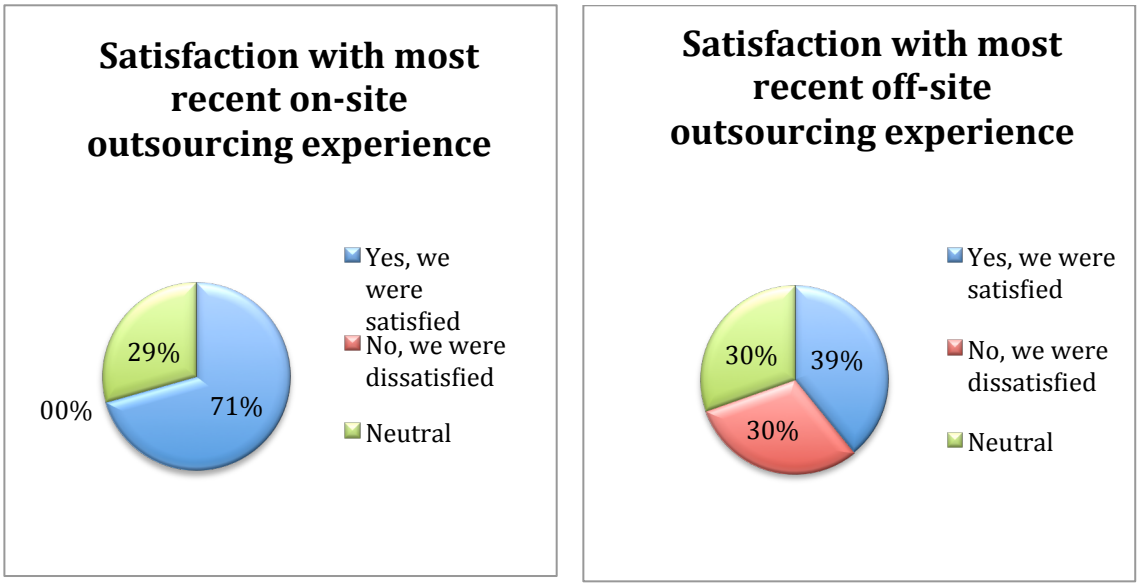

Figure 14 - Satisfaction with on-site and off-site

That almost two thirds of those involved in off-site outsourcing projects are not satisfied with their experience is quite alarming. It is here assumed that if a respondent identified their outsourcing experience as neutral, it was not completely satisfied, and could hence be improved. Those who identified their experience as neutral or dissatisfied were asked which factors that led them to be less than satisfied with their outsourcing project. Because the majority of those who had been involved in on-site outsourcing were satisfied, this question did not get many replies for on-site factors, and this is a limitation to the findings from this question. The respondents that answered this question had mainly an issue with vendors underestimating the scope and effort, or not performing up to the standards (see Figure 15). Other factors, such as not reaching business or service level goals, were also mentioned. Most of these factors are pointing towards a fault with the service provider, rather than the client.

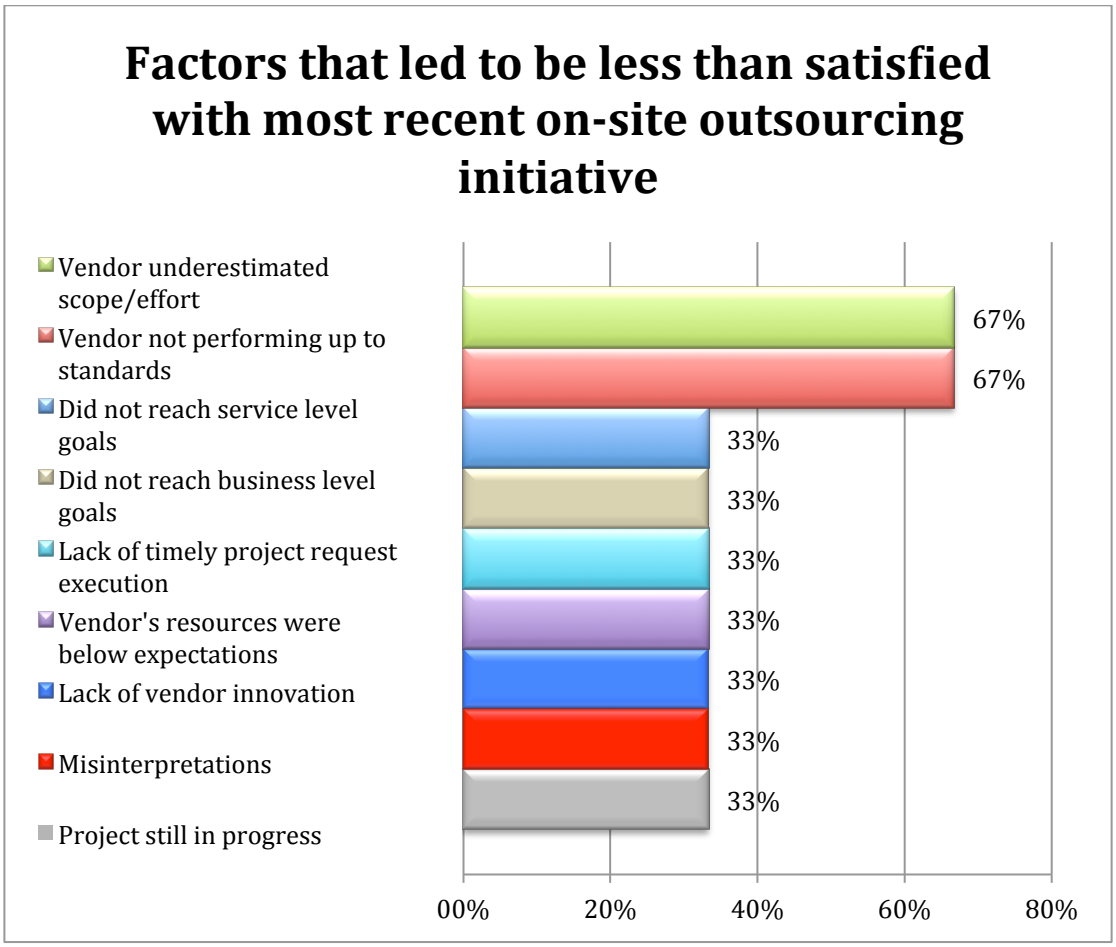

Figure 15 - Negative experiences with on-site outsourcing

When comparing the previous graph with Figure 16, it is clear that there are similarities between the two. The most identified factors that led to negative or neutral experiences with off-site outsourcing seem to be the same as those of on-site outsourcing. With almost two thirds of the respondents being neutral or dissatisfied with off-site outsourcing, this question got far more traction than that of on-site outsourcing. Some of the factors that were mentioned exclusively with off-site outsourcing experiences were the vendor's ability to overengineer a task, meaning they would take a simple task and make it into a far more complex and greater challenge than it needed to be. The vendor's lack of knowledge about the client's business, loss of key resources and poor internal management of the project were also factors that were only identified for off-site outsourcing experiences. That does not however, mean that they could not be present in an on-site outsourcing arrangement.

