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MASTER'S THESIS

Motives, Challenges and Success Factors in the Business Partner Network

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ABSTRACT

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<p>In this thesis the motives, challenges and success factors in business-to-business value-creating networks are assessed. The reasons for the business partner networks to construct, to hold together, or to be unsuccessful are discussed. The factors are studied from the literature and by assessing a case study. The case study was assessed by interviewing personnel involved in the case study. They were sent a questionnaire and a personal meeting was arranged to discuss the given answers. The conclusions are based mainly on discussions with the interviewed persons. The lifecycle of the partner network is a factor, which was not much discussed in the studied literature.</p> <p>It became evident that, in the business-value creating partner networks, the continuous revenue stream is an important factor for the successful continuation of the partnership. Short-term partnerships does not bring any major benefits and it is important to focus on the long-term partnerships. The long-term partnership is supported by thorough partner selection phase, where the motives are considered. Important factor is to consider the basis for long-term continuation of the partnership. The most important factor for the long-term continuation of the business-value creating network is the assessment of revenue compensation possibilities and the revenue stream continuum.</p> <p>The operational level planning of the partner network management is the basis for the realization of the objectives. The objectives for the partner network has to be set and shared inside the partnering organizations. Insufficient link between the top- and operational management makes it difficult to realize the objectives. Information sharing in the early phases is thus important to motivate the different interest groups inside the organizations to increase commitment towards reaching the mutual objectives.</p>	

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<p>Tässä työssä käsitellään niitä motiiveja, haasteita ja menestystekijöitä, jotka vaikuttavat lisäarvoa tuottavassa liiketoimintaverkostossa. Työssä on selvitetty sitä, miten partneriverkostot syntyvät sekä mitkä seikat vaikuttavat siihen jatkuuko yhteistyö vai ei. Motiiveja partneruuteen on tutkittu kirjallisuudesta sekä analysoimalla työssä esitettyä tapausta. Tässä työssä käydään keskustelua myös partneruuden elinkaaresta, jota ei ole käsitelty kirjallisuudessa tuotu esille. Työssä esitettyä tapausta arvioitiin lähettämällä siihen liittyneille henkilöille kysely. Kyselyiden lähettämisen jälkeen järjestettiin haastattelu kyselyyn vastanneiden kanssa. Lopputulokset perustuvat pitkälti haastateltujen henkilöiden kanssa käytyihin keskusteluihin.</p> <p>Kävi ilmi, että arvoa tuottavan partneriverkoston yksi tärkeimpiä tavoitteita on saavuttaa jatkuvuutta liiketoiminnallaan. Ainoastaan pitkäaikaisella partneruudella voidaan saavuttaa merkittäviä etuja markkinoilla. Siksi on tärkeää, jo partnerin valinnassa, kiinnittää huomiota partneruuden jatkuvuuteen pitkällä tähtäimellä.</p> <p>Liiketoimintaverkostossa partneruudesta syntyvät tuotot ja niiden jakaminen on tärkein yksittäinen osa-alue. Oleellista partneruuden jatkuvuudelle pitkällä tähtäimellä on jo partneria valittaessa se, että kyetään arvioimaan miten partneruudesta syntyvät tuotot jaetaan tasapuolisesti ja onko partneruudesta syntyvälle liiketoiminnalle jatkuvuutta.</p> <p>Jotta partneriverkostolle asetetut tavoitteet voitaisiin saavuttaa, on tärkeää suunnitella partneriverkoston hallintaa myös operatiivisella tasolla. Lisäksi tärkeää on jakaa verkostolle asetetut yhteiset tavoitteet organisaatioiden sisällä. Jos ylemmän- ja operatiivisen tason johdon yhteistyö on riittämätöntä, se vaikeuttaa oleellisesti asetettujen tavoitteiden saavuttamista. Tiedon jakaminen aikaisessa vaiheessa sitouttaa eri sidosryhmät paremmin yhteisiin tavoitteisiin.</p>

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1 INTRODUCTION

Metso Automation operates worldwide and has sales and customer support units in 34 countries in Europe, North and South America, Asia and Australia, and Africa. In 2005, Metso Automation's net sales were EUR 584 million. The number of employees totals approximately 3,200 (www.metsoautomation.com, 2006).

Metso Automation's Pulp & Paper Info Applications and Product Services is a department, which delivers process information systems (PIMS) and manufacturing execution systems (MES) to a wide range of customers in Pulp & Paper industry worldwide. The product portfolio consists of different products, which complement each other in the scope of supply. Some of these products are not developed inside Metso Automation, but in another company with which Metso Automation is collaborating. When supplying a manufacturing execution system, external skills and knowledge is needed because the complementary products come from the partners.

Manufacturing execution system, discussed in this thesis, consists of production planning, warehouse management, order handling and production tracking. Some of these different parts are a part of Metso Automation's own product portfolio, but some are acquired directly from partner companies. The supply of a manufacturing execution system or a process information system involves a number of actors already in the initial phases. When Metso Automation is supplying a manufacturing execution system, a form of a partner network is used. There are different operational phases in supplying the manufacturing execution system. Typically these phases are sales-, project- and after-sales.

Management has an important role in directing the partner network, when there are several different interest groups on the operational level. Managing the partner network is challenging, because the partnering firms may have different

organizational cultures and structures, and the way of working is different. The interests in different operational phases may vary.

1.1 Purpose and scope of the study

In the literature there is not much discussion on the lifecycle of the partner network. In this thesis the lifecycle of a partner network is assessed by analysing the case study. The purpose of this thesis is to study and assess the motives, success factors and challenges in different operational phases in the business-to-business value-creating partner network. Consideration is given to the possibilities for the partner network to continue its activities in the long-term. Focus is in managerial aspects.

The objectives of this study are:

- § To explain the reasons for the partner network to construct, to hold together or to be unsuccessful.
- § To clarify the motives of the management in the partner network, based on the literature and the case study.
- § To clarify the operational level managerial challenges in different phases, and to evaluate the success factors in the partner network, based on the literature and the case study.
- § To discuss success factors, which affect to the lifecycle of the partner network.

1.2 Research methodology

In this thesis the basics of business-to-business networks has been studied from the literature. Material read for this thesis has been various and the terms related to the business networks have not been unambiguous. Sometimes similar

networks have been discussed with different terms in the literature. This made writing of this thesis difficult.

The research was started by studying from the literature, how partner networks are formed, what are the motives for the companies to form partner networks, and what are the challenges and the success factors in the business value-creating partner networks for them to hold together or to be unsuccessful.

Supply of a manufacturing execution system has been assessed through a case study in Metso Automation. In the case study Metso Automation carried out a customer project in Juankoski, Finland. A partner network was built to enter this new business. In the case study, the motives, challenges and success factors were assessed and linked with the theories studied from the literature. Case study research was done by interviewing the persons involved to the studied case.

1.3 Structure of the study

In chapter 2 definition for the business network is presented and different forms of business networks are discussed. The concept of a partner network is clarified. The motives for developing forms of cooperation are introduced. A model on development of inter-organizational cooperation is presented. Transaction-cost theory and resource based view is explained. These are related to some of the challenges and success factors in the partner networks.

In chapter 3 the motives, challenges and success factors in the partner network are explained in more detail. The lifecycle of the partner network starts from the partner selection. Different phases during the lifecycle of the partnership, such as partner network management aspects, are introduced.

In chapter 4 the case study is assessed. Main focus in the case study is on the motives, challenges and success factors.

In chapter 5 results, from the case study, are discussed and conclusions are made. Discussion evaluates results in the light of motives, success factors and challenges presented in chapters 2 and 3.

In chapter 6 some ideas for the future research are presented and chapter 7 is a summary of this thesis.

2 THEORETICAL BACKGROUND OF BUSINESS NETWORKS

In the present world the global market has its effect on business. The competition is fierce and the time needed for a new product to the market has shortened. The scale of products and services is growing. As this is happening on a global scale, it forces companies to concentrate on their core competencies. It forces companies to be cost-effective and at the same time brings the need to acquire new markets and a wider customer base. The renewal and coordination of processes, that create value for the companies, are becoming an essential part of the way companies are working. This change forces companies to search for partners, which hold the competencies they do not possess themselves, things which are not a part of their core competence. The distribution and sharing of the information is easy and fast when information technology is used. Information technology makes it easier for companies to cooperate and coordinate businesses together. This supports the creation of business networks. There is a challenge to form the network, keep it operational and in case of a ceased cooperation, find out a way to form a new partner network.

Companies, whether small or large, are looking for benefits, when they form networks and when they try to find ways for cooperation with the other companies. This is obvious, what would be the reason to look for partners other than to benefit from the cooperation. However, these motives can be quite different when comparing large companies and small companies. Different forms of partner networks, such as subcontracting, strategic alliance etc., has effects on the motives as well. For example, in case of subcontracting, empirical studies show that interaction between suppliers and customers, which are important to one another, is not only and not in most cases even primarily a matter of selling and buying (Eriksson et al, 1999). Even in seemly simple forms of cooperation with subcontractors, the interaction between parties may comprise of complex patterns of information exchange relevant to the firms' needs, capabilities and strategies with regard to production, logistics, development and quality (Eriksson

et al, 1999). It seems that both parties, even in subcontracting, benefit from the mutual development of operational processes effecting production, logistics and administrative activities in order to bring a better match between operational processes between the parties involved.

Volatile market creates the need for more flexible organizational structures, therefore companies need to focus on their core competencies. This is the reason why companies are searching for more flexible ways to acquire needed resources. Outsourcing enables the focus on core competencies and enables more flexible usage of resources. On the other hand companies are searching for more efficiency in the value-chain due to the increased competition on the market. More cost-efficient production is needed for companies to stay competitive. In search for the efficiency, the driving force behind is maximizing profits and minimizing costs. Modern IT gives some options for companies to search for easier ways to benefit from resources outside the company boundaries. When using outsourced resources, the question is whether the costs eventually are bigger in outsourcing than in using own labor. Is it possible to use outside resources efficiently enough to overcome the transaction-costs. There will be costs for management, whether outsourcing is a form of subcontracting, strategic alliance or something else.

2.1 Definition of business network

A business network is a coalition of different actors performing together to reach the same goal. It may last for a long or a short period of time. It may have different forms, formal or informal. Subcontracting, strategic alliances, virtual organizations, associations and others are different forms of a business network (Möller et al., 2004).

As can be understood from the definition above, networks have many forms and tasks. There is not only one type of network, but also many different for different purposes. Quinn et al. (1988) present five classes of different types of network,

which are infinitely flat, inverted, spider's web, cluster and starburst. These classes describe the structure of the networks. Möller et. al (2004) present networks from a strategy and business point of view, classifying these in three different basic types: basic business networks, networks that renew the existing business, and networks that create new business. Ahola et al. (2000) presents a classification for the networks from a combination of different goals the network has:

- Production centered networks that are based on transaction-costs.
- Personal relationship networks which are effective and trust based.
- Symbolic networks which are something we are member of.

The concept of a network is very close to organization, when organization is defined as a social entity, which is goal-directed, deliberately structured activity system with permeable boundary. Organization has social aspects, it shares a common goal, it performs work activities and membership in it is visible (Daft, 1995). Network shares these same characteristics, except clear visibility and stability (Ahola et al., 2000).

2.2 Concept of partner network

When we are talking about managing a partner network, we are also talking about the infrastructure management of the firm. The company needs activities to create and deliver the value for the customer and when implementing the use of firm's activities, we speak of activity configuration. There are resources and assets in-house and the firm's partner network. The need for out-house resources from the firm's partner network refers to the resource-based view (Wernefelt, 1984). Activity configuration, in creating and delivering value for the customer, refers to the value-chain framework (Porter et al., 1985).

Activity configuration is a task, where the firm is configuring the use of in-house resources or out-house resources. The purpose for configuring activities is to create the value that customers are willing to pay for by arranging the firm's activities and processes. Value creation process can be defined with a value chain framework (Porter et al., 1985). We need a resource or asset to produce an activity or a process. The resource might be needed from in-house or from a partner network outside the firm's own boundaries. The result of an activity can be a sales document. The result of a process can be something supplied to the customer. In the latter it is easy to understand the different phases for example in a project, from start to finish, making it a process. Activities in a firm are the components in a business process.

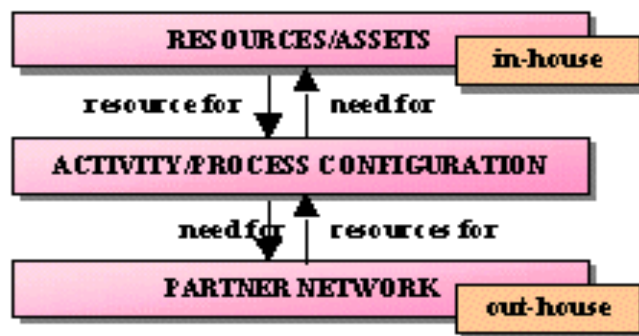


Figure 2.2.1. Infrastructure management (modified from Österwalder et al., 2002).

In order to create value, a firm needs resources (Wernefelt, 1984). There are different forms of assets distinguished by Grant (Grant, 1995). Tangible, intangible, and human assets. Tangible resources are for example equipment, plants and cash reserves. Intangible resources are for example patents, copyrights, reputation, brands and trade secrets. Human resources are the resources needed to create value from these tangible and intangible assets.

The partner network is a strategic network, which can be defined as "stable interorganizational ties that are strategically important to participating firms. They

may take a form of strategic alliances, joint-ventures, long-term buyer-supplier partnerships and other ties" (Gulati et al. 2000).

2.3 Birth of partner network

The change from mass production to customization has made it more important for a single company to configure its activities so, that it can create the value and solve the customer's problems with temporary resources. The need for a partner arises, when a firm is not able to find an activity, an actor or a resource inside the firm's boundaries. A firm has a need to act quickly on the market, but developing the needed activities or resources is not possible by means of recruitment, altering the current business processes, or by means of activity configuration.

