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Online or Offline?
Industrial Promotion Activities
A Case Study of Volvo CE

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ABSTRACT

The increased competitive environment in the construction equipment industry, and the rapid development within IT has resulted in new tools to more effectively communicate messages between business partners. An extranet has become a popular IT tool for companies in the industry to deliver industrial promotion activities electronically, instead of in traditional printed format.

The main problem of the thesis was to investigate how a MNC in the construction equipment industry can deliver industrial promotion activities electronically, to its dealers, and how this will affect its dealer relationships. The thesis is based on our case company Volvo CE, which is one of the top global actors in the industry.

In order to solve our main problem, we developed a model comprising four areas of investigation. The purpose of the model is to provide the initiator with the necessary information for choosing a strategy of how to most effectively deliver industrial promotion activities.

Our main conclusion is that there is no obvious answer to how a MNC in the construction equipment industry can deliver industrial promotion activities electronically. Although, we found that some industrial promotion activities have higher online potential than others, the decision is dependent on the specific case in question. Furthermore, we concluded that in our case study it is too early to say how electronic delivered promotion activities affect the dealer relationships. However, we found extranets as having high potential to strengthen dealer relationships.

Keywords: Industrial promotion activities, construction equipment, electronic/online delivery, extranet, relationship marketing.

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Mikael Andersson



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1 INTRODUCTION

This chapter will start with the research background to our study and continue with a short presentation of our case company, Volvo CE. Thereafter, we present the main problem of the study as well as the different research problems. The chapter ends with a presentation of the study's purpose and its delimitations as well as the thesis outline.

1.1 Problem background

The competitive environment in global markets around the world has become increasingly fierce over the last decades due to reduced trade barriers, escalating development in information technology (IT), global customers, etc. The global construction equipment industry is no exception from this development and is to day dominated by a few global players. According to industry experts, Caterpillar and John Deere are the leaders concerning e-commerce development. These two actors are followed by Komatsu and Case New Holland (CNH).

The ways to communicate marketing information towards the customers is also under development in the construction equipment industry. Today, there are a number of ways to deliver your message to the customer using a variety of communication channels. The development of new technologies during the last decade has resulted in more effective methods in promotional flows and promotion management in marketing communication channels. (Stern and El Ansary, 1996)

As the companies' goal is to provide the right information to the right person at the right time, the introduction of IT and e-commerce, and especially the use of intranets and extranets, have become vital tools for staying competitive. We define e-commerce as all business activities conducted on the Internet, not only buying and selling but also servicing customers and collaborating with business partners. The reason behind intranets and an extranets is effective information sharing. In order to keep up with the competitors, most companies are continually looking for new and better ways to speed communications between trading partners, establish better relationships with customers, suppliers and

partners, and reduce expenditures (Vlosky, Fontenot, Blalock, 2000). The business partners in this thesis refer to construction manufacturers and its dealers. The use of extranets can help businesses realize many of these goals, and the construction equipment industry is no exception.

One function of extranets is the possibility to place different kind of documentations online, meaning that these documents are made accessible through the extranet. Through the past several years, many businesses in various industries have been anxious to move documentation online to reduce costs. At present, the global players in the construction equipment industry are using extranets, among other things, as a tool for delivering various promotion activities electronically, or in other words, making these activities accessible online via the extranets. These promotion activities are, for example, product information such as product catalogues and parts catalogues, engineering manuals and service bulletins, etc. By placing these activities online and use electronic delivery, instead of delivering it to the dealers in traditional printed format, the manufacturers can achieve major cost advantages. The extranet further allows manufacturers to more personalize the promotion activities to the dealers after individual needs and by that strengthen its relationships with the dealers.

However, research has not adequately addressed how users react to print versus online documentation or whether this approach is cost effective over time, taking into account customer satisfaction, repeat sales, and other business issues. A fundamental design choice of professional communicators involves the delivery medium of the message. The channel choice or medium-delivery option is crucial to the effective conveyance of messages. (Vlosky, Fontenot, Blalock, 2000)

To be able to strengthen dealer relationships and achieve cost reduction, the question is what kind of promotion activities in the construction equipment industry are suitable to place online, hence delivered electronically, and what is preferable to deliver in printed format.

1.1.1 The case company – Volvo CE

Volvo CE is a part of the Volvo Group, which moreover consists of Volvo Trucks, Volvo Buses, Volvo Penta, and Volvo Aero. The Volvo Corporation has an over 75-year old tradition of shared technical and industrial experience. After a merge between Volvo AB, and Clark Equipment Co. in 1995, Volvo CE became a wholly owned subsidiary within the Volvo Group. The company develops, manufactures and markets equipment for the construction and related industries. Volvo CE's product line includes a range of wheel loaders, hydraulic excavators, motor graders, articulated haulers, and compact equipment. (www.volvoce.com)

Volvo CE has activities in over 100 countries over the world via a dealer distribution network, which consists of over 200 independent dealers. The company has approximately 8, 800 employees. The sales for 2000 reached 19.99 Million SEK. The Volvo Group possesses total assets of 200.7 billion SEK with financial assets of 5.3 billion SEK. In the year 2000 Volvo CE counted for 22 percent of Volvo Group's operating income, which makes it the most profitable division. (www.volvoce.com).

Volvo CE has divided the global market into three regions: NAFTA (United States, Canada, and Mexico), Europe, and International markets (rest of the world). The company's largest market is Western Europe followed by North America.

In 2000 Volvo CE had a market share of 5 percent of the total construction equipment market. This placed Volvo CE in fourth position in the industry together with John Deer. Caterpillar was the big leader with a market share of 29 percent, followed by Komatsu with 16 percent and Case New Holland with 8 percent (Volvo CE internal material, 2001).

At present, Volvo CE's main goal is to regain its number three position in the industry. This will partly be achieved by structural acquisitions but also by improving the relationships with its dealers, by making them "partners for profit" and improve the communication with them.

The dealer relationships aspect is very much related to Volvo CE's e-commerce activities. Volvo CE's e-commerce development has been relatively slow compared to its main competitors mentioned in the previous part. According to the company, Volvo CE holds today the 5th position in this area after John Deere, Caterpillar, Komatsu, and CASE New Holland (Volvo CE internal material, 2001). Volvo CE has realized the importance of catching up with the competitors in this field. The Volvo Group's e-strategy was launched in December, 1999, with a new and common website for the Volvo Group. Volvo CE's e-strategy started at the beginning of 2000 with a pilot website for the NAFTA region. (Gölin and Witvoet, 2000) The extranet, Volvo Dealer Network (VDN), launched in the beginning of August 2001, is a major cornerstone in the development of Volvo CE's e-strategy.

The latest strategy of Volvo CE to strengthen its competitive position is to try to deliver a more unified message to the customer through the statement of "One Company Vision". A current issue of Volvo CE is that its dealers regard it as a non-unified company. At present the dealers have to communicate with several separate divisions within Volvo CE depending on the issue, e.g., the product companies, regional sales and finance business functions, etc. Therefore, the company aims to communicate a more unified approach towards its dealers. Volvo CE's extranet - VDN - is an important factor in the "One company vision". VDN has the potential to provide a single, unified way for all Volvo CE companies and functions to communicate to the dealers. The extranet aims to build closer relationships with its dealers as well as achieving future cost advantages in the competitive industry environment.

"The vision of the Volvo Dealer Network is to become an indispensable part of everyday life for Volvo Construction Equipment and its dealers." (Volvo CE internal material, 2001)

1.2 Problem definition

The issue of choosing the most effective medium for promotion activities in the construction equipment industry is a most relevant topic. We will therefore investigate how this decision process can be undertaken by using a large Swedish construction equipment manufacturer as a case study. The main problem statement is the following:

MAIN PROBLEM

How can a MNC in the construction equipment industry deliver industrial promotion activities electronically and how will it affect its dealer relationships?

In order to provide answers and conclusions to the main problem, we will investigate three research areas:

Research problem 1

What are the current industrial promotion activities of a MNC in the construction equipment industry towards its dealers?

The first step is to investigate what kind of promotion activities a MNC in this industry is using. Promotion activities include activities that aim at supporting the dealers' selling process, not the actual interaction between the dealer and the end customers.

Research problem 2

How are the dealers in the construction equipment industry currently using industrial promotion activities towards the end customer?

To choose the most effective communication channel for promotion activities we must also know how the dealers are using it in interaction with the end customers.

Research problem 3

What is the IT level of the dealers in the construction equipment industry, regarding knowledge and resources?

Finally, in order to make an assumption of which promotion activities that should be delivered electronically, we must have a picture of the dealers' IT level. A low IT level can act as a restriction for delivering industrial promotion activities electronically.

1.2.1 Purpose

The main purpose of our thesis is to address the potential to deliver industrial promotion activities electronically in the construction equipment industry, and examine how it affects dealer relationships. This will be done by describing the current situation concerning promotion activities of our case company towards its dealers, and in turn the dealers' promotion activities towards the end customer. The thesis has an European approach and the empirical study focuses on the West European construction equipment market. Furthermore, the thesis will give practical recommendations and solutions to our case company on how to optimize the delivery of its promotion activities to its dealers. Finally, we seek to develop new theoretical contributions in how to deliver promotion activities electronically.

1.2.2 Delimitations

- The industry we study is the *construction equipment industry*. In this industry we include the following product categories: excavators, wheel loaders, articulated haulers, motor graders, compact wheel loaders and compact excavators.
- The focus of our research area is on *industrial promotion activities*. We define industrial promotion activities as all activities from the manufacturer directed to its intermediaries/dealers, which aim at supporting the dealers' selling activities. Personal selling is excluded

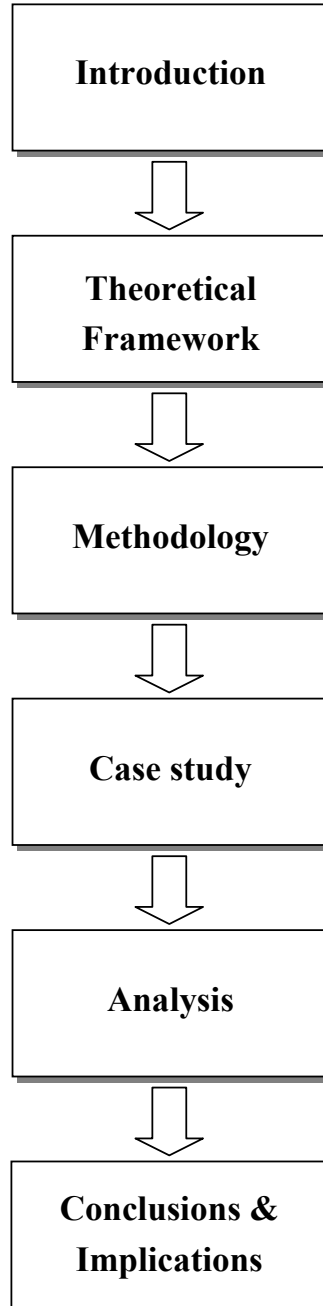
from the thesis. Furthermore, all promotion activities throughout the whole sales cycle, from pre to after sale support are included.

- The study is limited to the industrial promotion activities of the manufacturer towards its dealers, and how the dealers use these industrial promotion activities in their sales activities towards the end customer.
- The main focus of our study concerning electronic communication channels is on extranets, since our case company uses this channel for electronic communication. In this thesis an extranet is defined as an extranet or network that is only accessible for the dealers, not the end customers.

1.2.3 Thesis outline

In Figure 1.1 below, we present the outline of our thesis.

Figure 1.1 Thesis outline



Source: Own, 2001

2 THEORETICAL FRAMEWORK

In this chapter we present the various theories that we have based the study on. The main goal with our theoretical studies is to develop an own industrial promotion delivery model, derived from these theories. By applying our model on different industrial promotion activities, a company can decide how a particular promotion activity should be delivered most effectively.

The theoretical framework starts with a brief introduction to related subjects of the study, which includes industrial marketing, relationship marketing, customer relationship management, marketing channels, industrial marketing communication, and finally electronic media vehicles for promotion activities. This part is intended to give the reader a good background to the context of the study. Thereafter, we present theories that refer to media selection in general and print versus online documentation in particular. The chapter ends with our own model for delivering industrial promotion activities.

2.1 Industrial marketing

To give the reader a fundamental understanding of the marketing environment we are studying, we explain industrial marketing, its characteristics and how it differentiates from traditional consumer marketing. *Industrial marketing* is often called *business-to-business marketing* or *organizational marketing*. We will treat these concepts as similar and use the term industrial marketing (Baker, 1994). Reeder, Brierty, and Reeder (1987) define industrial marketing as all activities involved in the marketing of products and services to organizations that use products and services in the production of consumer or industrial goods and services, to facilitate the operation of their enterprises. Industrial marketing can therefore more briefly be defined as all activities that are directed toward satisfying wants and needs of organizations.

2.1.1 Industrial marketing characteristics

The characteristics of industrial marketing and what distinguishes it from consumer marketing are several. Below Reeder et al (1987); Kotler (1996); Hutt and Speh (1995); Webster (1984) present the main characteristics of industrial marketing.

The main market characteristic is that the number of companies supplying a market, and the number of customers that constitute the market for a specific segment, product or service are usually much smaller than in consumer marketing. The products in an industrial market are not purchased for personal use and there is a greater concern for the technical performance, delivery times, and other service and support of the products. The buying procedure is more complex, includes larger volumes, takes longer time and involves more buyers and specially trained people than in consumer markets. Demand is derived and usually economic cycle dependent.

As highlighted in our next section, the seller and buyer also usually engages in a deep and stable relationships over a longer period. Physical distribution is very important and in industrial markets, the channels are more direct. The way to reach the customer in industrial marketing is mainly through personal selling. Price tends to be less important in industrial markets, as quality of the products, delivery procedures, service, and technical support are more critical factors. Price stabilization is common and the low number of firms in one industry (oligopoly) willingly responds to competitors' moves in price.

2.2 Relationship marketing

When studying industrial marketing, it is logically to relate to relationship marketing since a major part of the relationship marketing theory is based on, and derived from, the traditional industrial marketing theory (Gummesson, 1998). Therefore, we will present the fundamental thinking of relationship marketing.

The fierce competition in global markets, as in the construction equipment industry, has resulted in that companies of today can no longer compete on the traditional 4 Ps of marketing alone (Product, Price, Promotion, and Place). (Miller, 2001) No enterprise can succeed any longer in distinguishing itself through operational excellence, customer intimacy, or product innovation without understanding the needs and desires of its customers. Therefore, in order to survive in the long-term, companies need to change their old approach and adapt a new approach for doing business. Relationship marketing is a

central part of this new approach (Galbreath and Rogers, 1999). As mentioned above, buying procedures in industrial marketing often involves many buyers in a complex network, with the aim to establish long-term relationships. Gummesson (1998) defines relationship marketing as marketing that places relations, network, and interaction in the center.

