Managing Global Distribution & Warehouse Organizations in an Agile Environment

A case study of Ericsson

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Abstract

For all corporations, there are specific challenges to overcome depending on where and in which environment you act. Factors like global coverage and a changing environment are two of the parameters setting specific demands on how you design and manage your organization, customers, and suppliers.

The telecommunication corporation Ericsson is a global company with a complex supply chain with high level of fluctuations and a constant change in customer demands. This means that the distribution organization has to prepare for changes, manage these effectively, and cope with all the challenges that a global organization brings.

The overall purpose of this work is to investigate how to manage a global distribution and warehouse organization in an agile environment. Furthermore, the objective of the case study is to look into how Ericsson is equipped to manage their global distribution organization in the agile environment where it acts.

Studying theories for distribution organizational excellence, agility, and global organization, areas of importance within each section was uncovered. By combining these, key components crucial to succeed in managing a global distribution organization in an agile environment were found. The key components found were: market sensitivity and customer knowledge, segmentation, process integration, networking, tight relationship with logistics providers, communication, central planning and local responsiveness, strong organizational culture, resources sharing, measurements, resources reconfiguration, best practices sharing, cultural management, and use of tools to facilitate agility, distribution excellence and managing global organizations.

This research was able to uncover that Ericsson is on the right track to become successful in managing a global distribution organization in an agile environment but that there are some action that has to be taken for them to excel in important areas.
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1 CHAPTER ONE - INTRODUCTION

The overall objective of this work is to suggest how to manage a global distribution and warehouse organization in an agile environment. An agile environment is characterised by varying, unique customer requirements and frequent market changes. The research focus is on private manufacturing companies acting in a global and agile environment. The case study for this thesis is the global telecommunication corporation Ericsson.

1.1 Background

Over the past few decades the globalization of corporations has increased. With facilitators as information technology, unification of national laws, and trade agreements, increasing number of corporations are expanding and becoming global. Adding the global parameters on top of already complex organizations adds additional challenges on to how to manage an organization. The question of either to centralize or decentralize becomes even more complex, how to communicate, spread knowledge, and handle cultural differences are other areas that will be more challenging to deal with, by having a global business.

Another tendency in businesses today’s is the frequent market changes and the varying, unique customer requirements; companies are acting in an agile environment. Characteristics usually connected to an agile environment are: highly competitive markets, instability in market and industry, high level of volatility, low predictability, demand on short reaction time, and a large amount of product varieties. To be able to act in this environment, the organization and the partners connected to it, has to become agile. This places new demands on the organization and its partners, they have to mobilise to be prepared for changes, be able to response quickly, have the adaptability and capability to adapt to those changes, as well as proactively anticipate and seek new opportunities.
A distribution and warehousing organization in a global company gets highly affected by both the agile and global environment. One of the key areas in logistics – communication gets more complex with language differences, cultural differences, and differences in standards. Challenges as; differences in laws and regulations, geographically scattered organizations, constant changes in customer demands, differences in demands for different customers, changes in the logistics industry as well as in the different markets will affect the management of the distribution and warehouse organization. As this environment places new demands on the total supply chain, also the logistics providers get affected and should be involved. To be successful, logistics buyers have to find ways of cooperating with Logistics Providers to secure agility as well as logistics excellence.

To manage a global distribution & warehousing organization in an agile environment is therefore a difficult task where the complexity of global corporations and networks meets the complexity of global logistics and an ongoing changing environment. How this can be managed, from an organizational point of view, is the scope of the research in this thesis.

The case study for this thesis is the telecommunication corporation Ericsson. Ericsson is a global company with a wide range of products of modern technology. Ericsson serves customers in almost every country in the world, has a wide range of products and has a complex supply chain with a high level of fluctuations and a constant change in customer demands. The study comprises the global distribution organization at Ericsson, including local warehouse and distribution operations as well as the centralized functions. The relationship with logistics providers are discussed specifically but are then focused on the relationship with the global distribution providers, and not local partners.
1.2 Thesis Purpose and Scope

The overall purpose of this work is to investigate how to manage a global distribution and warehouse organization in an agile environment. The research questions to support the overall purpose of this thesis are:

Research Question 1: What extent of centralization/decentralization is optimal to manage a global distribution organization in an agile environment?

Research Question 2: In an agile environment, is it crucial to handle logistics activities in-house to keep a high level of control and responsiveness?

Research Question 3: What factors, characteristics and activities are important to be able to manage successfully a global distribution organization, acting in an agile environment?

Furthermore, the objective of the case study is to look into how Ericsson is equipped to manage their global distribution organization in the agile environment they act in, to point out areas of improvement and suggest actions that can be taken to improve in these areas.

1.3 Thesis outline

The thesis is organized into five chapters; Introduction, Literature Review, Case Study, Summary, and References.

The literature review covers the three areas of theory: Distribution Organizational Excellence, Agility, and Global Organizations as well as a section of theoretical conclusions.
1.4 Method

The overview of the method of this thesis is described in Figure 1:1.

With the research questions as basis, this thesis has combined theories of distribution organizational excellence, agility, and global organizations. The theories of agility and distribution organizational excellence will focus on, but not be limited to manufacturing companies. As the cooperation with Logistics Providers (LPs) is central in this thesis, the distribution organizational excellence, and agility theories will also include subsections of how to gain successful relationships with LPs.

![Diagram](Figure 1:1: Thesis method)
Combining the theories will provide a framework for how a global distribution organization in an agile environment should be managed and identify critical areas of importance for success. The critical areas of important will be discussed with distribution as parameter to find similarities and differences. The outcome and essence of the combined theories will be summarized in key components that are critical to be successfulness in managing a global distribution organization in an agile environment.

Case study Ericsson has been prepared by collecting information about Ericsson during the author’s day to day work in the Ericsson distribution organization, and by interviewing managers with different areas of interest within distribution and warehousing as well as in other areas where logistics has a great impact. The author’s experience is based on acting as a Project Manager for developing projects within Central Distribution Logistics (CDL) at Ericsson with insights in most areas within Ericsson that is related to distribution. Furthermore, the author has several years of experience as Project Manager and Process Manager at one of Ericsson’s logistics providers. The interviews have been conducted both in a structural way with deep interviews but also on spot basis when additional information was needed. Persons involved in given input to this thesis are from several functions at Ericsson Central Distribution Logistics, Logistics Sourcing, Contract Management and local distribution. Historical information as well as current projects and future plans that affect the distribution organization at Ericsson have been taken into consideration.

Applying the case study on the key components of success will show what challenges Ericsson stand before in these specific areas, what possibilities they have in their current organization, how they can steer their organization and their logistics providers in the best way, in which areas they appear to be on the right track and what steps they can take to optimize their organization further with regards to their globalization and agility positions. The theoretical findings and potential suggestions of new or revised directions for Ericsson will be reviewed with experts within the logistics area.

In the area of agility, which is a fairly new concept, journals within the logistics and agility area have been the most important source. Literature regarding global organizations
and logistics organizations is extensive, that is why a few authors have been chosen for this study. The outcome of the logistics literature study has been reviewed by logistics expertise.

The terms “Transportation” and “Distribution” are sometimes used as having different meanings, where Distribution is the transport from the last warehouse in the supply chain to end customer and transportation is the wider term including all physical movements. In some cases they are used as meaning the same thing, namely the physical movement of goods. In this thesis I will consider the terms as two words for the same area of activity since when looking into global organizational aspects it is of little importance whether or not the physical flow in question is the last leg distribution or transportation. Furthermore, there is no collective name for Distribution & Warehousing, and for simplicity reasons, the term “distribution” will be used in this thesis as a collective name for distribution and warehousing.

In this thesis a distribution organization is defined as: An organization with the objective to secure service and quality in all activities related to physical distribution and warehousing, in order to enhance total customer value
2 CHAPTER TWO – LITERATURE REVIEW

This section is divided into four subsections to cover the main theoretical areas of this thesis:

- Distribution Organizational Excellence
- Agility
- Global Organizations

Within each subsections summaries are made to review findings, similarities and differences between the theories.

2.1 Distribution Organizational Excellence

As distribution and warehousing are two components in Supply Chain Management (SCM) and Logistics, and as there are limited distribution theories that investigates distribution from an organizational perspective, Logistics and SCM are used in this thesis to investigate what is considered to be distribution organizational excellence.

2.1.1 Defining distribution

According to Frazelle (2001) logistics is comprised of five interdependent activities: customer response, inventory planning and management, supply, transportation, and warehousing. The focus areas in this thesis – Transportation (Distribution) and Warehousing, according to Frazelle consists of the following:

Transportation; The objective of transportation is to link all pick-up and deliver-to points within the response time requirements of the customer service policy and the limitations of the transportation infrastructure at the lowest possible cost. The logistics of transportation includes: Network design and optimization, Shipment management, Fleet and container management, Carrier management, and Freight management.
Warehousing; The objective of warehousing is to minimize the cost of labour, space, and equipment in the warehouse while meeting the cycle time and shipping accuracy requirements of the customer service policy and the storage capacity requirements of the inventory play. The logistics of warehousing includes: Receiving, Put-away, Storage, Order picking, and Shipping.

Rushton, Croucher and Baker (2006) present the key areas in distribution and logistics as: transport, warehousing, inventory, packaging, and information. According to Rushton et al. (2006, p. 4), “Distribution represents the storage and flows from the final production point through to the customer end user. Furthermore, Rushton states that the prime objective of most warehousing is to facilitate movement of goods through the supply chain to the end customer, and that in addition, some warehouses have a specific objective to stock goods and material against particular contingencies.

Although the definitions at first glance can seem to be consistent, there is a limitation in the distribution definition by Rushton, Croucher and Baker (2006) as the inbound transport does not seem to be taken into consideration. If that were the case the definition would rather be: “Distribution represents the storage and flows from raw material through to the customer end user.” This could be to the fact stated in 1.4, that distribution is only seen as one part of the physical transport. However, due to the more limited view on distribution that Rushton et al. (2006) brings forward, the definition of Frazelle (2001) is more consistent with the view of the distribution studied in this thesis.

2.1.2 Logistics Organization Design

The evolution in Logistics has been intensive the last decades and through the evolution, firms have approached the organization of Logistics activities in various ways. However, interestingly enough, after three decades, there is still little consensus as to how a firm’s logistics activities should be organized and apart from a partial migration of some functions, today’s logistics organizations look much like the ones decades ago. There are several implications of this situation; one of the most important is that a “one
size fits all” approach. A logistics organization is not a standalone function and when designing the logistics organization one has to take into accounts how the firm is organized internally (Holcomb, Manrodt, Griffin & Schock, 2008). This view is agreed by Persson (1997), but who takes this a step further and argues that there is a view of a “one size fits all approach” in logistics literature, but that size is different depending on the author where some authors’ claim that the one way is to establish a Chief Logistics Officer at top management to steer the company logistics and others claim that a coordinated matrix-organization is the only solution. Persson claims that this one-way approach is not supported by either any empirical studies, nor has any support in the modern organization theory.

Frazelle (2001) is also arguing that there can be no logistics organizational design that fits all. As the supply chain is a network of enterprises, individuals, facilities, activities, and information/material handling systems that connect a company’s supplier’s supplier to its customer’s customer there is not one single stand-alone logistics organization (Frazelle). Therefore, Frazelle has developed eight different logistics organizational models based on the organization’s culture, existing organization structure, and business environment. The different models are described in more detail below.

Functional Organization Model; The functional organizational model is a silo organization with the idea that if each silo (ex, Finance, Sourcing, Logistics etc) is optimized, then the entire organizational performance must be optimized.

Process Organization Model; The process organizational model structures people, systems, and metrics around critical business processes. The model requires individuals from a variety of areas to work together toward common goals that relate directly to the value creation to the customers and shareholders.

Matrix Organization Model; The matrix organizational model is a combination between the functional and process models. It is usual a transitional organization structure.

Integrated Logistics Organizational Model; The integrated logistics organizational model is focused on the customer satisfaction processes, supply development, and logistics
cost/capital management. The model requires a chief logistics officer (CLO) or vice president of logistics who is responsible for the total logistics performance.

*Global Logistics Organization Model:* The global logistics organizational model is an extension of the integrated logistics model. The global logistics model includes an integrated logistics organization for global logistics planning and policy making, regional logistics policy making and planning, and local policy making and logistics planning. Each level has an individual responsible for total logistics, supply distribution, and customer response.

*Business Unit Logistics Organization Model:* The business Unit Logistics Organization Model is a model where different Business Units have different logistics organizations. The challenge here is the classic trade-off between the leveraging of assets that is available when multiple business units utilize the same logistics assets and the control that may be lost to a particular business unit when a designated logistics infrastructure is not dedicated to those particular needs.

*Distributed Logistics Organizational Model:* The distributed logistics organizational model has, without exception, a CLO. Logisticians are recruited and developed by the CLO and are then placed in the other areas of the corporation responsible for incorporate logistics practices into the traditional corporate activities of marketing, sales, R&D, manufacturing, information systems, finance, etc.

*Hybrid:* The Hybrid Model is a hybrid of some of the above models.

According to Frazelle, the challenge with the Functional model is that functions tend to have their focus towards the silo rather than towards the activities that creates customer or shareholder value. The Process model on the other hand has goals that relate directly to the value creation to the customers and shareholders, which is also true for the Integrated model which has cleanly aligned with well defined, reliable, and benchmark able logistics performance indicators and goals. The matrix model takes both silos and processes into consideration and has the possibility to be successful but can lead to the implication by the “serving two masters” scenario. In the Global model a global logistics
management team makes global policies and plans, and regional and local management teams adopt those global standards to the unique regional/local conditions and main challenges are synchronization between the units, the same goes for the Business Unit model where searching for synergies and aligning goals is crucial to be successful. The Distributed model also has a need of synchronization which is facilitated by the CLO. For the Distributed model, knowledge sharing is a key component to be successful.

Picard (1997) on the other hand, is not that nuanced but concluded that there are two basic approaches to setting up organizations for physical distribution: “Decentralized full-profit center” and the “Centralized” model. In the “Decentralized full-profit center” the subsidiary has total ownership and responsibility of the decisions, costs and service in distribution and warehousing. In the “Centralized” approach headquarters has decisional power over all logistics activities affecting the subsidiaries. However, as a conclusion Picard states that the one ultimately responsible for the revenue shall be responsible for the cost and have authority to act on both components and that this has to be linked to the organizational philosophy and the characteristics and activities of the company.