The need for a partner may also arise, when the costs of producing the value for the customer is too high using own resources. A firm may then seek a possibility to find a partner with whom to produce the value for the customer more cost-effectively. These needs go back to be described as an extension of matrix organization and a voluntary coalition of separate individuals/firms aiming at common goal, and here the networking has been presented as a solution for this adaptation (Ahola et al. 2000).

Inter-organizational cooperation starts with a business relationship or a cooperative relationship with another firm and consists of different phases that Ring & Van de Ven presents as (figure 2.3.1):

- 1) Negotiations.
- 2) Commitments.
- 3) Executions.

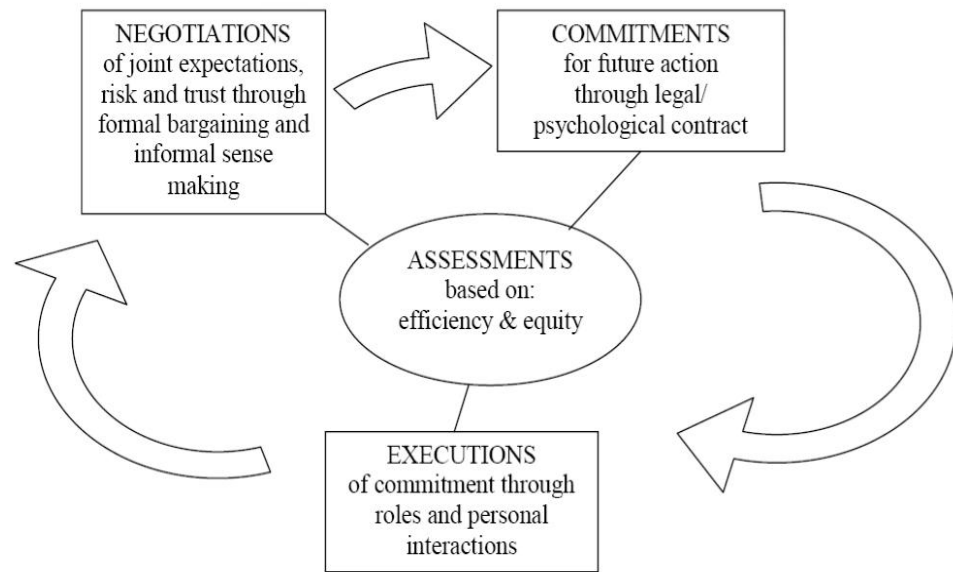


Figure 2.3.1 Development of cooperative inter-organizational relationships (Ring & Van de Ven).

The negotiations phase consist of discussions between the parties on joint expectations and risks, forming trust between partners. This may proceed to the commitments phase, where the parties involved discuss the obligations and responsibilities, and build a legal/psychological agreement. At any of these phases the discussions may end and no cooperation between the parties will be formed. If this proceeds to the executions phase, the cooperation starts and the parties become familiar with each other. The final phase may take a long- or a short period of time. Partners may not reach the set objectives and cooperation may be terminated, before the parties carry out the business-deal together (Ring & Van de Ven, 1994).

Larson identifies similar three phases in formation of a larger entrepreneurial network. These phases are, preconditions for exchange, conditions to build on, and integration and control. In the first phase the parties involved reduce uncertainty and clarify expectations from the cooperation. The partners may seek for references, such as reputation and former relationships. In the second phase the parties create the rules for their cooperation. How will they structure their

cooperative organization, what economic advantage will they gain, and what kind of a trial period they will have. The final phase integrates the agreed functions on operational level, strategic level and social level (Larson, 1992).

Building these cooperative inter-organizational relationships end in entering into a partner network of some form. It can be subcontracting, strategic alliance, virtual organization, association or something else.

2.4 Transaction-cost theory

Transaction-cost theory (TCT) tries to explain the nature of the firm more specifically than the classical economics. It tries to explain why firms exist and how the boundaries of the firm can be defined (Coase, 1937). Coase recognizes the importance of modeling transaction costs. Transaction costs are the costs, which emerge when the company organizes information, coordinates behavior, safeguards the interests of the parties involved, monitors the transactions, implements the appropriate behavior adjustments, plans legal agreements, etc. There are few key attributes in the transaction-cost theory and these are: the specificity of the assets required to support the transaction, the level of uncertainty surrounding the transaction, the difficulty of assessing the performance of the transaction, and the frequency of the transaction (Benoit et al., 1996).

2.4.1 Asset specificity

When asset is durable and dedicated to a specific transaction, it is "highly specific to the transaction". Asset specificity heavily impacts the choice of governance mechanisms. Investments in physical or human capital require a contract or mechanism to protect the investor. To avoid being locked in the transaction, the investor may ask for a longer duration of the contract (Benoit et al., 1996). In case of subcontracting, strategic alliance, etc., there is exchange in physical or human

capital. The specificity of assets, used in the transaction, defines the need for governance mechanisms.

2.4.2 Transaction uncertainty

Uncertainty in entering into transactions with another firm may create a need for a firm to enforce a contract. Writing and enforcing contracts is costly for highly complex and uncertain transactions. Hence it is expected these to be internalized by the firm or to be accomplished through relational contracting (Benoit et al., 1996). This is also valid when companies enter into a partnership agreement. Sometimes planning and implementing a legal contract is too costly to carry out. Then the firm has the choice between internalizing the asset or specifying a frame contract. When the firm specifies only a frame contract, there has to be trust between partners. It can be difficult or costly to measure the actual performance of the parties. Elements of exchange are often difficult to evaluate, particularly in the case of services. The difficulty in measuring the results could be reduced. By reducing the opportunism, and building up a clan that requires commitment from all parties, it will equilibrate short-term inequities over time. Clan-assisted markets institute procedures to balance the interests, goals and values of the contracting parties (Benoit et al., 1996). This is important perspective also in the partner networks. The benefits acquired by being a member in the partner network should be balanced between the parties. By balancing the benefits, there is a possibility to avoid the transaction costs caused by distrust and transaction uncertainty.

2.4.3 Transaction frequency

When parties interact frequently, it may be more economical to design a governance mechanism that is specifically adapted to specific situation. For low-frequency transactions the firm will prefer to bear the risk associated with

opportunism and uncertainty, rather than support the cost of creating a new governance mechanism or expanding an existing one (Benoit et al., 1996). This is also visible in the partner network. Low-frequency transactions may eventually cause a value-creating partner network to fall apart. The parties prefer to bear the risk from opportunism, rather than to support the creation of governance mechanism.

When organizations select a governance mode, they attempt to minimize the transaction costs. Market governance is preferred when the transaction costs are low. Because of economies of scale and scope, the transaction cost-theory assumes that the market will always be the lowest-cost producer of a good or a service. An internal governance mode is preferred when the transaction costs are high. The production cost advantage is overwhelmed by the high transaction costs (Watjatrakul, 2005). In a network perspective this is an issue that needs to be evaluated. If the transaction costs for using outsourced resources, for example by means of subcontracting, exceed the benefit from using internal resources, there should be other motives for the decision.

2.5 Resource based view

The resource-based view (RBV) is another aspect to evaluate whether it is reasonable to outsource activities or to use resources outside firm's boundaries. The transaction-cost theory is based on costs, which emerge when managing the outsourced resources. Resource-based view considers strategic resources of a firm. These can be assets, capabilities, or organizational processes. Resource-based view presents another perspective to outsourcing. It argues that resources are not homogeneous and perfectly mobile. Instead resources are heterogeneously distributed across firms and imperfectly transferred between firms (Barney, 1991; Grant, 1991). Resources can be assets, capabilities, and organizational processes, which enable a firm to conceive and implement strategies to improve its efficiency and effectiveness (Daft, 1995). Resource-based view supports the

aspect of core competencies, and argues that firms are able to obtain better return for their investment by focusing on core competencies. Core competencies can be used to sustain competitive advantage, by exploiting the opportunities in the market, and to respond to the threats from the competitors (Barney, 1991).

2.5.1 Strategic resources

Strategic resources enable organizations to sustain competitive advantage. If the resources are valuable, rare, imperfectly imitable, and non-substitutable, these are considered strategic to the firm. Strategic resources can be called as core competencies of a firm (Watjatrakul, 2005). Strategic resources can be assets, capabilities, or organizational processes. These valuable resources allow an organization to conceive of or implement strategies that improve its efficiency and effectiveness. This, as mentioned earlier, is they key driver for companies to search for possibilities to outsource non-strategic resources. Non-strategic resources can be acquired from the market by means of subcontracting, strategic alliance, or other form of a business network. A resource is not strategically valuable, if many organizations possess similar resources.

3 MOTIVES, CHALLENGES & SUCCESS FACTORS IN THE PARTNER NETWORK

This chapter clarifies the motives to enter a partnership and explains the essential phases, which affect to the long-term success of a partnership. Motives to enter a partnership, different phases in the partner selection, the shared objectives in the partner network, and the realization of these shared objectives are discussed. These factors set the basis for the challenges and success factors in the partnership. In the end of this chapter, the most important factor affecting to partnership continuation in the long term, focus on revenue, is discussed. Everything discussed in this chapter, describe the lifecycle of the partner network. Chapters from 3.1 to 3.3 consider the partner network creation process. Chapter 3.4 considers realization of the set objectives in the partner network. Chapter 3.5 considers the characteristics and motives, when the size of the cooperating partner differs in size. Finally chapter 3.6 brings out the fact that focus on revenue is the most important factor to maintain a long-term partnership.

The long-term continuation of a partnership is related to its success in being able to reach the objectives set for it. This can be discussed in terms of how the partner network is able to increase the competitiveness of a single member in it. The companies expect benefits, when they try to find a partner to make their actions on the market more competitive. Companies expect to save time to market and time to customer in a cost efficient way. Using a form of a partner network can bring synergy benefits. It can enable combination of new information more quickly, decrease the time in R&D, and increase the size and match in the product portfolio. Networking increases the economies of scale by increasing the sales volumes and by enabling more cost-effective business. The resources acquired from the partner network enable better liability on the market and increase negotiation power. Partner network enables company to concentrate on its core

competencies and as such enables the company to increase its competitive advantage (T&T, 2001).

The success factors, and also challenges in the partner network, can be divided in different subcategories:

1. Selecting a suitable partner.
2. Building a structure for managing the partner network.
3. Setting realistic objectives.
4. Sharing the objectives in the partner network.
5. Following the realization of the set objectives.
6. Sharing the revenues equally, so that every actor in the network wins by being a member.

3.1 Selecting suitable partners

In this thesis the partner network is considered as a business value-creating partner network. Different motives, expectations and revenue stream compensation possibilities are studied. The reason for enter into a partnership agreement lies in increasing revenue, creating more flexible organizational structure, being more cost-effective on the market, etc. One of the crucial success factors is to select a suitable partner, because there is always a risk to select a wrong partner. If the established partner network fails later to win the battle with the other networks on the market, it might eventually mean a "lost market" for each partner in the network (Rese, 2006). Figure 3.1.1. presents a framework for evaluating the correct partner. The framework presented here is considered between OEM's and suppliers, but it can be used in a broader context as well.

In evaluating a need for partnership, the specificity of the assets is questioned. If there is no need to do specific investments on the supplier side, and if the quality does not differ amongst different suppliers, it is a case of buying from the market

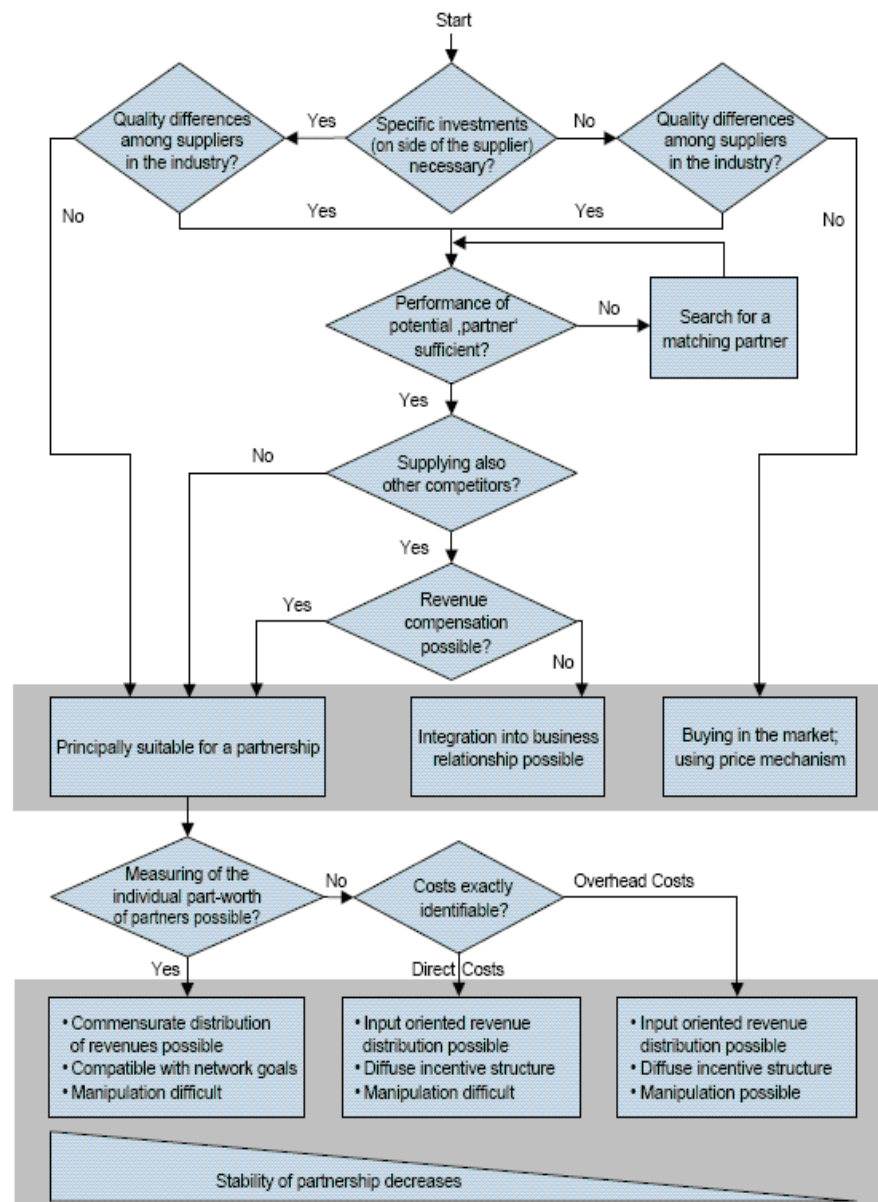


Figure 3.1.1. Decision model for selecting the right partner for a partnership (Rese, 2006).

and no need for partnership exists. We may need a partnership if there is only one supplier on the market, or there are many, but there are no major quality differences between the different suppliers. If there are quality differences between suppliers and we can select between them, the performance and the competitive position of the supplier will be evaluated. If the supplier has transactions with our competitors, possibilities to compensate revenues have to be

evaluated. This determines whether to have a partnership or a business relationship with the supplier.

