Understanding Ericsson- China’s Order Management Department Challenges: a Case Study

Master's Thesis within Business Administration

Authors: Henrique Luiz Mayer Nunes; Jing Ha

Tutor: Johan Larsson

Helgi- Valur Fridrikson

Jönköping August, 2010
Acknowledgement

First, before the beginning the discussion about what were the motifs that led the authors toward the stated research problem and the conclusions from the study, important is to thank those who have been part of this study adventure abroad.

Personally, a very generous acknowledgement to the eternal and never-ending support provided by our parents, whom have always supported us in every sense of the word. Our gratitude to them is never ending.

Further the enormous admiration by Professor Johan Larsson for his talent and willingness in helping, been always available towards discussions and enhancement of our ideas whenever necessary.

Of extreme importance is to thank those who have participated in this study and have made possible the development of this study, specifically the member of Ericsson- China’s Order Management department; thank you for your patience in collaborating with us for this study to be developed.

Finally, a special thank to the new friendships developed and good times enjoyed through this study period in Sweden, which has been an incredible life experience.
Abstract

Master thesis within Business Administration

Title: Understanding Ericsson- China’s Order Management Department Challenges: A Case Study

Authors: Mayer Nunes, Henrique Luiz Ha, Jing

Tutors: Larsson, Johan Fridrikson, Helgi Valur

Date: 2010-08-23

Subject: Supply chain management, logistics, order management, qualitative research

Problem discussion: According to Coyle, Bardi, & Langley Jr., 2003, companies have always struggled in dealing properly with its outbound-to-customer logistics side, given the importance of such. In this case specifically, the investigation of the functions and processes employed by the Order Management department within Ericsson’s Chinese operations was the starting point for understanding what are the relevant problems existing; the reasons, probable impacts, possible opportunities for improvement as well as suggestions in doing so. Based on such premises, the authors have gone through these “challenges” to try to understand how in the case of Ericsson the company have or is dealing with such issues.

Purpose: The purpose of this thesis is to provide a general overview of the department’s existing processes, functions, detected problems and finally suggestions for improvements toward such problems.

Research Method: The Case Study approach was chosen by the authors given the characteristics of this study in pursuing the objectives stated, emphasized by the fact that the authors observed the current situation within an Ericsson’s department and the company’s perceptions. Coupled with this, the qualitative methods combined with a small portion of quantitative perspective have been used in order to provide the necessary research structure, followed by questionnaires and an interview as secondary data.

Conclusion: The conducted research was able to detect that within the department the two most relevant problems considering the employees’ and manager’s perspective is related consequently to the ERP system currently employed and inexperience by the department’s personnel in conducting their tasks. Further the authors point out suggestions for improving such issues.
# Table of Contents

1 **Introduction** ................................................................. 1  
   1.1 Problem discussion ..................................................... 1  
   1.2 Purpose ........................................................................ 3  
   1.3 Research question ...................................................... 3  

2 **Frame of Reference** .............................................................. 5  
   2.1 Overview of Frame of Reference ..................................... 5  
   2.2 Supply chain management ............................................. 6  
   2.3 Logistics ..................................................................... 8  
   2.4 The outbound logistics flow .......................................... 9  
   2.5 Demand management .................................................. 10  
   2.5.1 Introduction to Demand Management ....................... 10  
   2.5.2 Order fulfillment ..................................................... 11  
   2.5.3 Order management .................................................. 12  
   2.5.4 Order cycle ............................................................ 13  
   2.6 Information Technology ............................................... 15  
   2.6.1 Introduction to IT ..................................................... 15  
   2.6.2 ERP systems .......................................................... 16  
   2.6.3 SAP applications on supply- operations side ............ 20  
   2.7 Customer service ....................................................... 23  
   2.8 Business Process Management ...................................... 25  
   2.8.1 Enterprise Performance Management ...................... 26  
   2.9 Knowledge Management ............................................. 27  

3 **Methodology** ................................................................ 29  
   3.1 Research type: The case study approach ....................... 29  
   3.2 The qualitative perspective, with a quantitative touch .... 30  
   3.3 Research context and participants .................................. 32  
   3.4 Empirical data sampling and collection ....................... 32  
   3.5 Interview and questionnaires application ..................... 34  
   3.6 Secondary data collection and use .............................. 35  
   3.7 Analysis of the empirical data ..................................... 36  
   3.8 Quality within the research analysis ............................ 36  

4 **Results of the Case Study Ericsson** .................................. 39  
   4.1 Introduction to the case study – The order management department- Region APAC ....................................................... 39  
   4.2 Findings of the Case Study ............................................ 42  
   4.3 An Overview of the department’s processes and functions .... 44  
   4.4 Discovered problems associated with the department’s processes and functions .................................................. 49  
   4.5 Probable reasons associated with the discovered problems 51  
   4.6 Probable impacts associated with the department’s discovered problems ......................................................... 53  
   4.7 Findings based on the employees’ perspective ............... 56  

5 **Analysis** .......................................................................... 60  
   5.1 Summary of the detected findings .................................. 60  
   5.2 ‘Labeling’ of discovered findings ................................ 62
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3</td>
<td>The rationale between each “challenge”</td>
<td>65</td>
</tr>
<tr>
<td>5.4</td>
<td>Suggestions for the problems discovered</td>
<td>67</td>
</tr>
<tr>
<td>6</td>
<td>Conclusion</td>
<td>80</td>
</tr>
<tr>
<td>7</td>
<td>Future Research</td>
<td>82</td>
</tr>
<tr>
<td>8</td>
<td>References</td>
<td>83</td>
</tr>
<tr>
<td>9</td>
<td>Tables of Appendices</td>
<td>88</td>
</tr>
<tr>
<td>9.1</td>
<td>History of Ericsson</td>
<td>88</td>
</tr>
<tr>
<td>9.2</td>
<td>Main ERP software providers</td>
<td>89</td>
</tr>
<tr>
<td>9.3</td>
<td>Questionnaire 1</td>
<td>90</td>
</tr>
<tr>
<td>9.4</td>
<td>Questionnaire 2</td>
<td>94</td>
</tr>
</tbody>
</table>
Introduction

First, in order for the readers to have a better understanding of the overall contents that the study is concerned about, it becomes necessary to present the context in which the discussion towards the problem that have motivated this study, as to the purpose and sub-purposes to be achieved by the authors.

1.1 Problem discussion

All companies, when making the most optimal use of its supply chains, will inevitably face problems that in most aspects can be increased through investigation, understanding and adoption of the necessary measures toward its improvement. Within Ericsson’s scope of management, such improvements as regarding its performed activities in the way the company deals with its customers will inevitably be necessary as well so that the company’s overall performance can be enhanced. Most specially due to its dimensions that surpass country’s borders and wide range of products and services provided to its customers, demanding even more flexibility from its supply chain in order to understand even better its clients’ needs, delivering solutions in the most effective way possible.

Such argument can be supported by the fact that it is becoming more difficult for companies in developing and maintaining competitive advantage. With increase in customers’ demands besides domestic and international competition increasing, firms are constantly in search for a differential advantage. Following this trend, there has been a constant focusing in the logistics processes, supporting the idea that a “world class” organization should be able to provide to its customers high levels of service delivered (Stock & Lambert, 1992). Within this context, the need to take advantage from the company’s supply chain becomes imperative in order to deliver to customers products and services that follow all the characteristics demanded, within acceptable efficiency levels. When it comes to providing customers with the most appropriate levels of service; companies struggle due to specific characteristics, such as the customer’s location, the necessary transport to reach them, or even the resources necessary for such task. To emphasize such affirmation, effective management of customer service requires the definition of service, establishment of management standards, conduction of measurement, as well as an initiated program for control. The biggest contribution of such program would be its relevance to overall company goals, needs of customer, and competitive behavior, as
well as the manner in which those needs might vary by customer, product line, individual products, and geographic territory (Heskett, 1994).

Inside such service delivery to customers, crucial becomes the importance of adequate order fulfillment as well as the proper use of order management system and its practices which represents the principal mean by which buyers and sellers communicate information relating to individual orders of product. Further, an effective order management system becomes crucial to operational efficiency and customer satisfaction within a company (Coyle, Bardi, & Langley Jr., 2003). Not just having products delivered but as well maintaining a certain level of customer service factors in terms of order cycle times, product availability, complete orders shipped, accurate invoices provided, or damaged products might reflect an estimation of the overall performance of the firm’s logistics performance, which emphasizes the need in having the right product, at the right time, in the right amount, without suffering any damage or loss, to the right specific customer is a basic principle of any logistics systems that recognizes the importance of such service (ibid). That is adapted to the customer’s need becomes important for companies with the objective of continuing such business relationship. Customer service maintenance is so important for firms that it has been really considered as the fuel that drives the logistics-supply chain engine.

For that, realizing the importance of a well structured order management system capable of dealing with the company’s needs determines to which extent Ericsson attend to its customers’ demands toward its satisfaction as well as for improvement of business performance. Providing customers with the appropriate level of service might be a daunting task for managers, due to its specific characteristics that, if the company’s processes are not in synchrony with all the areas of the value chain (Porter, 1985), it can represent big issues for the company such as customer unsatisfied or even the loss of such customer. With these premises in mind, the main reason for developing this thesis research has been based on the opportunity to investigate what are the relevant practices employed by Ericsson China’s order management department, and what might be the relevant issues and outcomes related to such within the department’s perspective.

Based on such considerations, in becoming more competitive in the global scenario, companies are focusing special attention towards its supply chains. With it the necessity in serving customers the best way possible, companies have deposited attention into outbound logistics, also known as outbound-to-customer logistics systems (Coyle, Bardi, & Langley Jr., 2003). One important part of such system is the order management function. Based on the importance that this function has towards the company’s outbound logistics operations and its impacts, the stated problem of this thesis is re-
garded as ‘what are Nanjing Ericsson Panda Communication Co. Ltd. (as referred to as ENC; Ericsson- China) Order Management department’s most relevant problems, its reasons, and impacts that might affect the department’s operations?

In order to further specify such problem mentioned, the authors investigated the available data gathered that have allowed the relevant conclusions towards fulfilling the purposes of this thesis. To answer the stated problem, the fulfillment of the specific purposes described below were necessary in order to meet the conclusions arrived from the thesis development.

1.2 Purpose

The purpose of this thesis is to gain increased understanding of the Ericsson- China’s (ENC) Order Management department activities as related to how the department undergoes its processes and functions, investigating its associated problems, the reasons for such and probable impacts, as well as suggestions toward improvements. The authors’ personal interests in developing the study relied on the interest and opportunity given by Ericsson’s respective department in investigating how an organization within the logistics realm performs its activities and what would be the problems associated to such.

1.3 Research question

When taking such wide approach as to understanding the company’s order management related challenges that might hinder the department’s operations, the determination of how to better approach these becomes necessary, investigating what might be relevant issues perceived by Ericsson- China’s (ENC) Order Management department. To achieve such objectives, the following research question has been developed:

- What is the department’s associated processes and functions (also referred to through the study as activities) in order to obtain a broader understanding of it, but also what would be the most relevant problems, its reasons, and impacts based on the employees and manager’s perspectives?

After the fulfilling of such question, the authors then strive towards a second one, related to suggestions for improvements to the discovered “challenges” attached to the department’s activities:
• What could be most suitable suggestions for improving such detected problems? From the detected problems currently affecting the department’s activities, how could the department improve or develop feasible solutions for such?

The fulfillment of the presented research questions is the authors’ objectives for conducting this research study so that a broader perspective as to the probable issues within the logistics functions within an organization becomes elucidated, and to what could be possible improvements towards these.
2 Frame of Reference

Through this chapter, a presentation regarding the relevant theoretical topics and relevant content regarding each is presented in order to provide relevant understanding and connection to the proposed investigation. This section is divided into an Overview of Reference as well as the topics which in the authors’ perspectives will ascertain a proper structure that is capable in providing the necessary literature structure.

2.1 Overview of Frame of Reference

The discussion perspective within this chapter follows the presented framework below. This has been developed by the authors in order in this way following the purpose of providing guidance in understanding the different topics within the universe of discussion proposed by this study. Areas like supply chain management is briefly discussed, followed by the logistics sub-area; explaining its roles until arriving towards the discussion of order management, and consequently its sub-area of demand management, which the objectives of this study are focused on. Such framework has been developed.

Of absolute importance for the discussion toward all the mentioned topics given its influence on the development of the study is the connection with information technology; which in this sense represents the means on how the informational flows from customer to company exist in order for the processing of orders happen. An elucidation of customer service regarding the involved logistics activities by the department complements the discussion of how the involved activities and flow of orders might affect performance to customer parts.

Finally completing the Frame of References, the topics of Business Process Management and Knowledge Management are emphasized as well given the importance of its considerations to the problems discovered by the authors throughout the development of the study and how these could benefit the suggestions proposed in order to enhance its performance.
2.2 Supply chain management

The term supply chain management has been explained through the understandings of a wide range of literature authors (Coyle, Bardi, & Langley Jr., 2003; Ballou, 2004; Murphy & Wood, 2004; Christopher, 1992, and 1998). In order to provide its wide range of different, but similar definitions, these are presented as:

The term supply chain can be defined as all the activities comprised associated with the flow and transformation of goods from raw materials stage, through the end user, as well as the associated information flow” (Murphy & Wood, 2004). The term supply chain management focuses on the coordination among business functions; marketing, production, or finance, within and across organizations. This can be regarded as the relevant systemic strategic coordination of the traditional business functions and the tactics across different business functions within a particular company and across businesses and the supply chain as a whole (ibid);

Following a different perspective, Christopher (1992) defines the term as the network of organizations that are involved through upstream and downstream flows in the different processes and activities that will produce value in the form of products and services for the ultimate customer at its end (Christopher, 1992). Within different words, supply chain management is “the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole” (Christopher, 1998, p.18), with focus upon the management of the relationships among the different existing parties of such chain in order to achieve a more
profitable outcome for all the involved firm in this chain (ibid). Further, SCM can be defined as the logistics interactions that occur among the functions of marketing, logistics, and production within a firm and those interactions that take place between the legally separate firms within the product-flow channel (Ballou, 2004).

In another definition, supply-chain management is regarded as “a pipeline or conduit for the efficient and effective flow of products and materials, services, information, and financials from the supplier’s suppliers through the various intermediate organizations or companies logistics networks between the original vendors and the ultimate final customer” (Coyle et al., 2003, p.15).

The latter presented definition related to supply chain management is the one adopted for the understandings within the objectives proposed by this study given its explanation towards the relationship existing within supply chain management related to not only the necessary and correct management of products, but importantly services and upmost information between the different individuals composing such chain, as finally the impact that such correct management has over the final customer whom is the reason for what companies exist and must maintain a high level of performance.

To further visualize a set of activities that occur in a supply chain, (Mentzer, DeWitt, Keebler, & Soonhong, 2001) provide a broad definition of the mentioned pipeline of activities within supply chain management model exemplification as shown in the figure bellow:
In a general perspective, the focus of supply chain management is on co-operation and trust and the recognition that properly managed ‘the whole can be greater than the sum of parts’. For each firm involved, the supply chain relationship reflects a strategic choice. A supply chain strategy is a channel and business organizational arrangement based on acknowledged dependency and collaboration. Supply chain operations require managerial processes that span functional areas within individual firms and link suppliers, trading partners, and customers across organizational boundaries (Bowersox, Closs, & Cooper, 2010).

2.3 Logistics

As presented previously in figure 2, the relation of logistics with supply chain management is that it is part of the latter, regarded as a set of activities. The definition of logistics could be translated “as that part of the supply chain process that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers’ requirements” (Murphy & Wood, 2004, p. 6). It can be considered essentially as the planning orientation and framework that pursue in creating a single plan for the flow of products and information through a business (Christopher, 1998). It can be considered as the part of the supply chain in which effective flow of products and services are planned, implemented, and controled, from the point of origin of such products/ services to the point of use/ consumption, attending to customer’s demands (Coyle et al., 2003). The same author also states that logistics “is the process of antecipating customer needs and wants; acquisition the capital, materials, people,
technologies, and information necessary to meet those needs and wants; optimization of goods and services produced to fulfill customer requests; and utilizing the network to fulfill customer requests in a timely way” (ibid, p. 40). Based on the premises of this study, such definition better relates to the objectives pursued. According to Christopher (1998), a logistics system could be described as the following figure shows:

![Figure 3 – The logistics flow (Christopher, 1998).](image)

According to the same author, logistics management has the potential to assist the organization in the achievement of both cost/productivity advantage and a value advantage. Furthermore, its mission is to plan and co-ordinate all those activities necessary to achieve desired levels of delivered service and quality at the lowest possible cost. In this sense, logistics must be seen as the link between the marketplace and the operation activity of the business (ibid).

Based on Bowersox et al. (2010), in most supply chains, customer requirements are transmitted in the form of orders. The processing of these orders involves all aspects of managing customer requirements, including initial order receipt, delivery, invoicing, and collection. The logistics capabilities of a firm can only be as good as its order processing competency.