Persson (1997) takes another approach and studies the organizational company strategies for logistics coordination. Persson claims that there is a tendency for organizations to develop different organizational design strategies for logistical coordination in a specific pattern that can be explained by three parameters: logistics task predictability (to which extent the firm produces to stock), the number of logistics decision elements (size of organization, number of products and product complexity measured in number of components), and the possibility of grouping logistics activities into more or less autonomous groups or decision areas (identification of separate product groups as far as technology, market or location is concerned). The most coordination is needed in an organization with low predictability and possibility of grouping and with a large number of logistics decision elements. Whereas an organization with high predictability, limited number of logistics decision elements and high possibility of grouping does not demand a flow-oriented structure in addition to the
functional hierarch and gives possibilities for formalization, rules and procedures for logistics coordination (Persson).

Depending an author, there are several views regarding how an organization shall choose, or develops to organize its logistics activities. Picard (1997) presents a more narrow view of the possible design of the distribution organization, and Persson (1997) claims there is a tendency for organizations to develop different organizational design strategies for logistical co-ordination in a specific pattern that can be explained by the parameters: logistics task predictability, number of logistics decision elements, and the possibility of grouping logistics activities into more or less autonomous groups or decision areas. Holcomb, Manrodt, Griffin and Schock, (2008), Persson (1997), and Frazelle (2001) agree that the design of a logistics organization has not one solution. The organizational design is much more complex and depends on broader aspects like the ones Frazelle brings forward: organizational culture, existing organizational structure, and business environment.

2.1.3 Successful Logistics Organizations

Less than one third of all logistics projects are ever “successful,” meaning that the goals developed for the project in the beginning of the project were met in retrospect. And the fundamental reason a project, program, or enterprise fails is organizational dysfunction, that the barrier to implementation is nearly always organizational in nature (Frazelle 2001). According to Frazelle, there are a number of supply chain management practices that distinguish truly world-class logistics organizations and lead to superior logistics and corporate performance. These six practices are described more in detail below.

Supply Chain Scoreboards; The supply chain participants have to come to an agreement on a mutually satisfactory set of performance metrics to be able to secure overall supply chain performance. The scoreboard should address financial, productivity, quality, and cycle time performance
Supply Chain Benchmarking; To identify appropriate targets for each metric, benchmarking with logistically similar supply chains is of great support. The risk of not benchmarking is that the members of the supply chain may settle for too low expectations.

Collaborative Planning, Forecasting, and Replenishment (CPFR); To be successful in information sharing, timing, and data accuracy it is necessary to open up supply chain communication. It is suggested that different organizational units, partners and even competitions can join in value hubs where if needed a neutral 4th party provider gathers, extracts and shares applicable information to the different supply chain operators.

Collaborative Purchasing; In collaborative purchasing, non-competitors going into similar marketplaces with similar demands can work together to purchase anything from packaging materials to logistics services in collaborative purchasing agreements. Research shows that joint negotiation enables each party to enjoy a 15 percent savings (Frazelle, 2001, p 318) in transportation costs as compared to what could have been negotiated separately.

Strategic Outsourcing; World-class logistics organizations also partner with strategic providers of various levels of outsourcing of logistics services. Outsourcing decision must be made continuously as the business and logistics environment is changing continuously and the decisions must be carefully thought through.

Wyland (2008) stresses the process integration as a way to become a Best-in-Class Logistics company. According to him integration of key departments to secure better visibility, connectivity, and effective process is one of the most effective ways to reach quality in Logistics. Also Tyndall, Gopal, Partsch and Kamauff (1998) brings up process integration as a way to reach supply chain excellence but also adds other principles that should be applied to the organization to become Best-in-Class: To work collaboratively with customers, suppliers and trading partners, to invest in supply chain information technology, to invest in supply chain knowledge, people, skills and learning’s, to outsource elements of the supply chain for flexibility, higher performance, and better asset management, and to think globally, build regionally and operate locally.
However, the nature of the company matters, regardless of which logistics organization that is in place, every company does not have the same possibility to be successful in their Logistics organization. According to Holcomb, Manrodt, Griffin and Schock (2008) size or organization does matter. Large companies are often heading the development of new technology, redesigning of networks, and sustainability projects. The reason for this is better ability to invest and the possibility to continue the development even in hard times. The large organizations (sales greater than $3 billion according to Holcomb et al., 2008) are more likely to have primary managerial control of network design analysis and facility location within the domain of supply chain and Logistics, spend more time on strategic planning with service providers, and work to integrate their supply chains with their partners.

As stated before, Tyndall, Gopal, Partsch and Kamauff (1998) stresses that thinking globally, building regionally and operating locally is one of the parameters to reach supply chain excellence. Wyland (2008) also stresses as mix of centralization/decentralization where Best-in-Class Logistics companies shall focus on centralizing key planning activities to minimize uncertainty and overlap, and localizing the actual execution. According to Wyland, this will make companies better positioned to identify areas for reducing costs and maximizing resources.

According to Frazelle, (2001) the most common and most severe barrier to succeed in logistics for nearly all logistics organizations is the non-alignment in the organization and that metrics used works against themselves. Bringing the logistics organization into alignment is not an easy task considering the political, technical, and cultural differences.

For an organization to be successful in logistics, collaborative cooperation, internally and externally, as well as outsourcing and process integration are stressed by Tyndall, Gopal, Partsch and Kamauff (1998) and Frazell (2001). Wyland (2008) and Tyndall et al (1998) agrees that planning and strategies shall be kept centrally and execution and modification regionally/locally and despite a somewhat non-nuanced view of Picard he
still states that the one part responsible for the revenue shall be responsible for cost and have the authority to act, which can bee seen as a link between him and Wyland and Tyndall et al. in the centralized/decentralized issue. Frazelle stressed the goal and measurement alignment whereas Tyndall et al. states resources and knowledge as key.

2.1.4 Relationship with logistics providers to reach distributional excellence in distribution

The relationship between a logistics buyer and a logistics provider can come in many forms. According to previous chapter collaboration and outsourcing was two of the cooperation models brought forward to become successful in Logistics.

Simatupang and Sridharan (2005) describes collaboration as the close cooperation among autonomous business partners or units engaging in joint efforts to effectively meet end customer needs with lower costs. The five features of collaboration according to Simatupang and Sridharan are:

- a collaborative performance system
- information sharing
- decision synchronization
- incentive alignment
- integrated supply chain processes

In the definition of Sandberg (2007) critical characteristics were also identified; “Collaboration is a relationship characterized by openness and trust where risks, rewards and costs are shared between parties”. In his study to examine degree of collaboration result showed that a basic prerequisite is that all involved parties should be able to influence the design of the collaboration and that strategic collaboration is seldom practiced as companies still are concerned with operational issues and therefore do not reach the strategically level of collaboration. Trust is also stressed by Moberg, Whipple, Cutler, and Speh (2004) who identified trust as the key enabler to supply chain collaboration. According to Simatupang and Sridharan (2002) performance systems and incentives should be placed as main feature of collaboration. Supply chain members
have different revenue and cost structures and therefore have different individual gains in capture benefits from collaboration. Placing incentives as a main feature will enlighten the common gains and the individual contribution to the gain of the other party. Incentive alignment shall cover calculating costs, risks, and benefits as well as formulating incentive schemes, which shall be based on mutual objective of improving total profits.

Tyndall, Gopal, Partsch and Kamauff (1998) and also Frazell (2001) state that strategic outsourcing is one way to become best-in-class in Logistics. The outsourcing trend started in the 80’s and 90’s now includes almost every activity of a firm, both core and non-core components within business processes, information technology processes, manufacturing and distribution and warehouse activities, and customer support. Articles and reports in industry journals stressing the benefits of outsourcing including cost reductions, improved cycle times and responsiveness, improved quality and flexibility are plentiful. Recent research has however found other angles of outsourcing, probably as the long term effects of earlier outsourcing are now beginning to be visible.

According to Kroes (2007) it is of outmost important that an outsourcing decision is based on the company strategies and that the long-term competitive impact of the outsourcing decision is analyzed. Outsourcing often improves cost competitiveness because a firm can eliminate unproductive assets, reduce capital spending and, partner with a firm that can perform an activity at a lower cost (Kroes). Some companies report 30-40 percent cost reduction in logistics cost as a consequence of outsourcing (Boyson, Corsi, Dresner, & Rabinovich, 1999) but in other cases outsourcing has become a source of failure and disappointment due to unrealistic expectations and unclear goals, flaws in the contractual agreement but also due to sabotage by managers at the firm outsourcing. Giunipero and Eltantawy (2004) argue that increased reliance on outsourcing creates a loss of control and a risk of losing proprietary information shared between parties. Also Van Damme and Ploos van Amstel (1996) stress the risk of loosing and assimilating information as a reason not to outsource, that customer feedback reaches the company less rapidly and that sometimes speed and delivery reliability are realized more by keeping transportation and warehousing in-house. Furthermore they argues that well organized and managed logistics can yield
competitive advantage and with that a better reputation and that if logistics is tightly connected to sales & marketing department, this can be a reason to keep logistics in-house in order to maintain direct customer contact. The company holds specific know-how of its products and processes and can respond to changing customer needs more rapidly and in a flexible manner, whereas a service provider wishes to minimize deviations from schedule in order to gain efficiency (Van Damme et al. 1996).

According to Kroes (2007) firms should maintain activities in-house if the internal resource or knowledge sets provide a core capability that generates a competitive advantage and outsource those activities that do not provide an advantage. In other words, activities should be performed in-house if a firm can perform them in a way that allows them to be positively distinguished from those of their competitors. Outsourcing should occur when a supplier can provide a firm with a competitive advantage due to a lower cost structure or performance advantage.

Frazelle (2001) gives more thorough guidelines by suggesting the following decision criteria to justify outsourcing a logistics activity, if all of the following apply, then outsourcing is justified:

- that there is a proven third party logistics (3PL) provider in your industry
- that there are economies of scope and scale available for the 3PL
- that the 3PL has a significant cost (-20 percent) and service advantage
- outsourcing is acceptable to the customer base
- the 3PL has a better warehouse management system
- there is a culture match between the 3PL and the user.

However, Frazelle states that he personally is very cautious in outsourcing recommendations due to the fact that it is much more difficult to re-insource an activity than to outsource. This is agreed by Van Damme and Ploos van Amstel (1996) that states that if the decision of outsourcing is made, it is necessary to do it right since it is difficult to reverse.

According to literature, different organizations tend to be more or less open for the possibility of outsourcing. According to Daugherty and Droge (1997), the organizations
where logistics staff is centralized at corporate management level, while line activities are decentralized within business units, tends to indicate significantly higher amount of outsourcing services, where transportation and warehousing is the most used. On the other hand, organizations where both the logistics line and staff responsibility are centralized at corporate management level, are more seldom engage in outsourcing relationship due to that they have achieved critical economies of scale and have control. Also Rao and Young (1994) stress the issue of centralization of the logistics function as one main contributor to not engage in outsourcing. Rao and Young connect this to the reasoning that if a logistics function is centralized logistics usually is seen as a core competence and if seen as core competence companies usually are reluctant in outsourcing.


For collaboration however, no contradictions in the theories can be found, although the authors stressed different areas of the collaboration as the most important one. Where Moberg, Whipple, Cutler and Speh (2004) identified trust as the key enabler to supply chain collaboration and Simatupang and Sridharan (2002) stated that incentives should be placed as main feature of collaboration. Sandberg, on the other hand included both of these aspect in his definition “Collaboration is a relationship characterized by openness and trust where risks, rewards and costs are shared between parties”. The different authors’ view of a collaborative relationship can be summarized in: Joint performance system and incentive alignment, information sharing, possibility to influence the relationship, process integration, risk and reward sharing, and trust.
2.1.5 Subsection summary

For an organization to be successful in logistics, the authors studied has brought forward characteristics as; collaborative cooperation, process integration, central planning and strategies and regional/local execution and modification, goal and measurement alignment, and resources and knowledge as key areas. Whether outsourcing brings an organization till logistics excellence, or not, there are differences in opinion. Furthermore, a connection between the level of centralization and outsourcing was found that argues that the more central logistics organization, the less likelihood of outsourcing. Frazelle (2001) suggested a number of organizational models for logistics organizations and Persson (1997) argued that there is a tendency for organizations to develop different organizational design strategies depending on tree specific parameters. However, Holcomb, Manrodt, Griffin and Schock, (2008) bring forward an aspect that is crucial regarding the design and how to manage a logistics organization, the importance of taking into account how the firm is organized. The logistics organization can not be seen as a separate organism, it is integrated in and dependant on the organization and the environment in where it acts.

To summarize, areas of importance to reach distribution organizational excellence are considered to be:

- Collaborative cooperation with logistics providers or outsourcing
- Process integration
- Information sharing
- Central planning and strategies and regional/local execution and modification
- Goal and measurement alignment
- SCM knowledge
2.2 Agility

Acting in an agile environment places specific demands on a company’s organization and on the supply chain where it acts. This section describes what is considered to be an agile environment, what agility is and how to become agile. Both business agility and supply chain agility is brought up to get a full view of what a distribution organization acting in an agile environment is facing.

2.2.1 Defining agility

According to Collin and Lorenzin (2006), an agile environment is an environment characterized by varying, unique customer requirements and frequent market changes. Varying customer requirements can be due to high and frequent peaks in volume that is the result of for example seasonal products, short product lifecycles, project based demand, or customers acting in markets that are frequently changing. The unique customer requirements can be due to tailor-made product and service packages sold to specific customer segments or requirements from extremely small segments like monopolies or governments. The frequent market changes can be due to frequent mergers and acquisitions some markets and industries are affected by, or markets with high level of changes in politics and economics (for example where interest rates and exchange rates are more likely to experience frequent changes).

Hoek and Harrison (2001) introduced demand and supply characteristics as dimensions that impacts the relevance of agility and therefore showing what is considering to be an agile environment. According to Hoek and Harrison there are different categories of environment dependant on where on the scale an organization and its products are on the different demand and supply contingencies. They bring up five different categories of environment: innovation/projects, Lean, Mass customization, Efficient Customer Response/Quick Response, and Agile.
The demand contingencies according to Hoek & Harrison are the following:

- Lead-time tolerance: Lead-time for responding to a demand
- Forecastability: Describes forecast accuracy
- Variance in volume: The differences between peaks and the frequency of upswings/downswings

![Demand Contingencies Diagram](image)

Figure 2.1: Demand Contingencies impacting the viability of an agile supply chain. 
*Source: Hoek & Harrison (2001)*

The supply contingencies are the following:

- Postponement: Delaying inventory allocation in the supply chain
- Design variance: The level of customization
- Partner modularity: To which extent companies in the supply chain will have to redesign management practices and interfaces for the goods or information flow
- Supply chain scope: The scope of supply chain involvement
Combining these, a categorization of environments can be found according to figure 2.3.