The predicted stability of the partnership is evaluated by assessing the possibility to compensate profits between the partners. If it is possible to measure individual part-worth of partners, commensurate distribution of revenues will be possible. This enables the best stability for the long-term partnership. If direct costs for producing a good or a service are exactly identifiable, input oriented revenue distribution can be used to diffuse incentive structure. If the costs for producing a good or a service consist of overhead and direct costs, it is possible to use input oriented revenue distribution to diffuse incentive structure, but manipulation is possible. The latter revenue compensation method is the worst to maintain stability in the long term.

The decision model for selecting the right partner for a partnership has two levels, which are:

1. Clarifying the nature of the needed transaction (buying from the market, partnership or a business relationship).
2. Predicting the stability of the partnership by evaluating revenue compensation possibilities.

In the study by T&T (Teollisuus ja Työnantajat, 2001), the most important criteria affecting to the selection of a partner was studied. The actors were divided in three different categories: main suppliers, system suppliers and subcontractors. These are presented in the table 3.1.1 below.

Category	Most important criteria for selecting a partner
Main suppliers	§ Ability to internalize responsibilities and adhere to an agreement. § Cost efficient way of working.

	§ Trust in the mutual ways of working. § Mutual terms of quality.
System suppliers	§ Ability to internalize responsibilities and adhere to an agreement. § Cost efficient way of working. § Trust in the mutual ways of working. § Mutual terms of quality. § Complementary special know-how.
Subcontractors	§ Ability on internalize responsibilities and adhere to an agreement. § Trust in the mutual ways of working. § Cost efficient way of working. § Mutual terms of quality. § Complementary special know-how.

Table 3.1.1. Criteria for selecting a partner (modified from T&T study, 2001).

The criteria for selecting a partner can be summarized in two categories, which are:

1. The closeness of the organizational structure and culture.
2. The economical and technical know-how of the partnering firm.

3.2 Considering network management aspects

The partnership agreement, mutual trust and efficient distribution of information are essential aspects in the partner network management. Objectives of the partner network have to be set and shared between all the actors in the partner network. The business processes, which support distribution of information in the partner network, have to be organized and developed. The partner network management requires leadership for human resources. To manage the partner network

efficiently on the operational level, there must be business processes, which support the partnership. Different aspects to be considered in the partner network management are:

1. On the top management level:

- § Risk management and liabilities.
- § Strategic compatibility.
- § Trust and shared objectives.
- § Closeness of the organizational culture.

2. On the operational management level:

- § Efficient distribution of information and know-how.
- § Business processes, which support cooperation in the partner network.
- § Shared objectives and responsibilities.
- § Mutual trust.

Complex relations between the partners create challenges for the management in the partner network. The individual actors in the partner network have different motives for the cooperation, but the actors should also have mutual objectives that balance the partner network. The partners have to improve trust and develop cooperation continuously. In this sense the partner network is a continuous process and has a lifecycle of its own.

3.3 Setting objectives

To be able to increase trust and commitment between the partners, there has to be mutual objectives. The objectives should be shared from the top management level also to the operational level. This is similar to sharing the strategy, vision and mission inside any organization. In a study by T&T (Teollisuus ja Työnantajat, 2001), the most important objectives set to the network were listed.

The actors were divided in three different categories: main suppliers, system suppliers and subcontractors. These are presented in the table 3.3.1 below.

Category	Most important objectives set for the network
Main suppliers	§ Reduction in unit costs. § More efficient use of capacity. § More flexible use of production processes. § Increasing competitiveness by increasing R&D know-how. § Making more effective use of material flows and inventories.
System suppliers	§ More flexible use of production processes. § More efficient use of capacity. § Reduction in unit costs. § Increasing competitiveness by increasing R&D know-how. § Increasing competitiveness by focusing own resources better.
Subcontractors	§ More efficient use of capacity. § More flexible use of production processes. § Enhancing the reliability of processes. § Reduction in unit costs. § Making more effective use of material flows and inventories.

Table 3.3.1. The most important objectives set for the network (modified from T&T study, 2001).

The objectives can be divided in two main categories, which are:

1. Increasing competitiveness by minimizing costs and by increasing know-how.
2. Enhancing the reliability of the supply chain by increasing flexibility.

3.4 Realization of objectives

It should be possible to measure the realization of the set objectives. The objectives studied by T&T (Teollisuus ja Työnantajat, 2001), may not be easily measurable, but there might be a measure when combining different objectives and measuring their expected output. For example sales volumes, margin, overhead, and gross profits are continuously measured in most companies. The efficient use of capacity and flexibility in the production processes decrease overhead. This affects to unit costs. Decrease of overhead affects to margin and to gross profit in a positive way.

Most probably the members in the partner network are not willing to share these figures with the other members, but they should be able to measure these by themselves. It is important to be able to measure the realization of the objectives. If realization of the set objectives cannot be measured, it only appears that there are benefits from the partnership.

In the study by T&T (Teollisuus ja Työnantajat, 2001), the realization of the objectives set for the partner network was studied. The actors were divided in three categories: main suppliers, system suppliers and subcontractors. These are presented in the table 3.4.1 below.

Category	Most important realized objectives
Main suppliers	§ Reduction in unit costs. § More efficient use of capacity. § More flexible use of production processes. § Enhancing the reliability of processes. § Extended product portfolio.
System suppliers	§ More efficient use of capacity. § More flexible use of production processes. § Reduction in unit costs.

	§ Making more effective use of material flows and inventories.
	§ Extended product portfolio.
Subcontractors	§ More efficient use of capacity.
	§ More flexible use of production processes.
	§ Enhancing the reliability of processes.
	§ New innovations and new business.
	§ Reduction of unit costs.

Table 3.4.1. The most important realized objectives (modified from T&T study, 2001).

The realization of the set objectives can be divided in three different categories, which are:

1. Increasing competitiveness by minimizing costs.
2. Increasing sales by new business and extended product portfolio.
3. Enhancing the reliability of the supply chain by increasing flexibility.

3.5 Motives due to size of the company

If cooperation is to be simplified the benefits for a partner are a sum gained from access to other's resources and workflows, aiming for revenue growth. Resources of a firm can be its customers, human resources, products, knowledge, information, marketing and technology. Also workflows or business processes, comprised of operational know-how, strategic know-how and existing value chains, can be resources of a firm. The level of cooperation limits access to these different resources.

Large company has a large customer base, effective marketing channel and credibility amongst its customers. It has developed products, which are known on the market. There might be a brand name into which new products can be added

to increase credibility on the market. Large company also possesses knowledge and information in different forms due to its existing core competencies. It has existing workflows, value-chains and business processes developed to supply products in a cost-effective way.

Small companies are more capable of taking advantage from the new technologies and they are more adept to accept changes than large companies. They often possess creative and highly mobile people working for them (Blomqvist, 1999). They lack liability on the market. Small companies do not possess similar value-chain, marketing channels and customer base as large companies do.

Cooperation between a large and a small firm is often stated as asymmetric cooperation, because of the large differences in size of the companies. The differences are e.g. size in number of employees, or in bargaining power on the market.

3.5.1 Asymmetric cooperation

Asymmetry between companies and thus the term asymmetric cooperation comes from the differences in the size between the companies. As described above, asymmetry is conceptualized as difference in number of employees and in size of the annual turnover. OECD defines a small firm employing less than 100 employees, medium-sized one as 101 - 499 employees and a large one employing more than 500 (Blomqvist, 1999). The other differences are studied in a working paper by Blomqvist (Blomqvist, 1999). In this chapter characteristics, and the motives for a small and a large firm to enter a partnership agreement, are introduced.

Characteristic differences between small and large firms can be found on different levels. Characteristics are divided in different levels, which are: organization and management, logic of strategy, type of know-how, type of resources, type of

innovations, type of products, attitude towards risks, attitude towards change, ability to act, decision making and commitment.

In asymmetrical cooperation, the partners seek to complement each other's deficiencies.

	Small technology firm characteristics
Organization and management	<ul style="list-style-type: none"> • Simple, informal and undeveloped organization evolving around the owner-manager, unhierarchical and flexible organization, tight clan type of an organization • Management skills embodied in the owner-manager, autocratic management style, charismatic leadership and face-to-face culture • Often technically educated entrepreneurial management • Founders of fast-growing firms have been identified as innovative entrepreneurs • Individualistic and entrepreneurial culture • Lack of functional experts outside R & D, e.g. planning • Undeveloped management and control systems, less sophisticated routine procedures, possibly imitation from the industry • Ad-hoc or project-driven innovation activities in smaller SMEs • Strong and informal information flow • Difficulties to manage rapid growth
Logic of strategy	<ul style="list-style-type: none"> • Emphasis on the speed of response over planning and strategizing • Short-to medium-term planning • Fast reaction to emerging opportunities
Type of know-how and resources	<ul style="list-style-type: none"> • Person-embodied technological expertise and a pool of motivated and bright specialists focusing mainly on specific R & D, absence of physical assets • Usage of external resources • Lack of capital and finances, lack of collateral for financiers
Type of innovations	<ul style="list-style-type: none"> • Innovation as the raison d' être and lifeblood of the firm • Strong focus • Product innovations more likely than process innovations • Both incremental and radical innovations
Type of products	<ul style="list-style-type: none"> • Innovative single product or only few products • Application know-how and products for market

	niches <ul style="list-style-type: none"> • Even absence of products, subcontracting or contract R & D to increase cash-flow
Attitude towards risk	<ul style="list-style-type: none"> • Growth-oriented entrepreneurial firms have usually high willingness to take risks due to high potential rewards and • Great risks due to the nature of new technology R & D and product development, large risks due to great dependency on large partners/customers
Attitude towards change and ability to act	<ul style="list-style-type: none"> • Difficulties in managing the turbulent environment • Too small resources to lead the change (e.g. standards) • Opportunist approach • Flexibility due to ability and will to vary capacity utilization, adaptability • Specialists in operating in single source volatility environments • Ability to change direction quickly
Decision-making and commitment	<ul style="list-style-type: none"> • Almost instantaneous decision-making, the owner-manager's commitment is decisive to the firm's commitment

Table 3.5.1.1. Characteristics of small technology firms (Blomqvist, 1999).

A small firm is lean and flexible, decision-making is simple and fast, it possesses organizational flexibility and has creative, committed and highly mobile employees. Small firm has limited resources (financial and human resources), lack of marketing skills and lack of focus on the market. It has a lack of credibility on the market and typically a lower revenue stream than a large firm. Management is very individualistic and short-term. It is difficult for a small firm to manage growth (Blomqvist, 1999).

	Large technology firm characteristics
Organization and management	<ul style="list-style-type: none"> • Formal and hierarchical organization, rigidity due to bureaucracy and internal fragmentation, tension between centralization and de-centralization • Consultative management style of large management teams • Highly developed management and control systems

	<ul style="list-style-type: none"> • Paradoxes in corporate management and medium-management interests • Poor vertical and hierarchical communication • Less innovative managers than entrepreneurs in fast-growing firms
Logic of strategy	<ul style="list-style-type: none"> • Long-term strategy implemented with continuity and skills • Long-term planning and attempts to control the company's environment
Type of know-how and resources	<ul style="list-style-type: none"> • Market and marketing knowledge, access to Distribution Channels • Functional expertise, however not necessarily enough capable personnel for specific R & D projects • General management skills • Scale-up and engineering expertise, established manufacturing facilities • expertise in clinical testing and regulatory approvals (drugs) • Finances, capital-embodied technologies • Possibility to influence in standardization and good linkages to authorities
Type of innovations	<ul style="list-style-type: none"> • Broad front technological activities, cumulative development • Core-competence based development • "Not-invented-here" causes rigidity in innovation transfer from outside
Type of products	<ul style="list-style-type: none"> • A good option for product differentiation • Attention to expanding existing product ranges and defending market share
Attitude towards risk	<ul style="list-style-type: none"> • Risk aversion of managers: risk avoidance due to fragile authority and prevailing logic of control and consensus
Attitude towards change and ability to act	<ul style="list-style-type: none"> • Attempt to control company's environment • Lack of dynamism and flexibility, Internal inertia • Resistance to change e.g. reluctance to give up traditional technology • Traditionally operate in more stable environments or multiple sources of volatility where no one source dominates the others
Decision-making and commitment	<ul style="list-style-type: none"> • A company-wide commitment is difficult to create • Complex decision-making procedures of committee structure

Table 3.5.1.2. Characteristics of large technology firms (Blomqvist, 1999).