### 2.4 The outbound logistics flow

Outbound logistics refers to physical distribution activities such as collecting, storing, and distributing products to buyers and involves (finished goods) warehousing, materials handling, network planning and management, order processing, and vehicle scheduling and routing (Wu & Dunn, 1995). Also referred as physical distribution, this activity before mentioned as part of the value chain primary activities is regarded to be

---

1 Concept presented by Michael Porter in his book ‘The Competitive Advantage (1985), which portraits the Value Chain as a chain of generic value-adding activities for a firm operating in a specific industry.
the set of processes, systems, and capabilities that enhance a firm’s ability to serve its customers (Coyle et al., 2003).

As Wu & Dunn (1995) explain, the main difference between the inbound and outbound flows within a supply chain is regarded to the product characteristics, where the inbound flow deals with raw materials in order to be processed, and the outbound flow with finished goods. This second flow (outbound flow) tends to be far more complicated than the inbound flow due to the fact that it holds more options since it generally deal with higher value products that require specific customer delivery requirements. Furthermore the same author remembers that depending on a firm’s strategic goals and available resources regarding how a firm will develop its outbound strategies, logistics managers can choose from a wide range of options that include direct shipping or hub-and-spoke, central warehouse or distributed network, intermodal or single mode, and third-party services or private fleet (ibid).

2.5 Demand management

2.5.1 Introduction to Demand Management

Within the before mentioned outbound logistics, demand management might be defined as one approach that ensures business’ needs are being appropriately met and that resource are not being applied unnecessarily. It is not about reducing contract volumes, but ensuring that contract volumes are appropriate for meeting the needs and objectives of the organization, and other considerations (OGC Organization, 2010). Demand management is often a term in which can be considered to a wide range of different departments and disciplines such as production, logistics, marketing, sales, planning and finance. In this sense it becomes a quite abstract and complex concept for traditional companies focused on mass production and distribution (Langabeer II, 2000).

In other words, it is regarded as those focused efforts necessary to estimate and manage customers’ demand, objective the use of information towards shaping the organization (Blackwell & Blackwell, 1999). The essence of demand management is to further the ability of firms throughout the supply chain – particularly manufacturing through the customer – to collaborate on activities related to the flows of products, services, information, and capital. Its desired result is to create greater value for the end customer or user, for whom all supply chain activities, should be taken (Coyle et al., 2003). It becomes of high relevance for companies in dealing with an adequate demand manage-
ment activities since there is clear evidence that understanding and managing market demand is of key importance for business success (Langabeer II, 2000).

Considering some problems related to demand management, Coyle et al. (2003) points out that as firms identify the need for improved demand management, a number of problems occur, as mentioned below:

- Lack of coordination between departments results in little or no coordinated response to demand information;
- Great emphasis towards demand forecasting, which are considered without attention to the collaborative efforts within strategic and operational plans that needed to be developed from the forecasts;
- Demand information is used generally for tactical and operational than for strategic purposes.

However, such amenities within the context of demand management are being proved as changing in the business environment. Langabeer II (2000) mentions that companies are now exploring with more impetus the subject of demand management due to its impacts towards the overall business strategy levels, which in turn means in changes at the way a company deals with its products portfolio, analyzing the necessary data in order to make the most appropriate decisions towards it with the proper use of the demand management capabilities in hand, either between tactically or strategically. As explained by him, an American pharmaceutical company might interpret the same demand management data from both operational and strategic perspectives. In this case, this company found that within its products portfolio, it has been detected that 72 percent of its products were in the mature stage, while 14 percent in decline. With such information in hands, the company decided to alter its portfolio strategy by immediately investing in products with the goal of offsetting such decline. This means that tactical use of such demand have just given the company a forecast of projected sales, while the strategic use of such information guided the adoption of the necessary new products into the company’s portfolio, understanding throughout each product’s life cycle (ibid).

2.5.2 Order fulfillment

Order fulfillment is a key process in managing the supply chain. It is the customers’ order that put the supply chain in motion, and filling them efficiently and effectively is the first step in providing customer service (Croxton L., Sebastian, Lambert, & Rogers,
It involves generating, filling, delivering and servicing customer orders. In some cases, it is only through this process that the customer interacts with the firm, and therefore, the *order fulfillment* process can determine the customer’s experience (Shapiro, Rangan, & Sviokla, 1992).

The *order fulfillment* has both strategic and operational element as shown in figure 4. Therefore, the process has been divided in two parts, the strategic process in which management establishes the structure for managing the process, and the operational process that is execution of the process once it has been established (Croxton et al., 2003). According to the same author, this requires interfacing and communicating with multiple functional areas within the firm and can be enhanced by working with suppliers and customers to develop a network and a process that meets the customers’ requirement in a cost effective manner (ibid).

### 2.5.3 Order management

*Order management* might be regarded as the phase in which deals with how a firm handles incoming orders; the set of activities that are considered in the period between the time a firm receives an order and the time a warehouse is notified to ship the goods to fill such order (Murphy & Wood, 2004).
According to Coyle et al. (2003), logistics require timely and accurate information relating to individual customer orders. This means that firms are placing even more emphasis on the corporate order management function within the logistics area. Furthermore, effective order management is key as regarding to operational efficiency and customer satisfaction. Considering such arguments, having an adequate order management system represents the conduit by which buyers and sellers communicate information relating to individual orders of products (ibid).

An order management system (OMS) is a computer software system which is used in a number of industries for order entry and processing. It is considered a boon which counters the immense and common challenge normally projected by the manual data entry and extensive orders and in capturing the customer related information (Invensis Corporation, 2009). It can be applied to a number of business services like; telecoms, retail, health care, finance and automotive industries, with the objective of keeping track of customers, accounts, credit verification, product delivery, billing, capturing, validation, fraud check, sourcing, back order management as well as others. Such capabilities enlighten its opportunities for improvement importance within the business context (ibid).

2.5.4 Order cycle

The order cycle process have different perspectives when it comes to it definition. According to Murphy & Wood (2004), from the seller’s standpoint it could be defined as the time from when an order is received from a customer to when goods arrive at the customer’s receiving dock. Continuing, from the buyer’s perspective it is defined as from the time an order is sent out to when goods are received. On a brief definition to the term, order cycle contains all the time- related events that make up the total time required for a customer to receive an order. In this sense, it is strictly “the time between when a customer order, purchase order, or service request is placed and when the product or service is received by the customer” (Ballou, 2004, p.98).

Within the spectrum of order cycle, it has been estimated that the activities associated with order preparation, transmittal, entry, and filling represent 50 to 70 percent of the total order cycle time in many industries (LaLonde & Zinszer, 1976). Due to it, a high level of customer service is to be provided through short and consistent order cycle times it becomes essencial that the relevant order processing activities become rightfully managed (Ballou, 2004). Although different authors describe the order cycle process
considering different steps, it is possible to describe these taking into consideration different literatures but in which the focus towards delimitating its different activities and each activity’s purpose within the subject. Ballou (2004) defines the process of *order cycle* as the following:

In order to describe each of the *order cycle* components mentioned by the author, we specify each as following:

Order transmittal – the length of time a salesperson and the sales office retain an order before transmitting it, and the length of time the order is in the transmission channel. Furthermore, a customer prepared order plus electronic transmission would have a total transmittal time essentially of a telephone call, *electronic data interchange*, or even web site use;

Order processing and assembly – *order processing* involves the activities related to preparing shipping documents, updating inventory records, coordinating credit clearance, checking the order for errors, communicating with customers and interested parties...
within the company on the status of orders, and disseminating order information to sales, production and accounting. Within the discussion of order cycle, important is to mention more specifically the activities within the order processing activity. This can be represented by a number of the activities included in the customer order cycle, containing activities like order preparation, order transmittal, order entry, order filling, and order status reporting (Ballou, 2004).

The typically included activities within the order processing activity are, according to (Murphy & Wood, 2004):

- The order information is checked for completeness and accuracy;
- A credit check is made by the credit department;
- The order is “entered” into the system so it may be filled (also known as order entry);
- The marketing department credits the salesperson with the sale;
- The accounting department records the transaction;
- The inventory department locates the warehouse closest to the customer, advises it to pick the shipment, and updates the firm’s master inventory controls;
- Finally, the transportation department arranges for the shipment’s transportation from the shipping dock to the buyer.

The other two respective components (additional stock acquisition time and delivery time) becomes less relevant in discussing since no major implications as related to processes involved exist as figure 5 depicts the involved activities within such components.

2.6 Information Technology

2.6.1 Introduction to IT

Information technology (IT) is an important enabler of effective supply chain management. Much of the current interest in SCM is motivated by the possibilities that are introduced by the abundance of data and the saving inherent in sophisticated analysis of these data (David, Philip, & Edith, 2003). According to Jiang & Yang (2007), effective supply chain management is built on the basis of the high quality of information transmission and sharing, which in turn rely deeply on information technology (IT) to provide the necessary reliable support. To utilize this information we need to collect it,
access it, analyze it, to have the ability to share it for collaboration purposes. Supply chain management system goals in these areas are (David et al., 2003):

- Collect information on each product from production to delivery or purchase point, and provide complete visibility for all parties involved.
- Access any data in the system from a single point of contact.
- Analyze, plan activities, and make trade-off based on information from the entire supply chain.
- Collaborate with supply chain partners. Collaboration allows companies to manage uncertainty for example, through risk sharing or information sharing, and achieve global optimization.

The same author still remembers that the primary goal of IT in the supply chain is to link the point of production seamlessly with the point of delivery or purchase. The idea is to have an information trail that follows the product's physical trail. This allows planning, tracking, and estimating lead time based on real data (ibid). Furthermore, Jiang and Yang (2007) clearly emphasizes that the connection between the support of information technology towards the supply chain activities, which becomes evident and at two levels; component with technology of identification code, automatic identification and data collection technology, electronic data interchange technology, Information technology on the basis of internet technology, and at a second level with various information systems and application software which are developed to support production and various aspects of the management on the basis of information technology infrastructure. Continuing, when integrated and applicative systems, they not only will be considered being a technical solution, but also a deep refraction of management thinking should be understood (ibid).

### 2.6.2 ERP systems

The importance and context of Electronic Resource Planning (ERP) systems for organizations are widely understood by these worldwide. These have become the type of application which supports the majority of business processes, as well as serving as a repository for the organization’s most sensitive data (AMR Research Incorporated, 2007). An ERP system consists in providing an organization with a software solution that comprises of several interconnected modules covering most of the key functions within a company (Rolland & Prakash, 2000). ERP projects aim at the automation of many basic processes with the goal of integrating information across the enterprise and eliminating complex, expensive interfaces between computer systems (Teltumbde, 2000). The same author further describes that ERP projects aim at automating many basic processes, with
the objective integrating information across organization; eliminating complex, expensive interfaces between computer systems. These promises to replace most of the legacy systems built over a long time in companies with a single, integrated information system and hence enable detection and elimination of process level redundancies. The software products involved in these projects are designed focused within longevity and offering numerous options representing best practices (ibid).

When considering its functionality, Tech Target Organization (2010) depicts that an ERP system considers specifically the following aspects:

Integrated information:
- Integrates information across all departments;
- Allows users to input data in one location that can be processed with other data and accessed as informational reports in real-time;

Flow of information:
- Facilitates the flow of information between the different functions and processes of an enterprise;
- Functions – manufacturing, finance, HR, sales and distribution, materials management, logistics;
- Processes – order entry, reporting, receiving, shipping, and accounting.

Plans and events:
- Plans future events.

Track events:
- Tracks a wide range of events in the enterprise in an integrated fashion.

Analyze events:
- Supports analysis of trends, to improve the performance of the enterprise.

As previously mentioned, an ERP system typically consist of many modules that are linked together to access and share the same database. Each module performs different functions within the organization and is designed so that it can be installed on its own or with a combination of other modules. As based on Joel, Keong, & Keah-Choong (2005), some common modules if ERP systems are described as:

Accounting and finance: Assists organizations in maintaining financial control and accountability, making possible the tracking of: revenues, cost assets, liabilities, and oth-
ers. Also capable of generating routine and advanced reports, product costing, budgeting, and analysis;

*Customer relationship management (CRM)* - Provides the capability to manage customers. It enables collaboration between the organization and its customers by providing relevant, personalized, and-to-date information. It also enables customers to track sales orders. Finally, it allows the firm to segment its customers and design customized promotions appealing to each customer segment;

*Human resource management (HRM)* - It assist organizations in planning, developing, and controlling its human resources. It allows the firm to develop the “right” people to support its overall strategic goals and to plan the optimal workforce levels based on production levels;

Manufacturing - Material scheduling and production tracking, capability, and flow of goods through the manufacturing process. Can even include capability for quality planning, inspection, and certification;

*Supplier relationship management* - Provides the capability to manage all types of suppliers. Also monitors supplier performance and track delivery of goods purchased. Enables users to effectively manage business process through real-time collaboration during design, production, and distribution planning with suppliers;

*Supply chain management* - Handles planning, execution, and control of activities involved in a supply chain. It assists the firm to strengthen its supply chain network to improve delivery performance.

Within *order processing*, allows entry and maintenance of customer orders by using communication technologies such as mail, phone, fax, EDI, and the Internet. As orders or inquiries are received, *order processing* inputs and retrieves required information, edits for assignment. *Order processing* in conjunction with *customer service* representatives, form the primary interface between the customer and the ERP (Bowersox et al., 2010). According to the same author, these are operations systems functionality with in *order processing*:
• Order entry (manual, electronic, blanket order);
• Credit check;
• Inventory availability;
• Order acknowledgement;
• Order modification;
• Order pricing;
• Order status inquiry.

However, even with all the potential benefits associated with such system, the already recognized downsides related to its difficulties in aligning to the specific organization´s requirements. According to Rolland and Prakash (2000), these drawbacks are:

• High costs;
• Difficult and time-consuming implementation;
• Need for enterprise´s process re-engineer;
• Difficult alignment to enterprise´s requirements;

• Need of allocation of massive internal resources;
• Lack of technical support by the ERP vendor group;
• High possibility of cultural clash.

Such described topics listed above are widely recognized by different authors in literature as well as consultants and managers in daily professional life. This is emphasized by the fact that there are many risks associated with implementing and running an ERP system in which sometimes the implementation of the system misses the mark, and instead of delivering instead of delivering promised cost reductions, business agility and performance improvements, ERP systems create complexity, duplication of effort, and in the worst cases, poor quality and customer service and a dangerous lack of visibility into the business (Tech Target Organization, 2009).

When relating to the previously mentioned ERP drawbacks, Tarn, Yen, & Beaumont (2002) supports the discussion towards the involved costs associated with this type of system, as to the time necessary in order to implement it and also to its complexity and processes automation. What becomes a relevant discussion in the latter issue discussed by ibid are that frequently ERP vendors in offering a consistent package of solutions to a client organization in making processes more efficient without taking further care in analyzing the efficiency and importance of the current involved process. Moreover, automating an “inefficient” process without a deeper analysis could only generate further problems to the organization relying on the usage of such ERP system, as well as unnecessary spending. Also, it can occur that consultants remove processes that are considerably efficient within the current business processes of the firm, although neglected by vendor’s consultants and then increasing more the problem of inflexibility (ibid).
Discussing the involved costs and time when implementing an *ERP* system, it has been stated that the average time for implementing such system can take over 23 months, and for example if considering *SAP’s R/3* system such operation can take from 1 to 3 years, sometimes even exceeding such period. Involving the related costs in implementing such system, it has been mentioned by the author that the issue of costs are a very relevant one. Besides the related costs of ownership, organizations tend to forget hidden costs that impact considerably budgets. Figures show that an average total cost of ownership is $1.5 million, and that hidden costs involved such as training, integration and implementation, data conversion, necessary consultancy, and the idea that the implementation project will be concluded on the ascertained date previously is widely overlooked (ibid).

Based on Tech Target Organization (2009)’s discussion, the author emphasizes on a series of “warning signs” that can determine if an *ERP* is jeopardizing an organization’s operations have a significant connection with the previously presented and discussed *ERP* problems, albeit emphasizing on further issues that might be critical. These are:

1. The *ERP* system cannot integrate mission with critical data;
2. Changes to the system are costly and time consuming;
3. The “disaster” recovery plan involves tapes;
4. Inappropriate IT equipments (PCs) when required to run heavy softwares;
5. High costs of maintenance fees;
6. Upgrades are disruptive to the business;
7. New employees need time to learn the system;
8. Globalization can pose as an enormous challenge.

Such presented facts elucidate the importance for an organization to consider and reconsider its current or future *ERP* implementation plans and strategies, given the impact that this system has on organizations budgets, as well as effectiveness.

### 2.6.3 *SAP* applications on supply-operations side

Following the premises than an *ERP* system has in making business processes more efficient, *SAP*, and specifically its *R/3* system catches such premise in transforming previous adopted processes into a new setting that meet the organizations’ requirements and needs. The relevance of such system to the study itself relies on the fact that further
understanding towards this becomes important given the fact that this is the ERP system currently implemented in the Order Management department in China.

Explaining further this system, Rolland & Prakash (2000) mentions that SAP provides a number of modules for different areas of a business. Also, these modules contain components for each specific sub-area, providing the system with the possibility of customization. Moreover SAP R/3 components, functions, and variants highlights the “whats and hows” in business operations dealing with the data that is necessary to be maintained or supplied, as well as the actions that are carried out. In this sense the mapping of a business process becomes crucial by literally “forcing” organizations to change their current implemented processes to what is proposed in consonance with SAP R/3 alignment (ibid).