Figure 2.3: Categorization of environments. Source: Hoek & Harrison (2001)
This means that; where there are a forecastability nearer 50% than 90%, where need of response lead-time is closer to hours/days than weeks, where supply chain scope leans towards value chain/networking instead of one-to-one, where going towards a neutral fourth party provider (4PL) and modular supply chain instead of JIT and 3PL, where the level of customization is on component level/modules rather than on package level, and where postponement is comprehensive – this is where you find an agile environment.

The definitions between Collin & Lorenzin (2006) and Hoek and Harrison (2001) shows different approaches where Hoek and Harrison leans more at describing an agile environment from a supply chain perspective and Collin & Lorenzin from a more holistic perspective bringing in market changes as a parameter. The contingencies by Hoek and Harrison regarding lead-time tolerance, forecastability, and volume variances is however connected to changes in market and customer requirement as changes and varies in market and customer requirements will lead to less forecastability, shorter lead-time tolerance, and variances in volumes. The supply contingencies brought forward by Hoek and Harrison brings up can be considered as parameters that can be changed to fit the environment by changing suppliers or supplier business models or the level of postponement in the supply chain. Of course this is not related to the large spread in design variances but in this case the product portfolio strategy could be looked over and, if it can be done without risking loss of customers, amended.

This thesis defines the agile environment as an environment where several or all of these characteristics is included:

- demands on reaction time is on days or hours rather than weeks
- markets are financial unstable
- industries has a high level of mergers and acquisitions
- market is highly competitive
- variances in volumes are high
- predictability is low
- number of product variables are high

and, where changes is the rule rather than the exception.
An example of industries in a highly agile environment is the fashion industry where number of product variants are high, variance in volumes are high (seasonal products), customer demands change rapidly and where competition is fierce. Another example is the IT and Telecom market where the market changes fast, where the industry are changing due to mergers and acquisitions, where predictability is low and where there is a large degree of product variety.

Satisfying the customer is a tough task when acting in an agile environment. The complexity of the business is much higher than in traditional businesses and the flexibility and responsiveness needed for a company acting in an agile environment has to be planned, prepared for and controlled in every stage. To handle an agile environment, an organization has to become agile itself. There are several definitions of agility of which this report brings forward some definitions that covers the thesis focus areas, agility in organizations and in supply chains.

Dove (1999, p. 19) concluded that “Something is considered Agile if it is prepared to thrive on unpredictable change; when to change or what to change is not known until it occurs, and the dimension of scope of Agility addresses this question”. The definition of Li, Chung, Goldsby and Holsapppe (2008) brings forward two dimensions of agility: alertness to change, and responsive capabilities to change, where the alertness dimension highlights agility as an opportunity seeking capability whereas the response capability dimension is the change-enabling capability that is embedded in organizational processes. Yusuf Sarhadi and Gunasekaran (1999, p 37) include capabilities in his definition by stating agility as “The successful exploration of competitive bases (speed, flexibility, innovation, proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment”. Moreover Harrison, Christopher and van Hoek (1999) also states capabilities needed to become agile by defining agility in terms of responsiveness to markets based upon the dimensions of market sensitivity, virtual integration, process integration and network integration.
The agility of supply chains are often discussed and according to Ismail and Sharifi (2006, p. 431) supply chain agility is defined as: “The ability of the supply chain as a whole and its members to rapidly align the network and its operations to the dynamic and turbulent requirements of the demand network”. Christopher (2000, p. 37) goes a bit further and sees supply chain agility from a more holistic view by stating that supply chain agility is “A business-wide capability that embraces organizational structures, information systems, logistics processes and, in particular, mindsets.” The supply chain agility definition of Bruce and Daly (2004) states that the agile supply chain is market sensitive and has the ability to respond to real time changes in demand.

The different authors have different views when defining agility where Christopher (2000) sees supply chain agility from a more holistic view whereas Yusuf, Sarhadi and Gunasekaran (1999) and Harrison, Christopher and van Hoek (2001) states agile capabilities in their definition of agility. The above authors have some areas in common in their definitions: Agility can be considered as the ability to be prepared for changes, to be able to response quickly, to have the adaptability and capability to adapt to those changes as well as proactively anticipate and seek new opportunities.

### 2.2.2 How to become agile

Based on the above definitions agility cover not only the organization itself but goes beyond traditional boundaries and includes all partners involved in forming the business proposition towards the customer as the flexibility and the high responsiveness to changing market conditions is formed by all actors involved and not only the company providing the product. Therefore, using agility as a competitive advantage is an organizational strategy and is not suitable to implement as standalone approach for some functions.

To be agile, Kidd (1994) states that organizations must have: (1) quick response to market opportunities, (2) adaptability or capability to change direction, (3) virtual corporations, and (4) reconfigurable corporate resources in answer to unexpected
market opportunities. According to Teece, Pisano and Shuen (1997), constant surveillance of market technologies and the willingness to adopt best practice is of central importance. This connects to the findings from the work of Schönsleben (2000), which states that a crucial factor in agility is knowledge. Li, Chung, Goldsby and Holsaple (2008) stresses that the importance of coordination and states that coordination together with learning and reconfiguration are the founding to enable change-responsive actions. Collin and Lorenzin (2006) brings forward the importance of methods to support a company to become more agile, and the importance of having an operational strategy to be able to quickly respond to changes, whereas the study of Power and Sohal (2001) showed that the companies acting agile, place a greater emphasis on Continuous improvement methodologies.

Capabilities needed for supply chain agility is almost the same as those brought forward for organization/business agility. According to van Hoek, Christopher and Harrison (2001), to build an agile supply chain five main characteristics have to be achieved:

- The supply chain has to be market sensitive and reading and responding to demands and changes in customer demands
- Virtual integration in the form of extensive information sharing between partners and functions has to be a natural part in the supply chain
- Deep process integration between partners that enables true collaboration
- The organization has to work in networks
- Performance measurements.

According to Christopher, Lowson and Peck (2004), agile supply chains are information based and also Lee (2004) argues for extensive information flows. Furthermore Lee stresses the collaborative relationship with suppliers and the importance of contingency plans and crisis management teams. According to Teece, Pisano and Shuen (1997), the process of becoming agile can be assisted by decentralization and local independence. Placing decisions closer to the business will result in shorter lead times for decision making and by that increase the responsiveness. Also, the ones most close to the business usually have greater knowledge of the business, can make the right decisions,
knows what it will take to do adjustments and how this will affect the day to day work. With local independence policies will be less rigid and this will enhance the possibility of being flexible and design solutions and engage in activities and actions that fit that specific market or customer.

In their definition of agility, van Hoek, Christopher and Harrison (2001) stated organizational networks as a key area to reach agility. According to Christopher, Lowson, and Peck (2004), the principle behind the agile network is to use the members needed for the particular time/occasion and change players when requirements change, to use the strength of specialist players in all areas and even though the relationships in a network are not permanent, they should be close. The idea of networks to gain agility is consistent with the opinion of Lemoine and Dagnaes (2003) who state that the networks organization facilitates quick responses to business changes and decentralization and coordination of the financial and core business activities are key issues in managing the network organization.

The literature in this area is not contradicting in any way, even though different authors stress different capabilities as the most central to become agile. Summarizing the capabilities needed to become agile, these include: the ability to be market sensitive, to extensive share information internally and externally, to work in network organizations, to be active in resource and knowledge transfer and sharing, and to engage in a high level of process integration. Furthermore, placing focus on local responsiveness is important and to be prepared for changes, operational strategies and contingency plans should be in place.

2.2.3 Where should agile capabilities be implemented?

Childerhouse and Towill (2000) argue that agile principles shall be applied to innovative, unpredictable demands. Teece, Pisano and Shuen (1997) are more detailed when describing that; innovative response is required when time-to-market and timing are crucial, when the technology changes rapidly and the nature of market and future competition is difficult to determine.
Figure 2.1, of Van Hoek and Harisson (2001), published by Donalds (2006) provides a guide to which products, customers, and flows agile capabilities shall be implemented. The model demonstrates that global companies, with large product portfolios and with businesses in several markets and segments should not choose one model to manage their supply chain. This is consistent with the ideas of Christopher, Lowson and Peck (2004) that identical products will have different unique product flows depending on customer behaviour and needs. Even if a company is acting in an agile environment, agility is not the universal answer. As agility may depend on the different types of products, customers and market combinations, agility will for most organizations not include all products, flows, and organizational units.

Weber (2002) argues that developing agile relationships in the supply chain are a significant departure from more traditional business strategies. Therefore organizations should determine the need for agility and the ability to develop agility before any changes in business strategy. Another reason for this is that changes are costly and as
companies simply cannot afford being flexible and highly responsive in all areas at all times, a segmentation of customer services is the first step to implement agility (Weber). Companies must identify where there is a need of agile capabilities and develop processes to minimize low pay-off changes. The ability to scan, evaluate and interpret the environment is of outmost importance to not risk spending resources on imaginary customer needs. The key to find the areas where agility is needed is to let customers define their preferred service and the consequences of that not being fulfilled. Next step is to design a solution that fits the need per customer/product/flow and then compare the cost of developing agile performance to the cost of agile failure. By doing this the organization should be able to determine whether agility is a useful strategy or not and where it should structure itself to be able to deal with dynamic and varied demand in these areas.

It is obvious that, to be successful in agility and to be cost efficient, only areas that need agile capabilities shall be treated as agile. Segmentation has to be performed by having a close dialogue with the customer about their actual need, and with that as a basis find the crucial capabilities in the different product segments, of flows, and implement these capabilities to reach the required level of agility.

### 2.2.4 Risk with implementing agile capabilities and how to avoid these risks

Implementing agile capabilities is however a thorough and demanding work and Hoek (2005) argues that lacking practical guidance and experience, companies risk to build complex set-ups that that only generates cost, are hard to govern, are not actually responding to the customer needs, will result in engagement in meaningless proliferating of product and failure to measure the service and by that fail network integration. According to Waters (2006) there are several ways to avoid these pitfalls and important aspects he brings up are: to have a close conversation with the customer at all levels, to use the customer information in cross-functional teams at management and executive level to improve responsiveness and process alignment in those areas that matters for the customer, and ongoing measurements and reviews to secure these improvements.
The improved learning of customer needs and relationship is also stressed by Waters as two very important factors to improve customer relations.

According to Bartlett and Goshal (1989), one of the barriers for bringing agile capabilities to a supply chain and organization is that companies tend to lean towards either local responsiveness or strong global standardization and organization. To be agile, local responsiveness and global efficiency need to be integrated into a network organization that is a virtually integrated entity, regardless of if the entities are operating in multiple locations and regions.

One possible lead to failure is having the wrong measurements, to measure internal needs instead of customer needs (Waters 2006). As mitigation, sharing measurement score cards with customers and aiming to use the measurements and targets your customer uses to measure you, and also asking the customer what defines success can be practiced. It is also of outmost importance that all parties in the supply chain are accountable for the measurements (Waters) to secure the shared responsibility of performance, flexibility and responsiveness.

To avoid the pitfalls in implementing agility, local responsiveness and global efficiency should be integrated and a global governance structure should be in place. Furthermore the dialogue with the customer has to be broadened to include several levels and functions in the organizations, to discuss actual needs, and to align measurements and targets.

2.2.5 Relationship with Logistics Provider to reach agility

Working with agility places high demands on logistics providers and their performance and therefore the selection, development, and integration of suppliers with appropriate capabilities is of outmost importance.

According to Waters (2006), the agile supply chain is about moving away from supply chains in which one main company directs supply chain operations according its own
practices and procedures, and towards supply chains that work for each individual customer. Christopher, Lowson and Peck (2004) states that one have to realize that in dealing with constantly changing market conditions, performance depends on a series of alliances and relationships with other enterprises. A tight integration with suppliers is needed in order to secure flexibility and to reduce reaction time. Also Christopher (2000) stresses the importance of close supplier relationships by claiming that a primary ingredient of agility is the confederation of partners linked into networks. According to Christopher, to become agile collaboration is crucial and true collaboration can only be formed by setting joint working methods, interact in joint development, and system integration. Schönsleben (2000) concludes that trust is the most important factor in the network and trust must be developed long-term, why competition is generally ruled out within the network. According to Bruce and Daly (2004), organizations must acquire capacity in order to react quickly on changes in demand and shared information between trading partners is therefore necessary. Information shared should be about customer behaviour, market changes, forecasts, open order books, new product introduction and long term information like visions and strategies. Also Waters argues that all players need be coordinated around real demand and service to the end-customer to support the agile supply chain. The key is that all supply chain players share this view and therefore integration and communication is of outmost importance.

It is obvious that all of the above theories share the same view regarding the cooperation with logistics providers in an agile environment. That working towards a shared view of actual customer needs, sharing working methods and information, engage in tight integration, and having trust is crucial if agility shall be reached.

### 2.2.6 Subsection summary

The authors included this research have some areas in common in their definitions of agility: Agility can be considered as the ability to be prepared for changes, to be able to response quickly, to have the adaptability and capability to adapt to those changes as well as proactively anticipate and seek new opportunities. According to them, the capabilities needed to be agile, includes; the ability to be market sensitive, to extensive
share information internally and externally, to work in network organizations, to be active in resource and knowledge transfer and sharing, and to engage in a high level of process integration. Furthermore, placing focus on local responsiveness is important and to be prepared for changes, operational strategies and contingency plans (Collin & Lorenzin, 2006) should be in place. It is important to point out that, to be successful in agility and to be cost efficient, only areas that need agile capabilities shall be treated as agile and therefore a segmentation has to be performed (Weber, 2002). As stated in this research there are pitfalls in implementing agility and to avoid these local responsiveness and global efficiency should be integrated and a global governance structure should be in place (Bartlett & Goshal, 1989). The dialogue with the customer is of outmost importance to secure that actual needs are considered. To be successful in agility a tight relationship with the logistics providers is a necessity (Christopher, Lowson & Peck, 2004, Christopher, 2000). A shared view of actual customer needs, shared working methods and information, a tight integration, and trust is crucial to reach agility.

To summarize, areas of importance to successfully reach agility are considered to be:

- Market sensitivity
- Extensive information flow
- Network organization
- Knowledge and sharing and transfer
- Resource sharing and reconfiguration
- Process integration
- Local responsiveness and global efficiency
- Segmentation
- Collaboration with logistics providers
- Sharing Best practise
- Measurements
2.3 Global Organizational Theories

Globalization is the ability to do business anywhere. Individuals and organizations have to go from a geographical concept of “where I do business” to a global business concept of “how I do business” to get away from the barriers that geographical thinking often brings. (Daniels 1993). According to Daniels, Globalization means more than merely having a geographic presence in a country or region. It means the local customers and business partners recognize your company and perceive you as appealing. Further it means that your company and your products and services are accepted by the culture, and perhaps are identified as part of the culture.