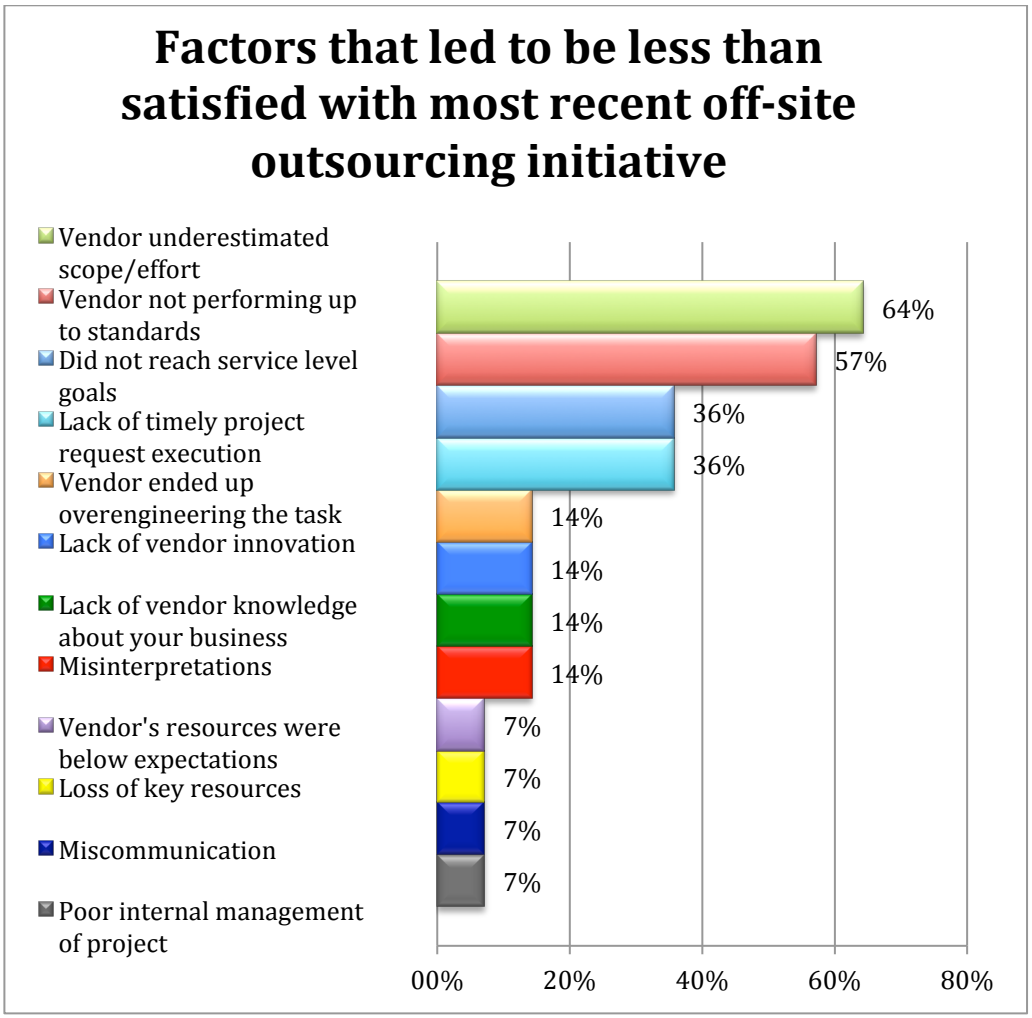

Figure 16 - Negative experiences with off-site outsourcing

Consistent communication and a feeling of partnership were identified as some of the most important success factors for the outsourcing relationship in both off-site and on-site (See Figure 17 and Figure 18). The rest of the success factors got different prioritization between the two outsourcing solutions. While the on-site outsourcing relationship put more emphasis on being in the same geographical location and time zone, with the same language and culture, the success of the off-site outsourcing relationship identified a well-defined agreement about the services carried out and joint governance of the agreement as important factors.

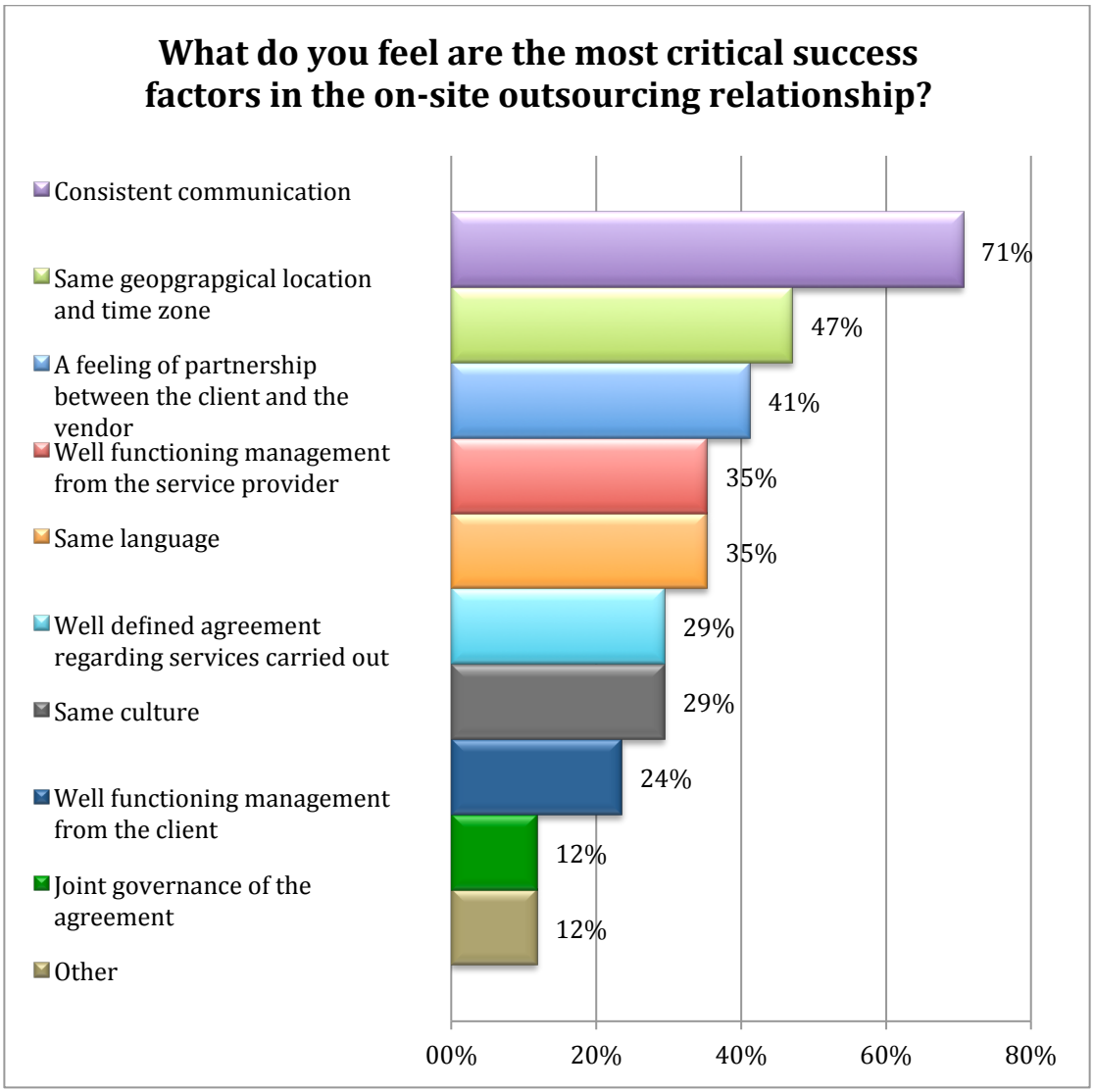

Figure 17 - Success factors in on-site outsourcing

The "Other" factors in Figure 17 were additional comments from the survey, where some of the respondents identified early assessment of the service provider's ability to complete the job and their ability to provide more bandwidth to the client as important success factors. A well functioning management from the service provider was identified as important for both on-site and off-site outsourcing, whilst a well functioning management from the client where less important. This might be reasonable, considering if the service provider is properly managed and perform their work well; the client's management of the service agreement might be less critical. However, if the client is poorly managing the service agreement, the project might still become a failure, and this should be a factor to consider as well.