*Sales order management, configuration management, distribution export control, and shipping and transportation management* are handled in these applications. These applications, like the others can be implemented globally, allowing the user to manage the sales process worldwide. When a sales order is entered, it automatically includes the correct information on pricing, promotions, availability, and shipping options. Batch order processing is available for specialized industries. User can reserve inventory for specific customers, request production of subassemblies, or enter orders that are assemble-to-order, build-to-order, or engineer-to-order as well as special customized orders (Jacobs et al., 2009).

In today’s world, businesses must deal at every turn with fast, continuous change in overall basic economic conditions. Short innovation cycles, global competition and pressure to curb cost necessitate constant optimization of all business processes. In this environment enterprise-wide information management plays a decisive role in remaining competitive (Buck-Emden, 2000).

As the world's leading provider of business software, SAP delivers products and services that help accelerate business innovation for our customers. This in turn benefits companies with products and services supporting business innovation and acceleration, focusing on the development of solutions to small business and midsized companies, to global corporations (SAP Corporation). Following Knolmayer (2009), the main functions of SAP system are:

---

2 As referred in the company’s website ([http://www.sap.com/about/index.epx](http://www.sap.com/about/index.epx))
Financials;
Human capital management;
Operations;
- Customer relationship management;
- Manufacturing;
- Supply chain management;
- Supplier relationship management;
- Product lifecycle management;
- Mobile business application.
Corporate services:
- Service and asset management.
Duet- Microsoft Office integration.

The operation segment is complex and includes many applications. Sales order management, configuration management, distribution export control, and shipping and transportation management are handled in these applications. These applications, like the others, can be implemented globally, allowing the user to manage the sales process worldwide. When a sales order is entered, it automatically includes the correct information on pricing, promotions, availability, and shipping options. Batch order processing is available for specialized industries. User can reserve inventory for specific customers, request production of subassemblies, or enter orders that are assemble-to-order, build-to-order, or engineer-to-order as well as special customized orders (Jacobs et al., 2009). Following Knolmayer (2009), in order to support companies in making basic strategic decisions regarding its operations, as the following:

1. Delivery performance;
2. Order fulfillment performance;
3. Fill rate (make-to-stock);
4. Order fulfillment lead time;
5. Perfect order fulfillment;
6. Supply chain response time;
7. Production flexibility;
8. Total SCM cost;
9. Value-added productivity;
10. Warranty cost or returns processing cost.

The modules included with the system are built on what SAP considers best practices. Meanwhile, system upgrades are designed to reflect the newest best practices (Jacobs et al., 2009). However as mentioned on the previous section, there are innumerable hurdles associated with SAP’s implementation. In case of SAP R/3 system, this requires the im-
implementing organization in radically re-designing its processes to meet R/3’s requirements (Rolland and Prakash, 2000), further the before presented list of drawbacks when implementing an ERP system within an organization. This can be visualized in the figure bellow.

The same author further discusses that the difficulty of such process “re-design” that SAP proposes; forcing an organization to suit their new processes to fit the system needs. Such alignment of processes can be difficult due to the very large amount of details to be handled and because organizations think in terms of their goals and objectives, and not in terms of SAP’s functions. This then results in a mismatch between organizational requirements and their resolution in SAP (ibid).

2.7 Customer service

The concept of customer service has been a generic term used by industry and academia to describe a set of activities in which a firm engages to win and keep customers. Customer service consists of those activities that enhance or facilitate the sale and use of one’s products or services. However, customer service is more than this definition suggests; it is also a variable that expands the image of a product and thereby offers the possibility of giving the firm’s products market acceptance, growth and the possibility of market dominance (Larissa S. Kyj and Myroslaw J. Kyj, 1994). Customer service, the output of the physical distribution function, may in fact be the best method for many firms to gain competitive advantage. Customer service is the process for providing significant value-added benefits to the supply chain in a cost-effective way. Further, there might be two sub-units of customer service: those related to physical distribution services ad those related to other functional units within the organization (Innins & La
Londe, 1994). Regarding the premises of this study, *customer service* becomes related as to the *Order Management’s* department level of service delivered to its customers.

According to Tucker (1994), *customer service* may represent many different services and activities. At present, the two helpful classifications of *customer service* are the *physical distribution* orientation, which incorporates product-service activities and the *marketing* approach. Under the *physical distribution* orientation, *customer service* is synonymous with *physical distribution*. Standard marketing texts label *physical distribution* as one element in the *marketing* mix of product, price, promotion and *physical distribution*. Thus, the *physical distribution* approach essentially views *customer service* as one individual element in the marketing mix. In contrast, the marketing approach does not see functional boundaries to *customer service*. Instead, it views *customer service* activities as occurring in all four categories of the *marketing* mix. For this reason, the marketing orientation to *customer service* is broader in scope than the *physical distribution* approach.

In relation with the before discussed perceptions of *SAP*, it is most likely that the *customer service* approach can contribute to the success of a firm and like in marketing, contributes to the enhancement of customer satisfaction and repurchase intentions (Innis & La Londe, 1994). Furthermore, *customer service* as provided by physical distribution can contribute to the success of the firm. *Customer service*, one of the key outputs of the physical distribution function, can influence demand on market (ibid). In this sense, for an organization it becomes imperative that such implemented *ERP* system is in connection with the organization’s goals to allow the best use of its capabilities by its personnel when dealing with the market’s demands efficiently and accurately.

This can lead to Heskett (1994) discusses regarding *customer logistics service*. Firstly, *service logistics* coordinates the interaction between the customer and the organization. It involves reducing *lead time* between the scheduling, the performance and the evaluation of the procedure. It requires rethinking the way in which the service organizations interact with customers. It is the management of responsive activities, and dynamic organizations which can respond to a wide variety of needs (Davis & Manrodt, 1994). Such can be defined as “a program for controlling logistics service that requires the definition of such service for an individual industry, company, product, geographic area, or customer. Once the concept of service is defined, standards can be established, measurement accomplished, and control exercised” (Heskett, 1994, p.5). Moreover then what becomes most important when considering such approach is to take in consideration what would be most important from the customers’ point of view. “Is it the imme-
diate availability and shipment of a complete order? Is it merely the knowledge of when and if an order will arrive? Is it the flexibility with which he can place his order? Or is it the policy which determines whether the customer or his supplier will pay for transportation on emergency shipments?” (ibid, p. 5). The perception of the term might vary depending on the context that this is related to. The interesting fact form it is that each organization must be able to tackle accordingly its own perceptual measures of customer service in order to adequately serve customers in the better way.

2.8 Business Process Management

Business Process Management (BPM) provides governance of a business’ process environment to improve agility and operational performance (Gartner Incorporated, 2009). It is concerned with how to manage processes on an ongoing basis (Armistead & Machin, 1997), being regarded as a systematic approach to analyze, control, and manage processes with the aim of improving quality of products and services (Elzinga, Horak, L, & Bruner, 1995). Another but similar perspective provided by Zairi (1997) is that BPM is regarded as a structured approach to analyze and continually improve fundamental activities such as manufacturing, marketing, communications and other major elements of a company’s operations. Following, it attempts on improving business processes continuously, always aiming at optimizing the involved business processes within an organization. It includes all activities that could help an organization in achieving capable and adaptable business processes (Truonh & Dustdar, 2009).

A process is an approach for converting inputs and outputs. It is the way in which all the resources for an organization are used in a reliable, repeatable, and consistent way to achieve its goals (Zairi, 1997). Also, business processes can be defined as a series of inter-connected activities that, crossing functional boundaries with inputs and outputs (Armistead & Machin, 1997). It is a set of logically-related tasks performed to achieve a probable defined business outcome. It has structure, inputs, outputs, customers (internal and external), and owners, and is built up integrating fragmented functions that contribute to its operations and internal and external flows (Al-Mashari & Zairi, 2000).

Referring to Armistead & Machin (1997), some of the reasons why organizations are moving towards a managing business processes perspective could be translated by:

- Increasing flexibility in organizations to meet changing external demands;
- Addressing the speed to market of new products and services and the responsiveness to meet customers’ demands;
- Facilitates costs reduction;
- Facilitates increased delivery capabilities;
- Helps addressing products and services’ quality in term of consistency and capability.

According to Elzinga et al. (1995) many companies are engaged in assessing ways in which their productivity, product quality, and operations are improved, which in turn such improvement leads toward Business Process Management, and that there have been many different terms used for the study of organization’s processes, such as “process simplification”, “process improvement”, “process re-engineering”, and “process redesign” (Lee & G, 1998). With considerations towards the Business Process Re-engineering (BPR) approach, this can be defined as fundamentally rethinking and radically redesigning business processes to achieve dramatic improvements in critical, contemporary measures of performance as; cost, quality, service, and speed (Al-Mashari & Zairi, 2000). Considering Hammer (1990), the same defines that the heart of reengineering is the notion of discontinuous thinking; of recognizing and breaking away from the outdated rules and fundamental assumptions that underlie operations. This means that it is necessary to change old assumptions and shed these old rules that have made the business itself underperform.

### 2.8.1 Enterprise Performance Management

Enterprise Performance Management (EPM) or Business Performance Management (BPM; sometimes mistaken by “Business Process Management” acronym) is regarded as a set of managerial techniques in both managerial and analytical processes that supported by technology enable organizations to define its strategic goals so that these can be measured and the possibility to manage performance against the established goal (Penton Media Incorporated, 2010). According to Oracle BI and EPM Publication (2008), EPM is widely positioned as management discipline of strategic importance. It should be connected to the business model, not just tactical management execution.

Understanding market dynamics become crucial in evaluating strategic alternatives and to define the right strategic goals. New products and services are introduced, new competitors enter the market, consumer behavior is changing, and business pace is increasing. Further, the author remembers that operational management requires real-time information, business planers need performance variance analysis, strategists need feedback towards overall goals and to comparison towards an overall market, while stakeholders benefit in seeing how contributors get recognized and requirements met (ibid). BPM is often mistaken by the fact that such approach relies on software systems in or-
der to become effective. One of the most important considerations that EPM/ BPM pro-
vides is that focusing on measurement can provide to organizations means of evaluating
it progress toward accomplishing the established goals. Further, through the use of per-
formance measurement, organizations can access how well its operations are aligned
with its business strategy. Moreover, this plays a crucial role in translating strategy in
results (Frolick & Ariyachandra, 2006). There are several different approaches that ena-
bles organizations tackle both internal and external metrics. These could be translated in
the development of standards, Plan-do-check-act (PDCA) cycle, Key performance indi-
actors (KPIs), the use of Balance Scorecard technique, as well as dashboards, fostering
competitive spirit that would encourage various groups to share information and im-
prove overall performance (Gregory, 2004), as well as Theory of Constraints (TOC)
(Goldratt, 2008). All of these in order to provide management with the most concise
level of information regarding both internal and external variables (Oracle BI and EPM
Publication, 2008).

2.9 Knowledge Management

From its many available definitions, Davenport & Prusak (2000) describes it as “a fluid
mix of framed experiences, values, contextual information and expert insight that pro-
vides a framework for evaluating and incorporating new experiences and information”,
which fits to the context of this study. In recent years organizations have strongly fo-
cused on organizing, creating, transferring, searching, sharing Knowledge under the
roof of the so-called Knowledge Management (Hildreth & Kimble, 2002), given the
crucial recognition that knowledge has been given to as being such an important com-
petitive asset for organizations (Sharif, Zakaria, Shu Ching, & Soh Fung, 2005). A
proper definition of Knowledge Management provided by David Skyrme Associates
Organization (2008) determines that this is the explicit and systematic management of
vital knowledge and its associated processes of creating, gathering, organizing, diffu-
sion, use and exploitation of such knowledge. Adding more, it requires turning personal
knowledge into corporate knowledge that can be widely shared throughout an organiza-
tion and appropriately applied within such.

Further (Bechina & Bommen, 2006) elucidates that two there are two different types of
knowledge: explicit and tacit. The difference between both is that the first one “has a
tangible dimension that can be easily captured, codified and communicated. It can be
shared through discussion or by writing it down and stored in repositories, notes, doc-
uments, etc” (ibid, p. 110). The second, is “linked to personal perspectives, intuitions,
emotions, beliefs, know-how, experiences, and values, being intangible and not easy to articulate so it tend to be shared between people through discussion, stories, and personal interactions” (ibid, p. 110). Moreover, the author even describes that the management of explicit or tacit knowledge consists of performing one or several of the knowledge processes such as transferring, creating, combining, and using the available knowledge.

Gupta (2004) affirms that there are a number of organizations concerned with the subject of how its members share their knowledge and accordingly have set up some incentives to motivate these individuals in making their knowledge available to the host organization or in retrieving knowledge stored in the organization’s repositories whenever needed. In this sense, knowledge sharing between involved participants becomes crucial in allowing knowledge to be properly diffused and available within organizations. Knowledge Sharing as defined by Bechina & Bommen (2006) is the process of exchanging knowledge between at least two involved participants in a reciprocal process allowing reshaping and sense-making of the content in the new context.
3 Methodology

This chapter elucidates the chosen methodology approach in order to best achieve the study objectives. The discussion of the premises of the case study approach within the study is presented by the authors, followed by the discussion of principally the qualitative and shortly the quantitative research perspectives. Also, the chosen research types and research methods are included and discussed. The reason for this chapter is to provide enough understanding to the author’s chosen research approach, emphasizing the reasons for doing so.

3.1 Research type: The case study approach

A case study approach is undertaken “in order to provide a detailed description of a particular situation, organization, individual, or event. “Its discipline inquiry is concerned with illuminating meaning by using inductive processes.” (Gatthorn, 1998, p.76). Being regarded as the simplest of all the available project designs, the case study approach involves a description of an ongoing event related to an particular outcome of interest, over a fixed time in “here-and-now”, enabling a more in-depth examination of a particular situation; the information it yields can be rich and enlightening and may provide new leads or raise questions that otherwise might never have been asked; as well as the involved people usually comprise a fairly, well- circumscribed and captive group, making it possible for the researcher to describe events in detail (Silverman, 2001).

Given the characteristics of this study within Ericsson’s Order management department in China, as to the understandings on what are the department’s adopted functions and processes in its daily routines, exploring its related problems, the reasons for such problems to occur, as well as investigating its impacts, finally the possible opportunities for improving such issues. As referred previously, the authors’ personal interests in doing so relied on the interest in investigating an organization within the logistics realm in order to have a broad understanding what could be the operational constraints faced on its activities. This has been possible after contacting Ericsson’s Order Management in China, whom has granted such possibility. The Case Study perspective then suited accordingly since it has been possible to investigate what were the actual premises adopted by the department, in this case, and further as part of the study elaborate suggestions for improving the present situation. The authors believe to have contributed to enhancing the universe of managerial science by exploring the reality of challenges ex-
isting and needed to be properly addressed within a company’s environment towards the achievement of customer satisfaction.

### 3.2 The qualitative perspective, with a quantitative touch

The authors’ research objectives in the study was basically focused on the premise of understanding how specifically Ericsson- China’s *Order Management* department’s functions and processes that are employed, further detecting the challenges related to those as well as the possible opportunities for improvement regarding the discovered problems, the understanding of its reasons and impacts such problems might have over the department, making further suggestions for its improvement. In order to achieve this, it becomes necessary then to structure how the proper methodology that have contributed for the structuring of the thesis development in order to better support the stated problem and respond to the stated purpose and sub-purposes. As Evans & Gruba state; “the methods we select are ways of testing the hypothesis or answering the questions” (Evans & Gruba, 2002, p.89).

From the author’s standpoint, the use of qualitative method relied on the fact that the characteristics of the study itself were more favorable for the use of such instead of relying on the *quantitative* perspective solely. This is due to the fact that the population to be research was known since the beginning of research process and that in order to detect the participants personal perceptions would only be possible with the use of *qualitative* perspective. However the *quantitative* perspective has contributed to the findings of the study when, given the constraints of distance and lack of time mentioned by the employees given their job responsibilities, a *quantitative* focused questionnaire has been applied in order to enhance findings.

Following the statement made by Silverman (2001, p.25), which explains that the choice between the research methods to be used depend upon what are you trying to find out, to achieve such proposed research objectives the authors have chosen most appropriated the *qualitative* method, however making use of *quantitative* method for developing a second questionnaire, given its approach towards reducing bias among the interviewed participants. This choice between both *qualitative* and *quantitative* methods can be explained by Patton (2002, p.556), as he states that “it is common that *quantitative methods and qualitative methods are used in a complementary fashion to answer different questions that do not easily come together to provide a single, well-integrated picture of the situation*.”
According to Gatthorn (1998, p.34), “qualitative research term refers to any kind of research that is able to produce findings not achieved through the use of statistical procedures or even other means of quantification”, emphasizing the relation between both qualitative and quantitative methods usage. Further, such kind of perspective is based in a phenomenological view, in which reality inheres in the perception of individuals. Also, this can be referred to research about people’s lives, stories, behaviour, but also about organizational functioning, social movements, or interactional relationships (Strauss & Corbin, 2008). The same author even specifies that the data gathering may be quantified in term, however the analysis of such is done in a qualitative perspective. The qualitative method is characterized by the emphasis of a phenomenological view, in which reality inheres in the perceptions of individuals (Gatthorn, 1998), and used to uncover and understand what lies behind any phenomenon about which little is yet known (Strauss & Corbin, 2008). Such research perspective might also be described by the fact that allows researchers to get at the inner experience of participants, determining how different meanings are formed through and in culture, discovering rather than test variables (ibid).