2.3.1 Organizational strategies for managing the international environment

According to Harzing (2002), there are two different types of strategies traditionally used for being global: Multi-domestic strategy, where a firm competes on a domestic level and where products and services are locally adapted and global strategy where the products and services are standardized and are offered in every market where the company operates. Svensson (2001) adds a third version, namely the glolocal or glocal strategy which is a balance between standardization and adaptation, and between homogenization and tailoring of business activities in the local markets and is therefore combining local, multinational and global approaches. Jones (1997) has taken this one step further and segmented the international strategies into four different organizational strategies to manage the international environment:

- Multidomestic strategy
- International strategy
- Global strategy
- Transnational strategy

The goal of a Multidomestic strategy is to respond to pressures for local responsiveness. An organization pursuing a multidomestic strategy has customized products and services to suit the needs of customers in each market they compete in. The strategic
control is decentralized to each division or Market Unit, which operates autonomously and develops its own set of value creation activities. Often, the only connections between the parent company and its foreign divisions occur in financial activities like allocations and profit and dividend transfer.

With an *International strategy* the organization attempts to replicate some aspects of its operations in each country or region. A standardized service/product is offered to customers in all countries and only slight local adaptations are allowed. With an International strategy, an organization’s core competences in R&D, product development, and marketing are centralized and core competences are transferred to the local divisions where manufacturing and/or marketing of centrally developed products and methods are pursued.

The goal with a *Global strategy* is to reduce costs so that an organization can offer foreign customers lower price products/services than their domestic companies offer. This is done by having standardized products/services created in low cost countries/processes that are offered to the global market.

The *Transnational strategy* is a plan to obtain both low-cost and differentiation advantages simultaneously by sharing and spreading competence and customizing products/services. Core competences are transferred to the countries where they can be used most successful and the organization creates a global network to facilitate the sharing of skills and resources to improve their core competences. Each foreign division is expected to build on and develop skills and resources received from the other divisions and to transfer enhanced products and processes to other divisions. The goal of a transnational strategy is to develop a core competence in the global coordination of organizational resources between divisions throughout the world.

The big differences in the four strategies makes it extremely important to link the way to manage an organization to which international environment strategy you pursue.

Table 1 shows the appropriate structure for organizations pursuing each of the four strategies.
<table>
<thead>
<tr>
<th>Multi Domestic Strategy</th>
<th>International Strategy</th>
<th>Global Strategy</th>
<th>Transnational Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong></td>
<td><strong>Need for coordination</strong></td>
<td><strong>High</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Vertical Differentiation**

<table>
<thead>
<tr>
<th>Levels in the hierarchy</th>
<th>Relatively flat</th>
<th>Relatively tall</th>
<th>Relatively tall</th>
<th>Relatively flat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralization of authority</td>
<td>Decentralized</td>
<td>Core competences centralized, other decentralized</td>
<td>Centralized</td>
<td>Simultaneous centralized and decentralized</td>
</tr>
</tbody>
</table>

**Horizontal Differentiation**

<table>
<thead>
<tr>
<th>Horizontal Differentiation</th>
<th>Global geographic structure</th>
<th>Global product group structure</th>
<th>Global product group structure</th>
<th>Global matrix or “matrix in the mind”</th>
</tr>
</thead>
</table>

**Integration**

<table>
<thead>
<tr>
<th>Need for integrating mechanism such as task forces and integrating roles</th>
<th>Low</th>
<th>Medium</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for electronic integration and management networks</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Very high</td>
</tr>
<tr>
<td>Need for integration by international organizational culture</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>Very high</td>
</tr>
</tbody>
</table>

| **Low**                 | **Bureaucratic costs** | **High** |

Table 2.1: Structure for coordination and control for organizational strategies in the international environment. *Source: Jones (1993)*

As shown in the table the problem of designing a structure and a control system to coordinate activities is much more complex for an organization that is pursuing a transnational strategy than for organization pursuing the other three strategies. But on the other hand organizations that are pursuing a transnational strategy are gaining competitive advantage over companies that follows one of the other strategies due to the sharing of competence. For this reason, many organizations are merging and forming global networks to gain access to the skills and resources that allows them to compete on a truly global level – a transnational level.
According to the principle of minimum chain of demand an organization should keep the structure as flat as possible to reduce communication and motivation problems (Jones 1993). Globalization and international expansion, however, tend to increase the number of hierarchical levels to be able to control its activities and the motivation problem can by that become even greater due to distances but also due to political, culture and social conditions. The increase in size in hierarchical levels depends on the degree of coordination the organization’s strategy requires. Organizations with an International or global strategy tend to have taller hierarchies, whereas a multidomestic strategy requires relatively little coordination between headquarters and divisions in foreign countries. Organizations pursuing a transnational strategy will as already mentioned require the highest degree of coordination and most probably have the tallest hierarchy (Jones).

The most common way in literature to approach globalization strategies is via the two strategies: Multi-domestic or multinational and the global strategy. Svensson (2001) has added a third version by describing the glolocal or glocal strategy as a balance between those. However, Jones (1993) has made a segmented version with four different strategies: multidomestic strategy, international strategy, global strategy, and transnational strategy. Due to his more refined version of approaching globalization strategies, his model will be further discussed in this research.

2.3.2 Centralization versus Decentralization

The constantly ongoing debate of whether decentralization or centralization shall be applied to a company structure gets even more complex if adding globalization as a parameter. Globalization usually requires several different legal entities in a numerous countries, vertical integration in some markets and areas, while, in some markets Joint Ventures might have to be established to do business. For companies pursuing the Transnational strategy, the centralization/decentralization issue will be very complex and the structure will need centralized control to facilitate learning and transfer core competences. On the other hand, decentralized authority is needed to ensure that local
market needs are protected. The multidomestic strategy decentralizes authority and limited central coordination is needed, the global strategy on the other hand has a centralized decision making at global headquarters. For an international strategy there has to be a balance between centralized and decentralized control to protect core competence yet to customize products for the local market.

However, according to Daniels (1993), debating whether to centralize or decentralize activities in a global business is basically a waste of time and creates limitations for thinking. The issue shall not be control, but to make resources available wherever they are needed to support the company. Furthermore he stresses that resources, financial and other, must be allocated to individuals, projects, functions, divisions, and businesses to place ownership of costs and activities at the actual business. According to Daniels the global balance includes identifying which activities have to be global planned and managed, monitoring these global business activities, and defining and obtaining resources necessary to carry them out. If needed, strategic alliances shall be formed if the activities can not be performed in-house.

To summarize, whether to centralize or decentralize is very dependant on which strategy accompany pursues and as Daniels (1993) states; to identify in which areas the company benefits of having centralization and decentralization to support the business, and to make resources available whenever and wherever they are needed is the central issue.

2.3.3 Knowledge and resources

Managing individual knowledge contributions is especially important in a global organization where the organization in many cases rely on individual knowledge. In an organization that acts globally one of the main challenges is to secure that knowledge is captured and made available throughout the organization (Daniels 1993).
As earlier pointed out, the need for integration is high/very high for companies pursuing a transnational strategy, medium/high for the international and global strategy, and medium/low for multidomestic strategy. Therefore specific consideration in the resource and knowledge area and how this is integrated and spread has to be made for those companies working with a transnational strategy.

To secure the spreading of knowledge, and to avoid resource overlap, two areas are specifically pointed out in organizational theories: resource transfer and global networking. Global companies take advantage of economies of scale without overly replicating resources (Daniels 1993). The sharing of resources is therefore central in global organizations and brings not only knowledge of several areas within the business to the individual but a possibility to transfer the enhanced competences back to their foreign operations to increase its competitive advantage abroad. According to Jones (1993) value creation at the global level begins when an organization transfers a core competence in one or more of its value creation functions to a foreign market. Both Jones and Daniels stress the importance of global networks to facilitate information spreading and learning throughout the global organization. The networks shall be seen as an informal organization and will act on several levels within the organization, in the form of cross functional teams as well as higher management networks. The network shall be able to bypass formal communication channels and it will be constant shifting, depending on needs. The direct communication and low functional barriers which networks bring to the organization reduces the number of steps required to solve issues and take action (Daniels). Organizations that work with global networks have access to resources and skills throughout the world. As each country has unique political, economic, and cultural conditions, different countries have different resources and skills that will give them a competitive advantage. Access to a global network will lead to sharing of these skills and improving the individual competence as well as the organizational knowledge bank. Daniels states that a network organization with the right tools, processes, resources and a clear vision gives the employees new roles to play in strategy; they are not longer merely implementing the strategy formed by top management, but can now create micro strategies to help them perform their tasks. This brings not only knowledge and bond between the employees but creates a sense of
ownership and influence to the individual that connects them tighter to the organization, its vision and strategies. Jones specifically stresses the importance of management networks where managers from different parts of the organization meet to discuss problems and share knowledge. Management networks can enhance the effectiveness of the formal organizational structure and improve performance as they promote communication between managers even when distances are great and interests diverge.

Both Jones (1993) and Daniels (1993) agrees that two of the most important areas of reaching success in global organization is the knowledge and resource transfer as well as working in networks in all levels of the organization.

2.3.4 Managing organizational culture

If the organization shall engage in global learning and resource sharing, development of an organizational culture becomes important. A solid set of cultural values can help overcoming language and cultural differences and for the organization to react quickly to changes in the market. The cultural values give the extra trust and integration needed to share resources and knowledge between units in different countries (Jones 1993). Also Daniels (1993) stresses the importance of a shared culture with shared beliefs, attitudes, values, and expectations regardless of where business is made. One benefit of sharing a global culture is the reduction in time spent on getting “buy-in” from every part and reduce time spent going back and forward with decisions to headquarters when competent net-workers can make the decisions. This however, means that each individual has to believe they are truly empowered to act and that they get the sufficient tools and authority to do so. For companies pursuing a global and international strategy cultural values are very important and for an organization pursuing a transnational strategy it is a necessity.

In the sense of organizational culture the literature is in agreement: A solid set of cultural values, shared beliefs, attitudes, values, and expectations regardless of where business is made is crucial to be successful in managing global organizations.
2.3.5 Managing cultural differences

Cultural differences can derive from e.g. political, ethnical, economical, or religious differences. Companies pursuing a transnational and global strategy will need a higher level of integration between organizations and functions with different cultures than organizations pursuing other strategies.

According to Min and Eom (1994), global companies should host a database with information about specifics in culture, laws, customs, lifestyles, currency, economics and politics for the different markets where the company operates. This database shall be promoted, and shall be open to all individuals within the company.

According to Dubrin (2007), to be successful working with different cultures, people shall have cultural intelligence. Cultural intelligence is the outsiders ability to interpret an unfamiliar and ambiguous gesture the way that persons fellow citizen would, to distinguish between behaviour derived from cultural differences, from the persons, and from the human being. One way of reaching cultural intelligence is to be aware of the dimensions where different cultures differ. Hofstede (1991) identifies different aspects of culture to take into consideration when dealing with people from other cultures: Power distance, collectivism, masculine/feminine, and avoidance of ambiguity. Power distance is how the culture deals with the fact that individuals are unequal, for example organizational hierarchies or if employees expect to be ordered to act instead of feeling empowered to act. Collectivism is if the culture leans against collectivism or individualism, which has a great impact when setting targets and rewards as the choice between individual or collective targets/awards will influence the team performance differently. Masculine/feminine dimension is the level of how separated males and females are and how strong the gender role is. In a culture where culture is more feminine compromises are more often used, equality and work environment are advocated and it is more accepted for males to show emotions. Avoidance of ambiguity is to what extent individuals feels threatened of ambiguous situations. In a culture where the avoidance of ambiguity level is high, there is a tendency to resist innovations and
foreign behaviours, rules are strict and people have a need to feel secure. These four
dimensions are highly different between cultures and to have the knowledge about
where on the dimension-scales a specific culture is positioned, will facilitate for smooth
integration and understanding of that culture.

How you structure your organization will have an impact on the cultural behaviours and
how you deal with culture. Transferring a large number of managers from head office to
a local company will most probably mean that the culture from the country where head
office is located is transferred to the local company. If transferring a few individuals to a
local company this will mean that they adapt to local culture and integrate their own
culture in the local culture which will facilitate doing business locally and get acceptance
from local employees. Furthermore it is vital to transfer the right types of persons and
secure that the ones getting assignments is open to different cultures and willing to
adopt. Organizations also have to be aware of that some fundamental ideas can not be
changed and have to act accordingly. For example transferring a female manager to
countries that do not accept women in management positions are not an option and
neither is transferring people from a culture that are in conflict with the specific country.
To overcome cultural pitfalls, many companies offers cultural educations to staff working
short or long term in other cultures and together with establishing a database according
to Min and Eom (1994) this will provide a solid base to prepare for a smooth resource
transfer.

To be a part of and to manage a global organization, you have to be aware of and
understand the differences in cultural behaviours and distinguish them from the person.
Sensitivity, the ability to interpret emotions and the knowledge of the dimensions that
makes the difference will assist in this process.

2.3.6 Information and communication

Global companies depend on ways of communication that facilitate free flow of
information across borders. To be successful in this communication, information has to
be available in real time and be accurate and understandable. Standardized way of
communication like standard systems, standard scorecards, work instructions, and process charts will familiarize the information and can therefore shorten the lead time of understanding and decrease risk of misinterpretation and therefore create higher responsiveness.

In a global organization, individuals can’t be passive receptors of other people’s communications (Daniels 1993). Everybody is responsible for their own knowledge and update. This is a part of the shared trust that makes it possible for global companies to function efficiently. Communication of improvement and best practises is of outmost importance for the organization to learn and develop and in a global organization the distances and cultural differences make this more complex. Employees must be aware of the importance of sharing ideas and best practise. Not keeping it for themselves to become unbearable or to avoid bragging.

### 2.3.7 Global leadership

The role of a global leader is rather different from the traditional management role and in many cases this requires different personalities. The global leader shall have the ability to eliminate negative impacts created by geographical distances as well as cultural distances. Depending on which global strategy the organization pursues, different levels of global leadership will be needed, and a organization pursuing a transnational strategy is simply dependant on a strong global leadership as opposed to an organization with a multinational strategy.