According to Gordon (1998, p. xiii), the fundamental thesis of relationship marketing theory is that relationships are the only real asset of a company, which will gain the company in a long-term perspective and hence create competitive advantage. Relationship marketing focuses on business relationships that include a company's relationships with its customers, suppliers, employees, and investors. Gordon (1998) defines relationship marketing as: "*The ongoing process of identifying and creating new value with individual customers and then sharing the benefits from this over a lifetime of association.*" (Gordon, 1998, p. 9) This definition engages the understanding, focusing, and management of ongoing collaboration between the company and its selected customers for mutual value creation and sharing through interdependence and organizational coalition.

The critical factor that has facilitated the development of relationship marketing is technology. Technology is the main tool for enabling relationship marketing and, with its support, companies can today communicate and create individual value with their customers. (Gordon, 1998)

When a company applies relationship marketing and manages to align the concept with its customers, the company can develop more loyalty among customers, through a long-term relationship that creates value for and together with them. The development of innovative solutions and new ideas is facilitated together with lower product development costs and risks and reduced time to market. The company can also achieve strengthened relationships with its suppliers, distribution channel intermediaries and shareholders. In the end relationship marketing can accelerates the growth of the company, e.g., higher success rates for new product and service opportunities, and hence achieve growth in both profit and revenues. (Gordon, 1998)

2.2.1 Customer relationship management

Customer Relationship Management (CRM) is a new management concept, a new approach, to managing customers (Galbreath and Rogers, 1999). CRM is about the management of technology, processes, information resources, and people needed to create an environment that allows a business to take a 360-degree view of its customers. Galbreath and Rogers (1999) defines CRM as: *“Activities a business performs to identify, qualify, acquire, develop and retain increasingly loyal and profitable customers by delivering the right product or service, to the right customer, through the right channel, at the right time and the right cost.”* (Galbreath and Rogers, 1999, p. 162)

CRM is very much the same as the relationship marketing concept defined by Gordon (1998), both stresses relationships, mutual value creation with the customer, and the internal resources needed to achieve this. What distinguish the two concepts or theories are mainly that CRM stresses the technology factor as an even more important enabler than the relationship marketing theory. CRM can be seen as a tool, a technological focused tool, for achieving the fundamental issues and goals of relationship marketing. According to Galbreath and Rogers (1999), CRM seeks to help meet these goals operatively.

To be able to treat the customers as individual buyers, and not as segments, CRM takes help from the technology, e.g., the Internet, to achieve this in real time. Technology enables a shift from one-way communication to two-way communication, which increases the chances to satisfy the customers' needs. (Griffits, Elson, Amos, 2001) Technology applied in the right way in a CRM context allows the company to provide customization and personalized attention throughout the whole sales cycle, from product development to after-sale support. This supply-chain integration is a central theme in CRM, as well as in relationship marketing. By achieving all this, the company can strengthen relationships with the customer in a long-term perspective and hence create increased customer loyalty and competitive advantage. (Galbreath and Rogers, 1999)

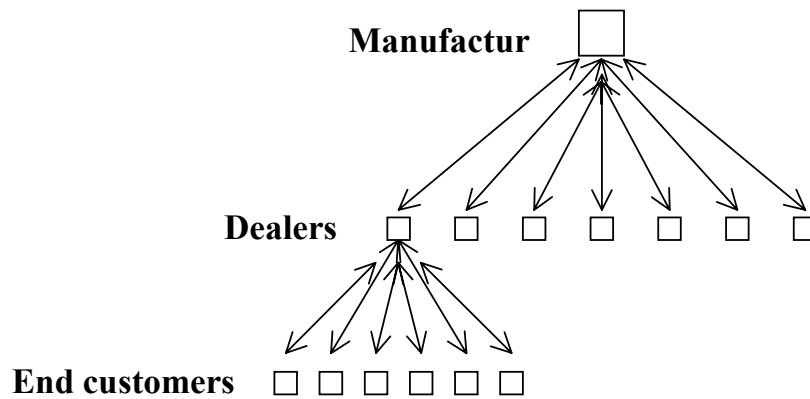
2.3 Marketing channels

To be able to understand the flow of promotion activities/material from the manufacturer to its dealers we will give a short explanation to the concept of marketing channels. The marketing channels that are taken up are representative for the construction equipment industry.

Stern, El-Ansary, and Coughlan (1996, p. 8) defines marketing or distribution channels as: “...*the set of interdependent institutions and agencies involved with the task of moving anything of value from its point of conception, extraction, or production to the point of consumption.*” The main underlying reasons for the emergence of marketing channels are economic. By using dealers or intermediaries the manufacturer can reduce the number of transactions that would appear if it were required to deal directly with the end customers. A centralized distribution network (see Figure 2.1) is therefore more efficient. Hence, dealers or intermediaries smooth the flow of goods, information, and services by creating possession, place, and time advantages.

This kind of distribution system also benefits the end customers in terms of reduced search costs, since the dealer or intermediary possesses the knowledge about end customers’ needs, due to its closeness to market, that the manufacturer usually lacks. Another end customer benefit is that an independent dealer or intermediary has a more complete range of products originating from different manufacturers. To summarize the idea behind middlemen, such as dealers and intermediaries: manufacturers outsource those activities that could be performed more efficiently by a dealer or intermediary.

Figure 2.1 Centralized distribution system



Source: Stern L.W, et al, 1996, p. 5

2.3.1 Information flow in marketing channels

According to Reeder et al (1987) and Stern et al (1996), the information flow in the distribution system is dyadic. This means that the information flow goes in two directions between the three parties (see the two direction arrows in Figure 2.2). The information exchange consists of both physical and non-physical information. Physical information includes presale maintenance and servicing material, such as promotion catalogues, ordering forms, and service manuals. The non-physical information consists of negotiations through verbal communication about product assortments, prices, and contracts, etc. (see Figure 2.2) In addition, product orders from the end customer to the dealer go back to the manufacturer.

The relationship between a manufacturer and a distributor is close and often seen as a partnership where both parties are heavily dependent on each other. The key to coordination of channel flows is informational sharing between the manufacturer, dealer, and end customer. Telecommunication systems and computer systems are used to assist the channel members in the exchange of information (Stern et al, 1996).

Figure 2.2. Information flow in marketing channels



Source: Own, 2001

2.4 Industrial marketing communication

In order to achieve business success your products and message have to be delivered to the customers in an optimal way. In the previous section we explained the infrastructure that enables the flow of physical products and information through the marketing channels and between the channel members. In this section we briefly explain how companies communicate their message to the markets.

After a company has designed the product offer which matches the wants and needs of the target market it needs to communicate this offer to buyers and convince them to try it (Ottessen, 2001). Ottessen defines Marketing communication as: “...every kind of communication between company and buyer about a company’s offering(s).” (Ottessen O, 2001, p. 35)

In markets where the product is distributed through one or more distribution channels, the manufacturer is only in full control of the marketing communication that is directed at the dealers or its own marketing communication directed at the end customer. The producer cannot fully control the dealer’s communication directed at the end customer. However, the producer tries to influence the activities at the dealers towards the end customers (Baker, 1994).

Industrial marketing communication planning includes the following steps: identification of the target market, determine response sought, choose a message, choose the media, allocate the total promotion budget, choose the promotion mix, collect feedback for measurement of promotion results, and

manage and coordinate the total marketing communications process (Kotler, 1996).

An overall understanding of the promotion tools that are used and the roles they play is necessary in order to achieve the right mix of promotion activities. Due to this, and the fact that industrial promotion activities are in focus in our thesis, below we will explain how we define promotion activities in a business-to-business environment.

2.4.1 Industrial Promotion activities

The overall goal with promotion activities is to deliver a message that in the end will increase the sales. Promotion is an umbrella name for all of a company's marketing communications and the promotions mix refers to the combination of elements in its promotional strategy (Rothschild, 1987).

We define industrial promotion activities as all activities from the manufacturer directed to its intermediaries/dealers, which aim at supporting the dealers' selling activities. Furthermore, the promotion activities relate to the whole sales cycle, from pre to after sales support.

The promotion mix includes in this study activities related to sales promotion, public relations, and advertising. Personal selling is excluded from our definition of the promotion mix. The sales promotion activities include for example different product information and material as product catalogues and brochures, which are used by the dealers in the interaction with the end customer. The sales promotion category also includes supporting information and material that is used internally by the intermediaries/dealers, such as service information and training material. The public relations category includes activities that aim at diffuse favorable information about the company to dealers, end customers, and other external actors in the society, e.g., share holders. Examples could be customer magazines, which are of interest to both the dealers and end customers, and newsletters aimed at newspapers. The advertising category refers to activities that support the dealers' advertising campaigns, such as Advertising Templates, etc.

2.5 Electronic industrial promotion vehicles

E-business or e-commerce is the new enterprise imperative. The Internet not only allows companies to conduct business in new ways, it requires them to do so to survive. To stay competitive in today's wired world, companies must be able to deliver applications and services digitally to their partners and derive real value from these online partnerships (Ling and Yen, 2001).

In addition to the traditional channels, electronic communication channels are today vital for companies to communicate with the customers and hence stay competitive. There are several different electronic communication channels that can be used as delivery vehicles for industrial promotion activities between a manufacturer and its dealers. In this section we will take up four different types: fax, CD-ROM, e-mail, and extranets. Since the main focus of the study is on extranets, this sort of network and electronic communication channel will be discussed in more detail.

2.5.1 Fax

Fax technology that has been in use for several decades allows images of paper documents to be transmitted through telephone lines to a destination where they can be printed (or displayed on a computer screen). Fax is a fast and convenient tool for transmission of information. Its main strength is the fastness and that it is so spread out in the business world, almost all companies have fax machines (Beekman, 1997).

The weaknesses are the relative high costs for sending information through this channel and the low quality of printouts. When the printout quality of received information is not of importance, fax works well. But, if for example, detailed pictures are to be sent this communication channel loses its value. The fax machines have become more sophisticated but the printout quality is still not sufficient.

2.5.2 CD-ROM

A CD-ROM (Compact Disc-Read-Only Memory) is a disc that is identical to a standard audio CD except that it is used to store computer data instead of, or in addition to, music (Beekman, 1997). This electronic media can store large

amounts of data, approximately 500 books worth of text. The large amount of data that can be stored is one of CD-ROM's main strengths. Companies can for example deliver large amounts of product information on CD-ROMs. CD-ROM is especially favorable if a lot of pictures are needed since pictures in data format involve large data files. Other strengths are the lower production and transportation costs compared to traditional printing material. This means that updates of the material become more economic than shipping out new printed material for each update.

Finally, CD-ROM facilitates better search and illustration options than printed material. The dynamics of CD-ROM gives the user possibilities to search by a traditional table of contents and also by using index search functions. The last form means that the user simply types the word or phrase he is looking for, and the CD-ROM then displays the various options available. Illustrations in different forms are also facilitated, as for example animations.

The major weakness of CD-ROM is that the user needs access to a computer with a CD-ROM drive. This means that a technician must have a laptop with a CD-ROM drive for accessing information out in the field. It can also be difficult to design the information on a CD-ROM so that it reflects traditional printing material (book interface). The quality of printouts from CD-ROM is often lower than compared to printed material and hence relies on high quality printers (Rehling, 1999).

2.5.3 E-mail

Electronic mail systems allow users to send messages (mail) from one computer to another. This can be done whether the receiver is logged on to the system or not. The strengths of e-mail are that it is fast and does not depend on location. The delivery takes normally only a few seconds whether it is same office or across the ocean. The receiver can log in and read the message from a computer at the office, at home, or anywhere in the world. E-mail also facilitates group communication, meaning that it is not more difficult or expensive to send the same message to one destination than to several destinations. Further, editing of e-mail is easy and documents, pictures, etc. can be attached (Beekman, 1997).

One weakness of e-mail is the restricted amount of data that can be sent. Normally e-mail servers only support data amounts ranging from one to two Megabytes. Further, with a slow connection to the e-mail server the download time is long for large sized e-mails.

2.5.4 Extranet

Extranets are private networks that use the Internet protocols and the public telecommunications system to securely share part of a business's information or operations with suppliers, vendors, partners, customers, or other businesses (Ling and Yen, 2001). Another definition of an extranet is: *"The extension of a company's intranet out onto the Internet, e.g., to allow selected customers, suppliers and mobile workers to access the company's private data and applications via the World Wide Web. This is in contrast to, and usually in addition to, the company's public web site that is accessible to everyone."* (Ling and Yen, 2001, p. 40) Extranets are often confused with intranets, which are private networks that are used exclusively within a company or organization. The access to an intranet is also limited to employees or organization members only. The main similarities and differences between the Internet, intranets, and extranets are presented in Table 2.1.

Table 2.1 Similarities and differences between Internet, intranets, extranets

Characteristics	Internet	Intranets	Extranets
What is it?	The Information Highway	The use of Internet technology within a company/organization	A network that uses the Internet to link company intranets in order to enhance business-to-business relationships
Access	Open	Private	By agreement only
Users	Public	Organization members	Business partners
Information	General	Proprietary	Selective

Source Vlosky R, Blalock L, Fontenot R, p. 439, 2000

In order to keep up with the increased competition, most companies are continually searching for new and better ways to speed communications between trading partners, establish better relationships with customers, suppliers and partners, improve customer service, and reduce expenditures. An extranet can help a company to realize many of these goals, hence achieve increased revenue and competitive advantages. (Ling and Yen, 2001; Vlosky et al, 2000; Andersson, 1998)

Further, extranets may promote customer to member loyalty to high-level commitment and will generally drive much of e-commerce business in the new millennium (Bushko and Raynor, 2001; Angeles, 2001). Ling and Yen (2001) also agree on the importance of extranets in the e-commerce development and imply that the extranet is where e-business begins.

2.5.4.1 Extranet applications

An extranet can include several business functions and the range of possible extranet applications is almost endless. Examples of business functions are sales and marketing, customer service and support, financial, product development, and human resources (Ling and Yen, 2001).

Sales and marketing

The sales department faces a continuous challenge delivering up-to-date reference information to customers, often dispersed over a large area. Having the right information available at a critical moment can be the difference between making and losing a sale. Marketing people, meanwhile, need access to database consisting of critical type information on current and potential customers. An extranet can be used for all these scenarios to provide information regarding product specifications and prices, sales leads, competitive information, calendars of sales activities, just-in-time training, and real-time sales presentations.