Another way of describing such method by McMillan (1996) is that such studies using this perspective are focused on meaning and understanding, taking place in naturally occurring situations. It gives the possibility to study selected issues, cases, or events in depth and details by the fact that data collection is not constrained by predetermined categories of analysis contributes to the depth and detail of the qualitative data (Patton M. Q., 1987). According to Strauss and Corbin (2008) the requisite skills for researching using the qualitative approach can be described as stepping back and critically analyzing situations, recognizing and avoiding biased situations, obtaining valid and reliable data, and lastly, thinking in an abstract way. More, abilities required from researchers could be described as having theoretical and social sensitivity, ability to maintain analytical distance while at the same time drawing upon past experience and theoretical knowledge to interpret what is sensitive, combined with observational power and good interactional skills (ibid). The advantage of the qualitative method approach is that it produces a wealth of detailed data about a much smaller number of people and cases. Such gathered data provide depth and detail through direct quotation and careful description of program situations, events, people, interactions, and observed behaviors (Patton M. Q., 1987).
3.3 Research context and participants

For the achievement of the purposes of this study, the research has been conducted with the collaboration of the Order Management department of Ericsson, within the Customer Logistics, region APAC (Asian-Pacific markets) is regarded as one of the five different Customer Logistics departments established by the company worldwide, focused on the five different market regions operated by the company.

The involved participants within the study were members of the Customer Logistics APAC department in which include 8 personnel in total, respectively; 1 manager (Mr. M), and 6 formal employees within the department, plus 1 backup support advisor in Sweden (whom was not part of the study since this was not involved in the operational daily activities of the department). Relevant to mention is the fact that Mrs. S (ENC’s Customer Logistics for the Asia-Pacific region, Order Management department employee) has been our primary contact, who has discussed with the authors as regarding the possibility in development this study, establishing the communication between authors and respective department manager. So forth, the collaboration of these 7 individuals (since the Swedish support employee has not been part of the data-gathering process) has contributed for the retrieve of valuable data for the study, regarding their feedback as a necessary source of data in fulfilling the established research objectives.

3.4 Empirical data sampling and collection

The collection of the necessary data that provided the necessary feedback to fulfill the objectives of this thesis and so forth analyzed by the authors became a crucial matter by determining how relevant was the data gathered as well as the means used in analyzing this.

The importance of determining a sample among a population in order to provided the desired results for any research study relies on the fact that for practical and cost reasons, it might be often impossible to collect information about an entire population in which a researcher is interested (Brewerton & Millward, 2001). Based on such fact, researchers rely on two different types of sampling: probability and non-probability sampling. According to Saunders, Lewis, & Thornhill (2009, p. 214), probability sample is characterized as being “most commonly associated with survey-based research strategies where you need to make inferences from your sample about a population to answer your research question(s) or to meet your objectives”, being chosen statistically at random. Differently, non-probability sample is more based on
subjective judgement. In order to be able to answer the stated research question(s), the author(s) should undergo an in-depth study focused on a small, even one, case selected for a particular purpose. Such case would have the ability in providing the author(s) with an information-rich case study, determined in the exploration of the stated research questions and consequently gain theoretical insight (ibid).

Based on both types of sampling mentioned above, the development of this study followed the *non-probability* sampling type, given the reasons for the authors to investigate Ericsson as the case for this study was based on contacts made with one of the department’s employees who has been an acquaintance of the authors and further, after explaining our research intents, forwarded our proposal to the *order management* department manager Mr. M, who accepted and allowed development of the study based on the department premises. However, Ericsson’s Asia-Pacific order management manager, Mr. M, emphasized the importance of the addressing of confidentiality towards specific and detailed data provided which have been understood and respected by the authors, complying with the interviewee’s regards.

The collection of the relevant data provided by Ericsson has been done through the use of an interview and questionnaire methods. These two types of methods have been chosen by the authors observing the different level of knowledge about each asked issue as regarding to what the authors were willing to retrieve. It must be emphasized that these have been chosen by the authors given the characteristics of the study since face-to-face interviews would not be possible to conduct (except on the case of the employee, who was available) given the geographical distance between the authors’ residence in Sweden and Nanjing, China.

In this sense, in order to obtain a more-detailed perspective from the department an interview has been conducted with an employee of the department (*Mrs. S*), who has served as our “bridge” towards contacting the company’s department and explaining our research intentions. Due to her involvement within the department’s functions and activities, as well as being most convenient given our facility to contact her and the impossibility in doing such interview with the department manager due to his busy schedule, the authors determined that an interview had been conducted with the participation of this individual person in order to provide detailed information as to specific issues about the department’s related processes, activities, and a deeper understanding as to the problems faced by the department. Also for complementing the data collection process, questionnaires have been applied to manager and the staff (including the interviewed individual). To complement the research findings content with connection to the stated
objectives, the use whenever possible of secondary data provided by the company’s department has been considered and appreciated due to the fact that reliable and relevant information related to the different processes and activities involved could be understood by the authors, giving a better perspective to the study as well.

3.5 Interview and questionnaires application

To better understand how the authors collected the relevant empirical data, the use of an unstructured interview as the basis for doing so is considered as a very important method when considering the qualitative research perspective combined with the application of questionnaires, adding more content and with a different perspective for data gathering.

Two questionnaires have been applied in order to obtain relevant data. One sent to the order management department manager, Mr. M; using qualitative perspective, trying to retain the highest level of information provided as possible regarding general issues related to the department, and another sent to the other 6 employees; using a quantitative perspective, focusing on multiple-choice questions. Such intent has been motivated by the fact of being most convenient by the authors as well as by the interviewees due to their commitment to their work and lack of time, not leaving aside their perceptions toward the stated sub-purposes described previously in this study.

According to Blaxter, Hughes, & Tight (2007), the use of interview as a method for collecting relevant data for a research might be done via mail, e-mails, telephone, or even face-to-face contact. Within this sense, the use of interview involve only two individuals with a participant and a researcher, or these can be realized through group events including several participants or researchers (ibid).

As regarding to Brewerton & Millward (2001), interviews can be structured into Structured interviews, Unstructured interviews, Semi-structured interviews, and Ethnographic interviews. Focusing the fulfilling of the objectives established by the authors, the use of the unstructured interview type has been adopted, given its characteristics in allowing the researchers address any or all of a given number of topics which may be of interest to the research itself. Furthermore, the questions to be asked to the interviewee participant were not fixed and therefore allowed to evolve during the research interview process (ibid).
The interview done by the authors with the participation of the Order Management APAC region employee, Mrs. S has been conducted presentially in the city of Jönköping during the 29th of April. This took an extent of 2 hours approximately, given the nature of the conversation in explaining and understanding the activities and processes involved in the department. The presence of this person on the city due to personal reasons was a rare opportunity for the authors to realize such interview before returning to her activities in Nanjing, China.

As regarding the questionnaires applied to the department manager, Mr. M., and other employees; these have been pursued, from the questionnaire applied towards Mr. M.; in order to obtain reliable information as regarding to the department’s context using qualitative developed questions that allowed the interviewee to provide relevant details toward each question asked. As regarding the second questionnaire applied toward the other department’s employees, this has been done in order to obtain objective and standardized answers toward relevant aspects related to the stated thesis problem and its purpose. With the limitations of this study as to resources and time, the use of the Kwik Surveys3 online survey tool has been addressed by the authors, maximizing efficiency in making such questionnaire available to the participants within Ericsson- China.

In order to enhance the trustworthiness of the research, the conducted questionnaires towards participants are available at the end of the thesis as appendix.

3.6 Secondary data collection and use

Beyond the use of primary data to arrive to the conclusions of this study, it has been also relevant considerations as regarding to the content of available secondary data provided by Ericsson. As according to Saunders et al. (2009), secondary data include the use of both raw data and published summaries. Further, some of this “secondary data” such as documents only produced by an specific company; in case Ericsson, help developing the structure of a research project. For this study, secondary data has been used in the form of documentary secondary data, which by the same author are often used in research projects that also make use of primary data (ibid).

Relevant information provided by the department in the form of PowerPoint files that contained reliable and accurate information regarding its activities in a detailed manner

3 Such survey tool can be accessed through the website http://www.kwiksurveys.com/
has been absorbed by the authors in order to develop the conclusions toward the research objectives states, as reliable as possible.

### 3.7 Analysis of the empirical data

Regarding the collected data by the authors through the use of both interview and questionnaire methods, relevant consideration have been concerned towards the analysis of such data. In a *qualitative* study, important is to make the most adequate use of the collected data towards the research purposes stated. In order to achieve such best use of the data retrieved from both interviews and questionnaires by the participants within the study, it has been determined that the data retrieved would be analysed following the described steps below:

1. Applying the necessary interview and questionnaires in order to obtain the necessary feedback answers;
2. Collecting the provided answers by the participants’ interview and questionnaires;
3. Interpretating the data of each retrieved answer, in order to detect within such relevant content that helped the development of the stated purposes and objectives of this study;
4. Conclusion of the study based on the previous collection and analysis of gathered data.

Following the described steps the authors’ intents in developing a concise structure regarding the available data becomes enforced, with the intention of providing the research study itself from the reliability and validity perspectives.

### 3.8 Quality within the research analysis

An important issue within the collection of the data to be analyzed is to consider its quality. According to Patton (2002), this can be achieved through verification and validation of the procedures necessary to ensure such quality within the analysis and development of a record for quality work.
Reliability and Validity

Reliability and validity can be emphasized from the researchers’ standpoint meaning that there must be an adequate level of certainty by the researchers towards the collected data provided by the interviewees and through the methods used for the gathering of such data. According to Silverman (2001), reliability can be understood as to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions. Further, as regarding to validity, this can be interpreted as the truth; the extent to which an account accurately represents the social phenomena to which it refers (ibid).

Within the auspices of this study, in order to achieve the required quality (reliability and validity) of the data gathered through both interview and questionnaires applied towards the participants, the following steps were followed:

- For the interviews, quality has been achieved through the assurance that the interviewee has fully understood the question asked by the researchers, making each of the questions asked specifically clear and assuring fully support when necessary to understanding the questions made by the authors to the interviewee. Also, neutrality has been adopted by the authors towards any asked question avoiding influencing the interviewee’s answers;

- For the questionnaires, quality has been pursued though the clear and concise development of questions, enabling interviewees to provide the necessary feedback through answers properly done, as well as to require help as to misunderstood questions, whenever needed. If necessary the participants could have reminded the authors of any unclear statement in the questionnaires.

Emphasizing the discussed methods the authors believe that the participants have replied truthfully to what corresponds to reality within the department’s daily routines. However important to consider was the fact that some of the data gathered through the employees might have been biased in the sense that these were discouraged to reply accordingly to reality due to the nature of the questions; which the participants might have feared retaliation of any kind thus affecting their job position or any other consequence. The authors though emphasize that none of the questions developed would jeopardize the relationship between Ericsson and its employees, given the fact that some of the replies to these same “biased” answered questions have been answered accordingly. Even
though such data might have been biased, these have not changed or impacted both analysis and the results achieved by the study.

Given the characteristics of the study, the achievement of the described methods presented above have allowed the necessary structure for the development of the research study contributing to the build-up of the proposed objectives. Even though the characteristics that have influenced the study (geographical distance of participants, constraints of time in conducting more interviews, and personal influence on some of the questions asked due to fear of being negatively affected by it) has in no way limited the results achieved or the overall quality of the study itself. For this, it is believed that the methods selected for the study contributed accordingly as to the involvement between authors and participants in fulfilling the study’s objectives.


4 Results of the Case Study Ericsson

This chapter presents the findings discovered from the author's empirical Case Study investigation. First, an understanding related to the Case studied by the authors' within Ericsson provides an overall idea of its context. After, the findings presented follow the same order of objectives pursued by the stated study's sub-purposes.

4.1 Introduction to the case study – The order management department- Region APAC

In the transformation from telecom service providers to integrated information service providers in the telecommunications industry, the demand for professional services worldwide is notably growing. Also professional services business in China's overall share of business showed continued growth. Meanwhile, along with the deepening of globalization and outsourcing, Ericsson AB transferred a lot of work from Sweden to China in order of gaining from the benefits of this ever-expanding economy.

On an overall perspective of Ericsson, the company's structure is highly elaborated with different departments and units so that each different firm branch and roles are specifically defined and well as structured. From top to bottom end in order to better understand its customer logistics service management, the company separates different business units, held by a Chief Technology Officer, Network business unit, Global Services Business Unit, and Multimedia Business Unit as well as Market Units, Global Customer Accounts (or Multi-Country Accounts) and CDMA Mobile Systems Unit. Continuing, the Business Unit – Networks (or BNET) holds as well a series of different functions that allow its optimal running. Without entering in details due to its complexity, the next department directs towards the Supply responsibility. As well as in BNET, this department has its management complexity in a well-structured unit with different responsibilities and sub-departments. However one of these sub-departments is Customer Logistics (see figure below).
Hence, as for the object of the study, the Order Management (OM) department is subordinated to the Customer Logistics activity; as this has been established in China as ENC (Nanjing Ericsson Panda Communications Co., Ltd) on early on December 2009, taking over the majority tasks handled by EAB (Ericsson AB) gradually. It is regarded basically as Ericsson’s operations in China, as it has been previously conducted in Sweden before the mentioned period. At the beginning of May, the transport planning function also will be transferred from Sweden to China. The whole project will be finished by then.

It is established into a small workgroup unit, comprised of 6 members who are newly recruited in total each responsible for his/ her tasks but existing job rotation each two weeks. The respective job functions inside the Order Management department are: order entry function; order planning and material sourcing; preparation for delivery and distribution; monitoring and follow-up activity. Also have been stated by the company that one Swedish person as Super User (further explained on the study) whose responsibility is managing and maintaining their large database joined the department to help and support daily working for almost six months.
As to customers

The end customers are located in Japan and South Korea (**NEA**); Australia and New Zeeland (referred by the company as the **ANZA** geographical market region); Malaysia, Singapore, Thailand, Laos and Brunei (**SEA**); also other regions as, Hong Kong, Macau and Taiwan. From February on, the department has determined that it accepts orders from Japanese and South Korean customers as well as from March onwards the previous **ANZA** market (comprised of Australia and New Zealand), and **SEA** (South-Asian Area) orders from the second week of March. Taiwan, Hong Kong, and Macau orders are processed following April.

The sales functional department called **Market Unit (MU)** whose role is to maintain contact to end customers. **MU** is an Ericsson’s internal function which is taken care the purchasing orders placed by customers. They locate in the same countries or regions as the end customers do in order to be more effective to provide services quickly and locally. It should be regarded that customers which place orders at Nanjing’s **order desk** are referred as to the **Market Unit** instead of literally contacting “end customers” because of the high level of work breakdown involved in doing so, having the support of such unit serving as the front door to customer contacts.

Condition of suppliers

The suppliers are divided in two categories; internal suppliers and external suppliers. For the internal suppliers, which are owned by the Ericsson Company itself, like **ENC** (in China), **EAB** (in Sweden) Borås and **EAB** Gävle (responsible the supply of some specific products). The external suppliers provide several specific products, like battery and electronic accessories. For **order desk** in Nanjing, **ENC** is the first supplier choice considering.

Scope of products

There are four main types of products handled by the **Order Management** department. Briefly described, these are:

---

4 In the department’s structuring, the client-base which need to purchase the specific products offered by the department in its market enter in contact with the **Market Unit**, which then such orders flow toward the **Order Management** department to be sorted out accordingly.
Radio transmission infrastructure (Electronic products);
- Core network data transmission (3G, 4G broadband communication products);
- Transmission & Antennas (Transmission infrastructure products);
- Multimedia (Electronic products).

Further explanation to the products supplied by the company would be too technical given the variety available and sub-groups in each of the mentioned category.

**ERP application employed**

The current employed ERP system is based on the worldwide known SAP Corporation, and the department relies on two modules that are currently applied within the Order Management department. For confidential reasons, these are called “system 1” and “system 2” throughout the presentation of the empirical findings in this study. System 1 is a newly introduced solution in Ericsson as a whole and it has been used by MU, Nanjing order desk and some suppliers Nanjing. System 2 has been employed for over a long time already, and as it has been mentioned, such system is currently used only by certain suppliers and Nanjing’s Order desk.

### 4.2 Findings of the Case Study

The collected data through the use of the appropriate methods determined previously in the methodology chapter allowed the authors to better understand the current situation pertaining Order Management department of Ericsson in China. As it has been described previously in the study through the methodology chapter, the applied questionnaires, interview, and secondary data obtained, these allowed the fulfillment of the premises determined by the determined research questions; which would provide the necessary knowledge as to what would be the department’s current employed activities, as well as the related problems that the department faces. In exploring the department’s problems issue, the authors approach to this have followed in investigating further what would be consequentially the reasons for the problems, and what would be the impacts associated with the problems. In doing this, it would be possible to provide a higher level of details related to the current existing situation.

An interesting contribution to the Case Study provided through the research with the available secondary data provided by the participants has been related to the relationship
between the perceptions of “customer” for the department. In this, the order management department receives orders from the Market Unit (MU); a department of Ericsson responsible for the receiving of orders. It has been impossible to further determine this unit’s role within the company’s environment since it was distant from the research objective. However, it became important in understanding the nature of how orders are placed and processed in the Order Management (OM) department as to how orders are placed and processed by the staff.