A large firm has marketing skills, resources (financial and human resources), and it has focus and credibility on the market. Management is more developed and it has marketing channels and a larger customer-base than a small firm. A large company is very bureaucratic and decision-making is complex. It is difficult to gain employees to be innovative and committed (Blomqvist, 1999).

<p>1. Market-based competitiveness: Globalization of markets: increased opportunities and competition Link to partners established marketing/distribution network Marketing resources / Market access and intelligence</p> <p>2. Time-based competitiveness: Rapid exploitation of technology, Reducing time-to-market Shorter product life cycles/ shorter development times Simultaneous product launching in several regions</p> <p>3. Access to finances, higher profitability and risk reduction: Access to financing, Increased profitability, Generated short-term revenues Efficient resource utilization Sharing R & D costs and risks Savings in personnel costs and personnel training</p> <p>4. Credibility and legitimatization: Prestige of association, Credibility/ High visibility, Legitimatization of new products</p> <p>5. Technology and standard-based competitiveness: Converging inter-industry technologies / complex technologies Efforts for standardization, Skills in handling regulatory agencies</p> <p>6. Competitive R & D: Reaching critical mass for a specific research venture Access to complementary resources</p> <p>7. Human Resource-based and Organizational competitiveness: Possibility to ensure the state-of-the-art of in-house R & D personnel Effective information exchange and learning</p> <p>8. Competition: Pre-emptive competitive moves Stabilization of competition, Changing competitors to collaborators</p>
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Table 3.5.1.3. Motives of small technology firms to enter partnerships with large firms (Blomqvist, 1999).

Small firms tend to seek for visibility in the market by increasing market-based competitiveness. They receive more opportunities via large firm by gaining access to its sales channel. Large firm enables a small firm to use its marketing resources and marketing intelligence. Large firm also provides credibility in the market for a small firm. By better access to finances, a small firm is able to increase its time-based competitiveness and investments spent on R&D. Large firms are often involved in evaluating industry wide technologies and standardization. This

enables small firms to learn about industry wide technologies and seek for benefiting from standardization. Large firms often have skilled human resources management from which small firms can learn. There will be less competition on the market for a small firm, when it enters the market under the umbrella of a large firm.

Motives for a large firm to enter a partnership with a small firm are summarized in the table 3.5.1.4 below.

<p>1. Competitive R & D: Access to complementary resources: merging technological knowledge and skills Reaching critical mass for a specific research venture</p> <p>2. Technology and standard-based competitiveness: Access to emerging technologies/ technology window Access to complementary technology, Access to core technical expertise /Technological change Converging inter-industry technologies</p> <p>3. Higher profitability, Savings and Risk Avoidance: Sharing R & D costs and risks / Increased profitability Efficient resource utilization / Savings in personnel costs and personnel training</p> <p>4. Time-based Competitiveness: Reducing time-to-market / Rapid exploitation of a new technology Shorter product life cycles</p> <p>5. Human Resource and Organizational Competitiveness: Effective information exchange and learning Shortage of scientific specialists / Inability to hire innovators Inability to replicate the innovative climate of a small technology-based firms Novel ways of thinking to foster innovativeness Increased organizational flexibility / lesser commitment to risky R & D projects Possibility to ensure the state-of-the-art of in-house R & D personnel</p> <p>6. Market-based competitiveness: Globalization of markets: increased opportunities and competition Catching of the present opportunities/ responsiveness Increasing fragmentation of markets and know-how of customer segments Developing products for specific market niches Market access / Market intelligence</p> <p>7. Competition: Pre-emptive competitive moves; even blocking a potential competitor / Stabilization of competition / Changing competitors to collaborators</p> <p>8. Credibility and legitimatization: Credibility/ High visibility</p>

Table 3.5.1.4. Motives of large technology firms to enter partnerships with small firms (Blomqvist, 1999).

Large firms tend to seek complementary resources to increase flexibility. Large firms can receive leads of emerging technologies and they might be able to get opportunities to access and acquire new core competencies. By complementary resources large firms can assure delivery capability. Using human resources, which do not cause costs when not needed, can increase profitability. The complementary human resources are already skilled and there is no immediate need for additional training. It is more flexible to handle R&D projects by enter into a partnership with a small firm, if there are risks involved. Bureaucracy, which is required in a large firm, can be avoided by developing products in a small firm. It is difficult to hire scientific specialists or innovators to a large firm, but such resources can be used via a small firm. It is easier for a small firm to hire specialists, and the organizational culture of small firm better supports innovators.

3.5.2 Symmetric cooperation

Symmetric cooperation is a term used when cooperating firms are approximately the same size in personnel and in annual turnover. The usual forms of cooperation, described as symmetric, are strategic- or inter-firm alliances, virtual organizations, associations, etc.

The partnering firms seek for new market opportunities together to gain more market revenue. Firms might also seek for new skills and ways to develop new products more cost-effectively by sharing the costs and resources (Teece, 1992). It is also possible to gain competitive advantage on the market by forming an alliance and thus has greater power on the market over rivals (Silverman, 2002).

3.6 Focus on revenue

The partner network is expected to bring a lot of benefits to its members. The ultimate motive is to increase profits by enabling companies to be more cost-

effective, innovative, competitive, etc. Increasing the profits is basically the up most reason for the companies to seek partners. "One of the most important aspects on the sustainability of a partnership is how the revenue of the value-creating networks as a whole should be allocated between the various partners. A focus on revenue is necessary, because of the asymmetry between cost and revenue origin." (Rese, 2006).

It can be argued that the business value-creating partner network will stay operational, if all the members benefit economically by being a member in it. This means that the long-term costs for being a member in the partner network cannot be more than the total profit gained. Also, at least the main objectives placed for the partner network must be met. Loosing a member from the partner network might cause the network to become dysfunctional, depending on the importance of the member. When business value-creating partner network is about increasing the profits of the individual members, it is important to be able to share the profits in means other than "all actors get the same".

4 CASE STUDY STROMSDAL

The case study is about assessing the motives, challenges and success factors faced in the customer project. Stromsdal was the first customer project, where Metso Automation supplied a manufacturing execution system to Juankoski, Finland with the help of a partner network. This was a strategic alliance, which Metso Automation established to enter a new market.

4.1 Research method for the case study

Research method for the case study consists mainly of personal interviews. Financial figures from the project were studied and different articles concerning project management were assessed. This gave the opportunity to discuss and make conclusions on factors mentioned in the case study.

4.1.1 Interviews

The case study is based on personal interviews with the persons involved in the Stromsdal customer project. Interviewed persons represent the management and the operational level in the customer project. The results from the inquiries (appendice 1) were analyzed and summarized into the table 4.5.1.

4.1.2 Carrying out the interviews

Before the discussions took place with the interviewed persons, interviewees were sent a questionnaire (appendice 1). The answers were discussed in the interview. The questionnaires were collected and additional comments were written down in

to the meeting memo. The questionnaire was sent to ten persons. To one person from Greycon, to two persons from Metsys and to seven persons from Metso Automation. Five persons from Metso Automation answered the questionnaire. Two persons represented the business management and sales. Two persons represented the operational management. One person represented the after-sales. Two of the persons can be considered to be on the top management level. The other three represent the operational management. The persons, who answered the questionnaire, were also interviewed and their comments were written down in to the meeting memo. A person representing Metso Automation's top management was interviewed frequently during the process of writing this thesis.

4.1.3 Operational- and top management

The terms operational- and top management are discussed in the case study. Some explanation is needed to clarify the difference between these two management layers. Operational management represents the level, which is responsible for all the needed activities to implement the set objectives. Top management is responsible for economical issues. Top management plans strategies and sets long-term plans for the future. In the case study the perspective of the top management is business management. The perspective of the operational management is the cost-effective supply of customer projects and the realization of the objectives set by top management.

4.2 Top management strategy and motives

In the late 1990's Greycon came forward to introduce their business to Metso Automation. This was an initiative from Greycon's side, but Metso Automation was not ready to enter into a partnership at this stage. In the late 1990's Metso Automation started to plan MES strategy. Metso Automation was planning to enter a new market, offering a manufacturing execution system. The objective was

to increase the business volumes by increasing the size of the product portfolio. The market studies indicated a tendency towards solutions where production tracking was combined with production scheduling. It was concluded that the core in the MES-concept was production tracking and that would be the part Metso Automation would be developing further in the future. To fill the gaps in the MES product offering, the selected option was to enter into partnership agreements with suppliers of production scheduling software. MES as a technology is between automation and ERP. Entering into the market with a manufacturing execution system was considered to be a moderate expansion to the existing product portfolio. Metso Automation was aware that the time to market was critical for success and it would be important to bring the new offering to the market quickly. For short time to market, Metso Automation was aware that finding the first reference customer was essential. The tests would require a real environment.

4.2.1 Acquisitions

It took two years to find the way to the market. The first phase was to acquire DNARoad from Metso Paper Hollola in 2001. After acquiring the new unit, Metso Automation initiated a new development project for MES PT (production tracking). The definition phase for the new product started. It was decided that Metso Automation will not be dependent on other companies, instead the new product will be flexible enough to contain needed interfaces to integrate with complementary products available on the market.

4.2.2 Partner selection

Metso Automation evaluated different companies to find a suitable partner. Production tracking and roll tracking were planned to be parts of Metso Automation's own offering. The other parts would be acquired from partner companies. After thorough evaluation, early in 2002, the best option for

partnership appeared to be Greycon. There were no overlapping in the product offering and no contradictions in strategic interests. Personal relationships on top management level between companies were good and the technology used by Greycon was well known for Metso Automation. Greycon would provide production scheduling and trim optimization modules. Production tracking and roll tracking modules would come from Metso Automation. Both companies saw this as a way to complement the product portfolio, when offering a complete MES solution. In April 2002, Metso Automation and Greycon entered into a partnership agreement.

Later the same year Metso Automation evaluated another company, Metsys. Metsys is a small firm (approx. 10 employees) with a well-known industry background and respected skills. The product offering of Metsys consists of production tracking, production planning, warehouse management, order processing and invoicing. A part of the offering is something a modern ERP is able to take care of (order processing and invoicing). Metsys had some overlapping functionalities in their product offering with Metso Automation and Greycon, but this was not seen as a disincentive for partnership. The motive for Metsys was the access to sales resources and sales channel of Metso Automation. For this benefit Metsys was willing to drop out some parts of their product offering in the strategic alliance.

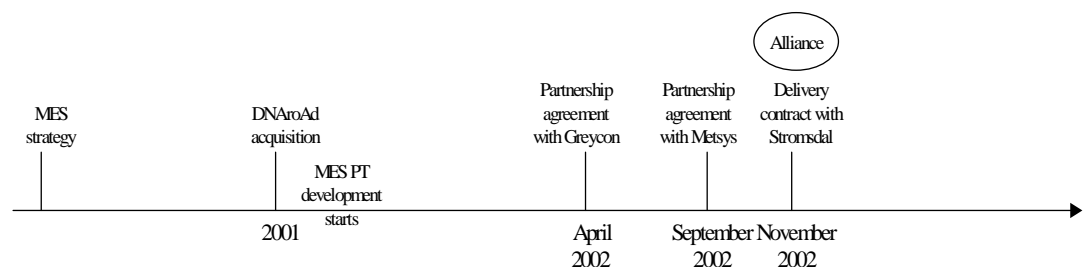


Figure 4.2.2.1 Timeline from strategy to alliance

By entering into a partnership with Metsys, Metso Automation was able to complement MES offering with order processing, invoicing, dispatching and

warehouse management. The other important motive for Metso Automation was Metsys know-how in this industry sector. In September 2002 Metso Automation and Metsys entered into a partnership agreement. In October 2002, the established partner network started negotiations with the Stromsdal mill. It would be the first reference customer and the opportunity for Metso Automation to implement the strategy till the end.

4.3 Operational implementation and phases

The road from top management strategy, motives and objectives to actually implementing the objectives requires operational activities in the companies. From chapter 4.3.1 to 4.3.3, the different operational phases in the Stromsdal customer project are described.

4.3.1 Sales

After entering into the partnership agreement with Greycon and Metsys, it enabled Metso Automation to search for a customer project. The partner network had the needed technologies to supply a complete MES system together as an alliance. This meant opportunity for Metso Automation to finalize the production tracking software in a customer project. Metso Automation was aware that Metsys and Greycon had been in negotiations with prospect of delivering their products to paper mill located in Juankoski, Finland, but the negotiations were set on hold. Metso Automation took over the customer interface and the negotiations were opened again.

Metsys had good personal relationships with the customer and Greycon had been technically qualified as a candidate supplier. The customer knew Metso Automation as a company, although there was no previous customer relationship. Customer had evaluated different suppliers before the alliance of Metso

Automation, Metsys and Greycon existed. The evaluation had taken place between ABB, Honeywell, TietoEnator, Metsys and Greycon. When Metso Automation came to play a role together with Metsys and Greycon, it had a strong influence. Metso Automation, as a bigger company, was considered capable of managing and coordinating the alliance and thus limiting the risk towards the customer. Metso Automation was also willing to take the main supplier responsibility, if customer was to choose this alliance to supply the MES-system. In the end this was the key cause for the customer to select the alliance of Metso Automation, Greycon and Metsys to be the supplier of the MES-system. Metso Automation driven alliance was established in November 2002.