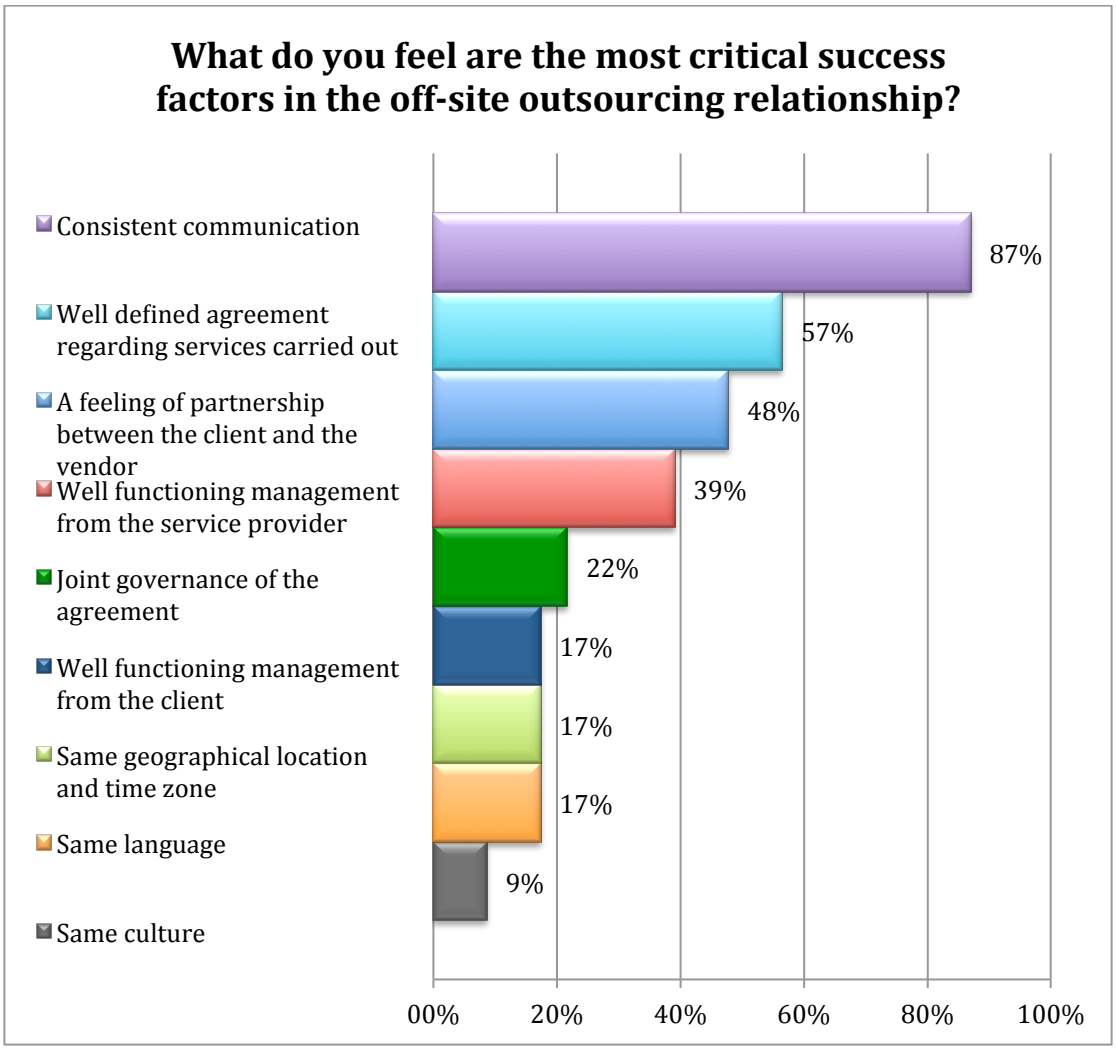

Figure 18 - Success factors in off-site outsourcing

When asked what initiatives Atmel is currently taking to improve satisfaction with their most recent outsourcing initiatives, both on-site and off-site projects were focusing on increasing the amount of communication across the joint teams. Increased communication in this case does not necessarily mean more communication, but could also mean improved communication. For on-site outsourcing projects, providing proper training for the service provider's staff was an initiative that was highly emphasized (See Figure 19). It is also an initiative that might be easier to conduct in on-site outsourcing projects, as the service provider is already located at the client's offices. 27% answered that there were no initiatives currently taken to improve satisfaction with their recent on-site outsourcing projects. Considering the high satisfaction rate with

on-site outsourcing projects, this might be justified, even though outsourcing is a dynamic process that is often changing and should therefor be treated as such.

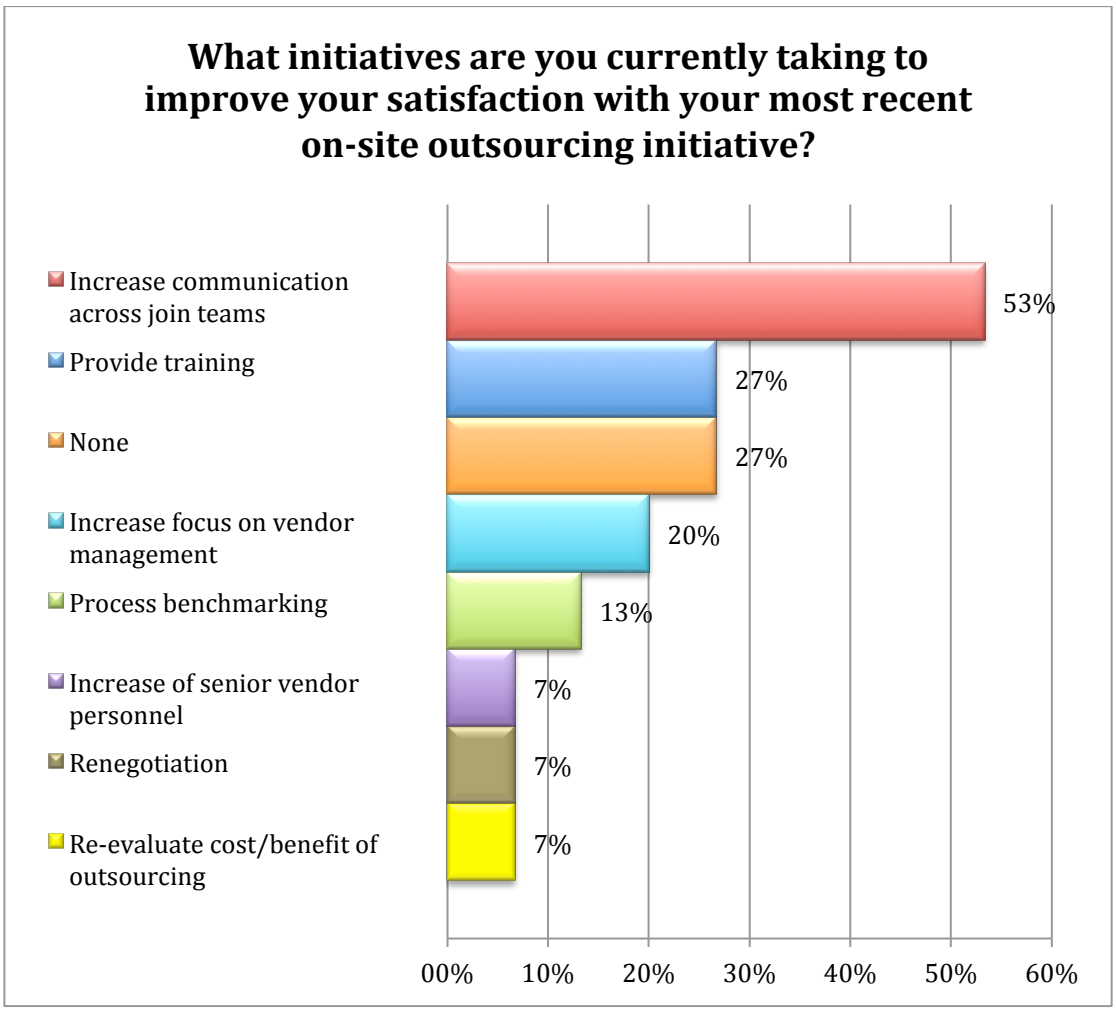

Figure 19 - Initiatives to improve on-site outsourcing

Process benchmarking and increased focus on vendor management were also important initiatives to improve on-site projects. In off-site outsourcing projects, it was surprising that the second highest initiative to improve satisfaction with recent outsourcing projects were to cancel the contracts (see Figure 20). More than one quarter of all off-site outsourcing projects were cancelled. 13% said they did not perform any initiative to improve satisfaction, and 9% re-evaluated the cost/benefit of outsourcing.

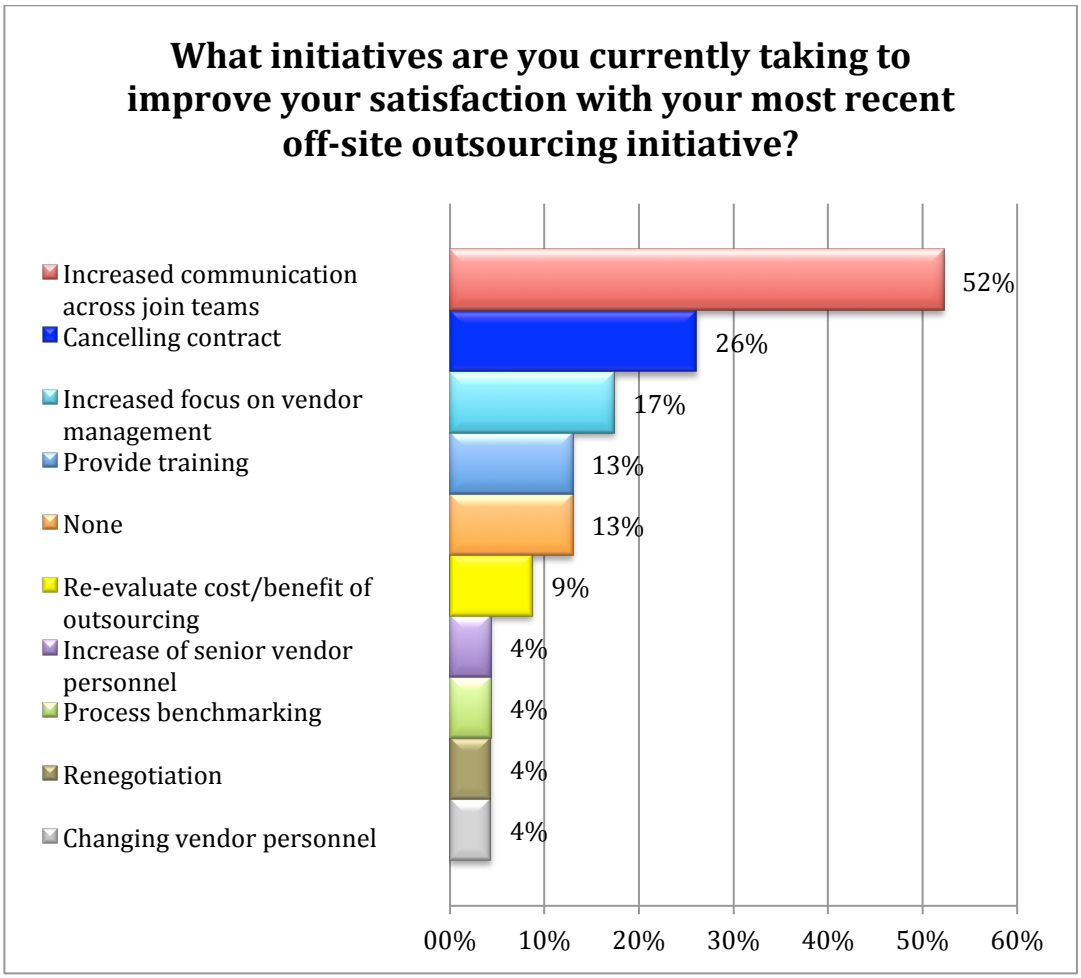

Figure 20 - Initiatives to improve off-site outsourcing

4.4 The outsourcing process

In order to see how the outsourcing phases identified in the literature review related to Atmel's outsourcing experiences, they were asked to identify what they considered to be the most important phases of the outsourcing project and how time spent on on-site and off-site outsourcing projects where distributed between the different phases.