In pursuing the fulfillment of the first stated research question, through the applied questionnaires and interview it has been possible to collect and determine the following:

- An overview of the processes and functions (activities) associated with the Order Management’s routines, presenting the involved functions and processes undertaken by its employees on its daily operations – in this case as it has been provided by the manager the previous existed functions and processes adopted, in which the responsibility for customer orders was handled by one specific Customer Logistics Management (CLM) staff, and that such unit was responsible for handling one or more customers’ orders entry to delivery at an agreed location, where the CLM serve as the interface for the MU (market unit; the department’s customer whom place orders) regarding all order issues. Further, nowadays the involved processes have changed. Orders are now handled by the MLM (Market Logistics Management) department, and which the CLM premises are not used anymore. Now, the CLM unit collaborates with different customers independently, following functional steps (explained further below).

- The most relevant problems from the participants’ perspective associated to the department’s activities – most important suggested by participants as being the employee’s inexperience to the activities of the department, by the manager, and the difficulty by staff in operating the current ERP system employed by the department, as well as others discussed;

- The detected probable reasons from the discovered problems based on the participant’s perspective – being associated with the fact that the department’s staff is inexperienced to the department’s activities due to these being newcomers and the necessary changes that has been implemented since the department was
transferred from Sweden to China. Also, related to some of the processes that employees have to undergo when dealing with orders placed, which due to the system difficulties might be more difficult and time consuming;

- The probable impacts associated with the detected problems from the participant’s perspective – most importantly on the manager’s perspective is related to what has been previously mentioned as detected problems, specifically: the amount of steps or functions necessary to fulfill in order to deal with customers’ orders, and the fact that such new resource based planning demanded by the department in order to deal with orders has been hard to be implemented due to staff’s inexperience. Also, such have led towards order backlogs, which in turn leads to less responsiveness related to the MU (market unit), which such recent move of the Order Management department has been celebrated by the MU given the geographical advantages it will provide.

These findings allowed further the development of suggestions toward improving these detected facts affecting the department’s activities, thus fulfilling the second research question determined by the authors.

4.3 An Overview of the department’s processes and functions

Based on the participants’ feedback and secondary data, it has been possible to understand that both functions and processes have a visible connection when executing any activity within the department.

In order to better understand it, the manager described that “in the previous process the responsibility for a certain customer was handled by one specific CLM (Customer Logistics Management)”. Continuing, the same even mentioned that “the CLM was pinpointed for one or more customers to follow and handle the whole process, from order entry to delivery at agreed address”. Even further, “the CLM was also the interface for the MU (Market Unit) regarding all kinds of questions and support”, as compared with today’s operations, which are conducted on a different perspective. As based on the manager’s reply; “today, we are working differently. The orders are handled by MLM (Market logistics Management). The wide role of CLM is no longer valid. The MLM is now working independent of customer and in functional steps”.
The department’s processes

From a basic perspective, based on the interviewee’s explanation about the processes involved on a daily basis, and Mr. M’s feedback as related to the Order Management department, these are: Order entry, order planning and material sourcing, preparing delivery for distribution, and transportation planning and follow-up. A more detailed perspective towards each of the described processes and the subsequent routines undergone by the department’s personnel are described below:

- Process 1 - Order entry: the user is responsible for order placements from all customers, from to the different existing suppliers;
- Process 2 - Order Planning: constant collaboration with suppliers exists with the objective of acknowledging all orders placed. There is the possibility of the MU department not being satisfied with delivery dates. In this latter case, the department personnel is forced to “push” suppliers for improved dates, while maintaining the MU department updated as to the order status;
- Process 3 - Prepare for Delivery: The department personnel are required then to follow up which orders are ready for shipment. In doing so, it becomes necessary to inform the MU department about the status of the shipped order. Follow up what orders that will be ready for shipment. The “Go” signal is then effective, giving the “Transport Planning” (which is not part of the scope of activities within the Order Management department) the responsibility for “calling off” such order, if that is the case, to Distribution Service Provider (DSP);
- Process 4 - Monitoring and Follow up: Such activity undergone by the department’s personnel has the objective of receiving incoming replies into the department’s common “mailbox” as related to the order status reports, and answering of “tricky” questions placed by suppliers (in this case, the department’s customers).

The described processes are related to the department’s daily operations, whenever orders are placed by its “customers” (as mentioned before, through the Market Unit) following the data provided by the participants. As related to an overview of the related processes within the department, available company secondary data as to the understanding of the involved processes within the Order Management routines are described, as presented in the following figure below:
Before, the responsibility for a certain customer orders was handled by one specific Customer Logistics Management (CLM); a division of the company within region APAC. CLM was pinpointed for one or more customers to follow and handle the entire process, from order entry to delivery at agreed address. The CLM was also the interface for the MU regarding all kind of matters and support. Now these activities are handled by the Market Logistic Management (MLM). The wide role of CLM mentioned above is no longer valid. The MLM is now working independent of customer and in functional steps as presented on figure 8.

**Related functions**

For each of the described process within the department exists its specific function that each employee undergo in order to assure the correct manner that each of the processes should flow. As described below, the concept of “team responsibility” function works on the sense that, since there is function rotation by employees, each of them have the responsibility of ensuring that within his/her functions the processes undergone within each activity gets correctly done, with the intention of developing the concept of “learning organization” within the department and consequently the company.
The transport planning function regarded in figure 9 is not in charge by the department. This has been only presented above since it has been provided as secondary data to illustrate the connection that exists between the different department’s functions and the transportation one. Each function developed by a specific employee in the department is described as following:

**Order entry function**

Once orders are placed in *System 1* as the order entry function, firstly it should release orders in the *System 1* and *System 2* to be visible before the data is transferred to suppliers. The suppliers would reject orders if they are not 100% clarified orders. To reach the 100% clarified order percentage there are some information that needs to be double-checked as the second step, for instance; price, product number, *Incoterms*⁵ checking, warehouse, billing address, consignee address, etc. This order clarification step requires full attention due to the reason of time-saving from doing it all over again for the non-clarification and differences between the suppliers’ systems.

---

⁵ According to the International Chamber of Commerce (ICC), these are standard transaction terms used in international contracts of sale of goods, helping traders in avoiding misunderstandings when clarifying costs, risks, and responsibilities by both buyers and sellers (http://www.iccwbo.org/incoterms/).
Regarding the *System* differentiation, it refers to situations such as the necessity of globally allocating resources (i.e. supplies) when necessary, some special pre-approved documentations for certain in short supply materials are required to provide to the suppliers in advance. Otherwise, the suppliers do not accept the orders to be further processed. Finally, the task for the *order desk* is waiting for the order confirmation from the suppliers when the purchase numbers are generated by the system.

**Order planning & material sourcing function**

This comes next as the second function in continuing handling orders. After receiving order acknowledgement which contains the confirmed delivery arrival date released by the suppliers, customers would accept it in the condition if arrival date is correspondent to the desired date. However, on the contrary, the confirmed date cannot meet the requirement; order desk is responsible to takes action commuting with suppliers to improve the confirmed arrival date until the customer is satisfied.

**Preparing order & distribution function**

As for the third function, *Order Desk* takes the responsibility in contacting the “*Transport Planner*” in Sweden (Borås) every day. The main task is to update the delivery and transport status for each order to the *MU*. Meanwhile, relative information also has to be updated, such as packing/shipping date, route and *Incoterms* necessary in *System 2*. For some markets, goods consolidation also needs to be finished. Sometimes, orders have the risk of delay by different occasions, in that case, updating risk list to *MU* is necessary so as to inform customer accordingly.

**Monitoring & follow-up functions**

The last function; *monitoring and follow-up*, updates the order status to the *MU*. It encompasses of informing the *MU* about the status of the placed orders by the same before future complaints arrive from the client-base of *MU*. In doing so, the final target of *EAB Nanjing Order Desk* is to serve as a quicker-responsive solver of problems that might arrive in case orders get delayed.

In sum the mentioned processes and functions above are, as according to the participant’s feedback and secondary data what constitutes the set of activities undertaken in order to deal with everyday’s orders placed by customers (in this case, suppliers of the
required equipment), and the responsibilities within each described function in dealing and following the status of each order.

4.4 Discovered problems associated with the department’s processes and functions

The empirical study based on the feedback provided by the participants’ data revealed contents as to the most relevant problems associated with the department’s processes and functions. Based on Mr. M’s perspective, problems related to the department’s processes and functions, from an operational perspective, could be described as:

1. As it has been mentioned previously, with the change of the department from Sweden to China, with that it has been necessary to integrate the new staff members. In doing so new ways in dealing with the department’s activities became necessary, and so a lot of efforts towards exercising improvements efficiently due to the necessary focus on the department’s existing customers, products, and functions, affecting in turn the department’s order handling capacity. As based on the manager’s own perspective:

“When working with all customers, all products and all functions there is a lot of things to learn to work efficiency. In the beginning this affects the performance of numbers of orders to handle…”

Further, based on a real case provided by the participant the same have mentioned the situation where when the MU department has placed orders for a new type of product the operating ERP system was not updated with data relevant to such product. The result of that was that the OM department needed urgently to contact the respective Superuser. Such situation happens occasionally given the fact that employees still lack the necessary know-how when dealing to orders placed issues.

2. There has been considerably hard for the department itself to manage properly its resource planning, especially due to newly implemented methods of working and inexperienced personnel within the department. Emphasizing it with the participant’s own quote:

“It has been difficult to do the resource planning based on the new ways of working as the same time as the staff is inexperienced…”
3. The necessity in implementing a diligent job rotation that could benefit the exchange of information and know-how between the department’s staff members, benefiting its overall functions and processes performance when dealing with the customers placed orders. Such job rotation schedule would focus on developing flexibility over employees, which is a must for the department. The sole reason in doing so is because there is a lack of information to be updated so that the next person on that function can execute its functions in a better way, compromising the performance during that period of time. As the interviewee commented about such issue:

“We have a schedule for the people to work in the different steps. In the beginning we changed every two weeks. We wanted to be flexible as soon as possible. The handovers when changing was not performed well. No one really take responsibility for updating the next person about what have changed and needs to be known. We will implement one responsible person for each function to improve this during spring…”

To further complement the discussion based on the participant’s feedback related to the department’s problems; the same also mentioned the fact that in using what the department calls the “common mailbox”, there have been the sensation by the Market Unit (MU) that the Order Management department is not addressing enough care to the “questions” placed. Continuing, the same affirms that it in fact does not have the same quality as if this would be done personally, having someone making sure the processes are done properly and received rightfully as it has once been in the past or when this has been suggested by the MU when dealing with two customers in the past.

Moreover, it has been also revealed that as according to Mrs. S interview feedback that the following problems seem constantly present within her perceptions. According to the same, the following problems are on general consensus between staff members in the department. These are:

1. The department’s order delivery standard, which states that every order placed should be handled within X hours becomes a huge obstacle for the employees to overcome. According to the interviewee, “having to deal with each new order in the stated amount of time becomes very hard to meet since sometimes we have problems with one specific order or how we are supposed to act in such cases, becoming necessary to ask for support or even when due to the difficulties encountered in using the system…”
2. The existence of two ERP operating systems\(^6\) (System 1 and System 2) which Ericsson is currently undergoing a transition from the older version (system 2) to the newer interface (system 1) since employees argue about the system’s current reliability as well as difficulty in operating it given there are a lot of different settings and steps to follow or achieve in order to deal with placed customer orders;

Complementing, the participant described current situation as “the fact is that the more modern ERP System 1 sometimes is “tricky” and difficult to operate depending of the situation we are facing and the order we need to sort out. This complexity takes more time and patience from us, however unfortunately require more time from our side…”

3. Unfamiliarity to the routines associated to the department’s functions and activities, since this is have been recently implemented in the city of Nanjing, China. Complementing such discovered problems, based on both interviewee and the results gathered from the questionnaire applied toward the department’s employees, their perception towards this problem have significant compatibility. As regarding to the participant’s perceptions, “sometimes it is hard o deal with orders since we do not have it so clear on how to deal accordingly with this order in hand”. Such problem has been detected previously through the findings presented.

4.5 Probable reasons associated with the discovered problems

Following, important is to mention the detected reasons described by the participants as related to the discovered problems. Firstly, on Mr. M’s perception as related to what would be the reasons associated with problems from an operational nature, the same described that:

1. Every employee within the Order Management department was a newcomer since its beginning (which dates the beginning of this year, 2010), which in turn have impacted the department’s activities since its staff was considerably inexperienced

\(^6\) Currently there are two ERP systems employed; System 1 and System 2. The difference between these is that System 1 is a more modern/efficient platform that will be able to generate more benefits, but still under transition as to its implementation in the company. However, System 2 is still being used by different departments within Ericsson worldwide.
with its activities. As based on the manager’s perspective, the same commented:

“Everyone in the team was new from day one. The reason was that we transferred the Order Management from Sweden to China…”

Still following the before mentioned subject, on a document provided by Mr. M, this refers more specifically as to specifically the fact that from the 6 employees, 4 were outsiders, new to Ericsson. Also the volume of information to teach these demands considerable training and time, as the matter of “how to educate the new employees” becomes a relevant issue to be addressed.

2. More difficulties existed when further changes have been implemented at the same time the newly created department started its operations. Further emphasis could be attributed as to the impossibility in predicting the amount of work that the team would have to deal by both regular order management activities and other changes, especially as to the current employed system update. As the participant describes:

“Many other changes implemented at the same time as the team started up. It was difficult to predict the work load caused both by normal Order Management and due to other changes, mostly big system update…”

Furthermore, when asked about probable reasons to the occurring problems from an external nature, Mr. M referred to the “common mailbox” instrument would have an increased benefit for all the personnel within the department if no restrictions as to its use exist at all. Complementing it, “the reason for having a common mailbox is to improve efficiency and to be more flexible when working with the issues sent by the Market Unit (MU), Suppliers, etc. When everyone can handle any order for any customer in any function we will be very efficient!”

Now according to the interviewed staff’s (Mrs. S) perspective as to the reasons to the stated problems on the previous section, the same have described the following reasons described below. These are:

1. As referring to meeting the X hours time period for handling orders:
   - It becomes very hard for the team of employees to meet such requirement due to the existing big volume of orders;
- Hardship increased due to the other department’s matters (as meetings, e-mail internal communication) are necessary and done often.

2. As referring to the system reliability and the two-systems usage:
   - The new SAP system platform have not been tested enough to assure its functionality due to the associated high costs;
   - Migration and enhancements on System 1 are still under way. As mentioned, this takes time due to the necessary investment and adaptation from the side of users.

3. As referring to the reasons based on the new employees’ problem premise:
   - These employees does not have previous experience to the department’s involved functions and processes;
   - Learning is a matter that will require considerable time.

4. As referring to the workload problem’s reasons:
   - The constant use of e-mail communication answering between the MU department and the OM department;
   - The different involving activities (meetings, managerial tasks, and other daily discussions);
   - The difficulty in familiarizing with the different existing catalogued products dealt on daily operations.

4.6 Probable impacts associated with the department’s discovered problems

Referring to Mr. M questionnaire’s feedback within the matter of the impacts associated with the problems, the same has answered that specifically the before mentioned problems 1 and 2:

1. When new ways in dealing with the department’s activities become necessary, there must exist a lot of effort toward exercising such improvements efficiently due to the necessary focus on the department’s existing customers, products, and functions. This in turn affects performance directly as to number of orders to handle.
And;

2. There has been considerable difficulty in managing resource planning; especially due to newly implemented methods of working and inexperienced personnel within the department.

These have directly affected the department’s routine. This in turn have represented a backlog of orders that so far has been going for a long time, in turn affecting responsiveness time in reporting to the Market Unit (MU).

Furthermore, on the participant’s perspective the most relevant issues when relating the problems’ before mentioned impacts are, as following:

**Geographical change of OM from Sweden to China**

The participant referred to the fact that the customer (MU) supported the geographical change of the Order Management (OM) department from Sweden to China based on the fact that this allowed communication since the time zone now is the same between both, benefiting the speed of feedback received. This has benefited operations and contributed in mitigating the other negative impacts detected.

**The system reliability issues and ‘Super-user’ dependence**

However, the system still represents a considerable danger for the department when dealing with the orders placed, even though such issue has been clearly reported by the interviewee’s feedback. In illustrating this discussion, the participant mentioned that whenever new products or system updates become necessary, it is crucial to contact a Super-user\(^7\) in order to deal with such matter at hand. This in turn might take long time since the Super-used addressed to support the OM-APAC is currently in Sweden.

On another case, in a situation that happened in which the department was compelled in giving a fast response as to when the material could be available to customer, this task has been incapable of completion due to the fact that system updates with information related to the new, ordered products was not been completed. However, the MU de-

---

\(^7\) According to the interviewee's description, this is one employee whom detains the required know-how to update Ericsson’s system database whenever small changes become necessary. For example, updating a specific item’s status or making whatever changes available as to the system’s interface itself.
partment pushed such order to occur, and the OM desperately needed support by the Supper-user.

Impacts over the customer (MU) side

According to the feedback provided by the participant, the most relevant impacts that might affect the Market Unit (MU), which is responsible for making orders towards the Order Management (OM) department is related to longer responsiveness and sometimes very long time to get orders acknowledged.