Customer service and support

Extranet applications in this category can have a much broader impact on the quality of internal and external communication. There are many claims made that the real value of Web-based customer service in general is not direct sales, but rather improved customer relations that retain customers. An extranet allows customers or trading partners to find the information they need, in real time, without having to wait on the phone for support. This timeliness of information exchange adds value to the relationship. Further, the company can for example create community applications, such as newsgroups with discussions forums, for exchanging and enriching knowledge related to various areas.

2.5.4.2 Advantages of extranets

Extranets have several advantages: (Ling and Yen, 2001; Angeles, 2001)

Ready access to information. Through simplified access to many types of information, an extranet can become the ideal vehicle for both internal and external communication. Information can be provided in a way that is

immediate, cost-effective, easy to use, rich in format, and versatile. Exchanging information over extranets costs less than exchanging it through older methods, such as faxes or voicemail (Nuala, 1997).

Freedom of choice. Web technology does not lock any of the parties involved into a single vendor's system. Web technology is available for nearly all the major operating systems and hardware platforms and can enhance the value of existing database systems.

Ease of use. Hypertext (searchable Web-site text via links) is a major contribution to the user friendliness factor of a Web-based extranet. Web technology also carries the advantage of providing a single Web browser front-end: once the user is familiar with this tool, it can be used for all Web activities.

Moderate set up cost. Since extranets use the existing Internet infrastructure, including standard servers, e-mail clients and Web browsers, an extranet is far more economical than creating and maintaining a proprietary network, as for example a traditional electronic data interchange (EDI)¹ network.

Lowering printing and processing tools. Cost savings is a major motivator for implementing extranets. For example, General Electric Company reduced the purchasing cycle by communicating with suppliers over an extranet instead of using phone, fax, and postal mail (Nash, 1997). Other fertile grounds for cost savings include delivering product information, catalogues, news, etc. electronically to intermediates via the extranet. Besides faster delivery times, the company also achieves major cost savings by forgone the traditional printing and mailing costs to intermediates. Mass mailings to customers and intermediates can be replaced by the use of extranets.

Additional extranet advantages are simplified workflow in areas as filing in reports and lowering training costs by using the extranet to deliver just-in-time training, regardless of the geographic location of the trainee. Better group

¹ The transfer of structured data by agreed standards from one computer system to another by electronic means, which is mainly applied for the ordering process. (Chen, 2001)

dynamics can also be achieved through discussion groups, mailing lists and different types of online knowledge.

2.5.4.3 Extranets impact on business relationships

Due to the characteristics as a communication tool, extranets promise to have significant impact in building, managing, and strengthening customer relationships. (Ling and Yen, 2001)

Communication is a critical factor in the extranet environment. As mentioned above, an extranet will enable trading partners, suppliers, and customers with common interests to form a tight business relationship and strong communication bond. Accuracy and timeliness of information, as well as speed of response, are important to achieve successful extranet relationships. Extranets facilitates each of these components by allowing business partners to communicate, exchange files, purchase goods or services, conduct information searches, manage businesses, monitor business details, and perform other activities. Additionally, extranets creates major opportunities to customize the information available on the network for everyone accessing the system (Vlosky et al, 2000).

The 24/7 global access, convenience, real time communication that extranets deliver is a very powerful communication channel in today's fierce competition environment. Successful strategy depends on successful communication, and it hardly needs to emphasize how powerful the Internet can be as a communication tool. Since extranets are Web-based and interactive, business partners can dig as deeply as they want, when they want (Bushko and Raynor, 2001). As a conclusion it can be stated that an extranet as a communication channel fulfills the fundamental principles of relationship marketing and CRM, and hence is very suitable tool for strengthen business relationships

2.5.5 Evaluation of electronic industrial promotion vehicles

We have now presented the four different electronic communication channels that can be used as delivery vehicles for promotion activities. In this section we make a comparison between the different channels strengths and weaknesses.

The Fax is still very much a common and used communication channel for sending short text documents, although most of its functions are being substituted by e-mail. Its suitability for delivering promotion activities is very limited due to its low printing quality and high cost. Concerning the CD-ROM, it is also very present and will probably continue doing so as a storage media for promotion material. In terms of delivering promotion activities to dealers, CD-ROM requires delivery through traditional mail. E-mail is now an established channel and will most probably be around for a very long time. Finally, the extranet is now an established communication channel but its development process is still in its early stages.

What are the main advantages of extranets in comparison to the other presented electronic channels? The main advantage is that a dealer/customer have global access to the extranet and its latest information 24/7. It does not matter where in the world the dealer is located to access the extranet, as long as he has a computer with a modem. The dealer can search for information as deep and often as he wish.

Another advantage of an extranet is its possibility to store large amounts of information in a structured way. An extranet can consist of infinite numbers of databases loaded with different types of information. Fax, CD-ROM, and e-mail can only deliver a certain amount of information each time they are used.

Furthermore, extranets offer an update flexibility that the other channels cannot compete with. Due to that an extranet is build up by databases, information only needs to be changed in one place and all dealers then have immediate access to the new information. The dealers do not need to keep track of old faxes, e-mails, or CD-ROMs to remember which information is the most recent. The information can be much more structured on an extranet.

Finally, extranets offer many other functions than just being a communication channel for promotion activities. Extranets can facilitate so many different functions, as for example order placement, delivery follow-up, and online training. All these functions aim at strengthening the company's relationships

with its business partners. An optimal extranet should be the single point access to the company for its business partners.

2.6 Theoretical models for industrial promotion delivery

This section presents different theories, which we used to base our model for delivering industrial promotion activities. We will first present theories regarding media selection, and secondly different theories concerning the decision process for print versus online information. The section ends with presenting our own model.

2.6.1 Media selection

The choice of which media to choose is the first step taken when the time comes to communicate a message to the customers. Traditionally this first step has included which communication tools to use - advertising, sponsorship, direct mail, personal selling, etc. - but also what media vehicle to use - TV, radio, print, Internet, etc. - (Kotler, 1996). Most of the theories behind media vehicle selection are related to advertising, but their basic ideas can be applied to other promotion activities as well. The theories within media selection also mainly refer to media selection within consumer marketing, but since specific theories for industrial marketing and media selection is limited and the fact that they are similar, we find them relevant for our study. Further, we only take up non-personal media that carry messages without personal contact.

In the process of determining media vehicle, there are a few important measures used to evaluate how effective each media vehicle is. These traditional measurements are: reach, frequency, timing, and cost. *Reach* is the percentage of the target audience that is exposed to the message. *Frequency* has to do with the number of exposures received by the target market. *Timing* is the extent to which the company can control when the target market is exposed to the message. *Cost* concerns how cost efficient the selected medium is compared to other media (Rothschild, 1987).

Before selecting the most suitable medium for communicating your promotion, certain key factors have to be taken into consideration. According to Smith

(1998), the key factors are as follow: audience size, audience type, budget, message objective, ease of booking, restrictions, and competitive activity.

Audience size concerns whether the company would like to reach a large number or just a limited number of people. *The audience type* refers to the characteristic of the specific target market in terms of age, gender, lifestyle etc. *Budget* refers not only here to the production costs and the media costs, but also to the capital resources of the message sending company. *Message objective* is the goal that the company has with selected media channels and with the promotion itself. For example, if the company wants to get the message to the market rapidly with frequent updates Internet may be a preferable medium to choose or if the customer want specific product information product catalogues can be more suitable. *Ease of booking* includes the lead time it takes for the company to construct a message and communicate it to the customer. In some markets there exist certain *restrictions* on products and the way it is communicated to the customers. This factor can be vital if such restrictions exist and if the company does not take it into consideration before selecting the media. *Competitive activity* includes what kind of media the competitors use and how the company should achieve its own competitive advantage in its specific medium.

Another important, and maybe the most basic, factor to take into consideration before selecting media is the actual product that one wish to communicate. This includes a complete specification of what the product is and what it does to the customer. In terms of information distribution, the information must be seen as a product. This demands a complete product analysis and before a decision upon an appropriate medium (Baker, 1994).

2.6.2 Print versus online documentation

In the media selection process, one of the key issues regarding the delivery of industrial promotion material is whether to deliver the message online, for the target market to access, or in printed format delivered through traditional mail. Established theories in this area are few. Most of the previous research is also restricted to the computer software industry and the decision to deliver customer service manuals or troubleshooting assistance online via the Internet

or in printed book format, such as written manuals. Despite this we find this kind of theories relevant for our study, since they deal with similar media selection issues. In the term *print* we include everything that a company sends out to the customer in physical written format. This can for example be product catalogues, product spec sheets, special offerings, and service manuals etc.

Historically the traditional way of deliver promotion material has been in printed format. As mentioned earlier, cost efficiency and the ability to reach an individual customer are the main reasons behind the initiation of using the Internet as a communication channel for delivering promotion activities. Higher cost of printing has forced many companies to transfer from printed to online and thereby giving the customer the opportunity to choose what to print or not (Bellis J, 1996). In many industries printed manuals have also become too bulky to carry when service technicians do repairs on-site and the frequent updates are expensive and harder to deliver to the customers in print (Rehling L, 1999). This combined with technological advances in hardware, connection speed, and software has promoted the online delivery of promotion material (Smart K.L, 1994).

The consequences of this development have been that many companies now deliver nearly all documentation online. This documentation includes product catalogues and service manuals. Companies' rapid transformation from print to online has brought up opinions that they are forgetting critical issues, since online documentation differs significantly in content, format, and organization from print documentation. (Smart K.L, 1994)

In a survey, done by The Association of Business Communication, 400 users of a word-processing application were questioned about their preferences and use of printed and online documentation. Results showed that users prefer different types of documentation for different types of tasks. Users choose medium based on their assessment of the situation at hand. They thereafter make their best guess about what kind of information that may suit their task and what source that might give them the best information most quickly. Respondents with less experience of the product used the printed documentation, while the more experienced users turned to the online help. The study also suggests that

users with less computer experience sometimes lack the required conceptual models of computers and software that make online documentation more usable. Furthermore, it became evident that the choice between printed and online is not an “either-or” proposition. People learn differently and consequently prefer different kinds of documentation dependent on the nature of the task. (Smart K.L, 2001)

To be able to decide if documentation should be online or not, one must weigh the strengths and weaknesses with putting documents online. Horton (1994), Bellis (1996), Rehling (1999), Smart (1994), Broughton (2001), Hoadley (1999) below state the strengths and weaknesses with documentation online and in print.

Strengths of online documentation

The major advantage for the customer with delivering promotion online is the instant access to information. Independent of time, the customer can access relevant information instantaneously and quickly via structured and indexed information. This is very convenient for documents that demand frequent updates, which reduce the errors due to out-of-date information. The customer may also make a personal choice of what to print or not. Despite this, the user has less paper documentation to store and update. For the producer, delivering promotion online means faster distribution of information with documents bypassing the whole printing process, which also saves printing and shipping expenses. By having the information online for customers to retrieve, less customer support is required and product acceptance is better. In addition, the technology provides opportunity for video illustrations and the ability to communicate in real time.

Weaknesses of online documentation

To be able to access documents online the user has to have a computer and a fairly good connection to the Internet. If the user wants to be able to print the online information, a printer is also required along with paper. This means investments for the user with capital that the user might be lacking. The printout quality usually gets worse than if a print house prints it professionally. Slow Internet connections will prolong the download time for the user, which

also increases user costs. For the seller, delivering promotion online includes risk taking. Risks concerning weakening control over the quality of promotion material circulating. Another risk is that the user lacks necessary computer skills and experience. In this case, training for the user may be required. Despite this, additional costs for researching, writing, and editing may come about.

Strengths of print documentation

The main advantage with printed information is that the user does not have to be at a computer to access it, can see exactly how much information that is available, and is more familiar with the format in which it is presented. In most of the cases, printed information, such as a product catalogue, give a more professional impression of the company to the customer. The company also has more control over what material the customer is exposed to.

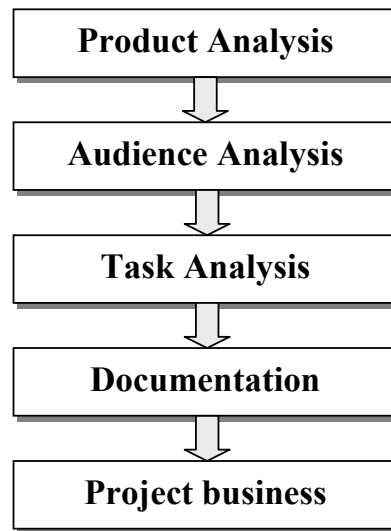
Weaknesses with print documentation

The main disadvantage with printed information for the seller is the cost to produce and distribute it to the customer. For the same reason it is more difficult to produce frequent updates and get them to the customer quickly. Finally, the medium is limited, since no interaction can be delivered.

2.6.3 Designing documents for online and print

According Smart (1994) and many other researchers (Horton, 1994; Bellis, 1996; Hoadley, 1999; Rehling, 1999) the most important thing to have in mind is the users' needs and then use them as a guideline in the determination of online documentation. As presented in Figure 2.3, Smart (1994) suggests an analysis of five areas in how to design integrated online/printed documentation: product, audience, task, documentation, and project/business.

Figure 2.3 Designing documents for online and print



Source: Own, 2001

Product means that people should have deep understanding of the product, its complexity, and find out its projected development and release dates. *The audience* should determine documentation needs and drive product development. A marketing team can refine user profiles exploring its roles, computer background, software experience, environment, system constraints, learning styles, and other needs. *Task analysis* focuses on task identification, accessibility, and problem solving. It requires a thoughtful and sustained research effort during the early development stage. Customer task information can be retrieved from general market research on customer usability and input from product support specialists. Also Locker (2000) supports this approach and states that the channel choice or medium-delivery-option depends on the audience, proposes, and the situation.

The study of previous areas can determine the actual contents of the *documentation*. An analysis of the current documentation situation helps to define a documentation plan to avoid possible redundancy and to provide the appropriate information in the most useful medium. A part of the documentation analysis concerns deciding on the content of each piece of documentation, design specs, access methods, degree of comprehensiveness,

use of graphics, and cost considerations. *Project business analysis* concerns issues such as where and how to produce, resource availability etc. This also includes international aspects for multinational firms and how the organization will be formed.

Finding a standardized solution to the media selection procedure seems impossible, since the customer focus promotes that each industry and customer is different. Despite this, some recommendations have been stated in the subject. The fact that many customers still prefer printed information or at least a printed piece in addition to any online offering, suggests a double-sided approach to the issue. As seen above each medium has its limitations, a balance between the two media ought to be sought (Smart, 1994). “

“...manufacturers should be seeking a strategy that takes the greatest advantage of both methods.” “...For reading, paper is better; for reference information, good online help is far more powerful than paper” (Bellis, 1996, p. 10).