According to Figure 21, the preparation phase is the most critical phase for the success of previous outsourcing projects, closely followed by the managing relationship phase. The vendor selection phase was identified as more important than the transition phase and the reconsideration phase. Only 7% considered the reconsideration phase as important to the success of a project. This is not surprising, considering this phase will be deemed more important if the project

is on the wrong track and needs to be renegotiated/terminated. In most cases this is not a problem, and should therefor be less vital to project success.

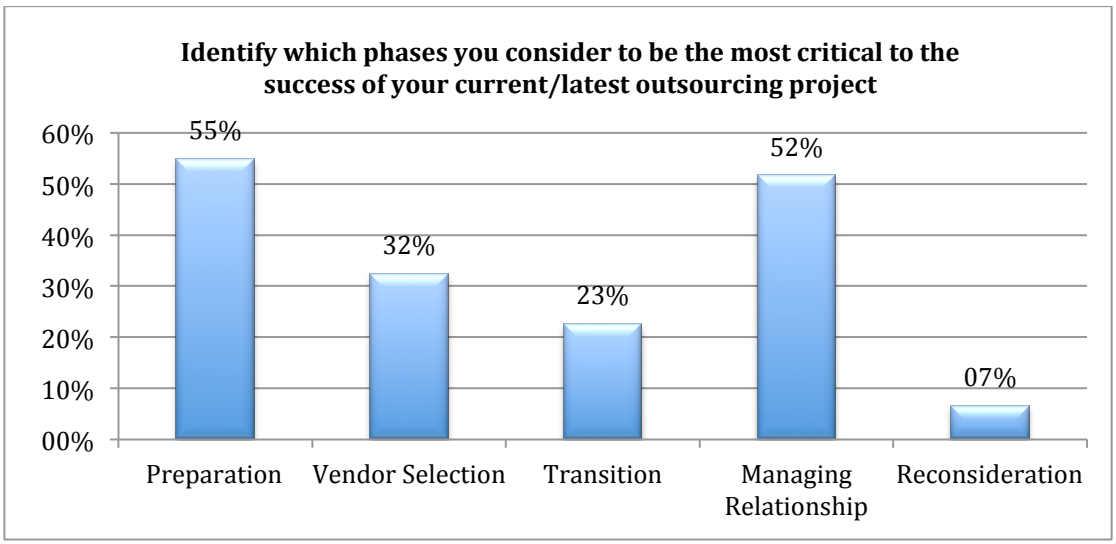

Figure 21 - Critical phases in outsourcing

Looking at the distribution of time between the different phases, on can see that off-site projects require significantly more time on the preparation phase of the project compared to the on-site projects (See Figure 22). Depending on the type of off-site outsourcing project, a well-prepared specification of the work description might provide less delays and setbacks during the implementation of the project. For instance, if an off-site outsourcing project is a black box, meaning the client do not tell the service provider how to do the task, but rather what needs to be done.

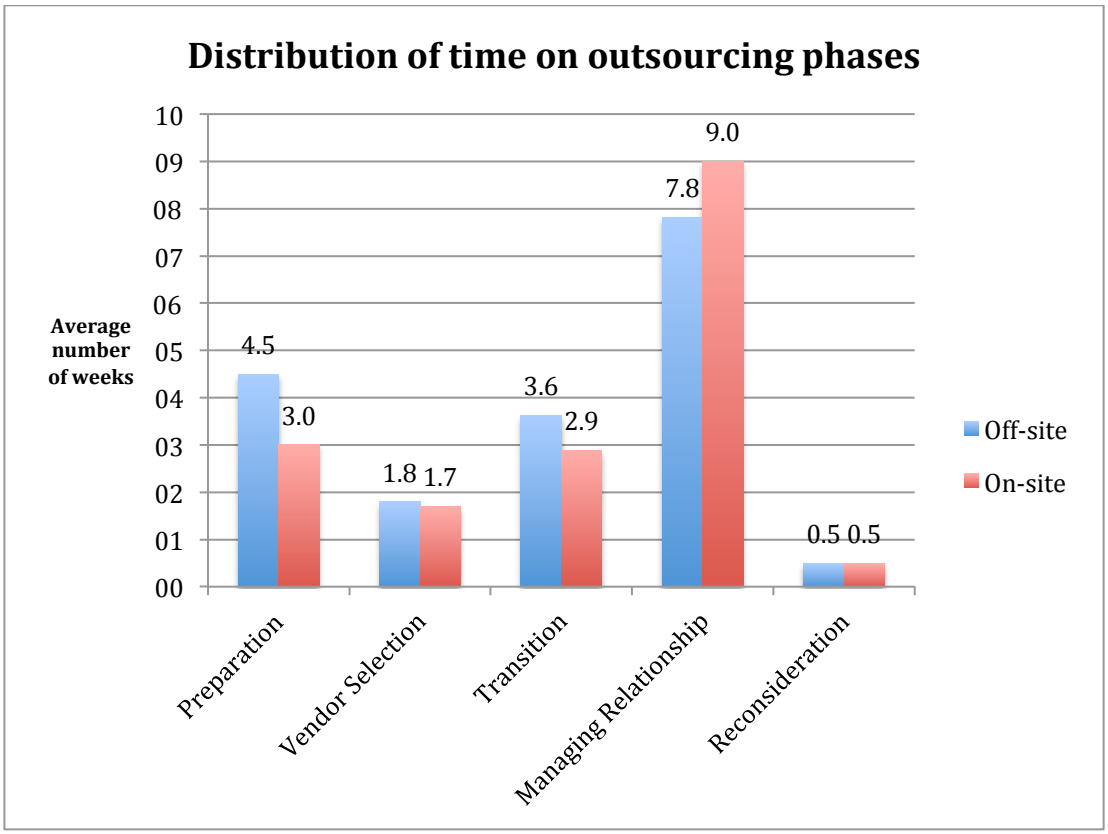

Figure 22 - Distribution of time on outsourcing phases

The transition phase was also more time consuming for off-site outsourcing than for on-site outsourcing. Considering it might take longer time to initiate a project in another country or in different parts of the country, whilst an on-site project might be treated more like an internal project and has less unknown variables, this was not that surprising.

However, what might have been a bit surprising was that the managing relationship phase required more time in on-site outsourcing projects than off-site outsourcing projects. A possible reason for this is that when the service provider is located at the client's location, easy access to communication between the parties increases the time spent on managing the relationship. It might actually be a positive effect from being close to the service provider, considering the high satisfaction rate with on-site outsourcing projects and that most initiatives to improve outsourcing was focusing on increased communication. It is nonetheless important to be aware of the time and

associated costs it requires to manage such a relationship, as this is more than half of the total time the client themselves spends on the project.

5 Analysis

The purpose of this chapter is to compare the literature review with the findings from the survey and the interviews, in order to analyze and answer the research questions asked in chapter 1. It will begin by looking at the implications of location-based outsourcing, in terms of benefits, risk factors, selection criteria and success factors. Three interviews with one project manager and two program managers at Atmel were conducted to elaborate on questions drawn from the survey. These interviews were conducted to strengthen and improve this research by providing additional practical insight and real life experience.

While there is lots of literature available on how to manage outsourcing projects, few scholars focus on the location-based aspects of this field of study. There are differences in conducting a project at the client's location and doing it at the service provider's location, and being able to utilize knowledge about these differences, and how they relate to risk and reward, could yield different outsourcing decisions among companies.

The literature seems to favor a focus on general outsourcing, rather then the specific types of outsourcing. They are concerned with what to outsource and how to outsource, but not necessarily how location based outsourcing could impact the project. A consequence from this lack of focus is that there are far less research material available for location-based outsourcing, and this provided quite a challenge in the literature part of this research. This potential gap in the literature inspired this research to focus on location-based outsourcing, and try to map out the main differences associated with selecting and managing one solution over the other.

5.1 Selection criteria

According to the survey 55% of the respondents answered that they differentiated between on-site and off-site outsourcing when deciding upon an outsourcing project. To follow up this question, the managers at Atmel were

asked how they differentiated between these two types of outsourcing in regards to selection criteria.

5.1.1 Reasons for selecting off-site outsourcing

Some of the advantages identified in the literature review for off-site outsourcing was a potential access to more suppliers than one would get on-site, which allows the client to increase the chances of finding an outsourcing partner that would deliver on the cost, time and quality that the client is looking for. Other benefits identified were lower overhead costs compared to on-site outsourcing. It was also mentioned that the closer the off-site outsourcing partner is to the client, the easier it is to maintain good communication and face-to-face meetings.

During the interviews, one of the managers explained that the type of outsourcing arrangement they pursued had a lot to do with their capacity to follow up the projects. For an off-site project, the service provider's ability to be autonomous and drive the client's needs is highly regarded and is considered a significant selection criterion in Atmel. It is not always practical to have on-site outsourcing solutions, for instance if the service provider is located in a geographical location that it is not feasible to have them come on-site, or if the client needs factories, infrastructure or services that does not exist in the on-site outsourcing market.