Companies going global need a powerful global vision to lead the organization and every employee into the future. An effective global vision offers inspiration and is a powerful intangible that can create powerfully tangible results (Daniels 1993). Furthermore the global organization demands that a global mindset is integrated into each individual working in the global organization and one of the global managers’ most important tasks is to assists its resources reaching this mindset. They must clearly communicate the mission, objectives and actions of the global organization and develop team building, motivation and leadership.
In a global environment, leaders have to act as connectors and facilitators rather than controllers and must emphasize cooperation across borders. Global leaders shall be sensitive to cultural dynamics and rather than making all decisions themselves, senior management should secure that timely decisions are made globally and are related to the company’s or network overall aims (Daniels 1993). According to Waters (2003) managers in global organizations must be able to work and be flexible in situations of innovation and uncertainty and also encourage the employees to be ready for change. Senior management have the responsibility to identify the core competences, knowledge and skills, and to secure that these skills and competencies are continually renewed and developed (Daniels). Global leaders shall also promote cultural exchange and staff rotation to gain both a shared culture but also the team acceptance of other cultures. They shall also provide the resources with the infrastructure needed to facilitate the networking, by for example provide sufficient IT infrastructure. Desired skills and treats of global leaders include the ability to see a broader global and societal perspective, a second language, information technology skills and international experience. Dubrin (2007) states two skills that are way to success in international management: Cultural sensitivity (the awareness and willingness to investigate the reason why people from different cultures act as they do) and cultural advantageousness (willingness to experiment with new culture). Dubrin also argues for a second language and charisma.

To lead teams where the different cultures are strong or where the global mindset is immature, Daniels (1993) suggests creating an organization that is obsessed with something. This will focus employees’ attention on the shared aspect of the global culture instead of the differences.

Summarizing the literature, important aspects of global leadership is the ability to eliminate negative impacts created by geographical distances as well as cultural distance. The global leader shall have the ability to empower team members, to be open for and promote other cultures, being cultural sensitive, and emphasise cross-border cooperation and facilitate exchange and information.
2.3.8 Subsection summary

Different organizations pursue different strategies to become global. Depending on strategy, different levels of integration, coordination, and centralization is needed. But regardless of which strategy a company pursues, some areas are crucial to master, to successfully manage a global organization. The literature stress knowledge and resource transfer as key to individual and organizational learning and success, and active engagement in networks at all levels of the organization (Jones, 1993, Daniels, 1993). Furthermore theories state that global companies are dependant on correct information, in the right time, and presented in the right way to be able to work as, and feel like one organization. Individuals must actively engage in receiving and interpreting information and be aware of the importance to share best practise (Daniels 1993). Moreover, one aspect of great importance is the sharing of an organizational culture with a solid set of cultural values, shared beliefs, attitudes, values, and expectations (Jones, 1993, Daniels, 1993). Also, to be able to handle and to understand cultures and the differences in cultures is crucial for all individuals acting in a global organization. The skills, treats, knowledge, and behaviour of the global leader are central to successfully manage a global organization. The global leader must have the ability to eliminate negative impacts created by geographical distances as well as cultural distance, and also use the cultural differences to create a positive and creative environment (Dubrin 2007), as well as demonstrate that a global behaviour is valued.

To summarize, areas of importance to be successful in managing global organizations are considered to be:

- Knowledge and resource transfer
- Engage in networks
- Correct information
- Sharing of organizational culture
- Cultural sensitivity
- Business Intelligence
- Best Practise
2.4 Theoretical conclusions

From the previous three theoretical sections, specific areas of importance were pointed out for each theory. This section will summarize these different areas of importance and highlight similarities and differences between them, and outline how these areas affect, and can be applicable on a global distribution organization in an agile environment. This section will also provide answers to the research questions.

Figure 2.5, Model for theoretical conclusions

2.4.1 Combining areas of importance

In table 2.2, the areas of importance for each theoretical section and for each author are summarized.
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<th>Process design</th>
<th>Teaming &amp; collaboration</th>
<th>Knowledge sharing</th>
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2.4.2 Areas of importance – differences and similarities

In this section, similarities and differences of the content of the areas of importance are discussed by applying the distribution organization as a parameter.

Market Sensitivity & Customer knowledge: To be able to rapidly react to changes and to be prepared to change, it is necessary to be superior in market sensitivity (Kidd 1994). Market sensitivity requires closely connections to the customer, not just at one single interface but at all levels and in several functions within the customer organization. Being market sensitive facilitates the planning for daily distribution, gives input to demands of process changes as well as how to cope with future trends by for example adding new lanes, changing transportation set-ups or initiate tenders for new services. By being market sensitive the possibility for designing and selling new or refined logistic products increases which can create competitive advantage and a possibility to extend business. Market information, new contracts, political decisions, etc., that can alter the business have to be communicated to the LP to secure that everyone is informed and prepared for change. The big contribution from the LP is the market sensitivity in the logistic area. As also this business is transforming quickly with new tools, changes in infrastructure and capacity, being sensitive to these changes can lead to better possibilities of trading with other markets or working with new partners. Waters (2006) argued that close customer relations at all levels as well as a frequent communication of needs will result in a higher degree of customer knowledge.

Segmentation: To avoid spending resources implementing imaginary customer needs, agility segmentation should be performed. As pointed out in the agility theories, agility is not the only solution (Christopher, Lowson and Peck 2004) and therefore segmentation has to be performed to find the areas where agile capabilities are needed. Also Childerhouse and Towill (2000) argue that agile principles shall be applied to innovative, unpredictable demands. For a distribution organization segmentation shall include deciding which customers, products, flows and distribution services that are considered
crucial to apply agility to, which warehouses or parts of warehouses that shall have a high level of agility (for instance “fast-tracks”), and which parts of the organization that shall engage in agile activities. The different segments defined shall have their different operational strategies (Collin & Lorentzin 2006) which shall stipulate how the organization and resources shall work to reach agility. It is important to secure that the segmentation is supported by the LPs and their service portfolio and furthermore, the logistics buyer has to place demands on the LP having operational agility strategies, to secure that these does not contradict the logistics buyer’s operational agility strategies, and that the links and dependencies are identified and clearly stated to avoid disruptions in operations, imprecise responsibilities and increase lead times.

**Process integration:** In all theoretical sections the ability to integrate is highlighted. Being process integrated internally and externally is pointed out as a way to success both by Wyland (2008), Tyndall, Gopal, Partsch and Kamauff (1998), Frazelle (2001), and Hoek, Christopher and Harrison (2001). Securing uniformity of routines as well as securing that routines for different units are not creating sub optimizations in other functions is one way to facilitate process integration. For a global distribution organization in an agile environment process integration is extremely important as visibility is the key to secure service, quality and responsiveness. Visibility is needed not only for products in the transport pipeline but also orders booked, stock visibility in warehouses and visibility of claims, delays, etc., to have the possibility to improve.

If pursuing a global, transnational, or international strategy, process integration is crucial to succeed.

**Tight relationship with Logistics Providers:** In Logistics theories there are, as earlier stated, diverging ideas on whether or not outsourcing is a way of achieving logistics excellence. As these contradictions prove no further guidelines, and as Van Damme and Ploos van Amstel (1996) see the risk of loosing flexibility by outsourcing, the focus on this section will be on the common theory understanding that collaboration is the cooperation model to use to be successful. In Logistics theories, as well as in agility theories collaboration is stated as they way to cooperate with the LPs in order to be
successful (Tyndall, Gopal, Partsch and Kamauff 1998, Christopher 2000, Lee 2004). According to Sandberg (2007) collaboration shall be characterized by openness and trust where risks, rewards and costs are shared between parties. Moberg, Whipple, Cutler and Speh (2004) identified trust as the key enabler to supply chain collaboration and Christopher stresses joint working methods, interaction in joint development, and system integration. Simatupang and Sridharan (2005) state the important aspects of collaboration, such as: a collaborative performance system, information sharing, decision synchronization, incentive alignment, and integrated supply chain processes. Schönsleben (2000) stated that in tight relationships, competition is basically ruled out, this however was not supported by any of the other theories.

*Network Organization:* Another way to integrate is via network organizations. Hoek, Christopher and Harrison (2001) state that organizations have to work in networks with shared targets to be successful and also Jones (1993) and Daniels (1993) stress the importance of global networks to facilitate fast information spreading and learning throughout the organization. The direct communication and low functional barriers which networks bring to the organization reduce the number of steps required to solve issues and take action which facilitates agility. From a distribution point of view, participants in such networks should include different functions within distribution and warehousing, internal stakeholders such as key account management, order management, production, but also logistics providers, and other partners as customs authorities, airlines, etc. The networks can act on several levels where operational personnel in warehouses, distribution and production join together in their own operational networks and where distribution and warehouse management are engaged in other ones. Network participants’ changes depending on demand but even though the relationships in a network are not permanent, they should be close (Christopher, Lowson & Peck 2004).

Organizations pursuing a global or transnational strategy should work with networks to secure information exchange, knowledge transfer, and resource transfer.
Communication: There are total agreement in literature that communication/information is a prerequisite for logistics, agility and global organizations to function successfully. Christopher, Lowson and Peck (2004), state that agile supply chains are information based and Lee (2004) argues for extensive information flows. Frazell states that information is crucial for logistics success and also Jones (1993) and Daniels (1993) stresses the importance of communication to manage a global organization. To secure that the distribution operations are aware of new customer projects, that the warehouse knows the volume of goods that will be received in the coming period, that distribution sourcing has the correct service demands, and that every individual in the organization and partners involved are aware of the current performance level are only a few areas where communication is vital for the distribution organization. The timing of information as well as the correctness and targeting of it is crucial and therefore the right communication structure is of outmost importance.

Extensive communication between units within the distribution organization is particularly crucial for organizations pursuing a multidomestic or transnational strategy as the level of decentralization is higher than for other strategies.

Central Planning & Local responsiveness: The mix of standardization by central planning, guidelines and strategies, and local responsiveness by local/regional execution and modification are supported by both logistics excellence theories and agility theories (Gopal, Partsch and Kamauff 1998, Frazell 2001, and Lemoine and Dagnaes L. 2003). According to Global organizational theories centralization versus decentralization depends on which strategy the organization pursues. But regardless of which, it is important to identify in which areas the company benefits from having centralization or decentralization to support the business (Daniels 1993).

As stated before the issue whether to centralize or decentralize is very dependant on which international strategy an organization pursues.
Organizational culture: Both Jones (1993) and Daniels (1993) agree on the importance of having an organizational culture to be successful in managing a global organization. The culture will make the individuals focus on the similarities they share, like values and expectations instead of the cultural and geographical differences. The need for a joint organizational culture is specifically high for organizations pursuing a transnational or global strategy.

Knowledge & Resource sharing: The importance of knowledge and the sharing/transfer of resource are crucial activities to succeed in managing both agility and global organizations. According to Daniels (1993), managing individual knowledge contributions is very important in a global organization, where the organization in many cases relies on individual knowledge. To be successful in logistics Tyndall, Gopal, Partsch and Kamauff (1998) stated that people, skills, and supply chain knowledge as a key component and Power and Sohal (2001) pointed at the importance of the human resource management aspect, to become agile. The knowledge of customer needs, the business, and the specific areas of expertise is extremely important in global agile distribution organizations. Having customer and business knowledge creates Logistics superiority and decreases the lead time of responsiveness. Deep distribution knowledge will bring forward new solutions and secure that correct actions are taken and cultural knowledge avoids pitfalls when acting on a global level. According to Daniels, the sharing of resources to gain economies of scale without overlapping is central in global organizations, also Jones (1993) states that transfer of core competence is a necessity to spread knowledge in global organization. A distribution organization is usually divided into several functions consisting of distribution operations, warehouse operations, development, and sourcing and is often spread over large geographical areas with different warehouses and distribution operations in different countries. To understand the impact on and the dependency of other functions and also partners outside the own function it is important that resources are able to act in different parts of the distribution organization or functions connected to it and be that spread knowledge.
The sharing of distribution knowledge and resources and the transfer of the same is considered most important for organizations pursuing a transnational strategy due to the spread of resources and the high level of customization of solutions.

**Measurements:** Logistics theories stress the importance of alignments, especially regarding targets and goals where Frazelle (2001) states that the most common and most severe barrier to succeed in logistics for nearly all logistics organizations is the non-alignment in the organization. Waters (2006) stresses the importance of measuring according to actual customer needs and van Hoek, Christopher and Harrison (2001) states correct measurements as one of five top characteristics of an agile organization. Depending on what activities the distribution organization is involved in, what business model they have towards logistics providers, and what focus areas the company and organization has, measurements will look different. The crucial is what Frazelle, as well as Waters express, that all measurements are aligned throughout the distribution organization, that an alignment also exists with other relevant units, and that actual customer needs and requirements are measured.

The alignment of measurements will be especially important if pursuing a transnational strategy.

**Reconfigurable resources:** Kidd (1994) argues that reconfigurable corporate resources are needed in order to respond to unexpected market opportunities. Also Teece, Pisano and Shuen (1997), as well as Yusuf, Sarhadi and Gunasekaran (1999) stated that reconfiguration is the way to succeed long term in an agile environment. To be successful in reconfiguration of resources a high degree of market sensitivity is needed and organizations must have a plan for resource reconfiguration to be able to meet future needs.

**Sharing of Best practices:** According to Teece, Pisano and Shuen (1997), Yusuf, Sarhadi and Gunasekaran (1999), and Daniels (1993), sharing of best practice is of central importance. There are and will be different possibilities to develop solutions in different markets when it comes to distribution and warehousing dependant on
infrastructure, culture, geography, laws, etc. However, even if initiatives can not be entirely ripped off, they can provide with ideas on what logistics service to purchase, what modes of transport to use, what warehouse requirements to stipulate, what supplier to approach, what process enhancements that can be made, etc., therefore best practise sharing is extremely important, especially for a large, global organization that contiguously have to learn to adjust and improve and for organizations pursuing a transnational strategy this is a necessity to succeed. Important to point out is that sharing is not enough - adoption of best practise also has to be made and individuals have to actively search for these initiatives.

*Tools to support:* The different theories states different tools to support distributional organization excellence, agility and global organizations. Agility theories (Collin & Lorenzin, 2006) as well as Logistics theories (Tyndall, Gopal, Partsch & Kamauff 1998) stress the importance of investing in IT technology throughout the supply chain. To be able to secure operations and to communicate with customer and suppliers, IT tools are essential for a distribution organization. One important tool to reach true agility stressed by Lee (2004) is the contingency plans for all agile segments. These are crucial to avoid long reaction lead times and fire fighting and to have an agreed plan on how to react if changes occur. The contingency plans shall, and will be different between different flows, products, and customers depending on needs and requirements. Other tools discussed to reach agility are business intelligence (Collin & Lorenzin, Min & Eom, 1994, Teece, Pisano & Shuen, 1997) and improvement methodologies (Power and Sohal, 2001). Business Intelligence for distribution could be the searching, interpreting, gathering and presentation of information about: new contracts, suppliers, change in market conditions, changes in laws and regulations, news within the logistics business, etc.