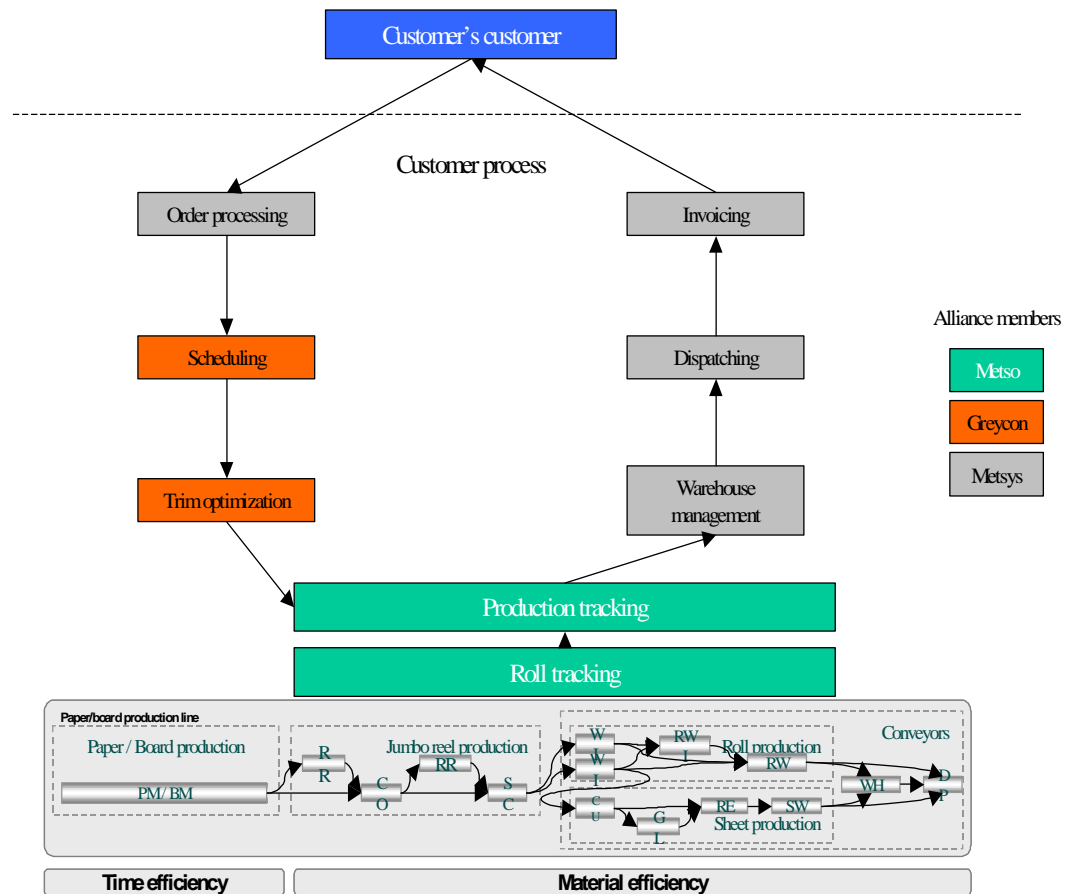


Figure 4.3.1.1. MES-system and the responsibilities of the alliance members

Metso Automation was the main supplier and made the delivery contract with the end customer. Metso Automation ordered the complementary resources (products and engineering) from its partners by making subcontracts. Terms and conditions in the delivery contract were divided to Metso Automation's partners as such. Parties in the alliance took responsibility of their own parts in the scope of supply (see fig. 4.3.1.1).

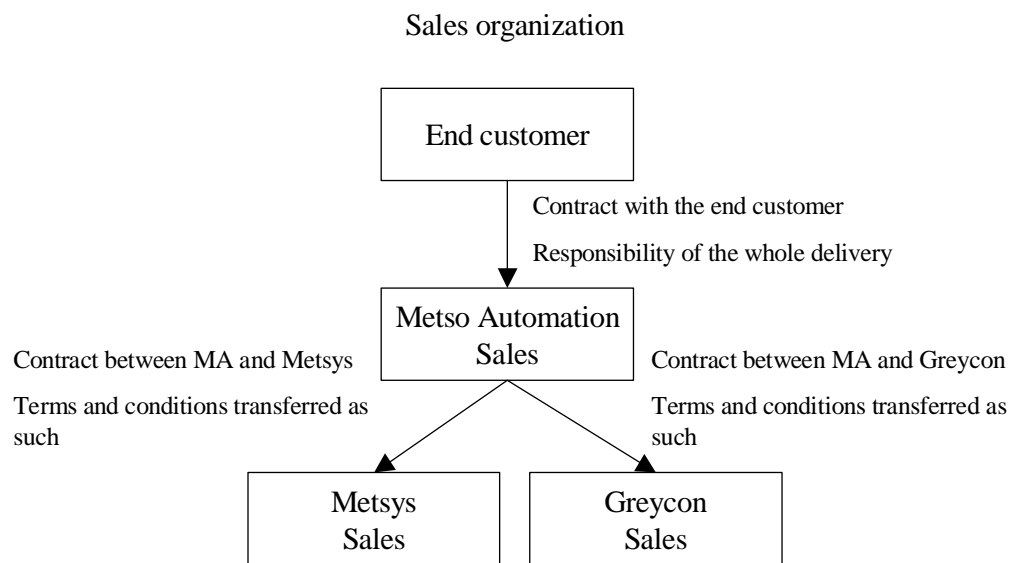


Figure 4.3.1.2. Sales organization

The specification for the proposed scope of supply was only a functional specification based on the customer needs and it was difficult to estimate the amount of work in advance. The product from Metso Automation was under development in R&D and there were no previous experience in working with this alliance. Metso Automation traditionally is not a supplier of tailored IT-projects, as this can be considered being. The organizational culture was not accustomed to supplying a tailored IT-project and it created challenges for Metso Automation to supply the manufacturing execution system together with the alliance members.

4.3.2 Project

After signing the delivery contract, the alliance needed to organize the activities. As explained in the previous chapter, terms, conditions and the scope of supply were agreed already in the sales phase. The partners were aware of their responsibilities in supplying the different functionalities. The original purpose was that the whole MES system would be discussed as one entity. This was also the idea behind the project organization. Alliance project management was responsibility of Metso Automation. Three project teams were assigned. Each team had a chief engineer and project engineers. All three chief engineers were reporting to the alliance project manager. The project teams were divided on the basis of each team having the responsibility of supplying their part of the scope of supply (see fig. 4.3.1.1). From the customer side there were one project manager and teams from different divisions such as production and management (see fig. 4.3.2.1). A steering committee was established for the project, which consisted of management level persons from the customer and alliance members. Supplied system had a major role for the customer process and for this reasons the steering committee wanted to follow the progress of the project closely.

Metso Automation was aware that the project management in the alliance would be challenging, as complete MES system consists of wide variety of different functionalities, products and technologies. It was decided to name a technical coordinator, already in the beginning, to help the project management to deal with the technical issues. It later became evident that, in the partner network, there was not enough know-how on anyone alone to act as a technical coordinator. During the project phase, technical coordinator changed. Eventually R&D project manager was nominated to this task (see fig. 4.3.2.2). The lack of capable technical coordinator, in the beginning, emphasized the importance of chief engineers and the role of project management declined.

The emphasized importance of chief engineers created a situation, where the MES system was not discussed as entirety with the customer. Members of the strategic alliance discussed their scope of supply independently with the end customer, without taking the entirety into consideration. The challenge to discuss the MES system as entirety was apparent also in the customer project organization. Both project organizations had separate teams responsible for certain parts in the MES system.

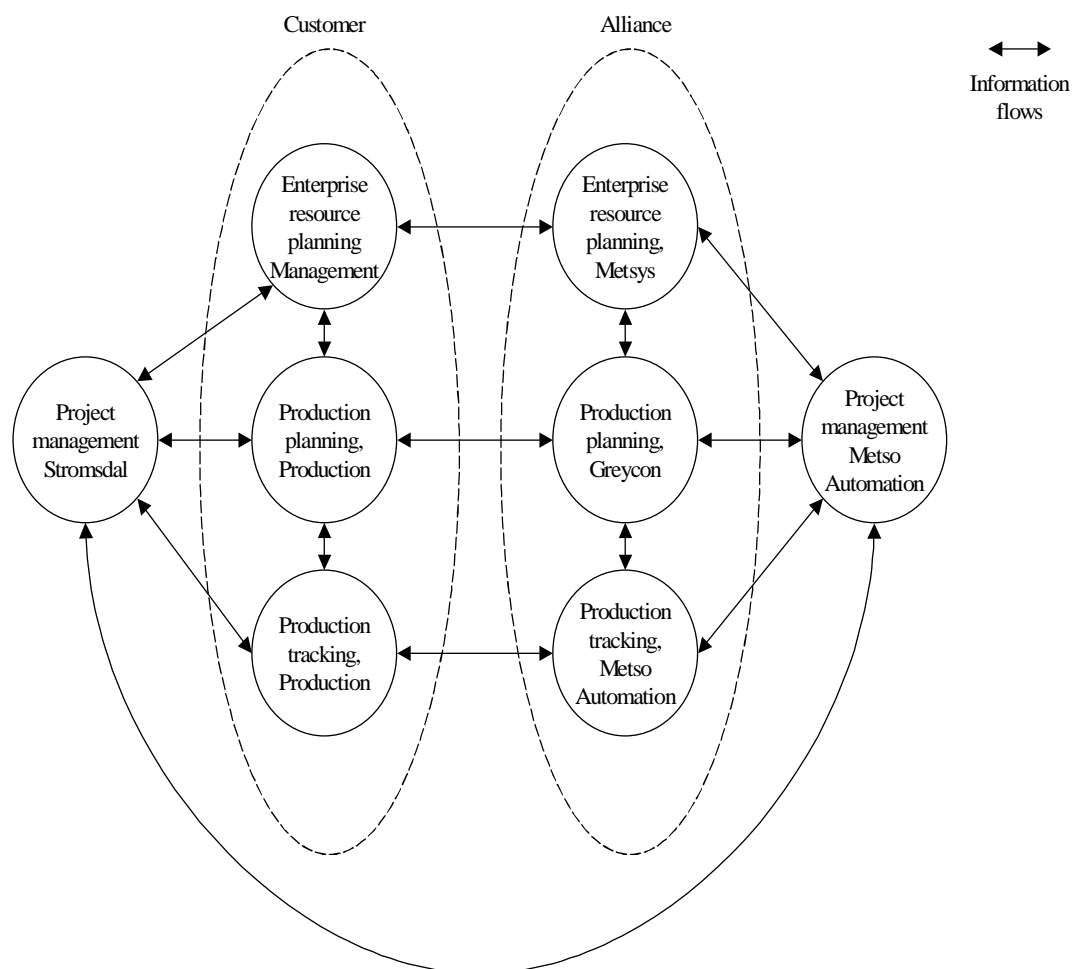


Figure 4.3.2.1. Project organization.

It became difficult for the alliance to act as an entity. The individual interests of the alliance members became stronger compared to the mutual interest, that became evident when teams discussed technical solutions. Teams tried to find accountable for difficulties, faced in the project, rather than working for the

mutual objectives. As the team chief engineers in individual teams got more authority over project management, the direction for the mutual objectives began to decline. It appeared to be challenging to find a collective technical solution for the interfaces between the products. Because there were challenges in coordinating the entirety, it caused these issues to be on no-man's land.

Information exchange worked fine between customer and alliance teams, when controlled, but not between the teams inside the alliance. Project management had difficulties in understanding the situation of the whole project, which caused economical pressure. This was due to difficulties in estimating the hours needed to get the project finished.

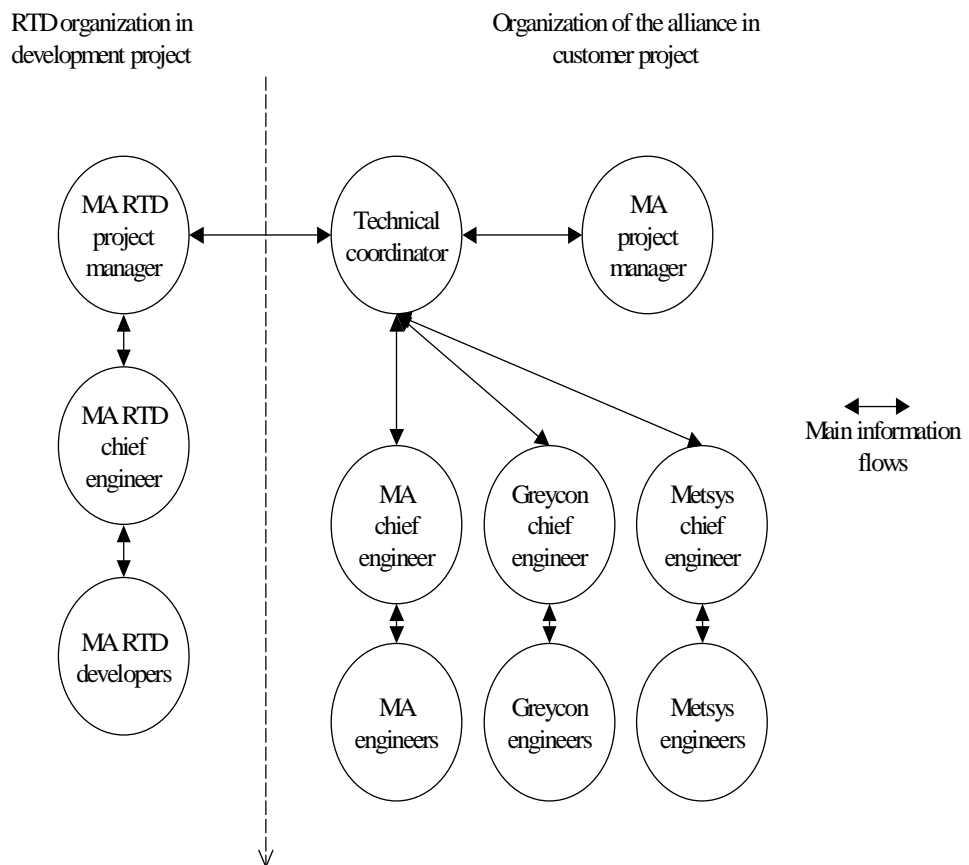


Figure 4.3.2.2. Organization of the alliance in customer project and R&D in development project.