Another manager said that Atmel focused more on following up projects and delivering detailed specifications in off-site outsourcing projects. This requires much more from the preparation phase and the managing relationship phase. These are also the phases that where identified in the survey as most critical to the success of the outsourcing project. Looking at the time spent on these phases in off-site projects compared to on-site projects, one can see that off-site outsourcing projects require significantly more time in the preparation phase compared to on-site outsourcing projects. In on-site projects, it was mentioned that the specifications could be on a higher level, with less details initially.

The managing relationship phase however, was open to more discussion among the managers. One manager explained that the management of on-site outsourcing involved a lot of communication between the service provider's employees and the client's employees, as they are more in a collaborative work environment and will be treated very much like colleges. There is a difference between perceiving the service provider's employees as people, rather than just a part of a firm. The outsourcing partner would be perceived as more of an entity or a company in off-site outsourcing, whilst on-site outsourcing is more focused on the people that come from the outsourcing partner to the client, and one would then see the company through the people that are on-site. It is also easier to get a good relationship with the service provider on-site; through the service provider's people that one would almost consider coworkers at the client's location. Another manager stated that managing an off-site outsourcing project required much more time than an on-site outsourcing project, unless the off-site outsourcing project was a black-box solution. He explained that the time it takes to manage the relationship and follow up the project is often underestimated in off-site projects. He had experience with projects where one thought that it would be cost-efficient to place the projects off-site, only to realize the amount of internal resources needed to manage the project was much higher than expected; sometimes even fulltime commitments.

5.1.2 Reasons for selecting on-site outsourcing

An on-site outsourcing solution does not require as much autonomy as an off-site outsourcing solution, and therefore the requirements is not as tough. In an on-site outsourcing environment, the ability to follow up the service provider is more present, and the manager would be able to direct their workflow more efficiently throughout the projects, if necessary.

One of the managers explained that conducting on-site outsourcing is quite similar to hiring new employees. If one where to take a new employee into the business, one would have to spend a lot of time on this person to get him/her up to speed on how things are done in the client's organization. The same is true for

on-site outsourcing arrangements, and it is therefore important to remember that on-site outsourcing does still require attention from the client's organization. It is important that the service provider's employees that comes to the client's location is properly trained in how the client's organization work, and how their processes differentiate from others. Even though they know their area of expertise very well does not mean that they know how that area of expertise is utilized in the client's organization. To take an example that relates to Atmel; a person can be very skilled at developing circuit boards, but it does not mean that person is aware of the workflow that is required to develop a circuit board at Atmel.

Off-site outsourcing requires also more contractual work, according to two of the managers. In Atmel, the legal and purchasing departments need to be included in the process, before a project can be initiated with a supplier. For on-site projects, these issues go more under the human resources umbrella, and they take care of IP-protection and such, just like they would with any regular new employee. This also makes it easier and faster to initiate on-site outsourcing projects than it would with off-site outsourcing projects.

One of the other factors that one of the managers mentioned was less management overhead in on-site outsourcing projects. By having service provider on-site, they are treated more like employees, and this makes the management process more straightforward and business as usual. There are far less hidden factors and flames to put out. One of the solutions to on-site outsourcing mentioned was to pay the service provider on a per hour basis for each employee placed on-site. This way it was easier to agree on acceptance criteria, compared to if one paid for a final service delivery. It is also easier to change the scope, without spending too much time on contract renegotiations, because the service provider will be paid the same amount for the hours spent anyway. This makes it easier to select on-site outsourcing if the scope of the project is finished on a higher level, while there is still some room for determining the final scope and detailed specifications of the project. This is in line with what was found in the literature review, saying that the ability to have

continuous face-to-face communication between the parties allows the service provider to have a clear picture of what the client is expecting from the process and the results (Duppada and Aryasri, 2011).

5.2 Critical success factors

One important finding from the survey was that the level of satisfaction from on-site and off-site outsourcing projects differed greatly. On-site outsourcing had a much higher satisfaction rate, at 71%, and none where directly dissatisfied with this type of outsourcing. Off-site outsourcing projects on the other hand, had a more even distribution of satisfied, neutral and dissatisfied experiences, being 39%, 30% and 30% respectively. These findings lead to further investigations in the interviews.

One of the managers explained that his theory on why off-site outsourcing projects offered such a low satisfaction rate had a lot to do with expectation management. It is important to know what one can expect from the service provider, and often, it is expected too much. This might be more critical when working with a new outsourcing partner, because it is difficult to know what risks to mitigate and protect one against when working with this particular service provider. The manager said that one of the most common mistakes one can make is to expect everyone else to be on the same level as themselves. This is according to him a recipe for disaster. For on-site outsourcing projects, expectation management is easier to control, because the client will be able to correct the service provider on a daily basis, if necessary.

Consistent communication and feeling of partnership between the client and the service provider was identified as some of the most important success factors in outsourcing relationships in both on-site and off-site outsourcing. Considering how much easier it is to keep the communication consistent at an on-site outsourcing project and to be able to get to know the service provider's staff on a daily basis, this might be a reason why the satisfaction is so high with on-site outsourcing projects.

To have the same geographical location, time zone, language and culture were identified as critical success factors in on-site outsourcing projects. To contribute the success of such projects to these factors might be related to how these factors mitigate miscommunication and misinterpretations. These factors had probably been ranked higher in off-site outsourcing projects as well, if only it was possible to achieve these factors for those types of projects. Unfortunately, in off-site outsourcing projects, there is not always an option to select a nearby service provider. This could be related to cost, quality or time, or even how well the service provider fits in with the client's tactical or strategic plan. There are great challenges with culture, language and time zones in off-site outsourcing. One manager explained that their experiences with Asian service providers had taught them that the service providers would confirm that they understood the tasks assigned to them, no matter how little or much they actually understood. Such cultural differences are critical to be aware of in order to mitigate misunderstandings and misinterpretations, and achieve a successful collaboration between the outsourcing partners.

The survey identified that in off-site outsourcing projects, critical success factors focused more towards a well-defined agreement about the services carried out and joint governance of the agreement. Because there is less direct supervision in off-site outsourcing projects, the details of the agreements becomes more important.

A well-functioning management from the service provider was identified as an important success factor in both on-site and off-site outsourcing. Two of the managers commented that the ideal outsourcing project would be to get exactly what you ordered, almost like it was off the shelf. Better management at the client would yield a better product and make them more autonomous. It was mentioned by one of the managers that there are no guidelines in Atmel for service monitoring in outsourcing projects, and by focusing more on the project execution by professionalizing monitoring of services would be one step in the right direction. This is an important observation, as the internal management of

the outsourcing relationship from the client's side is still important to the success of the project.

The initiative that was emphasized the most in improving the satisfaction with outsourcing experiences was to increase the communication across joint teams. One important thing to consider when increasing communication is to avoid increasing micromanagement more than necessary. Micromanagement is a factor that will easily arise from excess communication, and it can poison an outsourcing relationship if not managed correctly. One of the managers expanded on this by explaining that to increase communication would probably be incorrect, and that improving the current communication would be a more correct approach. He stated that it was important that the engineers talked to each other across the organizations, and that these communication channels had to be direct and could not go through management. It is also important to have one unified system for this communication to go through, in order to have a history of the exchange of information between the parties, and have this accessible to both parties in order to avoid misunderstandings.

One factor that was discussed in one of the interviews was that the client must allow the service provider to make mistakes in order to learn from them. This is one way to build a long-term relationship and establish trust with the service provider. Given that the service provider has the right competence for the job, the client needs to accept other technical solutions than they would have done themselves, given that the quality is good enough to meet the acceptance criteria. This will show them respect for their decisions, and could spark innovation and motivation to continue performing well. The client pays for the supplier's expertise and knowledge, so it is important to let them apply this to the outsourcing partnership. The alternative is micromanagement, which is seldom the preferred way of managing a relationship. Micromanagement could be an indication towards the service provider that the client do not trust them, and this would undermine the service providers authority and respect, destroying their motivation to prove themselves to the client. In cases where the supplier is selected based on cost reductions, and their expertise is expected to be low, then

knowledge-transfer mechanisms should be set in motion from the client to the service provider, and certain levels of micromanagement could be accepted.

One of the surprising findings from the survey, in regards to improving satisfaction with outsourcing, was that only 4% off-site and 7% on-site tried to renegotiate their contracts, while in comparison, an alarming 26% of off-site projects got cancelled. The survey revealed that little effort was placed in the renegotiation phase of the outsourcing process. The satisfaction rate for off-site outsourcing projects was quite low, and it seems like Atmel's solution for dealing with under-performing off-site outsourcing projects is to terminate them. It was surprising that so few of those that had negative experiences with off-site outsourcing did not try to renegotiate the terms of the contract, in an attempt to create a more long-term relationship with the service provider and take the time to let them learn from their mistakes. Re-initiating a project with a new vendor is time consuming and expensive, and might not always be the best decision.