*Managing cultural differences:* According to Dubrin (2007), cultural intelligence is essential to be successful working with different cultures. Cultural intelligence is the ability to interpret behaviour and distinguish between behaviour derived from cultural differences, from the persons, and from the human being. Hofstede (1991) assist in reaching cultural intelligence by pointing out different aspects of culture to take into
consideration. For a distribution organization, like any other organization acting in a global arena, handling cultural differences is essential.

Looking at the areas of importance and their similarities and differences, the high level of agreement between the sources is obvious. The reason for this might be that agility and logistics studies are usually performed from a global organizational perspective and agility is usually studied connected to logistics and supply chain, and therefore characteristics and capabilities needed to reach agility, global organizational excellence, and logistics excellence are similar.

The theoretical basis for above areas of importance can be regarded as solid, either by concurrence between the theoretical sections or agreement within one of the theoretical sections. With that as basis, all of the areas of importance are brought forward as key components to a successfully global distribution organization in an agile environment. However, the management of and level of engagement in several of these components will be different depending on what strategy the organization pursues. To summarize, these are the key components:

- **Market Sensitivity** (Market and customer knowledge)
- **Segmentation** (Where to apply agile capabilities)
- **Process Integration** (Internally and externally)
- **Collaboration with LPs** (trust, sharing, alignment and information)
- **Networking** (network organizations)
- **Communication** (give and take right information in the right time)
- **Central planning, Local responsiveness** (combine central strength with local flexibility)
- **Organizational Culture** (shared beliefs, attitudes and values)
- **Knowledge & Resource sharing** (cost efficient, learning, knowledge sharing)
- **Measurements** (aligned and cost focused)
- **Reconfigurable resources** (to reach agility)
- **Use of Best Practise** (share and adopt)
- **Tools to support** (BI, IT, improvement methods, contingency plan)
- **Managing cultures** (culture awareness and culture intelligence)
2.4.3 Applying the research questions

Connecting the literature research studied with the research questions, the following answers can be given:

*Research Question 1: What extent of centralization/decentralization is optimal to manage a global distribution organization in an agile environment?*

According to the theories for agility and global organizations a mix between central guidelines, planning, and strategies and regional/local operations and responsiveness is the most successful way to manage an agile, global distribution organization. However, the level of centralization and decentralization of a distribution organization is very much dependant on the organizational strategy but also on the corporate strategy, and therefore a definite answer not can be given to the question.

*Research Question 2: In an agile environment, is it crucial to handle logistics activities in-house to keep a high level of control and responsiveness?*

In the logistics theories studied contradictions were found on this subject. The agility theories found in this area did not mention outsourcing as a way to gain higher degree of responsiveness and flexibility, on the contrary some sources claim that outsourcing risks decreasing the flexibility and thereby the agility. However, it is important to point out that no literature was found that stated a direct conflict between agility and outsourcing of logistics services. Nevertheless, as the logistics theories diverge and as the basis found in the agility theories were too narrow to make a fair judgement, this research question is difficult to answer. The complexity of this issue is also very broad as the guideline of whether or not to outsource is more connected to the nature of the organization, where the crucial competence is, the degree of competence compared to needs, which activities that are tightly connected to others and why. Therefore a generic answer can not be given but has to be based on an examination case-by-case.
Research question 3: What factors, characteristics and activities are important to be able to successfully manage a global distribution organization, acting in an agile environment?

By combining the theories and analysing their differences and similarities, the key components to reach successful global logistics organizations in an agile environment are the components summarized in end of section 2.4.2.
3 CHAPTER THREE – CASE STUDY

The case study for this thesis is the Ericsson telecom company, and specifically the distribution and warehouse organization within Ericsson.

3.1 **The Company, Organization, Customers, and Products**

This section will present Ericsson, the organization, the products and services they provide, and to whom.

3.1.1 **Company presentation**

Ericsson is a global telecom corporation providing communication networks, global telecom services and multimedia solutions to telecom operators throughout the world. The company was founded 1876 in Stockholm, where also the headquarters are based. Ericsson has over 78 000 Employees and net sales of SEK 209 billion (2008).

The vision of Ericsson is “To be the prime driver in an all-communicating world” and the company aims at making its customers successful through innovative end-to-end solutions, evolution and enhancement of their networks, cost-efficient management of these networks and responsiveness to the customers’ needs.

Ericsson perceives their competitive advantage to be technology leadership, innovative end-to-end solutions, strong, long-term customer relationships, and the largest customer base within the telecom business world-wide and operational excellence.

Ericsson serves large global customers such as Vodafone, AT&T, Telefonica, and China Mobile.

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1 Ericsson Organization Presentation
3.1.2 Organization and company structure

Ericsson is a global corporation consisting of a large number of companies. The organization structure includes a research unit, three business units, 23 market units, and a number of group functions.

The major product areas are divided into the Business Units: Networks, Global Services, and Multimedia. Business Unit Networks develop and supply local companies or customers with telecom network equipment such as Radio Base Stations, Switches, Minilinks and Opto equipment. The business unit Global Services provide network rollouts services, after market services, system integration and maintenance services, as well as consultancy services. Business Unit Multimedia develop and supply multimedia solutions as Web TV, messaging and digital media etc to the operators.

The central function in the 23 Market Units (MUs) is Key Account Management and the MU is responsible for short and long term consolidated market contribution within assigned markets through effective account management. Each MU consists of a number of Local Companies (LCs) and Branch Offices (BOs). The Local Company is an
Ericsson own legal entity that hosts Ericsson sales activities, product development activities or shared services, or has been established for legal structuring purposes.

Furthermore, Ericsson has several Group Functions (for example Finance, Legal Affairs, Communication, and Sales & Marketing) and a Research unit.

3.2 Overview of Ericsson Distribution & Warehousing

Building a telecom network is a complex task where advanced coordination between network planning, material availability, transport requirements, site preparations, and installation has to be synchronized. Due to this complex coordination the risk of delay, re-planning, and re-allocation of sites is high and re-direction of material often has to be made. A large part of the Ericsson business is project based which means that Ericsson delivers larger volumes of services and products during a certain period in a certain market/region and after that the business is reduced, which is why there is high volatility between markets and periods. Some products have short product life cycles and high value, which is why extensive storage is not a cost efficient option and why lead-time and responsiveness are important. Furthermore the demand on high responsiveness in distribution is high for certain areas, for example for the Global Services, since delays and in down-time of networks can result in large penalties and might affect thousands of subscribers, and for the first deliveries of a network since timing is tight which might lead to using express solution. All these factors make the environment surrounding Ericsson Distribution very agile.

3.2.1 The Ericsson supply chain

Ericsson sells goods to over 170 countries and has production facilities or vendors in almost all its markets, although the large production sites are located in Sweden, China, India, Italy, and Brazil and the major vendors in US, China, Czech Republic, Germany,
and the UK. The ownership and responsibility of the outbound flow is divided into two parts. For markets where Ericsson has its own legal entities, where the central order office in Sweden is responsible for the international transport to port/airport of import or local warehouse and from there the Local Company (LC) has the responsibility for local warehousing and distribution. For countries where no legal Ericsson entity is present, the central order office is usually responsible for shipments all the way to installation site or customer warehouse.

The inbound flow comes to the production sites from a large number of countries where the main flows are from Sweden, Slovakia, China, Denmark, Germany and Italy. The ownership of inbound flow is with each production unit.

The repair and spare part flow is managed by Global Services together with the Market Units, where Global Services has responsibility for the regional warehouses that supply the local warehouses with spare parts and depending on region also responsible for local distribution.

### 3.2.2 Ericsson Distribution Logistics Network

This global distribution network (Ericsson Distribution Logistics, EDL) is the basis of the Ericsson distribution organization. The network strategy was founded in 2007 and has developed over the last years to become an accepted and prominent network structure within Ericsson. The facilitators of this network and the Head of EDL are based at a central unit (Central Distribution Logistics, CDL), hosted in Business Unit Networks at Ericsson AB in Sweden. The CDL organization has global responsibility for distribution strategies, processes and tools, targets, and governance. Furthermore, subject matter experts and project managers are part of the organization.

The central order office in Sweden also has a Transport Management function that is operationally responsible for outbound shipments. The Transport management
department reports direct to Head of Distribution. Furthermore, also part of the central order office, and closely connected to the CDL organization, are the Regional Distribution Managers (RDMs) with the responsibility to follow up on spend and performance in their regions as well as support the EDL network in their region.

Tied to the CDL-organization is also a central sourcing organization responsible for sourcing of global distribution and warehouse activities, such as international outbound transports, inbound distribution, and regional and central warehousing. The sourcing organization also supports local companies in tenders and provides standard contracts to those units requiring it. The central sourcing organization cooperates with the local sourcing organizations, which are final decision makers when it comes to selection of local suppliers and what to outsource or keep in-house.

As for the Market Units, they all have a Market Distribution Manager (MDM) as well as a MU Logistics sourcing organization and these functions are also part of the EDL network. The MDM network is coordinated by CDL and the MU Logistics sourcing network by the central sourcing organization.

Network participants from the Ericsson production sites are the Inbound Distribution Managers (IDMs), who are participants in an IDM network coordinated by CDL. Representatives from Global Service distribution organization, located centrally in Sweden are also participating in the EDL network.

Apart from the participants mentioned there are other participants in the network and are yet others are on their way to join the network, for example Global Trade, distribution managers in the regional spare part warehouses, legal, accounts payable etc.
3.2.3 Ericsson and their Logistics Providers

Ericsson has five Global Distribution Service Providers (DSPs). The global DSPs have Global Service Agreements with Ericsson, are always invited to all tender processes if there presence is sufficient in the market in question, and an agreed governance model is applied on the relationship between Ericsson and the DSP. The General Service Agreements (GSA) are owned by the central logistics sourcing department but all Ericsson entities can apply local agreement (Specific Service Agreements) to the GSA for their local business with the DSP.

1999 Ericsson AB made the decision to outsource the handling of outbound and inbound international transportation. The three DSPs awarded the business got at least one region each and were organized into three Control Towers (CTs), the Ericsson Control Tower concept was one of the first CT concepts implemented. Activities
outsourced were: order management for distribution, forwarding, logistics development, logistics concept management, 2nd tier management and cost control. The reason for outsourcing was to focus on core competences and to cut costs; at the time Ericsson did not consider Distribution & Warehousing a core competence. In late 2008 the work to re-take the control over operational distribution begun and a Transport Management department is now implemented which is controlling most of the operational outbound volumes and more will come. In the implementation a decision on taking back control of some of the activities once outsourced has been taken, and this will be implemented during 2009.

Due to the DSP split per region, there has been almost no competition between the DSPs. Due to the merger and acquisition trends in the Logistics industry three initial DSPs became two in 2005. At the same time a new logistics sourcing strategy was formed where it was decided that all Ericsson outbound volumes should go to tender (market per market). Due to this, between 2008 and 2009 three new DSPs have been introduced and are now managing part of the outbound distribution for Ericsson.

The DSP relationship and business model for the local distribution and warehousing differs from market to market. In most markets warehouse management and distribution are outsourced but logistics planning and development are kept in-house. Depending on size and market characteristics there are different Logistics Providers for different flows, needs, and customers and in addition the number of local DSPs differs from market to market.

For the Repair & Spare parts, the regional warehouses have the final decision of which DSP to use but services are mainly procured by the global DSPs. The agreements vary depending on regional warehouse but a uniformed structure is being worked out.

Independent on which area, there are minimum demands that shall be fulfilled when choosing a new DSP. Even if all DSPs currently do not fulfill these minimum requirements (due to local procurements with relationships as basis), logistics sourcing
is getting more involved also with the local activities and therefore these minimum requirements will be fulfilled for new implemented DSPs.

Generally, regarding distribution, Ericsson is in the phase of taking in-house ownership over distribution. The earlier wave of outsourcing has almost passed and Ericsson is in many areas looking into how to handle operative distribution as well as logistics development themselves. This will have a great impact on today’s organization and working methods as more qualified logistics people will be needed, enhanced knowledge will be a prerequisite for taking on earlier outsourced activities, and increased cooperation between distribution units to secure spreading of best practice.

3.2.4 Current Challenges

Ericsson, like all other companies, is always faces some challenges that put specific demands on their organization and business. The specific challenges that EDL currently stands before are:

Project Driven, shifting volumes
As already stated the volatility in the volumes is high and forecasts and predictions are therefore hard to make which puts pressure on the responsiveness and risks leading to express solutions.

Regionalization
The last years Ericsson has started regionalizing the supply chain, where factories outside of Sweden are starting to supply the nearby countries. This is a deliberate strategy to cut cost in the supply chain and the amount of goods supplied from nearby factories will increase the coming years. Also a number of regional hubs are set up to serve as entry point for low-value products, and regionally sourced material as well as to store high runner equipment for the LCs/BOs. This means a shift in volumes in the supply chain and provides new challenges.
Increasing number of third party vendors
Ericsson is moving away from being a production company to a service company and is using an increasing number of third party vendors to build a strong product portfolio. As in the case of regionalization, this challenges the current distribution set-up as volumes will move during the coming years and new vendors have to be integrated to the Ericsson supply chain.

Increasing demands on cost
The cost focus on Ericsson is increasing and for the coming years distribution has an ambitious cost avoidance target which means that new solutions have to be invented and implemented, planning capabilities has to be strengthened, and more goods has to be transported on surface than before.

Environment
Ericsson has an extensive environmental approach and has started to set targets for pollution in transport. At the same time more and more customers are starting to get interested in environmentally friendly ways of transporting. This is of course a good thing but does not always match the demands on responsiveness and short lead times due to fluctuations and volatility in volumes.

3.2.5 International strategy for Ericsson Distribution Logistics
In section 2.3.1, Jones (1993) brought up classifications of international strategies and there different characteristics. Ericsson Distribution Logistics organization can be considered as pursuing the multidomestic organizational strategy referred to in 2.3.1., but are on their way to become an organization with a transnational strategy. The multidomestic strategy has a fairly flat organizational structure, decentralized authority and has minor need of integrating roles, process integration, and a strong organizational culture. However, as the Ericsson distribution organization moves toward a transnational strategy, there will demands on a higher level of integration. A transnational strategy is centralized and decentralized simultaneously, there will be a need for extensive process integration and a well embraced organizational culture, and there will also be a need for
joint taskforces and integrating roles (Jones 1993). This is consistent with the ongoing activities at EDL, the development of an EDL culture, the network organization and integration thereof. Therefore, EDL can be considered to be on the right track developing the organization towards the transnational organizational strategy.
3.3 **Key components applied to Ericsson Distribution Logistics**

In section 2.4.2 a number of components were listed, to be successful in managing a global distribution organization in an agile environment. In this section, these components are applied to the work and development in EDL to get an indication the areas where EDL is on the right track, where it can improve, and to give recommendations on what to improve.