Now, considering a different perspective, based on the perceptions form Mrs. S interview related to the impacts by the problems mentioned before, through the data provided by this participant, it has been possible to determine that:

1. As related to the X hours order placement criteria:
   - Constant extra work necessary by employees’ within the department;
   - Decrease of productivity, due to the extra related activities necessary to attend, as to intra-communication requirements.

2. As related to reliability of systems in use:
   - The system occasionally “crashes”;
   - Orders missing require double checking by employees, as due to usage of two systems;
   - No matter what, double-checking such information with the MU department takes extra time;
   - The existence of arguing between MU and OM in verifying such information missing;
   - The constant need of consulting the Super-user whenever problems occur.
3. As to the new employee’s impacts:
- Constant need of contacting Gävle’s team 1\(^8\) in order to provide the required information related to employee’s routines (activities);
- Routines and processes not still take time.

4. As to the workload impacts:
- A lot of time spent in solving each order placed by the MU department;
- Extra time in sorting out the different unfamiliar products from the product catalogs.

The provided data by the participant have served as the backbone in understanding what would be the involved issues when considering the department’s probable existing difficulties or issues. The data allowed a deeper understanding to what would be the extent of these issues considering the reality of the Order Management department, so that further development of considerations or suggestions can be discussed.

4.7 Findings based on the employees’ perspective

Based on the Order Management department employees’ perceptions, the most relevant findings in the data retrieved from these participants, clearly benefiting the development of the objectives established within this study are presented below, as following:

a) Regarding the “inexperience challenge”:

Q10) The quality of information provided by superiors or by other departments attend needs when sorting issues related to dealing with routines: 5 (83%) agree, 1 (17%) neutral;

Q11) As to their opinion about how feedback provided by superiors/ different departments/ units are helpful in achieving the department’s operational goals, again, 5 of 6 (83%) agreed to the statement and 1 (17%) was neutral;

\(^8\) Refered by the participants as Ericsson’s support team in providing relevant feedback information toward how procedures should be conducted by request of departments staff.
Q16) When discussing the benefits that training (workshops, instruction provided) would benefit the department’s employees performance, 4 of 6 (67%) agree, 1 (17%) strongly agrees, and 1 (17%) was neutral to that;

b) Regarding the “system challenge”:

Q4) About the currently employed ERP system, the employees’ opinion as to how easy this can be operated, 4 of 6 (67%) disagreed with, and 2 of 6 (33%) agreed;

Q5) As to the reliability of the ERP system, 3 of 6 (50%) agrees, 2 of 6 (33%) disagrees, and 1 (17%) was neutral;

Q6) Regarding the amount of work required by the ERP system to use from the employee side, 4 of 6 (67%) agrees, and 2 of 6 (33%) strongly agrees with such fact;

Q18) Improvements in the current used ERP system would make the department more efficient, 2 of 6 (33%) agrees, and 4 of 6 (67%) strongly agrees with this.

c) Regarding the “workload challenge”:

Q7) The affirmation towards the fact that employees in the order management department are always busy due to the volume of orders placed by the market unit (MU). Such affirmation was supported by 3 of 6 (50%) participants whom strongly agreed, as other 2 of 6 (33%) who agreed;

Q14) Regarding the affirmation as to the company’s overall performance could be affected considerably by orders dispatched late whenever the dispatch of a customer order becomes late, 4of 6 (67%) of the participants agreed to this statement, 1 (17%) maintained a neutral opinion and other 1 (17%) disagreed;
d) Related to the delivered service levels:

   Q13) Execution of orders placed might be affected by the department’s existing challenges (inexperience, system, and workload): 1(17%) strongly agree, 2 (34%) agree, 1(17%) neutral, 2 (33%) disagree;

   Q15) the level of service currently achieved by the department in meeting orders reflect on the overall company’s performance: 1(17%) strongly agree, 4 (67%) agree, 1 (17%) disagree.


e) Interesting statements provided:

   Q2/Q3) “We always try our best, but maybe not always meet the goals since sometimes very busy”.

   Q12) “Still some communication is neither efficient nor fast”.

And finally, regarding the employees’ provided feedback regarding the questionnaire applied toward these participants, there has been some questions in which it has been possible to observe the possibility of biased, contradictory answers with what has been detected from the other participants as it follows on the presented questions’ results below. The authors presented these in order to enhance understanding toward the department’s staff opinion to the discussed issues referred in these questions; however several considerations can be depicted from such data. For example, it can be observed in some cases that to very specific questions the employees might have felt psychological pressure in answering it openly, since this could somehow “affect” their image within the department. In this since, it is possible to say that these answers were biased somehow by other factors that discouraged the employees related when answering these. Also this fact is encouraged by the condition that in some cases employees’ opinion greatly vary when answering to the questions presented through the questionnaire. These are:

   Q1) The OM APAC department execute its activities efficiently: 1(17%) strongly agree, 3 (50%) agree, 1 (17%) neutral, 1(17%) disagree;

   Q8) High levels of workload are caused by the different number of processes existing in sorting customer orders when these are placed: 1 (17%) agree, 5 (83%) disagrees;
Q9) High levels of workload are caused by inexperience in dealing with the related tasks within the department: 1(17%) strongly agree, 1(17%) neutral, 4(67%) disagrees.

Q17) Increasing number of employees in the department would increase its performance: 1 (17%) strongly agree, 1 (17%) agree 2 (33%) neutral 1 (17%) disagree;

Even though such data can be regarded as contradictory, these have not influenced on the further development of the study, its objectives and results. The purpose of highlighting it is based on the sole reason of enhancing the perceptions toward the existing issues within the department’s activities and how these can influence on its overall performance.
5 Analysis

The following chapter analyzes the objective proposed by the second research question, which are the most suitable suggestions for improving the previous presented problems as well as suggestions on how the department could focus on improving such detected problems based on the empirical investigation. The authors focus then in providing suggestions for possible improvements for such problems trying to add relevant content based on available literature regarding the department’s situation. In doing so, the authors have fulfilled the study’s objective.

Having discovered the department’s related activities problems, the probable reasons, and impacts of such problems based on the perceptions of the study’s participants, it becomes relevant in achieving the second research objectives stated on the study to determine what would be the type of the problems discovered from the empirical investigation within the Order Management department, characterizing these in groups of “challenges” in order to provide a better understanding of these. This consisted in investigating further the meaning of the detected findings, and afterwards literally “labeling” the problems in terms of challenges that these represent for the department itself, based on the empirical findings presented by the participants, as presented previously in this study.

5.1 Summary of the detected findings

As before mentioned in the “Results” chapter what were the detected problems, its reasons and impacts that are influencing on the department’s activities, it has been possible to develop a summary in order to provide a better understanding regarding these findings better understanding the context of the gathered data. In doing so, such summary list of the department’s discovered issues (problems, reasons, and impacts) from the empirical findings allowed a deeper analysis of what would be the content within each detected items in the three different categories mentioned: problems, reasons, and impacts, so that further consideration could be drawn in terms of suggestions. These are, as it follows:

---

9 The word “challenge” has been referred to as to the department’s detected problems that demand improvements for the benefit of future overall performance within its activities.
<table>
<thead>
<tr>
<th>Discovered problems:</th>
<th>Problems’ reasons:</th>
<th>Problems’ impacts:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manager’s perspective:</strong></td>
<td><strong>Employee’s perspective:</strong></td>
<td></td>
</tr>
<tr>
<td>P1) Extra effort necessary in learning the processes and routines; Performance decreased due to number of orders to deal with.</td>
<td>P1) The current adopted criteria for sorting each order placed of X hours; P2) The current use of two ERP systems/ System 1’s difficulty; P3) Unfamiliarity to the department’s routines and processes.</td>
<td>R1) * Hard for the team of employees to meet such requirement due to the existing big volume of orders; * Hardship increased due to the other department’s matters (as meetings, e-mail internal communication) are necessary and done often. R2) * System platform have not been tested enough to assure its functionality due to the associated high costs; * Migration and enhancements on System 1 are still under way. R3)* Inexperience by employees with the functions and processes; * Learning is a matter that will require considerable time.</td>
</tr>
<tr>
<td><strong>P2)</strong> Difficulty in managing the available resources (newly implemented methods and new coming personnel).</td>
<td></td>
<td>R1) Every employee (4 out of 6) was a newcomer to the department; R2) More focus could be given by Ericsson as to the provision of work to be handled by the department;</td>
</tr>
<tr>
<td><strong>P3)</strong> Lack of information sharing when rotation occurs.</td>
<td></td>
<td>R1) * Hard for the team of employees to meet such requirement due to the existing big volume of orders; * Hardship increased due to the other department’s matters (as meetings, e-mail internal communication) are necessary and done often. R2) * System platform have not been tested enough to assure its functionality due to the associated high costs; * Migration and enhancements on System 1 are still under way. R3)* Inexperience by employees with the functions and processes; * Learning is a matter that will require considerable time.</td>
</tr>
<tr>
<td><strong>P4)</strong> Lack of information sharing between OM and MU. Situation aggravated since staff does not handle such ‘mailbox’ properly.</td>
<td></td>
<td>R1) * Hard for the team of employees to meet such requirement due to the existing big volume of orders; * Hardship increased due to the other department’s matters (as meetings, e-mail internal communication) are necessary and done often. R2) * System platform have not been tested enough to assure its functionality due to the associated high costs; * Migration and enhancements on System 1 are still under way. R3)* Inexperience by employees with the functions and processes; * Learning is a matter that will require considerable time.</td>
</tr>
<tr>
<td></td>
<td>R1) * Hard for the team of employees to meet such requirement due to the existing big volume of orders; * Hardship increased due to the other department’s matters (as meetings, e-mail internal communication) are necessary and done often. R2) * System platform have not been tested enough to assure its functionality due to the associated high costs; * Migration and enhancements on System 1 are still under way. R3)* Inexperience by employees with the functions and processes; * Learning is a matter that will require considerable time.</td>
<td>11) Problems 1 and 2 have directly affected the department’s routine. Long time in processing order due to backlog and responsiveness; 12) Requirement for one additional staff (as a Super-user); Backlog within the orders. 13) Longer responsiveness; Long time to get orders acknowledged.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11) * Extra work by employees; * Decrease in productivity. 12) * System often “crashes”; * Constant “double-checking” of processes done; * “Double-checking” of order missing between OM and MU; * Frequent support needed by the Super-user. 13) Constant need of contacting Gävle’s support team I; * Routines and processes not still familiar. 14) Extra time spent in dealing with system and related issues, as well as product catalogs.</td>
</tr>
</tbody>
</table>
Table 1 – Understanding the discovered problems, its reasons and impacts from the manager and employee’s perspective.

From the summary presented above, it is possible to identify the most relevant discovered problems, its reasons and impacts as has been presented previously during the “Results” chapter. As it can be noted, in order to facilitate the visualization of each of the presented items in the three different categories, these determined by its respective letter and followed by the ordinal number referring to the discovered element following a numerical order. In this sense what is relevant is obtaining a clearer understanding of what the presented statements mean when considering the department’s perspective, pinpointing its relevance according to the findings and trying to relate the discoveries with each other as it is presented in the next section below.

5.2 ‘Labeling’ of discovered findings

The presented information above regarding the existing issues within the Ericsson-China’s Order Management department from the described problems, reasons and impacts shown on table 1 allowed the authors to better understand the nature that each discovered issue could be connected to, thus becoming necessary the “labeling” of the detected findings into specific challenge groups, being possible to determine similarities within the different sources of data gathered for the development of this study.
The rationale in doing so was based on understanding the nature of each discovered and presented items and to what these different “issues” in the three different categories (problems, reasons, and impacts) discussed before would be mostly associated to in terms of a general category that could be generalized as the source of these “issues”. Determining each detected topic into specific groups of challenge facilitated a proper understanding by the authors of the nature of these issues as existing barriers in the department’s daily activities and consequently its operational efficiency; disturbing its overall performance as well as to further determining what would be the suitable suggestions for future improvements to be conducted by the department in order to benefit its affected activities, based on manager and employees’ perspective.

The author’s investigation toward the data retrieved and then “issues” presented on table 1 based on the participants’ feedback allowed the association of each the discovered “issues” to the respective challenges presented below:

- **Inexperience** challenge group;
- **ERP System** challenge group;

And

- **Workload** challenge group.

These three challenges represent the result of a deeper understanding and investigation conducted by the authors as discussed before toward the content of the feedback by the participants so that the detection and determination of these challenges groups was possible.

The generalization toward the three groups of challenges just mentioned was based on the author’s understandings that what were each of the presented items on table 1 related to, following the content of the data gathered through the participants and that allowed such generalization. From the authors’ standpoint it has been clear that the three mentioned challenges were the most evident when analyzing the study’s empirical findings. Based on the data provided by the manager and presented before in “Results”; in investigating his statements it has became clear that related to the presented problems, these were related to as P1 – inexperience and workload challenges; P2 and P3 – inexperience challenge; and P4 - inexperience challenge. Consequently, when relating to the reasons, these were: R1 – inexperience challenge, and R2 – workload challenge. Lastly, relating to the associated impacts, these are: I1 – workload (associated to P1) and inex-
perience (to P2); I2 – associated to the inexperience and workload challenge group; and I3 – to workload challenge group.

Now based on the employee’s perspective data, this was related to the following considerations: P1 – workload challenge group; P2 – system challenge group; and P3 - inexperience challenge group. Now when considering the reasons for such problems: R1 – workload challenge group; R2 – system challenge group; R3 – inexperience challenge group; R4 – workload challenge group. At last, considering its impacts, it could have been determined that: I1 – workload challenge group; I2 – system challenge group; I3 – inexperience challenge group, and; I4 – workload challenge group.

Such “labeling” of the *challenge* groups can be better visualized on the table below, as following:

<table>
<thead>
<tr>
<th>Problems due to:</th>
<th>Reasons due to:</th>
<th>Problems’ impacts due to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Manager’s perspective:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1) Inexperience/ Workload</td>
<td>R1)Inexperience</td>
<td>I1)Workload (P1), Inexperience(P2)</td>
</tr>
<tr>
<td>P2/ P3) Inexperience</td>
<td>R2)Workload</td>
<td>I2) Inexperience/ Workload</td>
</tr>
<tr>
<td>P4) Inexperience</td>
<td></td>
<td>I3) Workload</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Employee’s perspective:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1) Workload</td>
<td>R1) Workload</td>
<td>I1) Workload</td>
</tr>
<tr>
<td>P2) System</td>
<td>R2) System</td>
<td>I2) System</td>
</tr>
<tr>
<td>P3) Inexperience</td>
<td>R3) Inexperience</td>
<td>I3) Inexperience</td>
</tr>
<tr>
<td></td>
<td>R4) Workload</td>
<td>I4) Workload</td>
</tr>
</tbody>
</table>

Table 2 – Labeling of discovered challenges related to the problems, impacts and reasons associated with the empirical findings.

After such detection and understanding the content of the empirical findings from the discovered *challenges* related to the department’s activities, these required further analysis given its relevance within the department’s operations and the study’s objective. The authors then explored the context with each detected “issue” and its consequences (in this case as presented; *problems, reasons, and impacts*) were involved so that possible considerations as to improving such *challenges* could be developed.
It is important to remember that each challenge group produced different numbers of items within each of the tree categories (problems, reasons, and impacts). As presented in table 1. Mostly interesting to understand by the authors has been the fact that when considering the manager’s perspective; from the 4 discovered problems, these have led to 2 detected impacts, but 3 impacts, which as presented this included the system challenge discussion within the manager’s perspective. Differently, within the employee’s perspective from the 3 discovered problems, these have led to other 4 reasons, still concentrated on the previously detected problems’ challenges, and the exact same association to the detected impacts.

5.3 The rationale between each “challenge”

Based on the presented challenges detected from the empirical investigation findings that concern the Order Management department activities, the analysis of the gathered data allowed the authors to further detect important considerations that allowed a deeper understanding of the nature of each detected challenge within the department.

On the authors’ perspective based on the collected data from it has been possible to understand a connection between the presented challenges which in turn have impacted the department’s activities in different perspectives. Such connection is supported by the logic developed by the authors when analyzing the retrieved data that in sense to what has been regarded specifically by the department’s employees as workload, it was possible to draw conclusions that such challenge results from the actions of the two other challenges: inexperience and the ERP system challenges. So forth, for what has been possible to understand from the empirical findings is that if the issues of inexperience and system challenges would be carefully considered and solutions focused on mitigating its impacts within the department’s activities would be properly addressed, operational performance could be restored and these detected challenges would then be minimized through adoption of appropriate action. Such logic between the detected challenges can be visualized as depicted in the figure bellow:
Having determined such relationship, what becomes important as just mentioned before it to determine what could be suggestions to be deployed within the department’s activities so that these challenges could be minimized or even eliminated if possible. It is important to remember that the inexperience and system challenges should not be treated exclusively since workload is considered as the result of the latter two. Instead further considerations to workload are considered by the authors as well encouraging a higher-efficiency solution to the department’s improvements. It would not be prudent developing suggestions for solutions only suitable for both inexperience and ERP system challenges. In order to allow a proper and complete set of suggestions fitting the reality of the department’s operations the authors propose on the next section suggestions that encapsulate the three challenges respectively, providing a perspective based on available literature and materials in order to provide available knowledge-content solutions to treat these issues with creativity and diligence.