One of the challenges in the delivery was that the production tracking software was under development at the same time the project delivery took place. This development project was an R&D project in Metso Automation that was running parallel with the delivery project. In the R&D project there had been some significant delays that were caused by technology platform change. This was considered to be less difficult than it eventually appeared to be. Decision to change the technology platform was a must, because Metso Automation wanted to avoid developing a new product on top of an old technology.

The difficulties faced in the project caused delays. This put more pressure on the alliance, especially to the project management. The economical pressure, which was caused by the delays, caused the alliance partners to work for their own interests. Due to the support from the alliance top management, the alliance was able to supply a working system. It appeared to be stable and functional and seemingly exceeded the technical functionality of the competitors. The alliance had to supply customer some features that were not planned in the beginning. This supported the development of a product that had good technical features and which supported the customer's process. The customer was satisfied and there seemed to be no disincentives for them to do business with this alliance again.

4.3.3 After-sales

The customer interest was to make a service agreement with the alliance, keeping Metso Automation as main responsible. Because of the coordination problems in the end of the project phase, and because there were no economical interests supporting the continuation of the alliance in after-sales phase, the alliance members saw it better to split up. Each partner ended up making a separate service contract with the customer. Metso Automation stayed responsible for coordinating support in cases where customer is not able to reach Greycon or Metsys directly.

The formal partnership contract between Metso Automation and Greycon was terminated not long after delivery. Objectives achieved by cooperation started to diminish, as Greycon and Metso Automation were not able to acquire new joint projects. There were also some person changes in Greycon that caused trust on the management level to decrease. Today Greycon and Metso Automation cooperate mainly in sales.

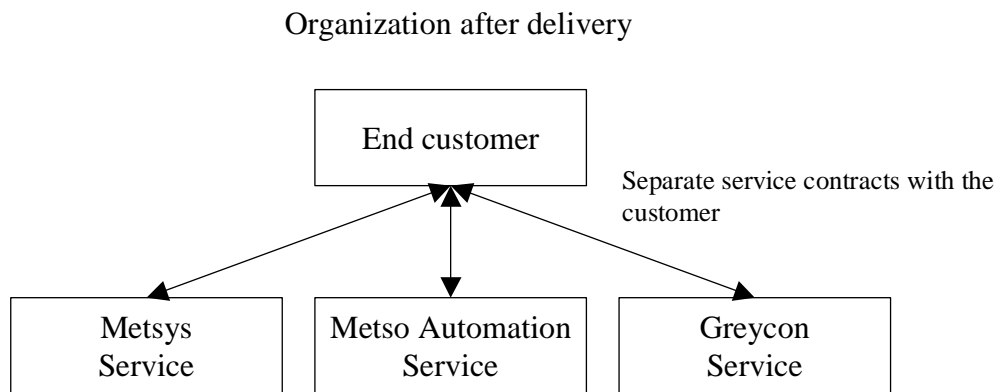


Figure 4.3.3.1. Organization after delivery.

Metsys and Metso Automation have continued partnership together case-by-case and activities seem to continue even in the future. Metsys is willing to put aside their production tracking software in joint projects. They benefit from the Metso Automation's sales channel and in turn Metso Automation is able to fulfill the product portfolio by offering products from Metsys.

4.4 Motives and the form of the network in the case study

The partner network presented in the case study is a strategic alliance, but there are factors related to subcontracting. These factors became apparent when inquiring (appendice 1), how the responsibilities were divided between the partners in the project phase. The responsibilities were divided by making subcontracts. The factors, which support subcontracting, are visible mostly on the operational level and in the project phase. The operational level considered this as

a normal subcontracting. The factors, which support a strategic alliance, are visible on the management level. This became apparent when inquiring the motives to enter the partnership agreements. The top management considered this as a strategic project with long-term objectives.

This network is a business value-creating network for the top management, and can be considered horizontal. Typically subcontracting is a vertical network and strategic alliance a horizontal network. Instead of only subcontracting human resources or out-of-the-box products, the supply-chain is supported by the know-how needed to tailor products for the customer. If one partner is missing from the partner network, the supply-chain for the offering will be incomplete. The importance of a single member in the partner network supports the form of strategic alliance and thus a horizontal network.

Strategic alliance (horizontal network) Objective to:	Subcontracting (vertical network) Objective to:
<ul style="list-style-type: none"> § Expand the product portfolio by complementary products. § Acquire know-how from areas outside own core competencies. § Enter new sales channels. § Reduce time-to-market. § Increase credibility. 	<ul style="list-style-type: none"> § Share the delivery responsibilities with subcontracts. § Reduce unit costs. § Acquire human resources or out-of-the-box products cost effectively from the market. § Establish a flexible way to support the delivery of new products in the supply-chain.

Table 4.4.1. Motives supporting different characters of networking in the case study.

The main actor in this network was clearly Metso Automation. Metso Automation initiated the search for suitable partners and made the delivery contract with the customer, taking the responsibility towards the customer. Both Metsys and

Greycon are smaller compared to Metso Automation, in size of employees and in annual turnover, which means asymmetric cooperation in regard to its partners.

When inquiring the interests for cooperation, the factors shown in the table 4.4.1 were brought out. The interests for cooperation were inquired from the top management and from the operational management. Mostly issues concerning the top management support strategic alliance as a form of network. Subcontracting is closer to operational level for it to be able to deal with the day-to-day issues and to respond to the objectives set by the top management.

The top management considered partnership as a solution to enable the expansion of the current product portfolio by complementary products from the market. The MES system contains parts, which are not a part of Metso Automation's core competencies, so complementary know-how was needed. Without the complementary products and complementary know-how from partners, it would not have been possible to enter the new market cost-efficiently. Time-to-market was essential and would not have been possible by developing the whole offering inside the firm's own boundaries. Expansion of the product portfolio also enabled partners to increase their visibility and credibility on the market.

The operational management level considered the partners as subcontractors. The objective for the operational management is to reduce costs in supplying products and engineering for the customer. This can be accomplished by establishing flexible ways to support delivery of new products in the supply-chain and by supplying out-of-the-box products. Because the nature of the delivery was not something the organization was used to supplying, it presented challenges in the sales-, project- and after-sales phases.

4.5 Essential success factors and challenges

The partner network lifecycle, and its success in the long term, is a complex thing that has connections with the different layers and phases inside the partner organizations.

Table 4.5.1. summarizes the success factors and challenges, based on the answers given to the questionnaire in appendice 1. The importance of a factor is in brackets. The table is described in the chapters 4.5.1. and 4.5.2. below.

There are different phases in the case study, which involve different interest groups inside the organization on the operational level. Different operational management represents all of these phases. Business management is collective for all phases. The answers in the table are divided between different phases: planning-, R&D-, sales-, project- and after-sales phase.

The answers to the questionnaire represent Metso Automation's opinion. Only the persons from Metso Automation answered to the inquiries and were interviewed.

Type of management and operational phases	Success factors	Challenges
Top management, partner selection § Strategic scenarios. § Partner selection. § Setting objectives. § Risk management.	§ Trust & commitment (1) § Mutual strategic interest (2) § Strong evaluation on the technical know-how and competitive environment of partners (3)	§ Revenue compensation possibilities (1) § Lifecycle of partnership (2) § Trust (3) § Difference in organizational cultures (4)

<p>Top- and operational management, planning</p> <p>§ Planning operational management.</p> <p>§ Sharing objectives.</p> <p>§ Risk management.</p>		<p>§ Planning the operational management of the delivery network (1)</p>
<p>Research & Development</p> <p>§ Realization of objectives.</p>	<p>§ Strong technical and process know-how within partner companies (1)</p> <p>§ Window of opportunity to finish the development created by customer project (2)</p>	<p>§ Time schedule (1)</p> <p>§ Mixture of development project and customer project (2)</p> <p>§ Combining technologies with partners (3)</p> <p>§ Difference in organizational cultures (4)</p>
<p>Sales phase</p> <p>§ Realization of objectives.</p>	<p>§ Complementary know-how from partners (1)</p> <p>§ New products (2)</p> <p>§ More leads (3)</p>	<p>§ To receive new orders with low references (1)</p> <p>§ Efficient distribution of information (2)</p> <p>§ Shared objectives (3)</p>
<p>Project phase</p> <p>§ Realization of objectives.</p>	<p>§ Best possible cost-competitiveness due to possibility to use partner resources (1)</p> <p>§ Strong technical and process know-how within partner companies in own core areas (2)</p>	<p>§ Technically understanding the system (1)</p> <p>§ Time schedule (2)</p> <p>§ Mixture of development project and customer project (3)</p> <p>§ Efficient distribution of information (4)</p> <p>§ Shared objectives (5)</p> <p>§ Difference in organizational cultures (6)</p>
<p>After-sales phase</p> <p>§ Realization of objectives.</p>	<p>§ Complementary know-how from partners (1)</p> <p>§ Human resources available from partners (2)</p>	<p>§ Revenue compensation possibilities (1)</p> <p>§ Efficient distribution of information (2)</p> <p>§ Technically understanding what had been supplied (3)</p>

Table 4.5.1. Success factors and challenges in the case study.

Based on the interviews, the management representing the business management (see chapter 4.1.3), considers strategic scenarios, selects the partners, and sets the objectives for the partner network. The operational management plans the implementation of the set objectives, shares the objectives in the operational level, and is involved in the risk management together with the business management.

4.5.1 Success factors

The numbers in the text, in brackets, refer to the success factors in different phases introduced in the table 4.5.1. The phases in the table 4.5.1 are marked bold in the text. The number is equivalent to the importance of the factor based on the given answers.

Partner selection (top management)

The business management considered the mutual commitment (1), to finish the joint project, to be the most important factor affecting to success in the case study. In the partner selection phase, the technical know-how, and the competitive environment of the partners was strongly evaluated (3). Without mutual strategic interest (2) and thorough partner evaluation there would have not been any basis for the partnership.

Sales phase

The business management considered the sales phase to be supported by the new products (2) in the long term. For the sales phase, the most important success factor was considered to be the complementary products (1) from the partner companies. Without the established partner network, there would have not been possibility to acquire new business or at least it would have delayed it considerably. The sales channel of the partners was considered to bring more leads (3).

Research & Development

In the table 4.5.1. there are factors, which affected to the R&D phase. These represent the business management point of view. The know-how of partners was evaluated in the partner selection phase. The strong technical know-how in the partnering firms was considered as one of the success factors for the R&D phase (1). The window of opportunity (2), created by achieving a customer project, led also to finishing the R&D project, and decreased time-to-market.

Project

The operational management considered the partner network to provide the best possible cost-competitiveness due to the possibility to use resources from the partner companies (1). The strong technical know-how of the partners, on their own core competence areas, was considered to help in finishing the joint project (2).

After-sales

In the after-sales phase, the partners made individual service agreements with the customer. Metso Automation was left with the coordination responsibility in case the customer would this request. This was possible to organize, because there was complementary know-how from the partners (1), and because there were human resources from the partner companies involved in the established duty ring (2).

4.5.2 Challenges

The numbers in the text, in brackets, refer to the challenges in different phases introduced in the table 4.5.1. The phases in the table 4.5.1 are marked bold in the text. The number is equivalent to the importance of the factor based on the given answers.

Partner selection (top management)

For the lifecycle of the business value-creating partnership, the biggest challenge is to compensate profits in the long-term without continuous revenue stream (1). Revenue compensation was seen challenging also in the after-sales phase, because of the difference in the nature of the business. The trust (3) declined between Metso Automation and Greycon, because Greycon transferred its business out from Finland and because there were person changes inside the company. This also affected to the lifecycle of the partnership agreement (2). There were differences in the organizational culture (4) between partners, mostly in the way of working, which affected to the trust creation.

Planning (top- and operational management)

Selecting the correct partners, evaluating revenue compensation possibilities, and setting mutual objectives, establish a basis for the partnership. Implementation on the operational level determines how these objectives can be realized. Based on the inquiries in the case study, the operational management is responsible for the realization of the set objectives. It should be involved in planning of the operational management when supplying a system to the end customer for the first time. Especially when the setup consists of partners with whom there is no previous experience. The business management was criticized for not taking the operational implementation (1) into thorough consideration in the case study. It seemed that due to the complicated environment of the customer, the preplanning should have been made more carefully.

Sales phase

In the answers, the biggest challenge in continuation of the business was to receive new orders with relatively low references (1). It was also criticized that there was not enough information (2) available and the objectives (3) were not shared inside the organization.

Research & Development

From the answers it became apparent that the R&D was mixed (2) with the customer project. The operational management criticized this. For example the R&D project manager was nominated as a technical coordinator in the customer project. The biggest challenge for R&D was the time schedule (1) of the customer project, which required comparatively tight schedule for developing the production tracking inside Metso Automation. This brought challenges visible in the customer project. The individual interests of the chief engineers, which were emphasized in the customer project, made it difficult for the R&D to agree on the technologies with the partners (3). Unrealistic time schedule was seen as the biggest cause of pressure for R&D and the customer project. One challenge was also the organizational culture, which was visible in the way of working (4).

Project

The R&D project was parallel to the customer project and it caused delays to the customer project (3). The operational level criticized the amount of information exchange and sharing of the objectives (4, 5). Differences in the organizational culture reduced trust between the actors in the operational level (6). The complex process environment of the customer and the new technology made it difficult to understand the whole system (1). The original time schedule, criticized as unrealistic in the answers, created pressure for the project organization (2).

After-sales

The after-sales phase ended up in partners making a separate service agreement with the customer. The biggest cause for this was seen the possibility to compensate profits between partners equally, if one partner was to organize the service in the partner network (1). This would create transaction-costs and it would be possible to receive better profits by working separately. The nature of the business in the after-sales is different to the project sales, because the installation base is established. There is less competition on the market due to highly specific type of service needed to maintain the supplied system. Typically after-sales market brings better profit for the service providers and the partner

network structure is not supported. Technically the supplied system provided challenges in the customer service interface (3). The transferal of information was criticized in the customer service interface (2).