Bellis (1996) further suggests that all product information should be published online since information costs everyone huge amounts of money and failing to make it accessible is bad business.

Similar to Bellis (1996), Horton (1994) states that it in reality is not a two-alternative-decision between print and online documentation. There are actually five different alternatives, not two: paper, online, both, neither, and hybrid. A hybrid is a combination between features of paper and electronic documents. Often, users have the possibility to search electronically and then print out and read what they find. The different alternatives may be necessary if the users for example have limited access to computers or refuse to use online documentation. By using online resources for only those documents that are best suited for the online environment, the company saves scarce system resources while providing the best mix and overlap of paper and online documents.

According to Horton (1994) there is also no given formula for what should and should not go online. The capabilities of systems and the needs of users vary so widely that such rules are of little use. However, one can out of the current circumstances make an intelligent judgement if a particular document should go online. Horton summarizes the decision in one formula (Horton, 1994, p. 5):

“Put a document online only if the benefits of having the document online exceed the cost incurred in putting it online – for you and for the user.”

Developing online documents is a continual process of successive refinement and not a one-time implementation. Several cycles of development with testing, learning and making improvements to working prototypes are required. There is also an estimated transition time from paper to online documentation of five to seven years. The need for paper does not vanish upon the first release of the version of online documentation. Not until the online documentation is done right, and users gain confidence in the new system, will the paper documentation diminish. It is important to remember that the need for paper documentation will never go away entirely. Some users will continue to use paper documents regardless of the advantages of online documents. (Horton W, 1994)

With this background the two media will most certainly exist side by side for the future being. Organizations must evaluate how to allocate its resources to maximize users' experience in ways that will promote customer satisfaction and increase usability and productivity while staying competitive in cost. An understanding of customers needs, the type of information they use, and how they use it will lead to more effective and profitable communication between companies and customers. (Smart, Whithing, DeTienne, 2001)

2.7 Own industrial promotion delivery model

As stressed earlier, there is no specific research, literature or theories that cover the decision process regarding electronic communication channels for industrial promotion activities. By examining the already existing theories and models about media selection and online publication, we developed a model, which consists of four areas with underlying factors.

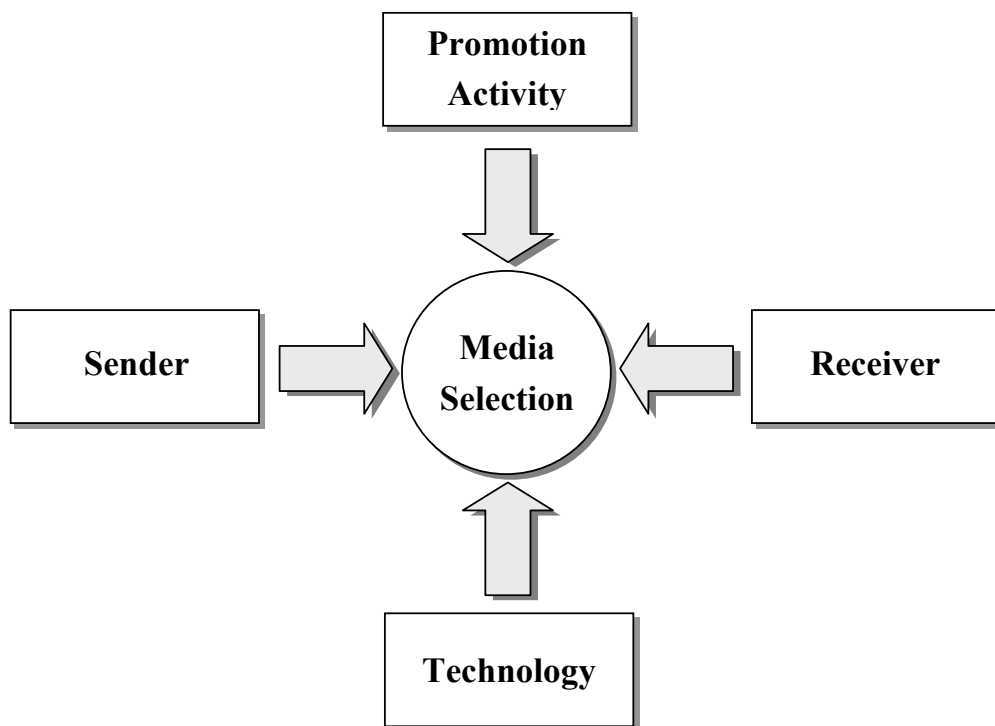
A company can by applying our model on various industrial promotion activities collect the information needed for making a decision of how to deliver a particular industrial promotion activity most effectively. The issue is to determine which media/medium to use for the particular industrial promotion activity. There are four alternatives for delivering industrial promotion activities: print, online, both, or a hybrid. Print means delivering professionally printed material, e.g., a brochure, by traditional mail. Online means publishing information, which is only designed for viewing on a computer screen. The both alternative means that the information is published in both print and online. As a general rule, the promotion activity should be put online only if the benefits of having the information online exceed the cost incurred in putting it online, both for the initiator and the user.

Finally, a hybrid is a mix between print and online. This means that the user can print selected parts of online information, which is specially designed for printing on a standard printer, such as an ink or laser printer. The hybrid alternative is suitable for example if the printed material has to be specially designed to fit a specific binder or if only a clean design with black and white colors is preferable for the printed version. The print quality of a hybrid is hence lower than for professionally printed material. Regarding the online alternative the user can also choose to print the online information. But this information is not specially designed for print, as in the hybrid alternative, and therefore has lower print quality. One disadvantage with printing online information that is not designed for print is then that the print quality is too low, with regard to paper, picture, colors, etc. If this material is then exposed to the customers, there is a high risk that the brand is damaged.

Although there are some requirements used as guidelines for online promotion activities, no theory tells specifically what should go online or not. Our model aims at guiding the company through a serie of factors related to different critical areas, which forms the base for the decision making. Hence, an analysis of all the areas cover all necessary information that is needed to create the appropriate strategy.

The four main areas that need to be taken into consideration when analyzing if an electronic channel has a potential of delivering industrial promotion activities are: promotion activity, sender, receiver, and technology (see Figure 2.4 below).

Figure 2.4 Industrial promotion delivery model



Source: Own, 2001

These four main areas all consist of factors that need to be analyzed in order to make the right decision. The various factors are presented in Table 2.2 below.

Table 2.2 Factors of Industrial promotion delivery model

Promotion activity	Sender	Receiver	Technology
Purpose	Budget/Capital	Task analysis	<i>Sender:</i> System constraint:
Cost factors/channel	Knowledge & Skills	Layout preferences	- Hardware - Software - Connection
Layout & Design	Organizational factors	Computer experience & skills	<i>Receiver:</i> System constraint/role:
Volume		Willingness to adapt	- Hardware - Software - Connection
Update frequency		Cultural aspects	
Standardization/Customization			

Source: own, 2001

Before starting to analyze the different areas and sub-factors of the model, it is recommended to go through the following two steps:

1. The first step is to categorize the industrial promotion activities from the sender and the receiver's personnel according to the two stages of the sales cycle, the pre and after sales stage. This means that the promotion activities from the sender and all personnel at the receiver are categorized in pre-sales activities and after sales activities.

2. The second step is to categorize the promotion activities and personnel into external and internal groups. Promotion activities aimed at the end customer are external and promotion activities aimed within the receiver organization are internal. Personnel working in the interaction with the end customer are external and personnel working inside the organization are internal. This categorization is illustrated in the Figure 2.5 below.

Figure 2.5 Categorization of promotion activities and roles

	Pre-sales activities	After sales activities
External		
Internal		

Source: own, 2001

These two steps are recommended to go through in order to structure the analyze and hence make it more easier to undertake. The categorization becomes even more important if the study involves many different promotion activities, which are aimed at several roles at the receiver.

2.7.1 Sender

The sender refers to the company controlling the particular promotion activities. A fundamental factor that has to be fulfilled by the sender is the needed *budget* for the respective media. The company must also have the required *knowledge and skills* associated with the specific media vehicle. This particularly concerns the online media in the form of an extranet, which puts high demands on development and implementation skills. *Organizational*

factors also play an important role, as the company must decide for example where the printing operations should be geographically located and how the online publishing shall be organized. This may include decisions such as centralization and decentralization of decision-making and production of the information.

2.7.2 Promotion activity

The promotion activity area is a central part of the model. A promotion activity can, as mentioned before, be in the form of a manual, product catalog, etc. The first factor concerns the *purpose* of the promotion activity. The purpose of a promotion activity can for example be to increase the sales personnel's knowledge about a product by providing the sales personnel with detailed product information. The second factor relates to the *costs* associated with different media options, for example print is relatively expensive and cost per unit is very dependent on the volume of the printed material. As in all business decisions, the cost factor is of major importance.

Another important decision refers to the desired promotion *layout*. For example, glossy promotion material speaks for professionally printed catalogues. The higher demands on layout, the more it speaks for delivering the promotion material in printed format. *Volume* refers to the actual size of the printed promotion material, referring to number of pages and physical size. The more bulky the printed material is, the more you can gain on publishing it online. For large documents with many pages meant for reading, e.g., literature, printed format is most suitable since it is easier to read from printed material than from a computer screen. On the other hand, large material that is structured as a dictionary with an index system is more suitable for publishing online.

The *frequency* refers to how often the promotion material has to be updated and how quick the material needs to be produced and reach the audience. For example, higher frequency of updates and high demands on short lead-times promote the choice of going online. The factor *standardization/customization* concerns if the promotion activity can be standardized across many dealers or if it has to be customized to each dealer's requirements. Standardization speaks

for print, since printing expenses can be minimized in economies of scale. Customized promotion activities speaks for publishing it online since you can let the user have a private account on for example an extranet with unique login name and password. The information can then be customized to the specific user account.

2.7.3 Receiver

The receiver, or customer/user, is an entity that demands a very thorough analysis since he is the actual user of the promotion activities. Firstly, a *task analysis* is undertaken of how the sender's different promotion activities are used by the personnel at the receiver towards the end customer. The company must know, in detail, the situation in which the user uses the promotion material. The task analysis is done in order to check if the promotion activities are used in accordance with the sender's purpose of the promotion activities in question. If there exist any differences between the purpose and the actual use of the promotion activity, it is of most importance that the sender receives this information since it could affect how the activity should be delivered.

Thereafter, an analysis of the receiver's *layout preferences* about the promotion material is undertaken. The criteria for the layout preferences are the same as for the promotion activity; hence high demand for layout speaks for professionally printed format. The analysis of the layout preference factor is done to check if the result matches with the sender's desired layout. The reason behind this check is the same as for the task analysis above. Since the different electronic delivery channels demand various computer skills and knowledge, the receiver's *computer experiences and skills* must be analyzed. For example, using computers to access online promotion material requires some, although rather basic, computer usage experience and training in the new system. In order to successfully implement any new technology and procedures, the receiver must also have a positive attitude towards changes. In this context the receiver's *willingness to adapt* to technological changes plays an important role. Finally, if the decision of media vehicle is seen in an international context, *cultural aspects* may be of importance, as for example, languages.

2.7.4 Technology

This area is analyzed from two perspectives, from the sender and the receiver perspective. As the knowledge and skills needed for various electronic media are placed in the sender and receiver areas respectively, the technology area only concerns more material issues. The *system constraints* associated with the various media channels, as hardware, software, and connection, applies for both the sender and the receiver. Despite the choice of medium for delivering promotion activities an investment issue will exist. Printing may include investments in print technologies, although the printing procedure is usually outsourced. Online delivery requires investments in new hardware, such as computers and servers, new software, such as web development software, fast Internet connections, and maybe also human resources with expertise in IT.

On the receiver side, system constraint is divided on the different roles in focus. For example, a dealer may have one system setup for the company as a whole, Internet connection, stationary PC, etc, and one for the sales people working in the field, laptops with wire or wireless Internet connections, etc. Since the system constraint may vary between different departments and functions within the receiver, it is important to analyze the requirements for all roles involved at the receiver.

2.7.5 Applying the industrial promotion delivery model

As we stressed in the introduction to our model, there is no clear-cut answer for which promotion activity that should be delivered in print and online respectively, or for one of the other alternatives. Although, there are two areas of our model that have to be fulfilled for delivering the promotion activities online, namely the sender and technology areas. The sender must for example have the needed budget, technology, and knowledge and skills for setting up an extranet. Additionally, the receiver must have the required technology for accessing the extranet. The other areas with related factors of the model have to be weighted against each other for each specific case when taking the decision of which channel to choose. This is necessary since the analysis of the different factors can result in contradictory choices of channels. The initiator of the promotion activity must therefore see each case as unique and weight the results of the different areas and factors from that special situation. The final

decision of which strategy to choose is hence case specific and up to the decision-maker to take.

3 METHODOLOGY

In this chapter we present and explain the methods that we have used for our thesis. This is made in order to justify and motivate our choices of methodology and to give the reader an understanding of the study's work process. We start by presenting the research strategy and design, followed by the method. Thereafter, the data collection is presented, as well as the data analysis. The chapter ends with a discussion of the quality of our study and an illustration of our research process.

3.1 Research strategy

There are several different research strategies that can be used when undertaking research. Yin (1994) points out five different types of research strategies: case study, experiments, surveys, histories, and the analysis of archival information. Each of these five strategies has its advantages and disadvantages, which depends upon three circumstances: the sort of research question, the degree of control over actual behavioral events, and the focus on contemporary phenomena versus historical events. We have chosen the case study strategy for our study, more precisely a case study in Volvo CE.

Yin (p.13, 1994) defines a case study as “...an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.” Since the boundaries of our study are not clear, a case study is a suitable research strategy. Merriam (1998) states that this type of study is intensive, holistic descriptions and analyses of a single unit. The single most defining characteristic of case study research lies in delimiting the object of study. A delimitation of our study is that it is focusing on one company, Volvo CE. Other examples of delimitations are the focus on promotion activities and that our study contains a limited number of interviews.

Case studies rely on multiple sources of evidence and therefore have a wide approach to data collection. Since this specific data collection approach is incorporated into the research design, this technique becomes a comprehensive research strategy. Another strength of case studies is that this type of research

strategy allows the researcher to retain a holistic view while examining real-life events. Further, the researcher has the possibility to penetrate deeply into a complex problem and the result can be applied effectively due to the real-life context of the study.