The authors believe that, if solutions towards the detected challenges in the department’s activities could be addressed properly much benefits could be gained in terms of overall and service delivery performance not only within the department’s perspective, but as well as for Ericsson’s operations within the APAC region. In this sense what becomes most relevant for the department to focus its attention towards solutions that would benefit the interface between the ERP system users; making this more user-friendly, as well as improving employees’ awareness toward the department’s processes, functions, as well as the system itself in order to avoid misunderstandings
and dependence towards the company’s support available. As mentioned, the suggestions developed by the authors are presented on the next section, as it follows.

5.4 Suggestions for the problems discovered

After discovering the respective challenges presented before and the different ways in which these are affecting Ericsson-China’s Order Management department, the authors last stand in fulfilling the study’s objectives was based in providing suggestions focused on the issues detected from the empirical findings, being regarded to as possible improvements directly associated with the department’s challenges.

What became relevant in discussing the suggestions presented here is that these could generate benefits regarding the presented challenges in improving the department’s overall levels of performance since the discussed issues presented in table 1 are directly affecting activities the quality of activities performed. In order to approach the suggestions described in the most suitable way, it has been determined by the authors that both academic literature and practical published materials available to enhance the content of the suggestions presented. The authors expect that these contributions can provide valuable insights for the department.

Suggestions regarding the three challenges – The importance of training and other considerations:

From the before presented rationale in which was discussed the relationship between the three detected challenges, in order to address it in the most suitable way the suggestions discussed here regarding the three challenges it has been taken in consideration the perspective of “internal corporate training” in order to fill the gaps observed based on the manager’s, interviewee’s, and staff’s perspectives. It has been possible to determine that such connection between each challenge is directly connected given the fact that inexperience could be observed within the system challenge, as well as workload being the final consequence of the previous challenges.
**The inexperience challenge:**

On a first perspective, encouraging the use of corporate training for filling the vacuum existing with the employee’s lack of understanding regarding the department processes and functions, the products negotiated by the department (since it has been mentioned by the employee’s interview that this is not clear for most of the staff in many occasions when sorting orders within the system), and focus on how to adequately use the *ERP* system. The empirical data obtained from the department’s staff strongly encourage such practice where 5 of 6 agrees, in which 1 strongly agrees, that individual and overall performance would be increased if more training could be emphasized within its activities that the department undergo. Some of the mentioned benefits of a skill-based training as provided by Dun & Bradstreet Incorporated (2010) are:

1. Increase of employee productivity: In addition to learning how to complete new tasks and take on more responsibility, employees can learn advanced techniques to help them complete everyday tasks more efficiently;
2. Reducing of turnover: if that could be the department’s solution for disconnecting low-level employees, training could assure that the performance of such individual is secured, providing him the tools for improving his/her performance;
3. Improvement of job satisfaction: skills improvement can generate feelings like being valued and appreciated. For the department such would be good, demanding higher individual productivity from its personnel;
4. Reducing of employee supervision: benefits generated through less and less dependence over external support when dealing with activities encountered problems.

(Ibid) still refers to some of the constraints related to the development of training sessions are related to the investments necessary in developing these; financial, time, and available resources (human and infrastructure). The possibility of considering distance learning training sessions is recommended if no other possibility is considerable, or in order to benefit the quality of the training content. If this becomes viable, the benefits of such initiative:

---

10 Even though such issue was detected within the System challenge group (in the form of Employee's P2), the benefits of its improvement through training could be related due to staff’s inexperience, for this reason deserving attention in this section as well.
a) Cost related - much cheaper given transportation costs of participants and lecturers;
b) More involvement between the participants and willingness in taking such training session;
c) It supports employee productivity – If employee have access to such database, he/her can participate on the training whenever possible during free time.

Particularly considering the its impacts, in the reality of the department and through the secondary data provided by the participants, previous training sessions have been conducted and in this case the necessary investments (as referred to the necessary resources; time, financial, and infrastructure) would not be a major constraint since such practice is encouraged by the company. Moreover, based on the employees empirical data feedback it has been pointed out that 5 out of 6, in which 1 strongly agrees, the department’s staff supports the idea that the development of training sessions would benefit the overall performance of its activities.

The necessity of such solution becomes evident since from the items presented in table 1 within the *inexperience challenge* group the department’s operational performance is suffering by the different facts presented bellow, as emphasized by manager’s problems:

P1 - Extra effort necessary for learning the involved processes and routines;
P2 - Difficulty in managing available resources due to the newly implemented department in China, and new-coming staff;
P3 - Lack of information sharing when rotation cycles among staff’s routines happen, due to inexperience by it since these cannot add value and pass it to a co-worker;
P4 - Lack of information sharing between OM and MU, since staff is inexperienced and do not detain proper knowledge of processes and functions, as well as on how to handle properly the “mailbox”.

And employee’s:

P3 - Unfamiliarity to the department’s routines and processes.

It becomes clear that such lack of understanding based on the manager’s R1 (which states that 4 out of 6 members of the staff were newcomers) and on employee’s R3 (which remembers it unawareness regarding processes and functions within). The consequences of it can be translated by the before presented by its impacts (manager’s I1 (p2); long time taken to process orders due to backlog and responsiveness, justified in
this case by staff’s inexperience; I2 – suggesting having another Super-user staff member by the MU; and employee’s I3; the constant need in contacting Gävle’s support team 1 since staff is not self-sufficient enough in knowing processes and routines accordingly).

Focused on a training development perspective, the proposed suggestions following insights of (ibid) could be valuable in conducting a training session. Principally related to:

1. Determination of needs: determine what skills are most pertinent to address current or future company needs or ones that will provide the biggest returns;

In this case focus should be given towards elucidating the department’s processes and functions accordingly; the products dealt by the department, adequate system-usage instructing and other needs that would benefit the department’s activities.

2. Use of quality materials and instructors: This aspect could mostly impact the achieved results of the training session to be conducted. The materials to be used should really ascertain the related issues that need improvements so that having quality materials and a value-adding instructor would benefit greatly the training session. A professional with valuable knowledge related to the system and activities developed by the department would be key;

For better results, what could be recommended is the participation of the department’s senior management, or even from different departments benefiting the exchange of knowledge and learning. This could generate a knowledge-sharing approach which is highly beneficial for multi-national corporation (CMNs) given its dimensions and necessity to learn fast new techniques and procedures, as well as the capacity of knowledge-generation through its different units, which sometimes its potential is not diffused to other unit or branches members.

3. Measurement of results: This aspect should be really taken into consideration since training sessions require company’s resources and time. For this reason, emphasis on testing what has been learned could improve the employee’s confidence and independence when dealing with relevant issues on a daily basis.
It is important that the knowledge gained from the training session has been properly understood and absorbed by the participants. There are no excuses for letting doubts exist since the purpose is to focus on eliminating the issues that have been detected from the study’s empirical findings. This could be exercised through periodical tests after such training sessions, or even on a more soft approach developing periodical groups of discussion in order to bond staff together and making sure knowledge regarding any issues are sorted out and clarified. The focus on quality and frequency that training occurs is of upmost importance. This in turn will reflect what has been the level of commitment and understanding by the participants referring to what has been instructed.

Relevant adding to the discussion on improving knowledge-levels of staff by the use of training sessions is the requirement of developing a permanent knowledge-sharing culture. This means that communication between its members must be encouraged as regarding job-related issues encountered as well as with higher-management, whenever needed and on a frequent basis. Although the empirical data has detected that such already occur within the department, this initiative should be increased to whatever possible given its benefits. As provided by the staff’s feedback, 5 of 6 agree that the quality of information provided by superiors or by other departments attend needs when sorting issues related to dealing with routines. Furthermore, again 5 of 6 agree that such feedback whenever happens is highly beneficial and helpful in achieving the department operational goals. Also, a proper training session would clearly benefit difficulties that the employees currently face as related to the dependency towards Gävle’s Support Team 1, as to the Super-user whenever doubts related to both the department’s routines and on how to deal with system malfunction/difficulties arrive.

In order to do it accordingly, briefly the training program could be exercised by the following steps as the managers see fit including the following aspects detected from the empirical findings, as bellow:

a) Clear definition of processes and functions within the department’s activities spectrum (related to the involved procedures for arranging orders placed, the extension of products dealt, how to proceed when problems occur, who to report to);

b) Instructing about the ERP system’s functions (how to properly operate the system, in order to enhance the level of understanding with the system and quality of tasks done);
c) Reliable and constant feedback whenever needed by the staff toward superiors, in order to clarify doubts related to their responsibilities (encouragement of a knowledge-sharing culture);
   - I.e.: casual group meeting in order to discuss problems encountered when exercising routines and processes, and proper solutions toward it.
   - Development of manuals containing reliable information on how to execute functions/ routines and steps to be followed whenever problems occur within respective tasks\(^{11}\);
   - It could benefit improvements having a monthly gathering of suggestions by the employees related to their difficulties in executing job tasks.

Based on these arguments, the authors depicted the following cycle in order to provide better understanding on how training within the department could be emphasized. The logic regarding it is similar to the \textit{PDSA} (Plan-Do- Study- Act) (NHS Organization, 2008) cycle presented by Walter E. Shewhart and further discussed by W. Edwards Deming, which underlies the necessary steps in order to improve processes, as well as for other managerial purposes. Following the premises discussed by such approach, the authors propose then the following cycle for the inexperienced challenge:

\(^{11}\) Although such practice is widely used by firms, it would be recommended then a verification of the manuals in use by the company in order to assess its applicability to the detected issues from the department, or even emphasizing staff of its importance.
Each of the included steps are further described as it follows in table in which the authors scrutinize how the department could ascertain each of these steps in order to sort of the inexperience issue within such. These are:

<table>
<thead>
<tr>
<th>1) Training focus</th>
<th>2) Objectives</th>
<th>3) Goals</th>
<th>4) Training quality indicators</th>
<th>5) Results achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processes and functions</td>
<td>Provide a clear understanding about the different processes and functions within the department</td>
<td>Staff should have in mind how processes and functions are established in the department</td>
<td>1) Q &amp; A after training sessions</td>
<td>1) Assessment of staff's overall level of understanding (polling perceptions within determined period of time)</td>
</tr>
<tr>
<td>ERP system interface</td>
<td>Enhance staff's capabilities in using the ERP system when managing orders</td>
<td>Staff should be able to minimize dependency on external support as much as possible</td>
<td>2) Knowledge testing (paper-based or hands-on practice)</td>
<td>2) Improvement in No. of order correctly managed (compared to previous periods)</td>
</tr>
<tr>
<td>Staff's responsibilities</td>
<td>Emphasize on the responsibility of individual and knowledge sharing</td>
<td>Ensure that knowledge sharing is emphasized among staff members. Determining how functional rotations and work teams should collaborate</td>
<td>3) Constant feedback among department members, ensuring best practices and knowledge absorption and diffusion by staff</td>
<td>3) Decrease of Super-user support needed (month, semester)</td>
</tr>
</tbody>
</table>

Table 3 – Scrutinization of the inexperience challenge training cycle.

With the presented information as it follows in table 3, it would be possible to have a wider understanding as to what would be the necessary steps in order to highlight cru-
cial points, the objectives, goals, possible ways in order to measure the training ses-
sions, as well as the expected results from these sessions.

**The ERP system challenge:**
Throughout the investigated sources in order to ascertain how the order management
department could develop a solution related to the *SAP R/3* ERP system currently em-
ployed, it is widely understood by businessmen that companies often struggle in adapting
to the system requirements and changes. Considering the department’s situation, the
impacts that this “system unbalance” is reflecting on the employees’ difficulty in oper-
ate the system accordingly, it is in the opposite generating a series of setbacks (as men-
tioned through the empirical finding; double-checking of orders, constant need of sup-
port, increased volume of orders placed slowing down activities pace).

As referring to the insights provided by the empirical findings, the incurring issues re-
lated to the *system challenge* are, on the interviewed employee’s perspective:

P2 - Current use of two distinct systems (system 1 and 2);
- Existing difficulty in operating System 1 when conducting daily tasks (which as
previously referred, the newer version).

The consequences form such problem detected from the retrieved data is that according
to employee’s R2; generally staff encounter problems when operating the system since
this has not been fully tested given the high associated costs to correcting the system’s
usability. Tests in this sense are still an ongoing factor which affects staff’s routines
with. However this occasionally interferes within the staff’s routines. Further, the im-
 pact (employee’s I2) is that the ERP system often crashes due to the amount of improv-
ing work still necessary towards it, the need of constant double-checking of orders and
process in order to make sure commands have been input within the system according-
ly, and finally the necessity of double-checking of missing orders that have been nego-
tiated between OM and MU, but somehow these do not become evident in the system.

Although the manager have not provided a clear insight for any problem related to the
system itself, it has been possible to emphasize the importance of necessary improve-
ments to the system based on the findings provided by the interviewed participant and
employees through the questionnaire applied to them. In order to deal with the men-
tioned issues pertaining the system itself, the authors have per see two possible im-
provement paths to be followed by the company, independently or in conjunction to
each other:
1. Training focused on personnel skills (as referred and discussed within the *inexperience challenge*), or;
2. Improvements of the system itself.

Discussing the possibility of the department focusing on providing necessary resources in order to enhance the staff’s understanding of the system through emphasizing training would be encouraged, given the issues stated by the interviewee presented at the employee’s P2. As discussed on the previous topic related to *inexperience*, including a training agenda towards elucidating clearly the system to employees could generate a series of benefits. Based on the employees’ perceptions towards evaluating the department’s used *ERP* system, it has been observed that 4 out of 6 (67%) of the questioned participants disagree to the fact that such system can be easily operated. Moreover, the participants opinions as to the fact that the current system requires great amount of work to deal with provided that 4 of 6 (67%) agree with such, as well as the other 2 (33%) strongly agrees with this fact. In this case, the before discussed premises regarding the development of training sessions should be taken into consideration in addressing this path as discussed in the session before.

Considering the second suggestion related to system improvements, previous research toward this subject points out that after purchasing and installing properly a comprehensive system, only 25% to 35% of its potential functionalities are used by the company (Multi Channel Merchant Organization, 2007). Specifically regarding the *SAP R/3* system, this discussion requires more details due to the fact that the implementation of this system since requirements over capital, time, as well as adaptation time are considerably long and exhausting.

As presented by Tarn, Yen, & Beaumont (2002) the time and cost for implementation of an *ERP* system are enormous. In the case of *SAP R/3* system, the time to implement it can take from one to one and a half year, and most three years, further generating an ownership cost value of $ 1.5 million dollars.

Given these specific details, the importance in addressing properly the second path suggested suggests extreme caution by management taking such decision since the difficulties connected to it are big. Considering the circumstances faced by Ericsson in general; in which *SAP R/3* system has been adopted and implemented, a big amount of investment has been made towards making processes more efficient. With such an
investment and implementation done, high costs, including consulting costs become inevitable (ibid). From the department’s involved personnel, the quality of the system itself is considerably good. The main issue lies toward its interface, which is complicated, not user friendly (based on the consideration made by the interviewed participant).

Following such detected premise, what could be suggested from such maintenance “services” provided by the vendor and related to ineffectively system usage, according to The Enterprise System Spectator (2004) it could be; checking for system upgrades; a newer version, a vendor patch, or any modifications. This could be encouraged by the fact that most companies pay 17% to 22% of the original software license price per year in order to gain access to bug fixes, legal changes, and technical and functional enhancement releases (AMR Research Incorporated, 2007). This could in turn aliviate some of the problems faced by users, if possible to address the detected issues by participants.

Also, considering the investment premise done by Ericsson towards the implementation of SAP’s R/3, trying to take advantage of the vendors’ support services could be the most probable solution, if it would become inevitably necessary improving the system. In this sense, an evaluation of either the need towards consultancy as to if the system itself attend the staff’s needs as users, or if its interface could be improved, benefiting their productivity. Less important would be improvements towards the system’s reliability, since it has been detected on the data by the employees that this is not such a considerable aspect. This means that the system is reliable, however, not user-friendly.

With such considerations presented, it would be relied on the company or department’s intentions to determine which of the possible considerations would be more feasible. In one hand, providing adequate training in order to enhance staff’s awareness could be a more hands-on approach, easier to initiate. However, still it would require personnel some time to absorb such knowledge and develop the necessary performance in increasing the department’s performance output regarding to the system usage. As to possible changes to the ERP system, even though this could focus on fixing the constraints existing by the system itself, it would demand considerable resources, plus work by the vendor company (SAP) in order to meet the client’s (OM department) demands.
The workload challenge – closing considerations:
As it has been previously mentioned, it has been possible to observe through the analysis of the data gathered from the participants the interconnection between the three described challenges, namely; inexperience, system, and workload, which the latter can be regarded as a result by the first two combined. With the considerations made previously by the authors, it is believed that the department could gain improvements from those suggestions however observing the most suitable way in approaching such, respectively; internal corporate training (as discussed in inexperience), ERP improvements (discussed in inexperience and ERP system).

The general consensus within the OM department is that the staff realizes the fact that late customer orders dispatched have a significant impact in the overall performance of the unit. This is emphasized by the opinion of 4 out of 6 (67%) who agreed with such fact. Considering the issue of workload as a reason itself for affecting the department’s performance, it has been provided through the empirical findings by the employees are constantly busy due to the volume of orders placed by the market unit (MU), whom 3 of 6 (50%) participants strongly agree and 2 of 6 (33%) agree. Such information reflects once again on the importance of the suggestions discussed previously in order to mitigate impacts in terms of workload faced by the department.