3.3.1 Market sensitivity

According to Kidd (1994), market sensitivity is a key area to be able to reach agility and Waters (2006) argued for close customer relations at all levels as well as a frequent communication to reach market sensitivity. The level of market sensitivity at EDL can be improved. The Market Distribution Management (MDM) network, including Regional Distribution Management (RDM) as well as EDL management can be considered as being fairly market sensitive but for other parts of EDL, and especially CDL, market sensitivity is limited. This could be due to the fact that central functions usually are further from the actual business. The information about customer needs, changes in demands, new suppliers, or changes in regulations, etc., can be found within EDL, and especially with the MDMs and functions closely connected to them, but is not transparent throughout the EDL organization but stays within the MDM and RDM network. The individual responsibility is of course important – that everyone working within distribution keeps track of news and changes that might affect their business, however no natural way or forum for passing on this information is in place today and CDL representatives seldom have natural contacts with EDL market representatives like the MDMs.

Regarding new Ericsson product introduction, EDL has occasionally been invited to discuss suppliability of new products. However, to be market sensitive an organization
can not sit and await invitations to discussing but has to be proactive and make sure that it is a part of the supplyability discussions in an early stage.

Even for news in the distribution area, the market sensitivity could be improved. News in the logistics industry usually reaches EDL via the DSP, or via the business press. However there is no systematically way to capture this information, or to spread it.

**Recommendations:**

A suggestion would be to establish a Business Intelligence function at EDL with the purpose to do research about new contracts, suppliers, change in market conditions, changes in laws and regulations that might affect distribution, news within the logistics business, and even competitors’ distribution set-ups. This information should be collected centrally and a databank and should be accessible for everyone. To have a total picture, the data bank should also include specifics about culture, laws and regulations, local standards, customer needs etc. Furthermore, to connect CDL and other central parts of EDL with the MDMs or other local representatives close to the customer will increase the market sensitivity and this will help EDL overcoming the challenge with shifting volumes as the organization will then have first hand information of volumes to come, contracts signed, etc. To gain product knowledge and be able to influence on the design and sourcing of products, proactivity to secure participation in supplyability forums is a necessity. The above recommendations will bring CDL closer to actual demands so that the strategies and guidelines are connected to actual requirements and increase the customer and industry knowledge of all EDL participants. Furthermore it will secure that product knowledge is incorporated into distribution, but also that distribution knowledge is incorporate into product introduction.

### 3.3.2 Segmentation

Christopher, Lowson and Peck (2004) argues that segmentation has to be performed to find the areas where agile capabilities are needed and Childerhouse and Towill (2000) state that agile principles shall be applied only to innovative, unpredictable demands. Furthermore, Collin & Lorentzin (2006) stress that the different segments shall have
different operational strategies which shall stipulate how the organization and resources shall work to reach agility. By segmenting high spend of distribution is focused where needed and environmental friendly solutions can be implemented in segments where it is feasible.

For BU outbound, all flows are managed in the same format with almost exactly the same processes, deadlines and demands on performance. There are of course deviations in form of express shipment and some specific areas kept outside the ordinary process but the great mass is handled in one way and according to the same demands. The inbound flow differs depending on the supplier providing Ericsson with the goods and of the production site receiving it. The local flows are more segmented and adjusted to suit customer and country need and the same goes for the Global Services flows. Active segmentation within Ericsson distribution is limited. The segmentation that is in place currently is mainly due to separation of business units, markets or customers, and is in some cases an active choice but not systematic or thought through in a broader context. Furthermore, as there is no segmentation, neither are there any operational strategies in place for the different segments.

**Recommendations:**

As pointed out earlier, not all activities shall be adjusted to the agile environment there will be flows, products and processes that should be standardized and where only minimal agile capabilities are needed. For Ericsson these standard activities could be for example replenishment flows, the standard delivery process to deliver RBS-products to Market Unit warehouses, and stocktaking. Areas where agile capabilities could be implemented are in the replacement flows, customer projects that have special demands, customers that usually have changing demands and/or site deliveries, as well as projects where supply is unreliable due to characteristics of a certain vendor, lead-times, component shortage, etc. The suggested segments are a fairly natural and to tie clear demands to them and treating them as different segments will focus spend where it is needed and provide service according to actual service required.
3.3.3 Process integration

Process integration was pointed out by Wyland (2008), Frazelle (2001), Tyndall, Gopal, Partsch and Kamauff (1998), as well as by Hoek, Christopher and Harrison (2001) as crucial in becoming agile and succeeding in logistics. The process integration between EDL and other units is extensive on the IT side, but less extensive in the non IT connected processes. Integration between the functions providing EDL with input is, with only a few exceptions, through EDI or within the same system. Working methods are well established and even though the new Transport Management team has just been implemented, the communication between the functions it is closely connected to is good, and therefore process integration will not be an issue. Also the process integration towards the Global DSPs is of high standard, especially on the outbound flow. However, there is not a high level of process integration between the different EDL functions. The reason for this is probably that EDL as an organization is fairly new and the focus for CDL has been on the international flow and the relationship within the own business unit, and not so much the connections between BNET and other units. Also, the somewhat scattered organization can be one reason of poor integration. One other area where process integration is at times limited is between certain Local Companies and the DSPs handling the local warehouses and distribution. No common warehouse management system exists and usually Ericsson uses the LP’s systems to maintain visibility and handle transaction and in some cases only phone, fax, regular mail, and Excel sheets are used to send delivery requests, get information about stock level or receive invoices. However, a new warehouse management system is now being developed by Ericsson to close that process gap.

**Recommendations:**

The level of process integration between EDL and other functions is, in some areas, very high. However there are important interfaces within EDL where integration is limited. Therefore, to improve the process integration, EDL could engage in internal EDL process integration between BNET outbound and local inbound and look at synergies and possible process integration between BNET and BUGS. Finding synergies will have an impact on the cost as it creates possibility of savings.
3.3.4 Tight relationship with Logistics Providers

Due to the diverse model of DSP relationships, and the large number of local providers, this section will focus on the Global DSP relationship only.

The literature stated that a close relationship via engagement in collaboration is the way to success in logistics and agility (Tyndall, Gopal, Partsch & Kamauff, 1998, Christopher, 2000, and Lee 2004). The current sourcing strategy of EDL advocates a “Competitive Collaboration” which is consistent with the theories. However, the EDL collaboration model is not really consistent with models described in the theories; there are some similarities but also some distinctive differences. The similarities are that EDL states that DSPs shall be treated with respect, they should be (and are) process integrated in operational business via EDI links to Ericsson, a clear governance structure exists and measurements shall be shared. The differences, however, are that risks are not shared equally (for example Ericsson never guarantees any volumes), the cooperation model is developed solely by Ericsson, limited information is shared between parties (especially on tactical and operational level), trust could be further developed, and the exchange in reviews is mainly performance and cost based and not focusing on development. Furthermore DSPs are still acting in a competitive environment together with the other DSPs, which is not totally contradicting the literature but Schönsleben (2000) argues that the development of long-term trust, that is the basis of collaboration, generally rules out competition. However, in the case of the international transport for Ericsson, the competition has been proven successfully and has resulted in decreased rates, why a certain level of competition should be remained.

In spite of a change in business model, BNET is still buying the “Control Tower services” from their DSPs for the international transport, which is almost identical regardless of DSP. This has led to that some DSPs have had to expand their product portfolio to be able to serve Ericsson.
The DSP set up for BUGS can not be considered as optimal. However, recently a close cooperation with central sourcing has been established and the distribution sourcing commodity strategies and possibilities thereof are now discussed with BUGS to find next step.

For local business, even if the relationships and business models with the local DSPs vary from country to country and in some cases also from DSP to DSP, there is a high degree of personal relations instead of business relations. In many cases there are not even agreements in place and the large number of DSPs in some markets makes collaboration hard to achieve.

Recommendations:
To be more collaborative, Ericsson should engage in closer relationships with their DSPs. There is a lack of trust, information sharing, joint development, and risk sharing and to succeed in collaboration, these are the components that are pointed out as the most important to master. Even if Ericsson is generally in the phase of changing their DSP relationship towards seeing the DSP more as a forwarder than an outsourced Ericsson unit, tight cooperation is still needed.

Furthermore, as being “best in all areas all of the time” usually never applies to any one company, therefore service/commodity/market should be procured from the best in class for that specific service/commodity/market. This tie in with the segmentation of services/flows/customers discussed in section 3.3.2, that to become successful, the outcome of the segmentation performed by Ericsson shall be matched to the right DSP and the right capabilities per segment at that DSP. It would be to Ericsson’s advantage to discuss segmentation together with the DSPs who possess the knowledge needed to set the right capabilities for each segment. Having a tight relationship with the DSPs and share information will give Ericsson support in handling the high fluctuations of volumes and lower costs by cooperating to find cost efficient transportation set-ups.
3.3.5 Networking

Hoek and Christopher (2001), Jones (1997), Daniels (1993), and Lemoine and Dagnaes (2003) all stress the importance of network organization to be agile and to be successful managing global organizations. The network organization at EDL is successful. More and more contacts are taken and more information than ever is floating between different distribution units. However, as already mentioned the vast majority of CDL staff, and staff in other central functions, do not have a natural contact with other distribution units, which in some cases is alarming as global processes, strategies, and measurements are managed and developed centrally.

Recommendations:

It is recommended that the active networking (forums, councils etc) is extended to include all functions within CDL and also BUGS, and the Transport Management function. Extending the active networking can increase quality of processes, strategies and guidelines, would improve the perception of CDL as a central competence centre, increase communication within EDL, and also give more support to the day-to-day work of the MDMs. A deeper engagement in the network from all functions will have a cost impact as decisions will be taken on the basis of real needs, development will be made with the right requirements (correct the first time) and activities costs saving activities will be shared more easily.

3.3.6 Communication

Regarding communication as a mean to manage global organization, succeed in distribution, and becoming agile, the literature is in agreement. Christopher, Lowson and Peck (2004), argues that agile supply chains are information based and Lee (2004) stresses the importance of extensive information flows to gain agility. Jones (1993) and Daniels (1993) stress the importance of communication to manage a global organization and Frazelle (2001) states that information is crucial for logistics success.
As global responsible for distribution, CDL works with different communication channels to reach its members and stakeholders: monthly newsletters, an updated website, and visualizations of goals and performance. Communication between the different EDL units is largely based on personal contacts but as the network is getting wider and deeper, structured communication is increasing. In the communication with stakeholders to the distribution network, the level of communication differs from market to market and unit to unit. To facilitate communication, Ericsson has a chat/share system that is used in conference calls or instant messaging, an extensive intranet and a shared document system for all units. However the communication between EDL functions can not be considered satisfying. One part of the problem is the large number of units having different responsibilities, another is that the network organization still has not gained full force, and a third reason is that only some individuals actively seek information, something that was stressed as important by Daniels (1993).

As always, communication is the hardest part to succeed in. Basically, EDL is on the right track, at least when it comes to push out information in the network, however more communication between EDL functions is needed.

Recommendations:
The accomplishment of more cross-unit information can be linked to the networking: when people are active in network organizations the information is spread more naturally. Therefore, extending the network activities to include more EDL functions as well as getting people familiar with each other by for example having informal gatherings will facilitate the information flow. Furthermore, all individuals have to take responsibility for searching and interpreting information needed for their specific areas of interest, EDL management can facilitate this process by proclaiming that information searching is the responsibility of all members of the EDL organization, and encouraging working time to be used for this purpose. This will be crucial to be able to engage in cost savings activities on a global basis.
3.3.7 Central Planning and Local responsiveness

As stated before, EDL has central units handling global strategies, target, processes, and sourcing, and local units doing the actual execution (in this sense, also the Transport Management and the Global Services operations are also seen as “local”, even though located centrally in Sweden). This is a deliberate strategy for EDL and according to Gopal, Partsch and Kamauff (2001) as well as Lemoine and Dagnaes (2003) it is also the way to become agile and exceed in distribution. This is consistent with Daniels (1993) that ownership of costs and activities has to be placed at the actual business. Historically, CDL has been focusing on the business units flows and the lion’s share of the resources is still occupied in designing solutions, implementing methods and following up on BNET flows. Even if there is a tendency to focus more on the MUs and finding synergies between BNET and BUGS, the main focus for CDL and central sourcing organization is still on the BNET flows.

The level of local responsiveness can be considered to be fairly high. However, the way any last-minutes changes are handled can not be considered as structured or planned for, since contingency plans and routines seldom are in place. Furthermore, the lack of written agreements, and/or knowledge of agreements, and the large number of DSPs can decrease the possibility of being responsive.

Recommendations:
For EDL to be successful in managing the mix of centralization/decentralization all central functions have to focus more on supporting local needs. EDL could develop routines and standard ways of workings for the local units, and support with measurements and statistics. Furthermore central sourcing could engage more in local tenders, renegotiations, and supporting local EDL representatives with standard agreements and in sharing best practice of DSP business models.
3.3.8 Organizational culture

Both Daniels (1993) and Jones (1997) pointed out organizational culture as a necessity to succeed in managing global organizations. Ericsson has a strong organizational culture, where especially the values are highly respected (professionalism, respect, and perseverance). In the last few years EDL has built up its own organizational culture, though still connected to the Ericsson culture. The culture has as yet not been spread much further than to CDL, Transport Management, the RDMs, and some of the MDMs, mainly due to strong local cultures in the functions where network participants are employed but also due to the fairly new EDL network.

Recommendations:
EDL has an organizational culture that brings the network together but to secure the spreading of values, beliefs, attitudes and expectations to all individuals. However, due to the fairly new network and numerous functional units involved in the network, these values, beliefs and expectations should be repeatedly shared and referred to in network forums until they are embraced by all individuals. EDL could also engage more in resource sharing/transfer as the sharing/transfer of resources will facilitate dissemination of the organizational culture (see below).

3.3.9 Knowledge & Resource transfer

The way to spread knowledge, lower barriers between functions, and reached economies of scale is the transfer and sharing of resources (Jones, 1997, and Daniels, 1993) Knowledge and resource sharing has a bearing on some of the challenges EDL is facing; due to the project driven environment, there will be ups and downs in different markets/functions and by sharing of resources costs can be cut. Furthermore, cost savings can be made by using experienced persons to similar projects in different markets/functions. Resource sharing within the EDL network is limited today. Project resources are sometimes shared between projects but usually the distribution personnel in one market or within CDL only acts within their own department/unit. However, the idea of sharing resources is emerging. Resource sharing between EDL and other units
is limited on both the BU side and on the MU side. As stated earlier, a close personal connection facilitates networking, communication and the spreading of organizational culture. One way to achieving this is the sharing and transfer of resources.