According to Yin (1994), one major weakness of the case study strategy is the lack of rigidity of the research design. There is a possibility that the researcher uses vague data or biased views to influence the findings and conclusions. It demands a lot of the researcher to report all evidence fairly. There have also been raised concerns that case studies provide little basis for scientific generalization. Case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. The researcher's objective is to expand and generalize theories (analytic generalization) and not to list frequencies (statistical generalization). Another criticism to case studies is that they take too long a time to undertake and result in massive documentation. This can be avoided by applying a good structure for the study.

3.2 Research design

After deciding research strategy, the next step is to decide the design of the research. The research design is the logical sequence that connects the empirical data to the study's initial research questions and, eventually, to its conclusions. The research design can be defined as the blue print of the research, connected to a least four problems: what question to study, what data are relevant, what data to collect, and how to analyze the results. (Yin, 1994)

According to Yin (1994), there are five components of the research design that are especially important for case studies; the study's questions, its propositions (if any), its unit(s) of analysis, the logic linking the data to the propositions, and finally the criteria for interpreting the findings.

Case studies are suitable when the research is based on "how" or/and "why" questions. Furthermore, case studies are suitable when the focus is on a contemporary phenomenon within a real-life context and when the researcher has limited control over that phenomenon. As all these three criteria apply to our case, a case study is an appropriate strategy for our study.

Since our study is not a pure theory validation research, hence a deductive research, the study does not include any propositions. From the very start of our study we did not have any theories or hypotheses that we planned to test in reality. This also means that the logic linking the data to the propositions is not relevant in our case. The definition of the unit of analysis is related to the way the initial research questions have been defined. Thus, related to the definition of what the “case” actually is. In our case the unit of analysis is a MNC and its dealers in the construction equipment industry. The final component deals with the analysis of collected data and its structure. Since we have chosen to conduct a qualitative study, we have not stated criteria for interpreting the findings in advance.

3.2.1 Case selection

We have chosen a purposeful selection strategy, as we want to discover, understand, and gain insight from the studied case (Merriam, 1998). We constructed a list of criteria that were essential for our study and which then formed the base for the selection. In a second step we also discussed these criteria together with Volvo CE.

It can firstly be mentioned that the selection of Volvo CE as our case company was mainly due to the invitation from Volvo CE itself. Despite this, we believe that Volvo CE is a very suitable case company in the construction equipment industry. Our case company, Volvo CE is one of the top actors in the construction equipment industry and has recently introduced an electronic media for delivering industrial promotion activities. As a next step, the company is now developing strategies of how to most effectively deliver its promotion activities through this media. Therefore we find our case company as representative for other actors in this industry facing similar industrial promotion delivery issues.

3.2.1.1 Selection of markets and dealers

Together with Volvo CE we decided to focus on the Western European market. This market is very suitable for our study since it is Volvo CE’s largest market and the usage of Internet Technology in this region is among the highest in the world. In order to get the best coverage possible of the European market we

decided to focus on dealers in Germany, Austria, and Finland. Germany is Volvo CE's largest market as well as the largest market for construction equipment in Europe. Austria is also one of Volvo CE's biggest markets in The Central European Region. Finland is an important market for Volvo CE in Northern Europe. We believe that these three sub markets very well represent Volvo CE's European market.

Furthermore, we decided to focus on one dealer in each country. This decision was taken with consideration to our pressed time schedule. Volvo CE chose the dealer to interview since it had most knowledge about the dealers market coverage, usage of VDN, IT level, language etc. The regional hub in Konz, Germany, was chosen due to its knowledge of the German market and its role as both producer and dealer. The dealer in Austria, Bilja, was chosen due to its high IT level and its early access to VDN. The Finnish dealer, Rolac, represent Volvo CE's smaller markets in Europe. The dealer was chosen because of its relatively low experience of VDN and since Volvo CE regards Finnish as a minority language.

3.2.2 Case study design

This part refers to the specific designs for case studies. Yin (1994) states four types of case study designs: single and multi-case studies, and within these two types, single (holistic) and multiple (embedded) unit of analysis. Hence, the distinction lies in the number of cases studied and number of units analyzed within a specific case.

Our case study is in the form of a single embedded case study. We are analyzing one MNC in the construction equipment industry, Volvo CE. Further, Volvo CE is a division within the Volvo Group. In addition, we are examining more than one level within Volvo CE: the headquarters, the e-commerce, communication, and customer support department, and the company's dealers.

In general, single cases are a common and an appropriate design for case studies. Three rationales for single-case design are justifiable for our case study, namely testing existing theories, serving a revelatory purpose, and being

a unique case. The single-case study allows us to apply our model, based on existing theories, on a MNC that meets all the model's conditions. This provides us with the opportunity to confirm, challenge, or improve our model. Our case also serves a revelatory purpose since to our knowledge only few established theories related to our subject exist. Finally, we see our case company as a rather unique case since it is among the top five players in the construction equipment industry regarding e-commerce activities, with focus on extranet as a communication tool (Volvo CE internal material, 2001).

An embedded case design is a logical choice in our case since our model refers to several levels in a company, thus multiple units of analysis. We also avoid the possibility that the case study is conducted at an abstract level and hence neglects critical data from the operational level.

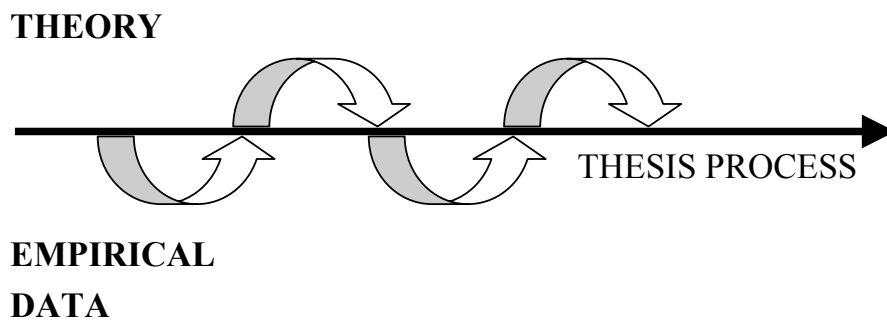
3.3 Method

A research study can have a qualitative or a quantitative approach, or a combination of the two. We have chosen to conduct a qualitative case study. A qualitative method implies that collected data cannot be quantified and analyzed statistically. Instead this method is used when the researcher wants to collect in-depth data. The method aims at understanding how all the parts of phenomenon work together to form a whole, in contrast to just study individual parts. This makes this type of method suitable for case studies. Other characteristics of qualitative methods are that the researcher is the primary instrument for data collection and analysis, fieldwork is usually included, samples are small and non-random, and the end product is greatly descriptive. (Merriam, 1998) All the characteristics above apply to our case study. Further, by using a qualitative method we are able to collect the right data, which then can be used to answer our main problem in the best way.

When considering research method, the researcher also has to decide if the study is inductive, deductive, or abductive to the nature. We have chosen an abductive approach, which is a combination of inductive and deductive reasoning. An inductive approach builds theories from empirical data, hence starts from the empiric, and moves towards the theory. A deductive approach moves in the opposite direction and starts with theories and then moves

towards the empiric for theory validation. Inductive reasoning tries to find a theory that explains the empirical data while deductive reasoning tries to find empirical data to match a theory (Merriam, 1998). We have used both existing theory and new empirical findings for our study, which refers to an abductive reasoning. In the initial stage of our study we had a deductive approach as we started out from theories to develop a model. When applying our model on the empirical studies we continuously received feedback, which acted as inputs to our model and hence had an inductive approach. By having this continuous movement from deductive to inductive and vice versa, were able to refine our model. Hence, this results in an abductive method (see Figure 3.1).

Figure 3.1 Abductive reasoning model



Source: Own, 2001

Additionally, the aim of the study has to be clarified. The aim of a case study can be either explorative, descriptive, explanatory, or a combination of these three (Lekvall and Wahlbin, 1993). The aim of our case study is a combination of all these three types.

Due to the limited previous research in our subject, we used an explorative approach to collect necessary data from various sources. To receive additional information about our research subject we had an initial meeting with the Senior Advisor within e-commerce and the E-business Manager at the e-commerce department at the Volvo CE headquarters in Brussels. The meeting gave us valuable information and guidelines for our continuing study.

The meeting at the Volvo CE headquarters gave us input as to which empirical units to study. The empirical part of our case study is of a descriptive nature, since we in the result chapter present our empirical findings in a neutral form without comparing them with our model.

An explanatory method is used when knowledge and theories exist and the aim is to explain the cause-and-effect relationship between different factors and actors. We used this method when we compared and evaluated our own developed model with the empirical findings. This corresponds to the analysis part of our study, which analyzes the empirical findings and theory with the aim to answer our main problem.

3.4 Data collection

Merriam (1998) states that collecting data involves both selecting data and which technique to use for the data collection. There are several techniques to apply for the data collection and the aim should be to find an appropriate mix of data sources to provide a complete understanding. Out of the most common data collection techniques for case studies, we found personal interviews to be the most appropriate technique for collecting primary data. For collecting secondary data we used literature studies.

3.4.1 Primary data

To collect primary data, which is new data not collected before (Merriam, 1998); we made in-depth interviews with internal staff at Volvo CE and with three of the company's independent dealers.

The majority of the interviews were conducted using a semi-structured approach. Only the initial meeting at the Volvo CE headquarters in Brussels was of a purely unstructured nature. Two different semi-structured interview templates were used, one for interviewing Volvo CE and one for interviewing the dealers (see Appendix A and B). The interview templates consisted of open-ended questions and followed a logical structure of relevant discussion areas. This allowed us to guide the interviews around the desired topics we had formed; while at the same time give the respondents opportunity to respond in a natural way. We both took notes and used a tape recorder at the various

interviews in order to be sure to get an accurate and complete understanding of the situations. All interviews were undertaken in a quiet and calm environment, either in the respondents' offices or conference room. During the interviews, the respondents seemed relaxed and there were no distractions during the interviews. Further, at each dealer we had lunch with the respondents, giving us the opportunity to have a more informal conversation. The contents of these informal conversations were also used as inputs in our empirical study. We have made no distinctions between the formal interviews and the informal conversations.

At our initial meeting at Volvo CE headquarters that covered two days, the interviews with the responsible E-business Managers, was more or less unstructured, since our purpose was to get a more overall understanding of the main problem. After the first meeting we were able to predetermine some areas of discussion and thereby construct more structured open questions than at the first meeting. Despite this also the second interview in Brussels can be classified as unstructured. At both meetings only notes were taken and no tape recorder was used, since we considered it to be unnecessary and wanted the respondents to feel more relaxed. After arriving back to Gothenburg we wrote down how we had understood the main problem situation and then e-mailed it back to Volvo CE. By doing this Volvo CE could confirm the information we collected and we were ensured that we had the right focus.

In our visit to Volvo CE in Eskilstuna we did a joint interview with a Communication and Promotion Manager, together with the E-business Manager from the Volvo CE headquarters in Brussels. The purpose with this interview was to acquire a complete understanding of Volvo CE's current communication and promotion activities, which referred to our first research problem. This interview was conducted during one day divided up in two parts. The length of each part was three hours. This extensive length of interview was required in order to get a full understanding of Volvo CE's promotion situation.

The purpose with interviewing the dealers was to have an understanding of their promotional activities and technological situation, providing answers to our second and third research problem. At each of the three dealers, we

interviewed not less than three people. Furthermore, we selected respondents from different levels of the dealers' organization: management and marketing people, sales people, parts and service people, and training managers. We did this in order to cover the whole sales process and have a broad and deep understanding of the dealers' activities. Furthermore, we wanted full understanding of the usage of Volvo Dealer Network from different roles of the organization at each dealer.

Each respondent at the dealers was interviewed individually and the length of the interviews was approximately one hour. By doing this we think that we able to get as much information as possible from each respondent.

3.4.2 Secondary data

For secondary data, which have been previously collected for another purpose (Merriam, 1998), we used already existing theories to develop our theoretical model. The data was collected from books, technology and business journals and articles, Internet sources, and internal Volvo CE sources, included printed material and the Volvo Dealer Network .

3.5 Data analysis

We applied our own developed theoretical model when analyzing the collected data originating from our research problems. Our theoretical model acted as a framework for comparing and analyzing the data we collected in the field. To analyze the collected data regarding the current industrial promotion activities of Volvo CE, we applied the following parts in our model: the Promotion activity, the Sender, and the sender part of the Technology. To analyze the data we collected about the dealers' sales activities towards the end customer we used the Receiver part of our model. To analyze the data we collected concerning the dealers' IT level, we used the receiver part of the Technology in our model.

3.6 Quality of the research

All research is concerned with producing trustworthy results, since being able to trust research results is very important for professionals in applied fields.

Validity and reliability determines if the researcher and the others can have confidence in the conduct of the investigation and its results. (Merriam, 1998)

3.6.1 Validity

The definition of validity is that the selected theory is in accordance with the empirical study, hence there exist a validity connection. A neutral, instead of a subjective approach, increases the validity of the case study. (Yin, 1994) Since the research findings should match reality, using multiple sources of empirical data through data triangulation increases the validity. Triangulation is the process that reaches conclusions by combining findings from different sources. Validity also refers to whether the theoretical findings are generalizable and thereby applied to other situations than the specific case study. (Merriam, 1998)

The selected instrument in our study is of a qualitative nature. We made in-depth interviews with people within a MNC and with its dealers to solve our main problem. Since the study is viewed from our own perceptions, the validity may decrease. Therefore, in order to avoid subjectivity, we let our supervisors as independent parties review the questionnaire templates before they were used. In addition, two Volvo CE employees, the E-business Manager and the VDN project manager at headquarters in Brussels, reviewed the questionnaire. The use of multiple empirical sources and letting the respondents confirm the collected data from the interviews increase the validity.

The purpose with our study was to investigate the potential for delivering industrial promotion activities electronically within the construction equipment industry and how this affects dealer relationships. Due to that the geographical coverage of our study is limited to the European construction equipment market, we find our research findings generalizable to this market. We also believe that the findings can be generalized to other developed markets with similar technology level. Furthermore, we believe that our findings can be generalized to other high capital equipment industries with centralized distribution networks, using different types of intermediaries.

3.6.2 Reliability

Reliability relates to minimizing the errors and biases of the study. To test the reliability another investigator should follow the same procedures as the earlier researcher and thereby do the whole case study all over again. The result of such study should then be the same as the initial one. (Yin, 1994)

We find the reliability of our study relatively high due to the thorough and systematic description of how we collected the theoretical and empirical data. In addition, the careful documentation of our interview templates (see Appendix A and B) and usage of tape recorder further increases the reliability. Another factor that should improve the reliability is that none of the respondents acted as if they were stressed. Instead, the respondents seemed relaxed and motivated for the interviews. Further, there were no distracting factors in the environment where the interviews were conducted. The interviews with the dealers were all conducted in the same way, i.e., we followed the interview guide and put the questions in the same way. In addition, the respondents did not experience the questions as unclear and we see the answers as truthfully. (Lekvall and Wahlbin, 1993)

3.6.3 Sources of error

Even though we think that our study has high reliability some sources of errors may exist.