4.5.3 Summary of success factors and challenges

The partner selection phase was carefully done and it created a solid basis for the partnership in the case study. Technological know-how and the environment, in which the selected partners were in the market, were evaluated. All the actors had mutual strategic interest and the top management level was committed. Objectives were set and the top management was optimistic in realization of the objectives. The revenue compensation was partly considered in the partnership agreement by evaluating the contribution and position on the market. The trust and commitment, mutual strategic interest, and the technical know-how of partners were considered as important factors in the partner selection phase.

Factors leading to success in the case study are inherited mostly from the early phases. For R&D the customer project created a window of opportunity to finalize development of a new product in Metso Automation. The technical- and process know-how of the partners, and the top management commitment on finishing the joint project, were the key issues leading to success even with the encountered challenges.

The key issues leading to success in the case study were,

1. The technical- and process know-how of the partners on their own core areas.
2. Trust, commitment and the mutual strategic interest of the top management in the partner companies.
3. Partnership gave a window of opportunity to finish the product development in a customer project.

What appeared to be one of the challenging parts in the case study is the cooperation between the operational- and top management. Sharing of the objectives, and planning of the operational management were criticized. Receiving new orders with relatively low references was a challenge that affected the revenue compensation possibilities compromising the partnership in the long term. Also the differences in the organizational culture might of affected whether the partners saw it favorable to have a long-term partnership agreement. The cultural differences between the partnering firms affected also to the sustainability of trust and commitment.

The key issues leading to challenges in the case study were,

1. Possibility to compensate revenues in the long-term and in the after-sales.
2. Unrealistic time schedule and difficulties in estimating the work.
3. The mixture of R&D and the customer project.
4. Complexity of the system and the customer process.
5. Information exchange.

Lifecycle of this strategic alliance seemed to last one joint project. The information exchange between top- and operational management in different phases were criticized (5) in the answers. There were mostly operational challenges, which were caused by unrealistic time schedule when compared to the complexity of the system and the customer process (2, 4). The mixture of R&D and the customer project (3) was needed, because the system was complex, and it was difficult for the project management to understand the system. This caused delays and pressure for the project management and diverged the mutual objectives. All these issues eventually affected to the realization of the objectives and thus to revenue compensation possibilities (1). Increasing profits and the revenue stream is eventually the only reason to establish a partnership in business value-creating network. Without this being possible, the business value-creating partner network has no possibilities to survive.

5 DISCUSSION AND CONCLUSIONS

The purpose of this study was to explain the motives, challenges and success factors in the partner network. The results from the case study are supported by some of the theories discussed earlier in this thesis. The following chapters will discuss, in detail, the motives, challenges and success factors in the case study and the link to theory.

5.1 Motives

There are different motives for partnership in different operational phases. For top management, it is important to consider the motives and objectives, if a strategic decision is made to enter a new business. The usage of network structure can reduce costs by avoiding development of new products in-house. Complementary products can be directly acquired from the market more cost-efficiently. By not developing the whole product portfolio in one place avoids also costs in marketing and in training new resources. Leads from the partner sales channel support sales phase and this is expected to bring more sales opportunities to increase business volume. Project phase is supported by the know-how of the partner resources and enables delivery of the sold scope of supply in more cost-efficient way. This will also increase flexibility in the supply-chain. Increased installed base creates more after-sales opportunities.

OBJECTIVES	POSSIBILITY TO
Development phase § Acquire products from the market to reduce development in-house. § Increase product portfolio. § Decrease time-to-market.	§ Decrease R&D costs and resource needs in-house reducing development costs. § Transfer development know-how from partners.
Sales phase	§ Increase business volume by

<ul style="list-style-type: none"> § Enter new market. § Acquire new sales channels. § Increase credibility. 	<ul style="list-style-type: none"> wider product portfolio. § Benefit from partner sales channel to increase business volume. § Decrease marketing costs and resource needs in-house reducing overhead costs. § Transfer marketing know-how from partners.
<p>Project phase</p> <ul style="list-style-type: none"> § Supply cost-effectively. § Maintain quality. § Increase flexibility in the supply-chain. 	<ul style="list-style-type: none"> § Increase gross profit by using existing resources with sufficient knowledge. § Decrease resource needs and training in-house reducing overhead costs. § Transfer implementation know-how from partners.
<p>After-sales phase</p> <ul style="list-style-type: none"> § Enter new market. § Acquire new sales channels. § Increase credibility. § Supply cost-effectively. § Maintain quality. § Increase flexibility in the supply-chain. 	<ul style="list-style-type: none"> § Increase business volume by wider product portfolio and installed base. § Decrease resource needs and training in-house reducing overhead costs. § Transfer market know-how from partners.

Table 5.1.1. Objectives and possibilities in different operational phases in the case study.

In the table 5.1.1. above, the management objectives are split to different operational phases. In the case study these consist of development (R&D), sales, project and after-sales. The foremost objectives for the development phase are: to create new solutions and to develop these to new products. At the same time the labor costs and the time-to-market should be decreased. This enables company to be more cost-competitive and time-competitive on the market. New products increase visibility. The network structure makes it possible to acquire complementary products from the market more cost- and time-competitively. The need for development work declines when some other company has developed the

complementary products. For a small company, cooperation with a larger company and its R&D might bring essential information on development processes and R&D project management. Both large and small companies may benefit from each other's ideas and innovations.

New product offering supports the sales channel and it enables company to increase its business volumes in the long term. When products are developed with lower costs, the offering will be more cost-competitive on the market. Partner network enables companies to benefit from each other's sales channel and this brings new leads from the market. When partners receive new orders, they will have more references in the future, and this increases their credibility on the market. Cooperation might create new ideas for marketing and for improving the existing sales processes. Small companies might learn new ways of marketing from the large company or vice versa.

The project phase benefits from the network structure by using complementary resources from the partner companies. There is no need for training resources in other partnering firms, when know-how is obtained via complementary resources. When each partner is responsible for delivering its part of the scope of supply, the transfer of know-how is not needed. Planning of technical coordination is part of the operational management and it is important. Complementary resources enable companies to deliver the products more cost-effectively and enable flexibility in the supply-chain. This should increase gross profits. Cooperation might create new ideas on how to deliver the projects, which may improve the existing business processes in the supply-chain.

After-sales phase is supported by all phases mentioned above. First of all, after-sales business opportunities have direct correlation to the amount of installations. The after-sales can consist of upgrades, extensions, training, and system service agreements, which comprise of system maintenance. The difference is that the gross volumes in monetary terms are typically lower in after-sales. In the after-sales, the gross profits are typically even without the network structure. When the

installed base is achieved, the revenue compensation becomes more essential factor than in the three previous phases. Motives to work in a form of a network decreases in the business value-creating network. It is more difficult to split the revenue stream between the partners, because of lower gross business value of after-sales. When installed base is already achieved, why not benefit from the typically higher gross profit individually, without having to deal with the transaction-costs from the cooperation.

5.2 Success factors and challenges

A vision to expand existing business to a new market, with the help of new products, is the starting point in the case study. Some products are obtained from the market and some are developed inside own organization. The partner selection is an important phase to be able to create a successful and motivated partner network to reach the mutual objectives. These strategic choices and decisions are made in the top management of each company involved. Mostly all the motives, in case of strategic alliance, are motives of the top management. Top management's strategic choices define the framework for implementation on the operational level.

There are three important phases when establishing a partner network, which are:

1. The partner selection process, planning and entering into agreements, revenue splitting.
2. The setting and sharing of common objectives, including definition of roles and responsibilities.
3. Planning the partner network management on the operational level.

The phases above set the conditions for success and challenges during the lifecycle of the partner network. How these phases were considered in the case

example, supporting the importance of the phases above, will be discussed in the following chapters in more detail.

5.2.1 Partner selection and negotiations

Typical issues related to the partner selection are discussed in chapter 3.1, where important things to be considered when selecting a suitable partner are:

1. Clarifying the motives to search for a partner, and identifying potential partners from the market.
2. Predicting the stability of the partnership by evaluating possibilities to split revenues and revenue stream continuum.
3. Evaluating differences in the organizational structure and culture.
4. Evaluating economical and technical know-how of the partnering firm.

Motives for entering into a partnership are various. These were discussed in chapter 2 and in detail in chapter 3. In business value-creating networks, the major motives mentioned in the studies are: search for flexibility in the supply-chain, and more efficient production by maximizing profits and minimizing costs.

Before the partner is selected, motives are clarified. Why we are searching for a partner, and what are our expected benefits. The phase after this is to search for suitable partners.

Framework for evaluating potential partner is presented in the chapter 3.1. Also the concept of revenue compensation is introduced (Rese, 2001). In business value-creating networks it would be advisable to speak about evaluating possibilities to split revenues between the partners. Evaluating revenue compensation possibilities, and possibility to split revenues is understood to be the same in this thesis. From this on, revenue split will be used as a term instead of

revenue compensation. In the negotiations phase, revenue split is agreed between partners based on their offering and position on the market.

Based on the interviews, the motives for entering into a partnership, identifying potential partners, possibility to split revenues and the technical know-how, were evaluated in the partner selection phase. Not so strongly evaluated were the closeness of the organizational culture, and the prediction of the partnership stability by evaluating revenue stream continuum. Evaluation of revenue stream continuum is presented, as a term, in this thesis. It is not discussed in the literature, but based on the interviews it affects the long-term partnership even more than evaluating possibilities to split revenues. Revenue stream continuum means the continuation of the new business, which is achieved by the partnership.

Technical know-how of the partners was one of the success factors in the alliance. It enabled alliance to deliver the project even though there were difficulties. Two challenges were visible in the case study, which were related to the partnership selection phase.

1. After-sales phase in the customer project.
2. Lifecycle of the partnership agreements.

After-sales phase lead to the situation, where partners entered separate service agreements with the end customer. In after-sales there were no revenue split possibilities to create a win-win situation for all partners supporting creation of joint service agreement. Customer would of preferred joint service agreement.

Revenue split possibilities were considered in the partner selection phase, but the difference in the after-sales market made the setup different. When installed base is achieved, the revenue compensation becomes more difficult. This is due to lower gross business value of after-sales. Agreed revenue split between partners and profits achieved in the project phase, may not be enough in after-sales. In after-sales, there is less competition, and benefits achieved from the partnership

decline. This issue becomes emphasized, when the same agreement is used for revenue split in project- and after-sales phases, like in the case study. It can be argued, that the project- and after-sales phases require different agreements due to different motives for the partnership.

When the customer project was finished one of the partnership agreements was terminated. There seems to be two main reasons for this:

1. Not enough new business to support partnership continuation.
2. Different organizational culture reducing trust and commitment.

These two issues are related to the partnership selection process, where two of the main issues are, prediction of the partnership stability by revenue split and revenue stream continuum possibilities, and evaluation on closeness of organizational culture and structure. It cannot be emphasized enough, how focus on revenue, affects the lifecycle of the partnership in the business value-creating networks. In the case study, there was not enough revenue stream continuum, which could of supported partnership continuation between Greycon and Metso Automation.

Different organizational culture can be argued to affect to trust between the partners. In asymmetrical partnerships small companies do not have similar structures than big companies. In chapter 3.5.1, differences in organizational structure and culture between big and small companies are presented (tables 3.5.1.1 and 3.5.1.2). There are differences in organization and management, logic of strategy, type of know-how and resources, type of innovations, type of products, attitude towards risk, attitude towards change and ability to act, decision-making and commitment. Asymmetry between Metsys and Metso Automation did not decrease trust based on the interviews. Instead the trust and commitment were seen as positive. Organizational culture affecting to trust between partners was seen challenging between Greycon and Metso Automation. It can be argued that the organizational differences due to the asymmetry created

challenges for the project management to understand the situation of the project. This caused economical pressure. Different organizational culture may affect to the way profits, from the business enabled by the partnership, are measured in different organizations. Measured profits show how favorable the partnership appears to be for different partners. This is why different organizational culture can be argued to affect to the revenue stream continuum possibilities and thus in interest to continue long-term partnership.

5.2.2 Setting and sharing common objectives

When the partner selection is finished, it is important to set and share the common objectives before entering into agreements. Some common objectives, on the management level, are discussed in chapter 3.3. Based on the inquiries, the common objectives for the partner network were set and shared on the top management level. Top management, in the partnering firms, was committed on realization of the objectives, and this can be considered as an important success factor. The cooperation between top- and operational management was criticized in the answers, which might be the reason for some visible challenges in the project and after-sales phases. Challenges visible in the project and after-sales phases were:

1. Failure to discuss MES as an entity in the project phase.
2. Operational difficulties in creating the service agreements

Quite evident is that without sharing the common objectives to the operational level, and without controlling the implementation of objectives, it leads to situation where the system is discussed in favorable ways for people responsible in the operational level. In this sense, it was quite natural, that MES system was discussed in terms of separate products and not as an entity. This was favorable for the operational level, when they had to explain different technical challenges faced during the project. This issue is related also to the planning of operational

management phase. Based on the inquiries, the objectives were not known to the service organization during the sales- and project phases. This caused operational difficulties in the after-sales phase. Information sharing initiated too late, practically when the customer project was nearly finished.

5.2.3 Planning operational management issues

Planning the management for the partner network on the operational level is important. The network management aspects are discussed in chapter 3.2. Things to be considered are:

1. Efficient distribution of information and know-how.
2. Business processes supporting cooperation.
3. Shared objectives and responsibilities.
4. Mutual trust between partners.