5.3 Risk factors

As mentioned in the previous subchapter, many of those involved in off-site outsourcing projects were dissatisfied with their recent outsourcing project. Most of those involved with on-site outsourcing projects were satisfied, and therefore the survey did not manage to capture the risk factors in on-site outsourcing projects as well as it did for off-site. The interviews were thus used to shed some light on this matter.

5.3.1 Risk factors in on-site outsourcing

One of the managers explained that in on-site outsourcing projects, the challenges were more contractual than operational. Because the service providers works so close with the client, there is less risks associated with the management of the project. On-site projects can manage a more loose specification of the scope, because it can be explained and further specified during the project. This is made possible because the service provider and client work so close together that there are less significant communication delays or

room for misinterpretation. When the project scope is not fully determined, contractual challenges arise. The contract needs to take into account that the scope could be changed during the course of the project. One way of dealing with such challenges is to pay on a per-hour basis, and not as one price for the total solution. This would create leeway for changes in the scope, without upsetting the service provider, which is now paid the same amount, no matter what the scope of the project looks like. Then the challenge will be to access the allocated resources for enough time to finish the project. Another risk mentioned with contracts, which was also mentioned in the literature review, was the risk of on-site workers leaking sensitive knowledge about the organization (Matusik and Hill, 1998). This required non-disclosure agreements with the on-site workers.

Another risk factor that was mentioned for on-site projects was failure to see what is expected from the client's own organization. For instance, if the client wants to train the service provider's employees on-site, then they would have to prepare significantly in order to efficiently train these workers when they come on-site. According to one of the managers, the client must expect to shut down much of its own business during this time in order to focus on the knowledge transfer. It is easy to forget just how much effort goes into training staff, and how much time it demands from the client organization. One manager said that it could take up to six months to train a service provider's employees on-site, even with dedicated personnel located with them to answer questions.

One manager shared his experience with an on-site outsourcing project that he had witnessed gone wrong. In this project the company had decided to outsource the software architecture, while performing the implementation of the code themselves. When the architect left, there was not one person in the client's organization that knew how this architecture worked or how they could further develop the software. As a consequence, the client had to pay the associated costs with gaining control of the architecture, which ended up being extremely expensive. To outsource the right processes is exceptionally important, and a failure to do so will have a significant negative impact on the organization.

Another risk of on-site outsourcing that was identified during the interviews where the risk of getting stuck in the old ways of doing things. During a generational change in technology, it is easy for some engineers to stick to what they know, and refuse to adapt to newer technologies. On-site consultants offers insight into newer technologies, and even though they are very expensive, they can provide knowledge about the state of the art technology, and enable the client to complete complex projects with high quality. When doing so, it is important to include the old engineers in the process, in order for them to update their knowledge on new technologies.

5.3.2 Risk factors in off-site outsourcing

One risk that was mentioned by all three managers were the failure to see that off-site outsourcing should not be used as a quick fix, or to lessen the workload, thinking the project would take care of itself. A lot of time is required from the client organization to get the project up and running, just as it would for on-site outsourcing. One of the managers stated that for big projects in Atmel with new service providers, the time horizon should be more than two years for off-site outsourcing projects in order to make it worth the time. For established relationships the timeframe could be shorter. Another risk factor mentioned, which relates to this one, was the failure to understand that once the project was up and running, it still needed regular oversight in order to keep the project on track. Those that thought that the service provider was an autonomous unit where often surprised by the amount of effort needed from the client organization during the project. The survey revealed that more time was spent on managing the relationship on-sight than off-site, however one of the managers commented that this was most likely due to peoples ability to see the need for the management on-site, and that for off-site it was more of a hidden factor that was needed, but often overlooked.

Another risk factor that was mentioned in the interviews was to select the right internal employees to manage the outsourcing process. For instance, according to one of the managers, one should never place a person that always knows best

as a manager for an outsourcing project. This would spark micromanagement and could potentially ruin the project and the relationship with the outsourcing partner. A person that always knows best should be placed as an implementer in projects in order to draw on his strengths.

The survey found that vendors underestimating the scope and vendors not performing up to standards were two of the most common risk factors that led Atmel's employees to be less than satisfied with the projects. One manager mentioned that Atmel often experienced that new service providers would receive projects based on cost and time estimates, and throughout the project the service provider would need more time to finish the project. What they often experienced then were a cost increase on the next project with the same supplier. Suddenly the time and costs necessary to complete the project got so expensive that Atmel could just as easily have completed the project on their own, within the same scope. The literature review identified twelve vendor capabilities, divided among three competencies, which could be used for evaluating vendors, and this could potentially be used to improve Atmel's issues with non-performing vendors.

Not reaching service level goals and lack of timely project request execution are related to these issues as well. These factors all points towards the vendors not achieving what they were paid to do. One question to consider is whether the vendors really is to blame for all these projects, or if internal mismanagement could have something to do with this as well. Misinterpretations, miscommunication and poor internal management of the project got a response rate of 14%, 7% and 7% respectively. Stating that approximately nine out of ten projects was the service provider’s fault raises the question of whether or not more time should have gone into the vendor selection phase. When 60% of off-site projects leave Atmel less than satisfied and nine out of ten times it is the service provider’s fault, it is clear that Atmel's outsourcing processes could be improved.

5.4 The outsourcing process

One of the findings from the survey was that the time spent on reconsideration was almost non-existent. While it might be a clear choice at the end of the project whether to terminate the contract, renegotiate it or continue with the outsourcing partner, there should be allocated some time to learn from the mistakes and missed opportunities in the project as well, so that future projects can build upon previous experiences.

In regards to terminating contracts and switching vendors, the issue with underachieving vendors should ideally be dealt with earlier in the process. The survey revealed that the preparation and vendor selection phases of the project were critical to the success of the project. However, the actual time spent on the vendor selection phase was somewhat low compared to the time spent on the other phases. Considering the importance of selecting the right vendor, perhaps allocating more time on this phase could yield less time and frustration in the managing relationships phase caused by following up underperforming vendors.

One of the managers mentioned that because of recent failures in outsourcing, they approached a new project a bit differently then the last. They gave the supplier a smaller initial project with low risk, which Atmel needed to get done anyway, as a test to evaluate the vendor's ability to complete a bigger project in the future. By doing so, the supplier knew that performing well in the initial project would give their firm future business. This also gave Atmel a win-win situation to evaluate this supplier, because if the supplier performed below expectations, they would simply not hire them for any future projects, but if the supplier did well, then Atmel would have a benchmark of their efficiency, and could therefor pay them in future projects based on the assumption that the supplier would keep this efficiency in future projects. By doing so, Atmel secured that if the supplier were capable of delivering what they wanted, they would also be able to require them to be as efficient as they were in the initial project.

6 Conclusion

The purpose of this chapter is make conclusions based on the discussion in chapter 5. This research was conducted to give insight into the differences between on-site and off-site outsourcing projects. The research questions provided the foundation for the literature review and the discussion based on the results found in chapter 4. This chapter is structured to conclude the research questions, followed by limitations and recommendations for further research.

6.1 What are the advantages and disadvantages of selecting on-site and off-site outsourcing projects?

Before looking at the difference between the two types of outsourcing, it was important to understand outsourcing in general. The transaction cost economics, resource-based view and core competences were used to decide whether a process should be insourced or outsourced (Williamson, 1985; Prahalad and Hamel, 1990; McIvor, 2005). The relational view provided insight into how the resources of collaborating firms could be part of a firm's critical resources and how inter-firm relationships can create competitive advantage, which makes the selection of the right outsourcing partner significant (Dyer and Singh, 1998). To initiate a review of risks and disadvantages of outsourcing, the agency theory was included to identify challenges with the principal-agent relationship.

6.1.1 Implications of selecting off-site outsourcing

The discussion in chapter 5 offered insight into the implications of selecting off-site outsourcing projects. The findings from the literature review, the results from the survey and the discussions from the interviews all focused on communication as the key to a successful outsourcing. In off-site outsourcing relationships, good communication can be challenging. This requires the client to be able to clearly explain what it is he wants from the outsourcing partner, down to the last detail. Developing a relationship with the outsourcing partner has been emphasized in the previous chapters, and this is more of a challenge in off-

site outsourcing relationships than it is for on-site. Face-to-face communication and continuous updates on the progress is essential to avoid misunderstandings and keep the project on track.

The discussion indicated that being able to manage the expectations from the off-site outsourcing project was correlated with the satisfaction of the project. It was often a problem among clients that they were expecting too much from the service provider, and therefore ends up being disappointed. The practical implications of the physical distance between the outsourcing partners would dictate the client's ability to follow up and being able to correct the service provider efficiently. If the off-site service provider is located in a different time zone, then communication will be more difficult and could be subject to delays. Placing someone to oversee the process at the service provider's location could mitigate the challenges of time zones, and would also decrease the cultural boundaries by increasing the client's knowledge about the service provider and its environment. Barriers between cultures, languages and time zones could be frustrating for the employees on both sides of the outsourcing partnership. This could lead to misunderstanding and wrongful interpretations. There is also less personal relationship development, which does not translate well for knowledge transfer.