The interviews in Brussels, Sweden, Germany, and Austria were conducted in English. Even though the authors and the respondents have relatively good English, it is not their native language. Despite this, both parties understood each other well during the interviews, but this fact may decrease the reliability of the study. In Finland the interview was conducted in Swedish. Also, here, we understood each other well, but the reliability of the study may also have been decreased due to the same reason as above.

The authors have rather limited knowledge in the construction equipment industry. If a person with more knowledge in the specific industry made the study, the conclusions of the study could have been different.

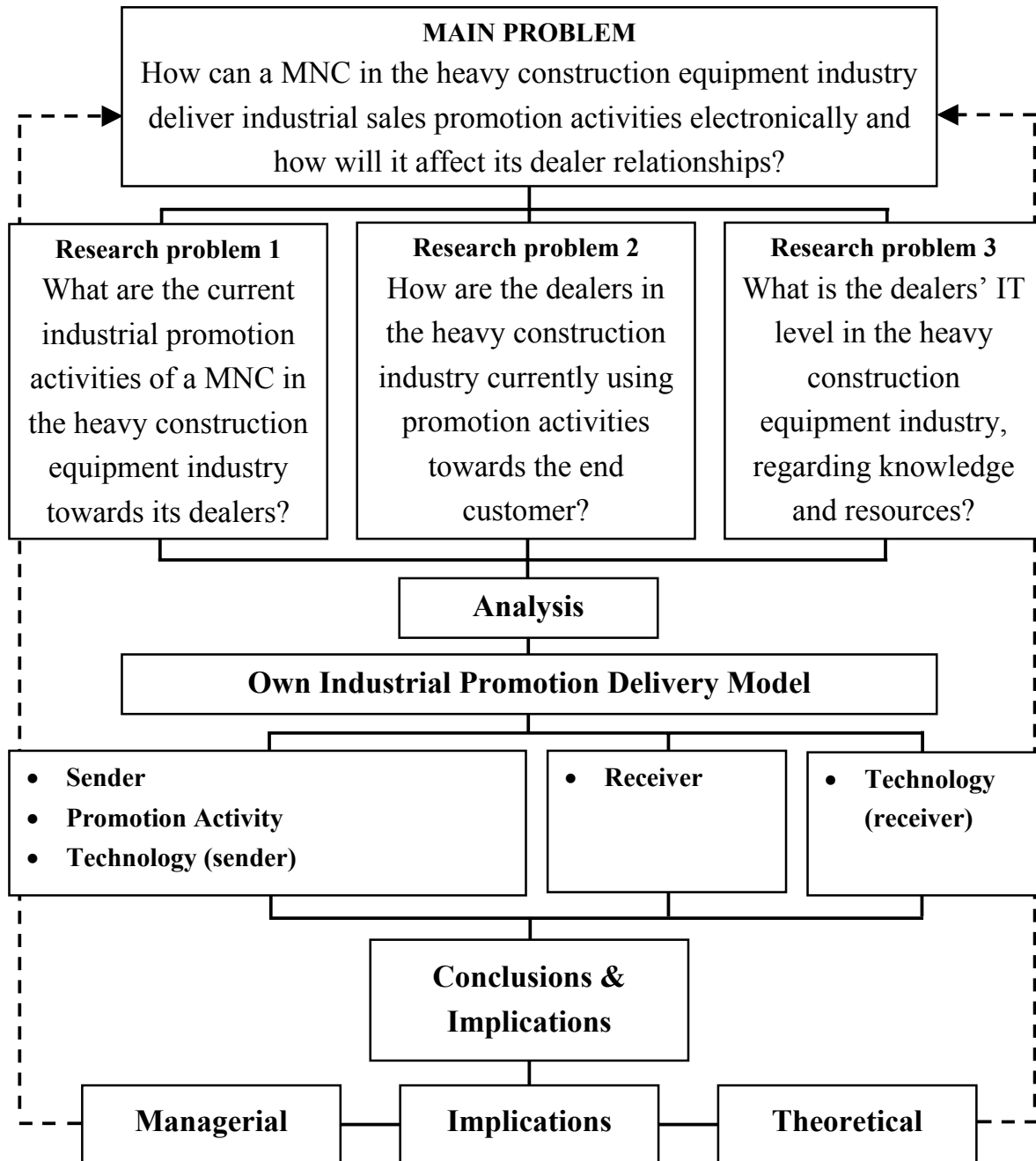
As mentioned earlier, we used a tape recorder during all interviews. This we did in order to be sure to fully mirror the reality. The use of tape recorder may also have had an opposite effect such as causing the respondents to feel uncertain and keep some information to themselves. Although we did not notice any signs of tensions or nervousness at the respondents, this may decrease the reliability of the study.

The aim with our field study for the dealers was to interview respondents representing the whole sales cycle. Although we managed to include the whole sales cycle in our field study of the dealers, the after sales side had lower participation than the pre-sales side. This may lower the reliability of the study, but we experienced that the respondents, independently of their role in the organization, had much knowledge in the after sales activities and therefore gave a satisfying description.

3.7 Research process model

The work process of our study is illustrated in Figure 3.2 below.

Figure 3.2 Research process model



Source own, 2001

4 CASE STUDY

In this chapter we present our empirical findings. We start by presenting our findings related to our first research problem, which refers to the current industrial promotion activities of Volvo CE. We thereafter present the empirical findings relating to our second and third research problem. This part includes how Volvo CE's dealers are using the industrial promotion activities towards the end customers and the dealers' IT level.

4.1 Volvo CE case study

In order to answer research problem number one, we examined Volvo CE's current promotion activities towards its dealers. In our visit to Volvo CE Eskilstuna, we interviewed a Communication and Promotion Manager, who is responsible for all Volvo CE's communication and promotion activities, and an E-business Manager, who is responsible for Volvo CE's extranet project.

4.1.1 Industrial promotion activities and the sales cycle

Volvo CE's promotion activities depend on the stage of the sales cycle. Below is a presentation on what kind of promotion activities that is used at each stage.

When approaching new end customers, the sales personnel at the dealers have to cover the complete sales cycle, from initial end customer contact to after sales activities. The first end customer contact is usually initiated by the sales personnel at the dealer. Here the main activities are aimed at getting the customer aware of the company and the products it offers and trying to influence the right people at the dealer. The promotion material used is company and product information in a broad sense. The more interested the end customer is, the deeper they go into the company and product information.

If the Salesman succeeds in influencing the right people a more detailed discussion about the products is initiated. At this stage the sales people at the dealer sit down and well-equipped sales people use their laptops to show video illustrations of the different products that the customer is interested in and do calculations of prices etc. At this stage discussions about prices, finance, and service are very common. This stage can take a long time and very often the

end customer wants time to think it over. If the end customer, in the end, is satisfied with the deal, a formal signing of the deal is undertaken.

The after sale stage is the most extensive and resource demanding stage of the whole sales process. This stage does not only include after sales activities on new products, but also old, which may have been sold many years ago. At this stage the after sales personnel must have support and service information material. Selling after sales products can require a similar process as for selling a new machine, although it is usually less time consuming.

4.1.2 Volvo CE's promotion activities

The main industrial promotion activities at Volvo CE, besides personal selling, consist of sales support material and other promotion information delivered to the dealers. The dealers then use this material and information in their sales activities towards the end customer. Historically, Volvo CE has mainly been delivering promotion activities in printed format, such as magazines, brochures, and various manuals. All promotion activities delivered from Volvo CE to its dealers can be divided in three categories:

- News and public relations
- Pre-sales
- After sales

Out of all Volvo CE's promotion material used in the sales process, there are, according to the Communication and Promotion Manager, very few documents that are truly global. Global material is completely standardized material that can be used for all Volvo CE's markets. The markets differ in each region and each market demand different types of products. Although the material can be referred to as *standardized*, there exist differences in weight and measure systems as well as languages.

4.1.2.1 News and public relations material

News and public relations includes promotion material such as the customer magazines, Volvo Spirit and Cubic Metre and Press Releases. The general purpose with this promotion category is to keep employees within Volvo CE,

its dealers and end-customers updated on Volvo CE's business process and product offers with relative short and focused information messages. It can, for example, cover information about new product launches, Volvo CE's financial results, cuts in personnel or new employees, and new co-operations etc.

Below follows a brief explanation of Volvo CE's main promotion material within public relations and news:

- *Press Releases:* Press Releases are standardized and centrally released short news in a letterform. They are aimed internally for Volvo CE and its dealers, and externally at public media to be published in daily papers etc.
- *Volvo Spirit:* Volvo Spirit is a new global corporate customer magazine for Volvo CE. It is a 30 pages paper magazine with high paper quality and full color. It works as a newsletter for all markets and contains, for example, information about new product launches and other company related news. The magazine comes out four times per year and is published in seven languages.
- *Cubic Metre:* Cubic Metre is market-customized magazine from Volvo CE. This means that the magazine is unique for each of the main markets. It is a 20 – 30 page magazine with high paper quality and full color. It consists of news related to each main market, but it also contains information about the practical use of the machines in the field. The magazine is released four times per year and is published in the languages of their main markets.

According to Volvo CE, a web-based publication of the customer magazines does not answer the same needs as a paper magazine. The company states that an online version of the magazine should feature shorter articles with factual news of which the news are limited in time.

4.1.2.2 Pre-sales promotion material

Pre-sales promotion material consists of promotion material that is used by the dealers in the first step of the selling process, the initial customer contact, to the actual closure of the deal. This category includes promotion material that focuses on Volvo CE's product offer and the objective is to diffuse different types of product information. A large part of this promotion material concerns

material for the latest products that Volvo CE offers. This category is divided into two categories: internal pre-sales material and external pre-sales material.

Internal pre-sales material includes material that the dealer uses internally within its organization. The purpose for this category of promotion material is mainly for the dealers' sales people to learn more about the products when they are not selling. This type of material is usually not handed out to the end customer. Examples of this kind of promotion materials are Product Manuals, Competitor Comparisons, the Sales Manual, and Advertising Templates.

Below follows a brief explanation of Volvo CE's main internal pre-sales promotion material:

- *Product Manuals*: Product Manuals are released when new products are launched and contain descriptions about the products and are made to educate and train the sellers about features of Volvo CE products. They are published in black and white and have approximately 50 – 60 pages dependent on how many models that are included. They are standardized in layout for all markets except that it is published in different languages.
- *Competitor Comparisons*: Competitor Comparisons are standardized black and white material with performance comparisons between Volvo CE's products and competitors' products. The size of the material is dependent on how many models are included. New Competitor Comparisons are released when a new Volvo CE product is launched or if competitors release new products.
- *Sales Manual*: The Sales Manual is sales support material for the dealers' sales personnel containing many loose pages in a standardized binder form. It contains data and figures about the products that may be hard for the Salesman to remember. Some pages are in color with pictures and others are in black and white. A new version of the Sales Manual is sent out to the dealers every year.
- *Advertising Templates*: Advertising Templates are by Volvo CE pre-made Advertising Templates, aimed for dealer to support it in its advertising activities. By using the templates as a framework, the dealer can then design

the advertisement as he wishes. They are delivered on a CD-ROM and can be both standardized for all dealers or customized for a specific dealer.

The external pre-sales promotion material is material that the dealer uses in the direct interaction with the end customer. The purpose with external pre-sales promotion material is to support the dealers' selling activities of new equipment. This material is also often handed out to the end customer. Examples of this subcategory are single Product and Product Family Brochures, and Specification Sheets. This type of material is primarily in the form of "glossy" promotion material, which means that it has high quality in design and layout. The update frequency for the external pre-sales material is mostly based on new product launches. Furthermore, Volvo CE produces this type of material in large volumes with a standardized appearance for the different regions except differences in language and measurement system.

Below follows a brief explanation of Volvo CE's main external pre-sales promotion material:

- *Product & Product Family Brochures:* Product & Product Family Brochures are brochures of 8 – 15 pages, containing information about one or two product models, e.g., L50D and L70D, or broader information about one product line, e.g., wheel loaders. The brochures are made in full color, high paper quality, and have lots of pictures.
- *Specification Sheets:* A Specification Sheet is a short 4 – 8 page brochure containing the most essential performance information about the machines. Specification Sheets for bigger machines are relatively short and simple in layout with black and white and yellow colors. Specification Sheets for compact machines have more pages with layout in full color and high paper quality. This is because compact equipment offers many possibilities and therefore requires more practical information of how the machines can be used. Specification Sheets are updated more frequently than other external pre-sales promotion material and needs to be delivered quickly to the dealers, especially in the early release stage. The average update frequency is approximately 1 – 3 times per year.

4.1.2.3 *The after sales promotion material*

After sales promotion material includes all customer support information from Volvo CE to its dealers that takes place after the actual closure of the deal, hence the final part of the sales cycle. This area is large since it includes not only material for the new products but also material for old models of the products that need service and maintenance. The purpose with the after sales promotion material is to offer the dealer service support information to the machines if they need to be repaired or complemented. According to Volvo CE, layout is of less importance when it comes to after sales material. It is of more importance that the information is accurate and complete, and easy to understand. In the internal category there are for example, Service Manuals, Service Bulletins, and a CD-ROM based computer system for portable and stationary PCs called PROSIS, and Spare Parts Catalogues. The after sales promotion category also consist of material that is aimed both externally towards the end customers and internally at the dealers. These are the Attachments Catalogues.

Below follows a brief explanation of Volvo CE's main after sales promotion material:

- *Service Manuals*: Service Manuals are thick standardized books with detailed information about the products with instructions in how to repair them. They are mostly in black and white and are firstly aimed at the service people at the dealers. A new copy of the Service Manual is sent to the dealers each year, although the content is changed several times per year.
- *Service Bulletins*: Service Bulletins are news about service issues aimed at the service people at the dealers working on the machines. They are frequently updated and released in a simple layout of black and white. Its number of pages differs from time to time and is dependent on the content. Service Bulletins are also often customized to each market.
- *PROSIS*: PROSIS is a CD-ROM based computer system for portable and stationary PCs. It is updated four times per year and contains most of Volvo CE's service and parts literature and is aimed at the dealers' parts and service people. Parts and service personnel at the dealers can use the indexed search mechanism to quickly search for relevant and accurate

information about Volvo CE's products. PROSIS is standardized to all markets, but is released in different languages dependent on the market. Furthermore, Volvo CE tries to influence the dealers to use the PROSIS instead of the printed after sales material.