Based on the interviews, it seems that the operational level was not so closely considered. In the case study, the objectives and responsibilities were shared by making subcontracts. There were operational challenges in the technical coordination and operational management of the partner network in the project phase. Lack of know-how on the operational level made it difficult for anyone alone to coordinate the project technically. Operational culture of the firms did not support this kind of cooperation. Differences in the organizational culture between partners made it even more challenging to manage.

For these reasons the challenges visible in project phase were:

1. Failure to discuss MES system as an entity in the project phase.
2. Individual interests became more emphasized than the mutual interest on the operational level.

Operational level is an important issue in the implementation phase of the established network. Partner selection, negotiations, agreements, setting, and sharing the objectives, create the basis for the partnership. These phases are important in creating a solid basis for a long lasting partnership. Without considering and planning the operational management issues, it will most certainly create problems, which test the basis of the partnership, and in worst case lead to failure. Focus on revenue cannot be emphasized enough. Operational level realizes set objectives. Without realization of the objectives, there is no possibility for revenue split, and it leads to failure in business value-creating networks.

Economical issues tend to put pressure on the operational level and this leads easily to situation, where common objectives are forgotten and individual interests come forward. If delivery is delayed due to technical challenges, or the time schedule is unrealistic, the economical pressure increases. This diverges objectives on the operational level. In this case cooperation between top- and operational management is important to direct the partner network to work for the interests of the entity. This was visible in the case study. The commitment and involvement of the top management can be considered one of the most important success factors. The fundamental problem of organizational learning in connection with project work can be found in the conflicting aims between a project and the surrounding organization. While the existence of an organization is designed for the long run, a project exists only for the duration of its completion (Eppler et al., 2003). Operational management involved in the project and it being on the same level horizontally, creates a situation where common objectives are overridden for the sake of individual operational level benefits. This requires top management involvement, where entirety is viewed and operational level supported by actions from the top management.

In an environment where the type of implementation is a project, the project management and its assessment has a big role. The implementation in a form of a

partner network emphasizes the need for adequate project management. D. White and J. Fortune (Fortune et al. 2006) presents a formal system model for project management where some important success factors are presented. They list the following critical success factors:

1. Support from senior management
2. Clear realistic objectives.
3. Strong/detailed plan kept up-to-date.
4. Good communication/feedback.
5. User/client involvement.
6. Skilled/suitable qualified/sufficient staff/team.
7. Effective change management.
8. Competent project manager.
9. Strong business case/sound basis for project.
10. Sufficient/well allocated resources.
11. Good leadership.
12. Proven/familiar technology.
13. Realistic schedule.
14. Risks addressed/assessed/managed.
15. Project sponsor/champion.
16. Effective monitoring/control.
17. Adequate budget.
18. Organisational adaptation/culture/structure.
19. Good performance by suppliers/contractors/consultants.
20. Planned close down/review/acceptance of possible failure.
21. Training provision.
22. Political stability.
23. Correct choice/past experience of project management methodology/tools.
24. Environmental influences.
25. Past experience.
26. Project size/level of complexity/people involved/duration.
27. Different viewpoints.

Some of the success factors discussed in the formal system model for project management came apparent as mostly challenges in the project phase of the case study. In the project phase the challenges were (described in the table 4.5.1) unrealistic time schedule (13), difficulty in technically understanding the system (8, 12, 25, 26), efficient distribution of information and sharing of the objectives (2, 4), and difference in organizational cultures (7, 11, 18, 22, 24, 27). All these challenges apparent in the project phase are supported by the listed success factors in the study by Fortune et. al (2006).

The difficulty in technically understanding the system was apparent because the technology was not proven and it was not familiar for the project management (12). The project management was not competent enough (8). There was no past experience in supplying the system (25) and the complexity of the customer process was challenging (26).

The difference in organizational cultures was visible by the factors listed in the formal system model. For the success of the partner network there should be effective change management (7) due to the newness of the operation. Good leadership (11) is required to support change management. Organisational adaptation (18) will be achieved by effective change management and good leadership. The political stability (22) of the partnering firms affect to the continuation and commitment of the partnership. The different viewpoints (27) and environmental influence (24) may support or challenge the continuation and commitment of the partnership.

5.3 Conclusions

On the top management level, revenue split and revenue stream continuum possibilities should be evaluated carefully before entering into the partnership agreement. These create a basis for long-term partnership. Importance of business

value for the continuation of the partnership became quite evident in the case study. One partnership ended, because there were not enough revenue stream continuum opportunities. There is a certain pool of revenue stream available for each partner involved in the partnership. Revenue split should provide a win-win situation for all partners and there has to be continuation in the revenue stream. This determines the lifecycle for the partnership in the long term and affects to trust and commitment. When partners are seeking flexibility in the supply-chain through partnerships, they have the opportunity to concentrate on their own core competencies. By concentrating on core competencies, they have the opportunity to enhance their own internal cost-effectiveness. Each of the partnering firms has to enhance their internal cost-effectiveness continuously to be able to win in a situation where the pool of revenue case-by-case decreases over time. Total sales may increase by being a member in an effective business partner network, but individual cost-effectiveness of partnering firm must improve continuously for a firm to gain enough profit to maintain profitable membership in the partner network. Only continuation of the partnership in the long term makes it possible to improve competitiveness. Transaction-cost theory supports the argument, that transaction frequency and revenue split affects continuation of the partnership in the long term. This supports the importance of partnership selection introduced by Rese, 2001 (fig. 3.1.1). Evaluating revenue split possibilities is one of the major issues in selecting a suitable partner. This is set in the negotiations phase, before entering into the agreements. Revenue split is agreed between partners based on their offering and position in the market. Transaction frequency supports the importance to evaluate possibilities for revenue stream continuum in the partner selection phase.

Important factor is also the link between top- and operational management in a large company. In a small company top management and operational management can be the same. Setting the objectives and realization of the set objectives are two different things with two different management layers inside organizations. Top management set the objectives and creates a framework making the realization of the set objectives possible. Operational management implements

realization of the set objectives. Consideration for the operational management issues cannot be bypassed and these have an important role in realization of the set objectives. Important issues in operational level are, efficient distribution of information and know-how, business processes supporting cooperation including project management, shared objectives and responsibilities, and mutual trust between the partners.

Commitment is important in both top- and operational management level. This emphasizes the importance of information sharing inside the company, which support commitment for reaching the set objectives. In a large company, there are different interest groups involved in different phases in the operational level. Different interest groups have to cooperate with the partnering firms. Sharing the mutual objectives in the operational level of the partnering firms becomes essential in reaching the set objectives. This is supported by results from the case study. Setting and realization of the set objectives are discussed in the literature, but the link between operational- and top management is not discussed.

In the case study it became evident, that there are different motives and success factors for partnership in different operational phases. It can be argued that the partner network established for one operational phase is not directly adequate for the other phase. Agreement on how to split revenues in the partner network and evaluation of revenue stream continuum possibilities differ significantly in different phases. Project sales phase has different motives for the partnership than the after-sales phase. It can be argued, that the need for partnership in the after-sales phase should be considered separately. Project sales and project implementation phases are both supported by the same partner selection process. In spite of the fact that there are different success factors for these phases. In the project sales phase, the major issues are realization of the revenue split, and revenue stream continuum. Major issues, which affect to the success of partnership in the project phase, are differences in the organizational culture and structure, sharing of the set objectives and planning of the operational management issues (i.e. project management).

6 FUTURE RESEARCH

Lifecycle of the partner network does not seem to be very common object for studies. Lot of effort has been put into studying motives for entering into a partnership and assessing first steps in the lifecycle of the partnership. Other fields of study are challenges faced in the partner network, mostly related to asymmetry of partnering firms.

Revenue split and continuum perspective in the partner network does not seem to be very common object for studies. Theories of business networks approach this abstractly discussing about transaction frequency, but do not assess this specifically. It became evident in the case study, that long term lifecycle of the partnership seems to be based on revenue split and continuum possibilities. This affects commitment and trust in business value-creating networks. This appears to be more important, than cultural differences or asymmetry between partnering firms.

Studies support that partner selection and setting, sharing and realization of the set objectives are important aspects in the partner networks. In the partner selection phase, it is important to evaluate cultural differences and revenue split and continuum possibilities to avoid and minimize challenges confronted later. This supports long-term lifecycle of the partner network. Setting objectives inside the organization and in the partner network, support commitment and trust on the top management level. Sharing these objectives inside organizations support commitment, trust and realization of the set objectives on the operational level. This essential link between operational- and top management became evident in the case study. It is not broadly discussed in the literature. Studies do not seem to make difference between operational- and top management. Studies mostly discuss only top management level that might be the same in a small company, but not in a large company. Operational management issues, in case of a partnership, are also not discussed broadly in the studied literature. Realization of

the set objectives and long-term cooperation is strongly influenced by operational level management issues. Without sufficient organizational structures supporting partnership, long-term cooperation will face serious challenges. Discussion on the long-term lifecycle of the partner network is needed and more studies could be focused on issues, which became apparent in this thesis.

7 SUMMARY

The objective for this study was to assess the motives, challenges and success factors in the partner networks and to discuss their influence to the lifecycle of the partner network. This was studied from the literature and by assessing the case study. Literature discusses this issue broadly and with different terms that might eventually mean the same. It seems that some of the terms related to the studied area are not yet fixed, which made it difficult to comprehend and focus on the essential things. In spite of difficulties, it was possible to structure this thesis and build a skeleton, which starts from describing theory for business networks proceeding to explaining motives for entering into partnership and advising what to consider sustaining partner network in the long term. Partnership lifecycle consists of selecting suitable partner(s), setting and carrying out the set objectives and focusing on revenue split and continuum possibilities. The effective realization of the objectives is supported by efficient project management and information sharing inside the partner organizations. The basis for the management is set between the top- and operational management. In the case study, motives, challenges and success factors related to it were assessed and discussed in terms of factors studied earlier from the literature. Some new issues became apparent in this thesis, which were not directly assessed in the studied literature.

This thesis was started by studying the literature. Literature gave understanding on the basic factors that influence the value-creating business networks. It was possible to assess the case study and write the questionnaire, after studying the motives, success factors and challenges discussed in the literature. The second part, in writing this thesis, consisted of interviews and discussions with the persons involved in the case study. When writing the discussion and conclusions, discussions were continued with a person representing the top management in the case study. Making of this thesis started in January 2006. Approximately half of

the time was spent on studying the literature and the rest was used in writing this thesis, interviewing and having discussions about the case study. Assessment of risks and protection of the intellectual property rights in the partner network were issues, which were considered being a part of this study in the beginning. Because the major issues in this thesis were to assess motives, challenges and success factors in the partner network, these issues were left out.

To summarize this thesis, it became evident that there are three major things causing possible setbacks in the long-term partner network, which were:

1. Inability to split revenues, and infrequent revenue stream in the partner network, which reduce trust and commitment in the long term.
2. Insufficient link between the operational- and top management, making it difficult to share the objectives set for the partner network.
3. Insufficient planning of the operational management, making it challenging to realize the objectives set for the partner network.

Based on the literature studied for this thesis it seems that no division is made between operational- and top management. These issues are separate and organizational culture affects both. Top management is concerned of revenue split and revenue stream continuum possibilities. Depending on how to measure profits achieved by the partner network, the benefits are seen differently.

Operational management is concerned on realization of the set objectives. Link between top- and operational management is about sharing the set objectives and creating a framework to make it possible to realize the set objectives (i.e. supporting creation of business processes). The results are based on the studied literature and the case study, but no further analysis was done to test their reliability.

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APPENDICES

APPENDICE 1. Questionnaire on Stromsdal MES customer project

Date: _____

Name: _____

Title: _____

GENERAL BACKGROUND

What were the main reasons to search for partners ?

How were the partners found ?

On what basis were the selection of the partners made ?

Did there exist a framework to evaluate partners ?

What kind of agreements were done with the partners ?

How was the cooperation between different phases organized and managed ?

SALES PHASE

How the responsibilities were divided (terms and conditions, scope of supply) ?

Who was managing the network ?

What were the interests in your opinion for cooperation in this phase ?

What kind of problems were encountered and in your opinion why ?

What was seen as positive in cooperation ?

In your opinion, how did the cooperation succeed ?

- give a number from 1-5 (1, poor - 5, excellent)

- please explain ?

What kind of things you would point out to create a working management model for partner network in this phase ?

PROJECT PHASE

How the responsibilities were divided (terms and conditions, scope of supply) ?

Who was managing the network ?

What were the interests in your opinion for cooperation in this phase ?

What kind of problems were encountered and in your opinion why ?

What was seen as positive in cooperation ?

In your opinion, how did the cooperation succeed ?

- give a number from 1-5 (1, poor - 5, excellent)

- please explain ?

In your opinion how did the organizing of different phases (sales, project) succeed ?

- give a number from 1-5 (1, poor - 5, excellent)

- please explain ?

What kind of things you would point out to create a working management model for partner network in this phase ?

AFTER SALES PHASE

How the responsibilities were divided (terms and conditions, scope of supply) ?

Who was managing the network ?

What were the interests in your opinion for cooperation in this phase ?

What kind of problems were encountered and in your opinion why ?

What was seen as positive in cooperation ?

In your opinion, how did the cooperation succeed ?

- give a number from 1-5 (1, poor - 5, excellent)

- please explain ?

In your opinion how did the organizing of different phases (sales, project, after-sales) succeed ?

- give a number from 1-5 (1, poor - 5, excellent)

- please explain ?

What kind of things you would point out to create a working management model for partner network in this phase ?

CURRENT SITUATION AND THE FUTURE

Is the cooperation still active and why or why not?

What were the experiences from the cooperation ?

Would you cooperate again with the same setup and why or why not ?

Was the cooperation cost-effective ?

Were the expectations met ?

What were the main reasons in your opinion for success and/or failure in this setup ?

If you would have to deal with a similar case, what would you do differently and why ?

If you would have to deal with a similar case, what would you do similar and why ?