6.1.2 Implications of selecting on-site outsourcing

The discussion and the survey indicated that on-site outsourcing might often be a more satisfactory way of conducting outsourcing. It allows the client and the service provider to work more closely together, mitigating miscommunication and frustration, while at the same time nurturing the relationship between the two parties. The feeling of a partnership between the client and the service provider, which was identified as one of the most important success factors in outsourcing, seems to be easier to achieve when they work together like colleagues.

Controlling the process is sometimes a major advantage when dealing with outsourcing, especially when there is room for changes in the project scope. If a project does not have a defined end-date and detailed specification, then it could still be initiated on-site, since the client is more in control of the process and would be able to explain any alterations in the project to the service provider, face-to-face, on a daily basis, making it easier to avoid misunderstandings. The ability to have continuous face-to-face communication between the parties allows the service provider to have a clear picture of what the client is expecting from the process and the results. However, there are cases where one would not want to control the process, and instead manage the deliverables from the milestones in the project. In cases where the client is lacking knowledge about the development of the product they are purchasing, and only care about the output from the project, then the advantages of on-site outsourcing would be reduced.

The discussion found that the time required bringing the service providers on-site and train them in the processes were often underestimated and demanded a lot of effort from the client organization. Thinking that the project will run smooth simply because the service provider is located in an arms-length and therefore all the benefits of on-site outsourcing will follow is a dangerous fallacy.

6.2 What are the main differences in the outsourcing process of on-site and off-site outsourcing projects?

One of the major differences between the processes of conducting outsourcing on-site and off-site seems to be the time spent on the preparation and managing relationship phases of the project. The conclusions drawn from the discussion are that off-site outsourcing projects require more preparation than on-site outsourcing projects, and is therefore more suited when all aspects of a project are known. If parts of the project is yet to be determined, then on-site outsourcing may be the way to go, given that this is a project that can be conducted on-site and is well enough developed for a service provider to initiate the project.

A high level of dissatisfaction was related to off-site projects and in almost all of the cases the service providers were to blame. Selecting the right service provider is critical to the success of the project, and once they are selected, processes to develop the client-vendor relationship should be emphasized. Letting them make mistakes and trusting their expertise was identified as important factors for building trust in the relationship. In on-site outsourcing projects however, the discussion was more positive towards vendor selection. Because the vendor needs to be on his best behavior when placed in the client's environment, and because the client will be able to guide the vendor more, the importance of finding an autonomous service provider becomes less important.

In the transition phase of the project, the on-site process seems to be very similar to hiring and training new employees, which the organization should have good experience with and most likely standardized. In off-site outsourcing on the other hand, it was found that this transition takes more time, as initiating a project in potentially a different country, or different parts of the same country, could become a more time consuming process.

The managing relationship phase is the most time consuming phases of the outsourcing process, and the discussion found that there are different views on what type of outsourcing is more demanding in this phase of the project. Even though the survey pointed towards on-site outsourcing as the more time consuming of the two, the discussion came to the conclusion that for off-site outsourcing projects, the time required to follow up on those projects were often underestimated and seen as a hidden factor. One of the interesting findings from this research seems to be that daily communication in on-site outsourcing is considered a good thing, and this helps direct the service provider along the development process, while in off-site outsourcing, daily communication is considered to be more in the lines of micromanagement. This might be related to who is in charge of managing the implementation of the project, being that on-site outsourcing if often managed by the client, while the service provider manages off-site outsourcing. Therefore the vendor could interpret more

communication and intervention in off-site outsourcing projects as complaints from the client, while in on-site it might be seen as help and engagement.

The reconsideration phase seemed to be similar for both types of outsourcing, even though little effort was placed into the phase itself. It seems like one of the areas Atmel could improve on is to be more careful with selecting their outsourcing partners, and follow an advice from one of the managers that said they should try to let their outsourcing partners make mistakes in order to become better, instead of terminating the contracts and switching to a new supplier. The switching costs associated with selecting a new supplier are quite high and one should also question the client's attractiveness among service providers when continuously changing vendors, instead of building long lasting relationships.

6.3 Final considerations

The research has made an effort to increase knowledge on the difference between selecting an on-site and off-site outsourcing project. What the findings seems to point towards is that outsourcing is approached with a seemingly ad-hoc mindset, where outsourcing is managed based on what the person in charge of that project considers right. Outsourcing is a dynamic approach and should be treated as such, but without a framework to simplify the complexity of it, there will be limited improvements in this area beyond a trial and error method. To place the outsourcing mechanisms into a joint system in order to begin standardizing how the different outsourcing phases in the process can be managed could contribute to better management of future outsourcing projects. This could potentially improve knowledge transfer and save the organization time and effort.

6.4 Limitations of this study

This study is done qualitatively, and one of the limitations of a qualitative analysis is the influence from the researcher's personal bias and idiosyncrasy. In interviews there is also a question of whether the researcher was able to capture

the right information through his questions and analysis of the answers given. The same goes for the survey, where the formulation of the questions needed to be clear enough for the respondents to be certain of what they were asked, and leave no room for interpretation. The author tested the survey and the interview guide on multiple test subjects before sending the survey, in order to mitigate these limitations, but these are still limiting factors that should be considered.

The results and discussions are drawn from data collection at one firm, and it could be questioned whether these findings could be applied to other firms.

6.5 Recommendations for further research

Because of the limited research undertaken in the past on comparing different types of location based outsourcing solutions, it would be interesting to see further research in this specific area. More empirical evidence from additional companies and other industry sectors is needed in order to generalize these data and create a framework for managing the different types of outsourcing solutions, and shift from the ad-hoc way of managing outsourcing to a more standardized one.

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8 Appendix List

8.1 Semi-Structured Interview guide

Date:	

Interview was conducted by:	Christian Lysne

Personal information, Interviewee:

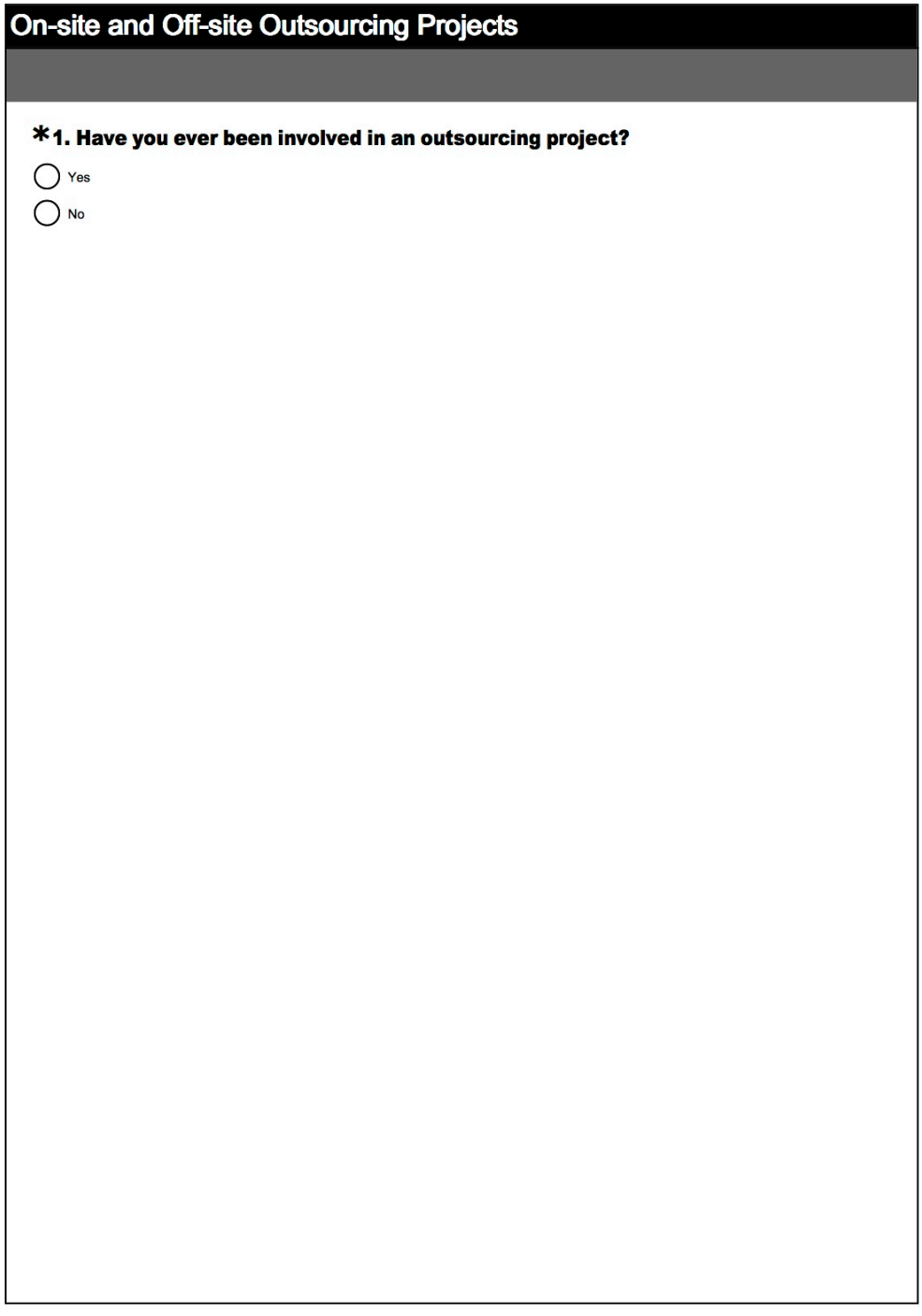
Name:	Job title:

Interview questions:

1	Can you elaborate on your experience with off-site outsourcing projects?	
2	Can you elaborate on your experience with on-site outsourcing projects?	
3	How do you distinguish between on-site and off-site outsourcing when deciding an outsourcing arrangement? Please elaborate and exemplify.	
4	Does any part of your outsourcing process differentiate between on-site and off-site?	
5	Have you ever changed from an off-site outsourcing solution to an on-site outsourcing solution or vice versa?	
6	The survey reveals that more time are spent on the preparation and transition stages in off-site projects, while on-site projects spend more time on managing the relationship. Any comments on this statement?	