- *Spare Parts Catalogues:* Spare Parts Catalogues are standardized thick, black and white books with information about parts to the machines. It is aimed both at the end customer and the dealers' parts and service personnel to help the end customers in the selection of spare parts. The content of the Spare Parts Catalogue is changed frequently, but only sent to the dealers once a year.
- *Attachments Catalogues:* The Attachments Catalogue is a one-hundred-paged black and white catalogue with information and small pictures of optional equipment for the end customer to select between. It can for example be different buckets and gravels for the end customer to choose between. Also the content of Attachments Catalogue is changed frequently, but only sent to the dealers once a year.

According to the Communication and Promotion Manager, neither the internal nor the external after sales material require such high demands on design and layout. More important is that the information is accurate and complete, hence updated. The pedagogic aspect is also of more importance.

4.1.3 Channels for promotion activities

Nearly all promotion material is delivered through the traditional mail channel. This channel covers all printed material as well as CD-ROM's with large sized documents, such as advertising or training material. Mailing lists make it possible for the dealer to get information automatically. The fax machine, which was very common a few years back, has been partly replaced by e-mail for communicating with the dealers and attaching smaller files. The extranet, VDN, is the newest communication channel developed by Volvo CE. This is a network, accessible via the Internet, developed for delivering promotion material electronically to the dealers.

4.1.3.1 Printing organization

The physical printing of Volvo CE's promotion material can be done in several places globally. Some material is printed in the different print hubs in each region due to the local changes to the material and differences in language. For promotion material that is printed in the four global languages, English, French, German, and Spanish, each product company, e.g. Wheel Loaders, is responsible for printing. Volvo CE may print in one location for the whole world per product company in all languages. This is then stored at one central location and then shipped out to each region. For local languages, the regions are responsible themselves. There must be a discussion between the region and the dealers if it is necessary to have additional local languages as, for example, Danish.

4.1.3.2 Volvo CE's extranet – Volvo Dealer Network

Discussions about creating an extranet started within Volvo CE approximately five years ago, but due to internal problems the project was delayed. One year ago the company hired a Senior Advisor within e-commerce and an E-business Manager. They now have the main responsibility for the Volvo Dealer Network development. The organization for the extranet development comprised people from all major departments within Volvo CE including a consultancy firm. An extranet core team including the E-business Manager was formed to coordinate activities across the regions and product companies and to work with them to secure deliverables. The regions (NAFTA, Europe, and International) responsibilities are to identify and collect regional information for Volvo Dealer Network. (VDN) It is also their responsibility to create and execute regional dealer communication and training. The product companies' responsibilities are to identify and collect information related to the product lines. Training internal employees on new processes and tools of the Volvo Dealer Network is also their responsibility.

Volvo CE's extranet, was launched in European region on August 1st 2001. The main purpose with this initial launch of VDN is to show the dealers all the promotion information that is available for them and to facilitate quick access to it. According to Volvo CE, it should also work as the single place for the dealer to search information and interact with Volvo CE. These are also the

main strengths with VDN according to Volvo CE. VDN acts as one company front page for the dealers and is a cornerstone in the “one company vision”. Today VDN is published in four languages: German, French, Spanish, and English.

Today the information online is just a mirror of all promotion information that is available in printed form, except for some video illustrations. The dealers can use the extranet to search and view the promotion material available, which they then can order from Volvo CE in printed form. Orders for printed material are made the traditional way via phone, mail, or fax, and not directly via VDN. Besides viewing the online information on the screen the dealers can of course also chose to print it directly in the office. Although, no online information is at the moment especially designed for printing via the web. Online information that is made for printing at the dealer must be designed with the appropriate layout with regard to size, colors, etc. This is major concern of Volvo CE today and not very easy to solve due to the low printing quality of pictures and colors at the dealers. Today, the information is just dumped there for the dealer to view on the screen or to print for internal use.

There is no financial support from Volvo CE to the dealers in the technical investments needed to access VDN. It is the regions that have to drive this development with the dealers to get them access to VDN. However, the company provides training on how to use the extranet on the extranet. According to the E-business Manager, the dealers’ technological restrictions are only partly taken in consideration when developing the extranet. Using VDN today with a slow connection, such as 33K modem, may result in slow navigation speed.

Access authorization

Volvo CE registers what product each dealer in each region is selling both from the company and its competitors. Therefore the dealer may not have access to information about all Volvo products on VDN. The dealer access to VDN is controlled by a user account. Each user account has a unique user name and a password. The information that the user has access to is customized to the user account. Today the access to VDN is only unique for each region. In the future

there will exist three different roles of access authorization at each dealer: dealer public, manager, and principal access.

Dealer public access refers to the access of information that is given to everyone at the dealer that has access to VDN. *Manager access* refers to access to information that is given to the sales staff and *principal access* is the access to information given to the dealer executive and the head of the region.

Today these different roles at the dealer have not been identified due to the VDN's early implementation, so all dealer staff can access the information provided to each dealer. The purpose of the classification is just to be able to guide the information for some dealers that for e.g., are only active in one specific industry and keep sensitive information away from certain employees. Another reason for the access classification is that there are dealers that only sell one of Volvo CE's product lines, and at the same time sell another product line from a competitor. According to the Communication and Promotion Manager, these dealers should not be able to see information about this type of products from Volvo CE, since this information could then be in the hand of the competitors. In the future the goal for Volvo CE is that the system should put customized information together for the dealers' special needs, regarding equipment, news bulletins, etc.

4.1.4 Publish decisions

The initiators to what information to publish on VDN or go in print are different dependent on the type of information. If it is information that concerns a specific region, such as sales statistics, marketing activities, planning, etc, it is the region that initiates the production of information. If it concerns product information in a brochure it is generally the different product companies that are the initiators and come with a suggestion on information to publish. It can also be other departments such as customer support.

In the end it is the region that says yes or no to the specific information to publish in their region, concerning both printed and online information. Even if the compact equipment, excavator, or wheel loader company could use the material it has to be somebody in the Europe, NAFTA or International region

that gives the approval for the dealers to access the information. This is because the different regions know which dealer that sells which machines etc.

4.1.5 Print versus online

One of Volvo CE's current main issues with VDN is what documents should be possible and designed for printing from the extranet at the dealers and what should still be printed centrally by Volvo CE. There are a lot of reasons why this problem is not easy to solve. The main problem is that the printing quality at the dealers is too low to use as sales material towards the end customer, which in the end is negative for Volvo CE's brand and its brand management. According to the Communication and Promotion Manager, material handed out to the customer needs to be more professionally designed with high paper and printing quality in full color. On the other hand, the Communication and Promotion Manager also states that it is better to have bad quality print that the sales people can use in emergent situations than having no material at all.

Other reasons to the issue are more fundamental. The technical level at the dealers differs widely. According to Volvo CE-people working in the International region, some dealers there do not even have PC's. Another hinder is that there are a lot of elderly people at the dealers who are not experienced with computers and prefer not to work with them. A more practical hinder for the dealers' sales staff and the use of computers is that laptops are not suitable to work with outside in the sun due to sun reflection on the screen. According to the Communication and Promotion Manager, the dealers' sales personnel prefer working with printed material in the interaction with the end customer since they are more used to it, it is easier to read, and see it as a more effective tool. All these obstacles complicate and slow down the development and use of VDN. These problems cannot be solved instantly, but maybe in the future.

Advertising material exists today on VDN, but only to a lesser extent. This should, according to the E-business Manager, also be developed more so that the dealer can give it to a local print house for printing. These documents should be partly prepared, templates, so that the dealers only need to fill in specific certain basic data for him, address, name etc. in order to complete the document. This has been very successful for Volvo Cars in advertising

campaigns. Today it exists only if the dealer contacts Volvo CE, which then sends a CD-ROM with standardized design and layout for ads. Furthermore, e-learning courses on the extranet, Volvo Dealer Network, are also under development.

When it comes to the design of the information online, Volvo CE states that the company needs to think more. At the moment everything is just dumped on VDN. One idea is to let the dealer print material that just need to be put in the already by Volvo CE printed and shipped material. These kind of loose pages can for example be a product specification sheet that is placed in a binder. According to the Communication and Promotion Manager, people at the dealers have problems with lose pages to put in the existing folders due to the size of the documents, cost of printing, and time to put it all together. This undermines one of VDN's main advantages – to provide updated information. The Communication and Promotion Manager states that if the size of the printed material can be limited, letting the dealer print e.g., Specification Sheets might work. The Communication and Promotion Manager states:

“It is not so easy to just say: let them print. You have to be smart. If we really think that the printing should be moved out there, we must improve the system.”

During this early period of the development of VDN, there has been a lot of discussions of what to put on VDN and how. The Communication and Promotion Manager states that this has created two sides within Volvo CE: those who want to put everything online and leave the printing to the dealer and those who want to use it only as a channel for ordering of printed material.

4.1.5.1 Cost saving issue

The cost for printed material is a large expenditure for Volvo CE. The annual cost for printing and distribution of printed promotion material is estimated to approximately \$ 1.5 million by Volvo CE. By keeping the print volumes high the cost per copy can be decreased, hence scale of economics can be achieved. The costs also differ depending on type of paper, preferable picture quality and layout, and printing technique, etc.

The short run objective with VDN is not to achieve cost savings. It is more to let the dealers to see what is on the shelf and what is available, and get this information out to the dealers. In the beginning it will be more expensive, since the two systems, online and print, need to be run in parallel for the at least two years. In a longer time perspective, in maybe five years, if a good system is created cost savings for Volvo CE will occur, although printed promotion material will not ever be replaced entirely by publishing it online. According to the Communication and Promotion Manager, the most important thing to remember regarding this issue is not to forget the needs that both dealers and end customers have and find ways how to fulfill them.

4.2 Dealer case study

In this section we present our empirical findings from the studied dealers. The German hub and dealer Volvo CE Europe GmbH is presented first and then the Austrian dealer Bilia. The section ends with presenting the Finnish dealer Rolac.

4.2.1 Volvo CE Europe GmbH

Volvo Construction Equipment Europe GmbH in Konz, Germany, is the regional hub for the central Europe Region, which includes beside Germany, Belgium, Netherlands, Czech Republic, Slovakia, Austria, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, and Switzerland. The hub has two roles. Firstly, it is responsible for distribution of products in the region and supporting the dealers in the region. Secondly, it also acts as a dealer by selling products directly to certain key accounts in the region. The study will be constrained to the German market.

The people we interviewed in Konz were: A Communication Manager, a Sales Manager, a Marketing Assistant, and a Spare Parts Assistant. The Communication Manager is responsible for supporting the dealers and educating them in VDN. The Sales Manager is responsible for sales activities towards key accounts and the dealers. The Marketing Assistant is responsible for all printed promotion material towards the key accounts and dealers. The

Spare Parts Assistant is in charge for supporting the key accounts and dealers with spare parts information.

4.2.1.1 German market

Germany is the largest and most important market for the construction equipment industry in Europe. The German market stand for approximately 50 percent of all construction equipment sold in the European region. The total amount of machines sold in Germany was 26 359 in year 2000 and out of these machines, Volvo stood for 3 805. This makes a total market share of 14,4 percent.

Volvo is present in all product segments except graders. Volvo CE is most dominant in articulated haulers with a market share of 70 percent and large wheel loaders with a market share of 25 percent.

The competition in Germany is very tough and the toughest competition is within the excavator segment. The largest competitors to Volvo CE in the German market are Caterpillar, Komatsu, and Liebherr.

4.2.1.2 Printed promotion material

According to the Communication Manager, all printed promotion material sent out to the dealers is in German, so there is no language problem for them. The number of English speaking people at the dealers is very low.

New printed promotion material is sent via traditional mail to the dealer without any pre orders. Most often Volvo CE Konz receives faxes or phone calls from dealers who ask for more promotion material. If it is only a small amount of promotion material the Marketing Assistant orders directly for the dealers, but if it is a lot of promotion material, he sends an ordering form to the dealer via fax or e-mail. This form is then filled in and faxed back to him. The promotion material is then sent directly by mail to the dealers. The delivery time for promotion material to the dealers is approximately three weeks.

Pre-sales material and activities

According to the Sales Manager, the dealers' sales personnel's normal selling procedure to the end customer most often starts with a visit out in the field, e.g., at a construction site. Here the focus is on the driver of the vehicles, since they are the most important influencers in the deal. Product & Product Family Brochures and Specification Sheets are used depending on how experienced the driver is about Volvo CE's machines. The meeting with the end customer's manager takes place either in the dealer's office or in the end customer's office. Here the Salesman gets information about the specific needs of the end customer. For example the end customer maybe would like to buy or rent a machine, but also discussion about service and prices is common. In the contact with the end customer the dealer makes up an offer. Together with the offer, the Salesman creates a folder, which is delivered to the end customer personally or by mail. These folders are all different in format and layout depending on how the dealer wants it. The folder includes a customized mix of pre-sales promotion material that the Salesman has put together. Similar folders are also created when Volvo CE Konz visits their key accounts or when they come to the office in Konz.

The most common pre-sales promotion material used by the sales personnel at the dealers and by the sales personnel of Volvo CE Konz are: Product Family Brochures Product Brochures, Specification Sheets, and the regional customer magazine Der Kubikmeter (Cubic Metre), and Product and Sales Manuals. According to the Sales Manager, new customers need more information, such as Product Family Brochures and corporate information, etc. Existing customers who buy machines every year and are more experienced with Volvo CE's products often knows exactly what to buy. In these cases the Salesman brings a smaller amount of information, such as price lists and Specification Sheets. Specification Sheets are also most important to have updated of the pre-sales promotion material.

Another important pre-sales promotion material is the Competitor Comparisons. These are used during the time the Salesman visits the end customer to show him the advantages with Volvo CE's products in comparison to competitors' products. The Communication Manager stressed one big

problem with the Competitor Comparisons. At the moment they are not created for the German market. The actors comprising the Competitor Comparisons are not active on the German market and are therefore unknown for the end customers. The Marketing Assistant further stated that the sales people need promotion material that is created especially for the German market. The Sales Manual is mostly not used in the interaction with the end customer. Instead it is together with the Product Manual used as a self-training tool for the sales people.

Everything that is handed out to the customer is important to have in full color and high quality paper, hence glossy material. This pre-sales promotion material includes Product and Family brochures, Der Kubikmeter, and other corporate information. Pre-sales promotion material with lower demand on layout is everything that is used internally at the dealers and also to some extent the material that is only shown to the end customer during a sales meeting. This includes Product Manuals, the Sales Manual, and Competitor Comparisons. However, the Sales Manager pointed out that competitive comparisons need to be on paper in order for the end customer to find it trustworthy, it is not enough to present it only verbally.