In order to elucidate the discussion towards workload challenge, based on the empirical findings as presented previously, the relative problems, reasons, and impacts on the perceptions of both manager and interviewed employee are:

- Manager’s P1 - Extra effort necessary for staff in order to learn the involved processes and routines within the department’s activities. This in turn as recognized by the manager himself natural time in order for the employees to adapt to the current flow of activities dealt in the department. And;

- Employees’ P1 - The criteria established by the department that there is a certain standard to deal with each order. This has been criticized partly by the interviewed participant in the sense that since there are several constraints which interfere in the staff’s activities (i.e. lack of understanding of processes and routines, ERP system, as well as volume of orders to manage), this in turn impacts the fulfilling of this criteria imposed by the company.
The reasons for such issues is that more focus could be emphasized by Ericsson as to
the provision of work to be handled by the department (Manager’s R2), as well as it
becomes hard for the staff to meet the deployed requirements given the constant vo-
volume of orders placed on the department (Employee’s R2). The impacts considered are
exemplified as being the fact that longer responsiveness and times to get orders ready
to deal with (Manager’s I3) and extra work necessary as well as time to deal with the
system that is not as friendly as the employees thought it could be (employee’s II/ I4).

Complementing the discussion, throughout the comments provided by the employees
when filled the questionnaire two comments that emphasize the issue of workload are
that: “We always try our best, but maybe not always meet the goals since sometimes
very busy”, and; “Still some communication is not efficient nor fast”. This fact empha-
sizes the issue that is workload and the importance of addressing the detected issues
within the department.

As mentioned before, the important consideration to be regarded when discussing the
workload challenge is the fact that this is connected to the previous challenges dis-
cussed before: is related as a result from inexperience; of staff not knowing how to op-
erating correctly the current ERP system and knowledge regarding the department’s
processes and functions and the products commercialized which in turn affect their per-
formance. Regarding the ERP system itself, it has been possible to determine two con-
siderations towards this; that the system itself is considered hard to operate, and, that
improvements could benefit the employees. It is the matter that the system might not be
suitable in the best way given the considerations of the employees, however important
to remember the difficulties and risks existing in making changes in this given its com-
plexity (i.e. extremely high costs and complexity in implementing new processes into its
structure). Also, it is important to remember other factors (i.e. geographical change to
China) which have somehow impacted the way the department operates in order to meet
local demanded by Ericsson itself in such change(i.e. new coming staff and new set of
routines recently implemented with this geographical change), just referred previously.

Given all the presented findings from the empirical investigation, it has been possible to
ascertain what and which would be the involved constraints that influence in the Order
Management department of Ericsson in China. And since it has been possible to deter-
mine the rationale that workload in this sense is an outcome of both inexperience and
the ERP system issues, it would be most prudent by the department to emphasize the
previous suggestions discussed before and constantly monitor and measure its implica-
tions as how the previous changes would affect this issue.
What would be proposed in this segment as it has been presented in table 3 in the *inexperience* suggestions is based on the latter encouraged by the authors discussed before, with the deployment of training focused on the presented topics it could then be possible to have a better understanding to which extent these have been possible to improve the conditions within the department:

- After deploying the training perspectives discussed before, to which extent have the respective items improved?
  - Responsiveness by the department when dealing with orders placed;
  - Time that orders get acknowledged by the staff as a workgroup;
  - If the time-frame period determine by Ericsson as a standard in dealing with orders is being achieved (or better than before);
  - How the staff perceives volume of orders (opinions about how are they “dealing” with it);
  - If the system issue still concerns staff when operating it;

- Regarding the improvements done on the ERP system, how have the staff adapted to it?
  - If the staff is more accustomed to the system interface;
  - The time that orders are managed (faster or slower than before);
  - The number of orders “missed” by the staff, or simply “stuck” in the system, compared to before;

As it has been possible to observe when reviewing the facts pointed out in the *workload challenge* group, the important observation that must be taken is measuring how the proposed suggestion would affect the department’s activities compared to before. No more than this, it is pure management focused on the improvement of quality of the activities conducted by the department. Even though it could be referred as a bit “dull” or obvious when taking a closer look to the information discussed in this chapter, but sometimes the obvious is not quite obvious even though businesses rely on valuable resources and tools in order to allow higher standards of management.
6 Conclusion

The main purpose of this study was to provide academia with the reality that pertain an organization’s department related to logistics activities and what are the existing issues that could hinder its overall performance when executing its activities. This has been achieved by the authors’ Case Study through the investigation of Ericsson’s Order Management department in China. The objectives of the study consisted in two main research questions. The first one focused on investigating what are the relative daily activities undergone, involving its processes and functions in order to have a broader understanding of its context. Then after having detected such the focus was on investigating based on the perceptions of two distinct groups: the department’s manager and staff – what could be the associated problems, its reasons and impacts that are affecting the department itself. The collaboration of the participants provided enough feedback data that allowed the authors to further analyze this and arrive to the discoveries and understandings discussed in the study.

The results of such effort has been regarded as the most relevant “challenges” discovered based on the perspectives of the department’s manager and employees was related to three main issues discussed: the existing inexperience related to staff regarding how things occur in the department, the hardship when dealing with the current ERP system, and for that matter distinctive workload resulted from the before mentioned issues existing within daily operations, fulfilling the first research question envisioned by the study. Further, a second research question have been structured so that after discovering the respective “challenges” within the department, the authors could provide suggestions for improvement in order to benefit the department’s overall activities performance. This has been conducted through investigation of constructive secondary data that could benefit the achievement of this objective. The suggestions produced by the authors strive in benefiting the detected “challenges” based on the empirical investigation and further enhancing the quality of the department’s performance, so that everyone involved in its daily activities could benefit from such initiatives discussed in the study as suggestions.

After fulfillment of both research questions, the study’s purpose envisioned by the authors has been fulfilled. The findings from this research showed that on the department’s reality, there are different perspectives toward the issues that affect its operations; form the manager’s perspective, it can be observed the focus on staff’s inexperience mostly, as from the personnel who are at the frontline in dealing with orders
placed, specifically these issues are related to the tools involved (i.e. the ERP system usability) and other operational aspects as some dissonance in communication between department members requiring further support by skilled personnel. This in turn resolves into workload that is not always met by the department, and that is the result of all the detected issues apparent from investigation and analysis of empirical data retrieved. As a foreword, the process of development of the study itself was capable to provide some interesting insights and facts by the authors. When discussing the perspectives of improving the “challenges” discovered from the empirical investigation, it is important to address that in order to succeed with the presented suggestions and also avoiding further harassment regarding the available resources within the department’s perspectives, there is a clear necessity of human-behavior surpassing.

This can be understood as a higher involvement between people in order to generate higher results and avoid conflicts; which could be with respect to whenever a problem occurs or even on finding the ways to solve it. As Goldratt (2008) mentioned, “common sense is not often common”. The meaning of such sentence resembles that although suggestion can be determined on how to make things go better, it is mostly important that individuals embrace the necessary changes in order to enhance performance and quality of work.

What has been provided in the study is just an introductory set of solutions to help the department in dealing with its issues, however elucidating some of the issues that could be regarded as major constraints given the constant necessity for organizations to leap higher. There is no magic recipe in terms of tools and frameworks to make activities undergo in a better way if individuals cannot see for themselves the importance of involvement and will to change, constantly and whenever necessary reviewing the currently adopted.
7 Future Research

For those in pursue of continuing the research developed in this study, the authors would suggest that conduction an investigation of the issues affecting activities within other companies’ logistics departments due to the fact that it would allow understanding different perspectives within other work environments and what could be the solutions for such.

Given the geographical difficulties from the author’s perspective in gaining access to data or even developing further questions since the department is located in China, gaining more understanding over the processes, functions, and consequently its respective issues might have provided more quality to the study. Also, confidentiality played an important factor in this study, agreed between the authors and the company’s staff, and this has somehow limited the extent to which data could be provided by the staff although such factor did not prevent anyhow collaboration by the interviewees, their attention to whenever necessary as well as in providing data in order to enhance the perceptions of the study itself within the possibilities. For this reason it could be suggested that future researchers involve themselves more specifically into organization’s issues when trying to pursue the development of a Case Study, so that details become more evident and also expanding the involved issues within the logistics function of the researched organization.

Another approach as to a different research perspective could be directly related to the performance measurement of any suggestions of improvement conducted by future researchers taking into consideration researches that have emphasized changes in order to make organizations more efficient regarding their logistics functions, and what has been the outcome of that. In order to observe and discuss how beneficial any suggestions for improvements can be when applied into real context, it would be encouraged researching that has a connection with the logistics realm within an organization’s activities.
8 References


9 Tables of Appendices

9.1 History of Ericsson

In the year of 1876, a single man named Lars Magnus Ericsson envisioned the potential of telephones and the needs for improvement of these from a technical perspective and on the same year with the collaboration of Carl Johan Ardersson began “L. M. Ericsson & Co. Mekanisk Werkstad”. Some of the facts that have influenced the company’s development to its current situation can be considered as its first big order placed in 1881 from the telephone association in the city of Gävle, Sweden. The delivery product was a system that included switchboards and telephones. During the late 1890’s the company holds plans to move its operations to St. Petersburg, Russia due to before customers “Televerket” and “Stockholms Allmänna Telefon” began their production. During the beginning of the 1900’s, the company expanded its operations outside Sweden, becoming part of a telephone company in Mexico. Following, in the year of 1918 a merger with the before mentioned “Stockholms Allmänna Telefon” occurred. In the late 1920’s, a power struggle between Ericsson and venture capitalist Ivar Krueger benefited the latter in holding the company’s operations. When Krueger died in the year of 1932, the company’s competitor “ITT” have assumed its operations led by Sosthenes Behn. However after future negotiations the company held its previous structure.

Following the Second World War, the company have established itself as an international company and concentrated on the manufacturing of fixed telephones and telephone systems. In the year of 1976, a hot product has been developed by the company (AXE-system) which turned to be a long life, important export product.

In its recent history, during the 1990’s Ericsson positioned itself as a leader in mobile telephony technology and currently produces mobile products with its jointly owned company, Sony Ericsson. Such vision have led the company towards a worldwide net of operations related to high-quality communication products serving different segment areas such as Ericsson Corporation has established itself as a worldwide leader in providing telecommunication and related services to both mobile and fixed telecom operators. Over 1000 networks over 175 countries utilize its network equipments and 40% of all its mobile calls are made through its system. This general information concerning the company’s history and current situation emphasizes the importance of it as a technology firm that plays such important role in today’s worldwide market.

(Sources: ericsson.com and ericssonhistory.com)
9.2 Main ERP software providers

Some of the well-known vendors of ERP systems are SAP AG, Oracle Applications, Microsoft Dynamics, SSA Global Technologies, QAD and Exact Software.

Founded in 1972, SAP AG is the largest European software enterprise, headquartered in Walldorf, Germany. SAP is an acronym for Systems, Applications and Products in Data Processing. It is the largest ERP solution software provider in terms of revenue. SAP products focus on ERP systems. Its main product is SAP R/3. R stands for real-time data processing, and the number 3 relates to the three-tier application architecture of its database, application server and client. There are over 91,500 SAP installations at more than 28,000 companies. Over 12 million people in more than 120 countries use SAP products.

Oracle Corporation was founded in 1977. It is one of the major companies involved in the development of database management systems, tools for database development, and enterprise resource planning software. The Oracle e-Business Suite includes software that performs financial, manufacturing and Human Resource Management Systems related functions. User access to these facilities is provided through a browser interface over the Internet or corporate intranet.

QAD produces Enterprise Resource Planning software for six main industries -- Automotive, Consumer Products, Electronics, Food and Beverage, Industrial Products and Life Sciences. QAD products, MFG/PRO is an ERP software containing multiple optional modules and adds on products like AIM Warehousing and Trade Management.

9.3 Questionnaire 1

Hello,

We, Henrique Luiz Mayer Nunes and Jing Ha, master students in Logistics and Supply Chain Management from the Jönköping International Business School are developing our master thesis entitled “Understanding Ericsson – China’s Order Management Department Challenges – A Case Study”.

Our intentions with this questionnaire is to retrieve reliable data regarding as to understanding the Order Management department’s different functions and the process related to these, the most relevant problems associated with these different functions, and how the department perceive the possible reasons for such problems occurring.

The following questions are of descriptive nature, which the participant has the liberty to disclose with his words the relevant information/data. Some of the questions will be more specific towards understanding the different functions within the departments, while others to broader issues dealt by the department.

Providing relevant documents as secondary data by the company to enhance the author’s knowledge about different questions would be much appreciated.

Please answer the questions honestly, providing most relevant content in terms of content and details whenever possible. CONFIDENTIALITY WILL ALWAYS BE REGARDED WHENEVER DESIRED. The authors assure that the provided answers WILL ONLY BE USED FOR RESEARCH PURPOSES.

Please keep in mind that, whenever necessary as regarding to any doubts, let us aware about it.

Sincerely,

Henrique Luiz Mayer Nunes and Jing Ha

Jönköping, 25 of April, 2010
**General questions regarding the Order Management department’s context:**

1. As to understanding what are the different functions adopted by Ericsson’s Order Management department, could you describe with your words what are the different functions (and processes related to these) in the department (e.g. what are the different involved processes that affects an order when this is placed by a customer)?

   *(This information could be enhanced by providing documents by the company, if possible)*

   *(feel free to fill in this space)*

2. From your perspective as the department manager, what would be relevant challenges/ difficulties *from an operational perspective* that the department faces? Could you list these giving possible considerations to each?

   *(feel free to fill in this space)*

3. Now, what could be related challenges/ difficulties *from an external nature* (outside the department) that might be influencing/ have influenced in the department’s activities? Would these be of any concern towards achieving customers demands?

   *(feel free to fill in this space)*

4. From the mentioned problems in question 2, on what would you base as being the probable reasons for such challenges/ difficulties to occur/ have occurred?

   *(feel free to fill in this space)*

5. Now as to question 3, what would be the probable reasons in your opinion to occur/ have occurred?
6. Based on question 2 and 3, how have such challenges/ difficulties impacted the department? And how it has affected its performance?

(feel free to fill in this space)

7. What have been the customer’s reactions regarding such challenges/ difficulties discussed on questions 2 and 3, faced by the department?

(feel free to fill in this space)

8. Could you provide/ describe any real situation(s) of how this has happened?

(feel free to fill in this space)

9. On the customers side, how have these been impacted due to such challenges/ difficulties faced by the department?

(feel free to fill in this space)

10. Based on question 8, could you provide/ describe any real situation of how this has happened?

(feel free to fill in this space)

11. How is the department currently addressing such difficulties/ challenges? What are the initiatives taken by the department?

(feel free to fill in this space)

12. In your opinion, what would be possible improvements towards these problems?
13. Could you provide any real example on how this has been done/is being doing?

(feel free to fill in this space)
9.4 Questionnaire 2

Hello. We, Henrique Luiz Mayer Nunes and Jing Ha, master students of International Logistics and Supply Chain Management at Jönköping International Business School. We are researching within the field of Order Management and would appreciate your participation. The questions asked in this questionnaire are mainly with multiple choices, regarding as to your personal perspective towards each issue asked, contrasting with your daily work routine experience. Please choose honestly the answer that most fits to each of the question asked. Confidentiality as to names and the information provided will be considered always in the purposes of this study. We are grateful for your patience and collaboration.

Please choose carefully the option that best fits to your opinion as to the affirmations bellow:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

* Note that for those questions in which you cannot determine, please leave this without any answer.

General thoughts about the department:

1. The Order Management APAC department executes its activities efficiently.

2. We always meet the established goals in achieving the fulfillment of orders within the department.

3. We always meet customer demands, and their satisfaction level is considerably good.
Considerations related to IT:

4. The currently employed ERP (current SAP module) can be easily operated.  
5. The currently employed ERP (current SAP module) is very reliable (as to constant shutdowns, sudden freezes while used).  
6. The current employed ERP system requires a lot of work from the employee side in using it.  

Considerations from the employee's perspective:

7. Employees in the Order Management department are always busy due to the volume of orders by customers (or whoever places it).  
8. High levels of workload are caused by the different number of processes existing in sorting customer orders, when these are placed.  
9. High levels of workload are caused by inexperience in dealing with the related tasks within the department.  

Considerations from the communication perspective:

10. The quality of information provided by superiors or by other departments employees attend your needs when sorting issues related in dealing with your routines.  
11. Feedback provided by superiors/ different departments/ units are helpful in achieving the department’s operational goals.  
12. The time used in communicating between the department’s workers/ managers/ other employee’s personnel is efficient and fast.
Considerations from the “customer” side perspective:

13. Execution of orders placed might be affected by the department’s existing challenges (for example; high lead times, inexperience in executing specific tasks, ERP usage difficulties, etc).

14. Whenever the dispatch of a customer order is late, the company’s overall performance might be affected considerably.

15. The level of service currently achieved by the department in meeting orders fulfillment might reflect on the company’s overall performance.

Considerations as to improvements:

16. More training (workshops, instructions) would benefit the department’s employees performance.

17. Increasing the number of employees in the department would increase its performance.

18. Improvements in the current used ERP (current SAP module) system would make the department more efficient.