7	How do you feel Atmel's organizational structure contributes to/limits outsourcing projects?	
8	There was a 71% satisfaction rate for on-site outsourcing projects, while off-site outsourcing projects had a 39% satisfaction rate. Why do you think that is?	
9	More than 50% said that they are trying to increase the amount of communication across joint teams. How do you think this can be achieved, while mitigating information overload and micromanagement?	

8.2 Survey



On-site and Off-site Outsourcing Projects

*1. Have you ever been involved in an outsourcing project?

- ◯ Yes
- ◯ No

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On-site and Off-site Outsourcing Projects

***2. What is your current job title?**

- ◯ Project Manager
- ◯ Program Manager
- ◯ Supply Chain Manager
- ◯ Other (please specify)

***3. In what country do you currently work?**

***4. Which option best describes the outsourced business function you were/are involved in?**

- ◯ Information Technology/Engineering
- ◯ Operations
- ◯ Finance
- ◯ Human Resources
- ◯ Legal
- ◯ Sales/Marketing Support
- ◯ Other (please specify)

On-site and Off-site Outsourcing Projects

***5. Identify which phases you consider to be the most critical to the success of your current/latest outsourcing project**

- [ ] Preparation
- [ ] Vendor Selection
- [ ] Transition
- [ ] Managing Relationship
- [ ] Reconsideration

Additional comments

***6. What were the objectives of your most recent outsourcing initiative?**

- [ ] Cost reduction
- [ ] Increased revenue
- [ ] Improved customer service
- [ ] Gain competitive advantage
- [ ] Gain tax advantages
- [ ] Leverage new technologies
- [ ] Desire to consolidate
- [ ] Increased flexibility
- [ ] Other (please specify)

On-site and Off-site Outsourcing Projects

***7. What needs were satisfied in your most recent outsourcing initiative?**

- [ ] Cost reduction
- [ ] Increased revenue
- [ ] Improved customer service
- [ ] Gain competitive advantage
- [ ] Gain tax advantages
- [ ] Leverage new technologies
- [ ] Desire to consolidate
- [ ] Increased flexibility
- [ ] Other (please specify)

***8. Do you distinguish between on-site and off-site outsourcing when deciding the outsourcing arrangement?**

- ◯ Yes, there are different requirements for selecting one over the other
- ◯ No, they are evaluated equally
- ◯ I don't know

Additional comments about the requirements?

On-site and Off-site Outsourcing Projects

On-site outsourcing

The questions in this section are concerned with the latest on-site outsourcing project you were involved in.

On-site outsourcing is here defined as outsourced work carried out at the client's facilities, meaning that the service provider's workers will come to the client to perform the work.

***9. Have you ever been involved in an on-site outsourcing project?**

- ◯ Yes
- ◯ No

On-site and Off-site Outsourcing Projects

***10. What were the main factors for selecting an on-site outsourcing solution?**

- [ ] Increased efficiency
- [ ] Flexible staffing (Transfer fixed costs to variable)
- [ ] Repetitive in scope with loosely defined requirements
- [ ] Better communication
- [ ] Better control
- [ ] Better quality
- [ ] Knowledge transfer
- [ ] Cost savings
- [ ] Access to latest technology
- [ ] Get rid of problem functions
- [ ] Other (please specify)

***11. What do you feel are the most critical success factors in the on-site outsourcing relationship?**

- [ ] A feeling of partnership between the client and the vendor
- [ ] Well defined agreement regarding services carried out
- [ ] Joint governance of the agreement
- [ ] Consistent communication
- [ ] Well functioning management from the service provider
- [ ] Well functioning management from the client
- [ ] Same geographical location and time zone
- [ ] Same language
- [ ] Same culture
- [ ] Other (please specify)

***12. Did your most recent on-site outsourcing experience live up to its expectations?**

- ◯ Yes, we were satisfied
- ◯ No, we were dissatisfied
- ◯ Neutral

On-site and Off-site Outsourcing Projects

***13. What factors led you to be less than satisfied with your most recent on-site outsourcing initiative?**

- [ ] Vendor underestimated scope/effort
- [ ] Vendor ended up overengineering the task
- [ ] Did not reach service level goals
- [ ] Did not reach business level goals
- [ ] Vendor not performing up to standards
- [ ] Lack of timely project request execution
- [ ] Vendor's resources were below expectations
- [ ] Loss of key resources
- [ ] Lack of vendor innovation
- [ ] Lack of vendor knowledge about your business
- [ ] Miscommunication
- [ ] Misinterpretations
- [ ] Other (please specify)

***14. What initiatives are you currently taking to improve your satisfaction with your most recent on-site outsourcing initiative?**

- [ ] Increased communication across joint teams
- [ ] Increase of senior vendor personnel
- [ ] Increased focus on vendor management
- [ ] Process benchmarking
- [ ] Renegotiation
- [ ] Legal actions
- [ ] Seek advice from independent advisor
- [ ] Changing vendor personnel
- [ ] Provide training
- [ ] Re-evaluate cost/benefit of outsourcing
- [ ] Cancelling contract
- [ ] Other (please specify)

On-site and Off-site Outsourcing Projects

15. How much calendar time was spent on each of the following phases within the outsourcing process for your most recent on-site outsourcing project? (in weeks)

Preparation	
Vendor Selection	
Transition	
Managing Relationship	
Reconsideration	

On-site and Off-site Outsourcing Projects

Off-site outsourcing

The questions in this section are concerned with the latest off-site outsourcing project you were involved in.

Off-site outsourcing is here defined as outsourced work carried out away from the client's place of work, usually at the service provider's facilities.

***16. Have you ever been involved in an off-site outsourcing project?**

- ◯ Yes
- ◯ No

On-site and Off-site Outsourcing Projects

***17. What were the main factors for selecting an off-site outsourcing solution?**

- [ ] Access to vendors facilities and infrastructure
- [ ] Increased efficiency
- [ ] Flexible staffing (Transfer fixed costs to variable)
- [ ] Better quality
- [ ] Knowledge transfer
- [ ] Cost savings
- [ ] Access to latest technology
- [ ] Get rid of problem functions
- [ ] Other (please specify)

***18. What do you feel are the most critical success factors in the off-site outsourcing relationship?**

- [ ] A feeling of partnership between the client and the vendor
- [ ] Well defined agreement regarding services carried out
- [ ] Joint governance of the agreement
- [ ] Consistent communication
- [ ] Well functioning management from the service provider
- [ ] Well functioning management from the client
- [ ] Same geographical location and time zone
- [ ] Same language
- [ ] Same culture
- [ ] Other (please specify)

***19. Did your most recent off-site outsourcing experience live up to its expectations?**

- ◯ Yes, we were satisfied
- ◯ No, we were dissatisfied
- ◯ Neutral

On-site and Off-site Outsourcing Projects

***20. What factors led you to be less than satisfied with your most recent off-site outsourcing initiative?**

- [ ] Vendor underestimated scope/effort
- [ ] Vendor ended up overengineering the task
- [ ] Did not reach service level goals
- [ ] Did not reach business level goals
- [ ] Vendor not performing up to standards
- [ ] Lack of timely project request execution
- [ ] Vendor's resources were below expectations
- [ ] Loss of key resources
- [ ] Lack of vendor innovation
- [ ] Lack of vendor knowledge about your business
- [ ] Miscommunication
- [ ] Misinterpretations
- [ ] Other (please specify)

***21. What initiatives are you currently taking to improve your satisfaction with your most recent off-site outsourcing initiative?**

- [ ] Increased communication across joint teams
- [ ] Increase of senior vendor personnel
- [ ] Increased focus on vendor management
- [ ] Process benchmarking
- [ ] Renegotiation
- [ ] Legal actions
- [ ] Seek advice from independent advisor
- [ ] Changing vendor personnel
- [ ] Provide training
- [ ] Re-evaluate cost/benefit of outsourcing
- [ ] Cancelling contract
- [ ] Other (please specify)

On-site and Off-site Outsourcing Projects

22. How much calendar time was spent on each of the following phases within the outsourcing process for your most recent off-site outsourcing project? (in weeks)

Preparation	
Vendor Selection	
Transition	
Managing Relationship	
Reconsideration	