**Recommendations**

As CDL has a staff reporting to Head of Distribution, the smoothest way to start engaging in resource sharing is to use CDL-resources in some of the numerous projects ongoing within EDL or in connecting functions where distribution knowledge is needed. If this is successful, other functions that include EDL resources will be less reluctant in sharing their own resources. For resource transfer, a mapping of resource and knowledge needs in all EDL units for the coming period, as well as the mapping of personnel willing to transfer, would visualize the needs and speed up the engagement in resource transfer. Even if resource sharing and transfer is one of the best ways to secure to knowledge sharing, there are other ways such as sharing best practises, which is discussed in 3.3.12.

### 3.3.10 Measurements

Waters (2206), Frazelle (2001) and van Hoek, Christopher and Harrison (2001) argued for measurements, where Frazell promoted alignment of measurements between functions and scoreboards as a way to success and Waters stated that correct measurements has to be used, that actually are aligned with customer needs. Measurements are crucial for Ericsson to take control over their costs, performance, and to be aware of the environmental impact. Included in CDL is a separate function responsible for global measurements for distribution and warehousing. This function provides measurements to all EDL-related functions and supports in developing new if needed. All functions within CDL, as well as other central functions has there own scorecard which are followed up on a monthly basis. However, all functions within EDL do not have a strict way of measuring warehouse and distribution activities. Even if there is increasing focus on local activities, global measurements and follow up are still mainly focused on outbound distribution and for the local business there is a big difference in how measurements and targets are followed up. Furthermore, local
measurements are not always collected at CDL for global performance consolidation. One effect this has had is sub-optimization. For example, cost avoidance measured for outbound distribution has led to agreements with DSPs on long lead-time to get better rates, this in turn has lead to the need for warehouses locally when promised lead-time to customer is shorter than total production and distribution lead time. Furthermore, some measurements, like “one time delivery” is focused on the delivery precision not from required delivery day from customer, but from confirmed delivery day to customer which means that this measurement is not aligned to actual customer needs but to the Ericsson ability to deliver due for example production constraints, component shortage, etc.

**Recommendations:**
Increased focus on local business measurements and follow up on performance will provide a total picture on Ericsson performance and insight of in which areas support is needed. Aligning measurements across units to avoid sub-optimization should be an important focus area for the EDL network generally and for CDL specifically. Furthermore, CDL and EDL shall secure that all measurements is according to customer needs, not organizational capabilities.

### 3.3.11 Reconfigurable resources

Kidd (1994), Teece, Pisano & Shuen (1997), and Yusuf, Sarhadi & Gunasekaran (1999) all argued for the need for reconfigurable resources to reach agility. Requirements will not be the same tomorrow and therefore resources has to learn and keep on learning to keep up with changes in markets and technology. Reconfiguration of resources is consistent with the cost challenge Ericsson is facing, to be up to date and have the correct knowledge is crucial to design the correct distribution solutions. Generally, Ericsson is good in offering educations and promoting learning and the same goes for EDL, even if it differs from function to function. At CDL there is a plan for the skills/knowledge that CDL should possess and recruitments are ongoing to fill the gaps. However, there is no clear plan for how reconfiguration is to be taken forward, which knowledge individuals within EDL have to posses the coming period, what institutions
offering educations that could support, where resources will be needed, and which resources than needs to be reconfigurable. Moreover and as earlier stated, the sharing of resources and the resource transfer within EDL is limited why the reconfiguration by “learning by doing” also is limited.

Recommendations:
With information from the Business Intelligence function (mentioned above) as basis, establish a knowledge and resource reconfiguration plan that looks further ahead (mid term and long term) to secure that EDL is prepared when changes occurs, when focus moves to other areas than currently, or when the industry change direction. The plan should include current resources, knowledge mapping, future needs, gap analysis, and action plan.

3.3.12 Use of best practice
The use of best practice is according to Teece, Pisano & Shuen (1997) and Yusuf, Sarhadi & Gunasekaran (1999) an important aspect to secure agility. Furthermore Daniels (1993) stresses sharing of best practice as a way to manage a global organization. The organization has to be both willing to share and willing to adopt. Best practice sharing is essential in the high cost focus environment Ericsson is acting in. Within EDL sharing of best practice is promoted and recently a forum for sharing of best practice between RDMs has been established as well as a website for the MDMs where best practice initiatives are shared. These activities should however be spread throughout the network to gain effect.

Recommendations:
Extend the sharing of best practice to other parts of EDL and bringing up best practice initiatives at team meetings etc. Even if all units within EDL do not have similar business, sharing of best practice usually brings innovation to the team. Remind the teams that sharing and adopting is important to the organization and facilitate for realization of best practice initiatives by supporting with resources and financial means.
Best practice—information should also be visible at EDL website (or equivalent) where every member of EDL can access it.

### 3.3.13 Tools to support

There are several ways to support agility, whereof Collin and Lorenzin (2006), Min & Eom (1994), and also Teece, Pisano and Shuen (1997) brings up business intelligence. Collin and Lorenzin (2006) together with (Tyndall, Gopal, Partsch & Kamauff 1998) stress the importance of investing in IT technology throughout the supply chain, Power and Sohal (2001) stresses continual improvement methodologies, and Lee (2004) argues for contingency plans. The contingency plans that are currently in place within EDL usually specifying actions to be taken in case of IT disruptions, fires, etc., but do not stipulate how to act in an agility sense. The IT tools for distribution and warehousing differs by market but possibilities are there and as stated before, a new warehouse management system are being built. Furthermore, IT tools for facilitation of information, and sharing of information is in place with common document systems, chats, and a conference call system where screens can be shared. However, as stated before – no business/market intelligence system exists, information are shared case by case but in very limited extent. Moreover there are limited use of continuously improvement methodologies, this exist basically only I some of the forums in the RDM/MDM network and are not introduced to many other parts of EDL.

**Recommendations:**

Each service segment should have an operational strategy. These should stipulate demands (lead-time demands for different flows, call-off times, quality, resource demands and availability), critical factors for success (for example, how documentation is presented, correct contact persons, etc.), and how to secure that these are met. Also, targets should be stated for each segment as there can be differences in demands of delivery accuracy, cost, delivery quality, etc., per segment. If needed, cross functional task-force teams can be established for segments where disruptions usually occur. In the contingency plans that are in place today, sections that specify how to act in an agility sense should be added and for those units where there are no contingency plans,
such plans should be developed and implemented. Regarding the use of continual improvement methodologies, these should expand to include a larger part of EDL. Furthermore, as already stated; a business/market intelligence function should be established which will give EDL all information needed to make qualified decisions, to gain higher responsiveness and to work on a global level.

### 3.3.14 Managing different cultures

According to Dubrin (2007), cultural intelligence is vital when working with other cultures and Hofstede (1991) points out the differences that can derive from cultures and also stresses the importance of being aware of these. Ericsson is generally very good in handling cultural differences. There is a high acceptance of people from other cultures, with different opinions, and with different backgrounds and discrimination due to culture is not accepted in any of the countries or offices. To support cultural awareness people transferred to other countries are offered cultural educations and people are promoted to have teams with mixed cultures to use the benefits these mixes brings. Furthermore, when Ericsson starts up new businesses, manufactory facilities, or local companies the local culture is very much incorporated in the business. There will be Swedes in management positions starting up the business but the idea is to educate local staff to take over and drive the business and by that get more aligned with local cultures and getting closer to local customers and suppliers. EDL is no different. The network consists of people from many cultures which enhance the cultural awareness and local network participants are usually natives. However, as the network is expanding and tighter relationships are built there will be an increased need of knowledge and information of other cultures and even if cultural awareness is something natural in the organization, no structured way of acquiring this knowledge and information exists.

**Recommendations**

As stated EDL and Ericsson is considered to be professional in handling different cultures so the recommendation this thesis brings is to continue to do so and use means to facilitate the process by sharing and transfer resources. Furthermore, management should encourage staff to set time aside to increase their personal cultural knowledge.
### 3.3.15 Sub-section summary

Table 3.1 summarizes EDL current key component status and recommendations given.

<table>
<thead>
<tr>
<th>EDL key component status</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market sensitivity &amp; Customer knowledge</strong></td>
<td>• Introduce Business Intelligence function</td>
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<tr>
<td></td>
<td>• Engage larger parts of CDL in local activities</td>
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<tr>
<td><strong>Segmentation</strong></td>
<td>• Active segmentation on flows, at least on a high level</td>
</tr>
<tr>
<td><strong>Process integration</strong></td>
<td>• Looking into synergies and integration between BUs</td>
</tr>
<tr>
<td></td>
<td>• Enhance process integration with BU and MU distribution</td>
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<tr>
<td><strong>Tight LP relationship</strong></td>
<td>• Share more information</td>
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<tr>
<td></td>
<td>• Working on building up trust</td>
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<tr>
<td></td>
<td>• Engage in joint development</td>
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<tr>
<td></td>
<td>• Segmentation of DSPs</td>
</tr>
<tr>
<td><strong>Network organization</strong></td>
<td>• Engage larger parts of CDL and EDL in active networking</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>• Engage larger parts of CDL and EDL in active networking</td>
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<td></td>
<td>• Management to encourage spending time on communication</td>
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<tr>
<td><strong>Central planning &amp; Global responsiveness</strong></td>
<td>• More CDL focus on local needs</td>
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<td></td>
<td>• Central sourcing to engage locally</td>
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<tr>
<td><strong>Organizational Culture</strong></td>
<td>• Repeatedly communicating of values and expectations</td>
</tr>
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<td></td>
<td>• Engage in resource sharing/transfer</td>
</tr>
<tr>
<td><strong>Knowledge &amp; Resource transfer</strong></td>
<td>• Engage in resource sharing/transfer</td>
</tr>
<tr>
<td></td>
<td>• Map needs and potential candidates</td>
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<tr>
<td><strong>Measurement</strong></td>
<td>• Secure alignments of measurements</td>
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<tr>
<td></td>
<td>• Measure against real needs</td>
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<tr>
<td></td>
<td>• Engage more in local measuring, targets and follow up</td>
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<tr>
<td><strong>Reconfigurable resources</strong></td>
<td>• Business Intelligence system</td>
</tr>
<tr>
<td></td>
<td>• Reconfiguration plan</td>
</tr>
<tr>
<td><strong>Use of best practice</strong></td>
<td>• Visualize the initiatives</td>
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<tr>
<td></td>
<td>• Sharing best practices in team meetings</td>
</tr>
<tr>
<td><strong>Tool to support</strong></td>
<td>• Operational strategies per segment</td>
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<tr>
<td></td>
<td>• Establish agile contingency plans</td>
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<tr>
<td></td>
<td>• Business Intelligence system</td>
</tr>
<tr>
<td><strong>Managing cultures</strong></td>
<td>• Resource transfer/sharing</td>
</tr>
<tr>
<td></td>
<td>• Management to encourage cultural training</td>
</tr>
</tbody>
</table>

Table 3.1: EDL key component status and recommended improvements
In the literature study, several areas of importance per theoretical subject were found. These areas were the areas considered as essential to handle or engage in to be successful in Distribution organizations, agility, and in managing global organizations. Together these areas of importance create the key components vital to excel in to be successful in managing a global distribution organization in an agile environment.

The research questions that supported this research were:

- **Research Question 1:** What extent of centralization/decentralization is optimal to manage a global distribution organization in an agile environment?
- **Research Question 2:** In an agile environment, is it crucial to handle logistics activities in-house to keep a high level of control and responsiveness?
- **Research question 3:** What factors, characteristics and activities are important to be able to successfully manage a global distribution organization, acting in an agile environment?

Out from the literature and discussions thereof the following answers can be given to the research questions:

**Answer to Research question 1:**
According to the theories for agility and global organizations a mix between central guidelines, planning, and strategies and regional/local operations and responsiveness is the most successful way to manage an agile, global distribution organization. However, the level of centralization and decentralization of a distribution organization is very much dependant on the organizational strategy but also on the corporate strategy, and therefore a definite answer not can be given to the question.
Answer to Research question 2:
In the logistics theories studied contradictions were found on this subject. Furthermore, the complexity of this issue is very broad as the guideline of whether or not to outsource is more connected to the nature of the organization, where the crucial competence is, the degree of competence compared to needs, which activities that are tightly connected to others and why. Therefore a generic answer can not be given but has to be based on an examination case-by-case.

Answer to Research question 3: The key components found were: being market sensitive and having customer knowledge, engage in segmentation, excel in process integration, engage in networking, having a tight relationship with LPs, communicating, having central planning and local responsiveness, having a strong organizational culture, sharing resources, engage in measurements, reconfiguring resources, sharing best practices, managing cultures, and using the tools to facilitate agility, distribution excellence and managing global organizations.

Ericsson is a corporation that are acting in an agile environment with high fluctuation in volumes, constantly changing customer demands, and fast changing technology. The distribution organization at Ericsson is a global network consisted of numerous functions spread on several Market Units and Business Units and individuals on several levels within the organization.

The key components found in literature all turned out to be applicable on Ericsson Distribution organization. The application of the key components on Ericson was analyzed and a current situation was found together with several areas of improvement.

Ericsson Distribution Logistics is considered to be on the right path to successfully manage the global organization and to gain agility. EDL is building a strong global network that is getting wider and stronger day by day. A central unit in place handling strategies, processes, targets and governance, and the local units are generally responsive and have market sensitivity. EDL has developed a positive organizational
culture that will bring the network together as one organization. The process integration with other units is of high quality and so is the information out to the network.

However there are areas of improvements. More central EDL representatives should be involved in the active network to spread knowledge and support local initiatives. The communication and process integration between network functions should increase and the central units should become more involved in local initiatives. EDL also should engage in the sharing and transfer of resources between EDL functions and functions closely related to distribution as well as reconfiguration of resources to meet new requirements. The business model with the Global DSPs should be revisited if a true collaborative relationship and excellence in logistics and agility is truly wanted by Ericsson. Furthermore, to reach agility, segmentation has to be performed in all units and flows.

Even if there are some gaps, some small steps like inviting more EDL functions to network team forums and starting to share resources, will create positive effects in other areas such as increased communication, knowledge spreading and the spreading of the EDL organizational culture. As this thesis shows, communication, spreading of knowledge and building relationships is the basis in almost all elements, or as the CEO of Ericsson states:

“No organization, chart, document or directive will ever replace the values and the attitudes of the people in an organization. Our commitment and ability to cooperate will determine whether we will achieve our goals and strengthen our leading position.”
5 CHAPTER FIVE - REFERENCES


Wyland B., (2008). *No Excuses! Why optimizing transport management is Within the reach of every company*, Aberdeen group