After sales material and activities

The after sales activities are divided into two areas: spare parts and technical service. Spare parts personnel work at the dealer's office together with the service support personnel, while service people work both out in the field and in the machine workshops. The most important after sales promotion material for spare parts people is the Spare Part Catalogue and for the service support personnel and service people it is the Service Manual. The Spare Part Catalogue is mainly used by the spare parts personnel to support the end customers with finding the right spare parts. If the end customer is large and has many Volvo CE machines, the Spare part catalogue can be handed out to speed up the ordering of parts. The Service Manual is used by the service personnel out in the field when they are repairing machines or in the machine workshops. The service support personnel, who usually are located at the dealer, also use the Service Manual when they are supporting the service people out in the field.

The spare part and service support personnel also use the CD-ROM based service system, PROSIS, in their learning on how to give service to the machines. According to the respondents PROSIS is cheaper for the dealers and it is invoiced once a year. Printed after sales promotion material on the other hand, is more expensive and can come in larger amounts on several occasions per year. According to the Spare Parts Assistant, many parts and service people are unwilling to use the PROSIS. According to her, the dealers find the printed material more convenient since you can bring it to the customer wherever he is. To use the PROSIS you have to bring the customer to the office and use a computer, which many parts and service people prefer to avoid.

In addition, Service Bulletins are sent out via traditional mail or e-mail to the dealers for news and changes to the current after sales promotion material.

The Spare Parts Assistant states that after sales promotion material is a bit different to pre-sales material. This is because both the dealers and the end customer can use some of the material. Despite this fact, the material has relatively low demands on layout and paper quality. In general the Spare Parts Assistant is satisfied with the after sales promotion material. According to her, the most important thing is that it is updated, pedagogically structured and delivered quickly out to the dealers.

4.2.1.3 Volvo Dealer Network (VDN)

All 21 Volvo CE dealers in Germany have today participated in the introduction course for VDN, which the Communication Manager was responsible for. The dealers have had access to VDN since August this year. Not all personnel at the dealers have participated in the training courses but the important ones have, e.g. managers, sales people, and sometimes also principles. There have not been any representatives from the Service and Spare Parts Department since these areas are not at the moment available on VDN. It was up to the dealers to decide which and how many of their personnel that should participate in the introduction courses, which were held at the Volvo CE office in Konz. It is the participating dealer personnel that have the responsibility to teach its other colleagues at the dealer. Further, the

Communication Manager will have follow up courses and plan to customize the courses after the dealers computer knowledge, e.g. special courses for more advanced dealers. The follow up courses need to have something new to offer, otherwise the dealers just think it is a waste of their time.

The Communication Manager does not see the VDN introduction courses as important for learning to use VDN, e.g. how to login, navigate, down load files, etc. The Communication Manager states:

“By the way, what we are talking about here is simple things, everybody should be able only be seeing VDN to search and download the information”.

The courses aim instead to raise interest among the dealers for VDN and to show its usability, which is critical for attracting the personnel to start using the extranet.

According to the respondents the dealers in Germany, as well as the end customers, are well ahead concerning IT resources and activities, and are not hesitant when it comes to IT solutions. All dealers have at minimum an ISDN connection to the Internet, and the standards of hardware and software are also at a high level. Sometimes the dealers are more advanced regarding IT activities than Volvo CE in Germany themselves, and many dealers have their own websites for managing e-business for used and rental equipment. The dealers place their orders for parts via Volvo CE's EDI system MOPS and from this year also orders for new products via the EDI system MAS. The majority of the dealers have computer resources of high standard for internal use, such as PCs and different types of printers. Laptops are also rather common among the dealers. The sales people are generally better equipped with laptops than the service people, which Volvo CE in Konz is trying to change. The Volvo CE headquarters in Konz is trying to push the dealers into improving the technical level by promoting them to buy laptops, and are presently focusing on equipping the service personnel with laptops.

Although the dealers in Germany are relatively far ahead concerning IT activities, the computer skills of the service personnel are not so high. The

respondents graded the sales personnel as 2.5 to 3 on a scale from 1 to 5, where 1 is beginner and 5 is advanced. The spare part personnel were rated a little bit higher than the sales personnel, but the service personnel out in the field were rated lower with a grade of approximately 2.

The average age of the salesmen are 45 years and it is among the older salesmen that the computer knowledge is lowest. According to the Marketing Assistant this is a generation problem, younger salesmen are more interested in technical tools and want to use laptops but the older ones do not. The Sales Manager thinks that younger salesmen do not need any education of how to use laptops but for the older personnel it is quite necessary to have training. Among the younger salesmen the usage of laptops in the interaction with the end customer is becoming more and more common, e.g., for showing price calculations.

According to the Sales Manager the end customer is generally familiar with having information presented on a computer screen, this includes both the important customer manager that signs the contracts and the machine driver working out in the field. The Sales Manager points out that it is possible to present information on a laptop to a machine driver at a construction site, since the machine drivers are used to this because the project managers at construction sites often use laptops in interaction with his entrepreneurial. In the future the salesmen cannot bring all printed material out in the field since it will be too much, too many machines models, and will be forced to work more with laptops.

The personnel that work internally with spare parts and service support are used to working with PROSIS and therefore have relative good computer knowledge and experience. The service personnel working out in the field are on the other hand not used to work with computers. The respondents stated that it seems as the spare parts and service support personnel is more open minded to VDN and working with computers in general. The sales and service personnel on the other hand seem more reluctant to adopting the new working tools, at least for the older employees in these two groups.

Usage of VDN

At the moment the principles, managers, and sales personnel at the dealers are only starting to explore and search the material and information available on VDN. The extranet is so new for the dealers, and there is also currently not that much information on VDN. New Specification Sheets are one category of material that the dealers are interested in as well as Competitive Comparison information. The Sales Manager thinks that VDN is very useful for retrieving the latest competitive information. The Marketing Assistant mainly searches for new Specification Sheets on VDN, which he supports the dealers with. These files are often forwarded to the dealers as attachments to e-mails. The dealer can then either show the file to the end customer on the computer screen or forward it himself to the customer via e-mail. Before he occasionally faxed the Specification Sheets to the dealers that showed it to the end customer but it is much more convenient and faster to send it via e-mail. The presentation quality also becomes much better.

As stressed earlier, the spare parts and service personnel are not using VDN since these areas are not yet available. The Communication Manager stated that the purpose with VDN is to provide the dealers with the right information at the right moment, and it is up to the dealers to decide when to use it, to get accurate information.

Cultural aspects

The English language skills in Germany are in general very low and according to the respondents the German construction equipment market is not an exception. All information on the German version of VDN is in German, except the file names that only sometimes have a description in German. Due to the low level of English language skills among the dealers this becomes a real issue. Even the Communication Manager sometimes finds it difficult to translate the English file names and states that you must be one hundred percent in that specific field to understand what the English term means. The missing language skills among the dealers are a major disadvantage and the personnel at the dealers find it difficult to understand the file names. In some cases it is only the principles at the dealer that know English. According to the

respondents this issue has to be improved in order to attract the dealers to use VDN and to make it useful and easy to work with.

Print from VDN

At present the Marketing Assistant mainly prints updated Specification Sheets from VDN that is not available in printed format, which he then supports the dealers' salesmen with for internal use. According to the Marketing Assistant, the printing quality from printing directly from VDN is acceptable for internal use.

The Sales Manager prints all Competitive Comparisons, which he sees as really critical for the salesmen in approaching the end customer. Also this kind of information is for the salesmen to use internally and not to hand out to the end customer.

Regarding the possibility of using material that is printed from VDN in interaction with the end customer the respondents are absolutely negative. The Communication Manager has the opinion that the Internet is only about presenting information, that is delivering information electronically, not for printing and then hand out to end customers. She continues to make the distinction between internal use and external use towards the end customer. Material that is printed from VDN at the office for internal use, e.g., for service personnel, is OK, but for external use it is absolutely not acceptable. Volvo CE and the dealer cannot afford to hand out and show badly printed material to end customers, since it can fail the deal and cause harm to the Volvo CE brand. It is necessary to give an end customer who buys a new product glossy printed material. When asked to consider combining printed material from VDN, e.g., updated technological data, with a glossy, high quality product brochure the Sales Manager says it is impossible. He states: *"we are talking about big machines, very expensive products, and as a customer you want a nice brochure before you buy it"*. The respondents think that it is acceptable to forward information from VDN for used equipment. The Sales Manager stated that they usually receive all inquiry for used equipment via e-mail, which is answered electronically together with attached data files.

Also Competitive Comparisons need to be in printed format. According to the Sales Manager the end customer does not take it seriously if it is not presented in print, it is not enough for the Salesman to present it verbally.

4.2.1.4 Future developments in print vs. online

The respondents agreed on that the initial goal of VDN, to present the information available, has partly been achieved. There is still a lot of information that is missing. The VDN has a lot of positive aspects for the future as being the one single portal for all dealer interaction with Volvo CE, but the development process has just started. The Communication Manager stated that Volvo CE, and themselves, now have to fulfill all the promises that have been promised the dealers about VDN. If this is not done as soon as possible the dealers will lose interest in the extranet, and it will become even harder to promote it. The service and spare part information must be included on VDN as soon as possible. Also competitive comparison on VDN is of most importance.

The Communication Manager stresses that VDN must have a new starting page. At the moment the starting page is static and looks the same every time the user access the extranet. It is of most importance that the starting page is continuously updated with useful and interesting news in order to catch the dealers' attention and facilitate revisit. As the layout is simple for VDN, which is done with the aim to minimize the access time as much as possible, it becomes even more critical to have updated news on the starting page. In addition the Communication Manager states that the news should include all information that can be of interest to the dealers, not only regional but also global news, e.g., that Volvo CE or one of its competitors have closed a big deal somewhere in the world. The planned launch for the customer magazine, Der Kubikmeter, on VDN is one step in the right direction.

VDN must also facilitate an ordering function of the material that is presented online. The Communication Manager states that the dealers should not have to fill in a traditional order form and send it to Volvo CE by traditional mail. As mentioned above, a wish among the respondents is for the English file names to be changed to German or those files that currently do not have explanations in German should at least have explanations in German. The respondents also ask

for different access levels to VDN, as the executive channel for the dealer managers.

The communication aspects between Volvo CE and the dealer have not been affected that much due to the present form of VDN. The support aspect on the other hand has been more positive affected, but VDN still has many promises to fulfill before some real progress can be seen. The respondents feel that Volvo CE is very often under average compared to its competitors regarding IT, as extranet, and also when it comes to the implementation process.

For the nearest future the respondents think that printed promotion material will have to exist side by side to online or electronic material. The salesmen need both printed material and information from VDN, as they can for example show the end customer pdf-files, video clips, etc., on a laptop but they still need to hand out some printed material. The Sales Manager forecasts that in 10-15 years the salesmen might not need printed promotion material but in the next 2-5 years they will. The use of laptops as a presentation tool in interaction with the end customer was also forecasted to increase in the future.

4.2.2 Bilia

Bilia is a Swedish owned company, who is the importer and distributor of Volvo CE's products in Austria. The company's headquarters are in Salzburg and it has three branches in Austria. These branches act mainly as service points for service personnel with small stocks but also to some degree as hubs for sales people.

Bilia sell five Volvo CE product lines; wheel loaders, excavators, articulated haulers, and compact equipment. Bilia's business not only covers the Austrian market but the company also manages Hungary, Slovakia, Slovenia, Croatia, and Bosnien-Herzegowina. In the study of Bilia, we constrained our study to the Austrian market.

We interviewed three respondents at Bilia in Salzburg, Austria: A Marketing Manager, a Market Support Manager, and an Order & Sales Administrator. The Marketing Manager is responsible for all marketing activities of Bilia in the

region. The Market Support Manager is responsible for supporting the sales force at Bilia Salzburg as well as the sub-dealers in the region. He was also responsible for educating the personnel at Bilia about VDN. Finally, the Order & Sales Administrator is responsible for ordering and selling the products, at the ordering and purchasing function of the sales department.

4.2.2.1 Austrian market

Austria is a small market for the construction equipment industry. The expected total number of machines sold during 2001 is 1 540. Out of these machines, Volvo CE stands for 172. This makes a total market share of 11.17 percent.

Volvo CE is present in all product segments except graders. The company is most dominant in articulated haulers with an expected market share for 2001 of 40 percent and wheel loaders with 26 percent.

The largest actors in the Austrian market are Caterpillar, Liebherr, Komatsu, and Kobelco. The toughest competition is within excavators and compact excavators, but according to the Market Support Manager it is growing in all product segments.

4.2.2.2 Printed promotion material

The printed promotion material that is used at Bilia covers a broad range of documents. Almost all printed promotion material produced by Volvo CE is published in German and since the Austrian language originates from the German language, they do not have any language problem. Almost all managers at Bilia and at the end customers know English very well. When it comes to sales and service personnel their knowledge in English is rather low. This concerns also the machine drivers at the end customers. According to the respondents the average level of English speaking people in Austria is higher in comparison to Germany, but lower compared to Sweden.

Pre-sales promotion material and activities

The sales personnel at Bilia undertake similar sales and promotion activities towards the end customer as the sales personnel in Germany, described earlier.

In general all respondents at Bilia were satisfied with the pre-sales promotion material. Bilia's sales people uses Product Family Brochures, Product Brochures, Product Manuals, Specification Sheets, the Sales Manual, the regional customer magazine Der Kubikmeter (Cubic Metre), and the new corporate customer magazine Volvo Spirit.

According to the respondents Product Brochures and Specification Sheets are the most important documents for the sales people. One of the problems that the Market Support Manager stressed is that the delivery time for new printed Specification Sheets is too long and sometimes reach Bilia after a new model has been launched. Specification Sheets are really important for the salesmen when selling new products. In addition, the Specification Sheets' high frequency of changes makes it hard for Bilia to be updated with the latest version.

As is Germany, the sales personnel bring more promotion material to new end customers and less to existing and more experienced end customers. According to the Marketing Manager the Product Family Brochure is especially important for selling excavators since many people in Austria do not know that Volvo CE has excavators in their product range. The customer magazines, Der Kubikmeter and Volvo Spirit, are used for both new and existing customers. Der Kubikmeter works as a regional newsletter for the end customers.

Competitor Comparison information is also important pre-sales promotion material for the sales people. According to the Marketing Manager the problem with this material is that it is not customized for the Austrian market. The current competitive information material is global for all Volvo CE's markets, and since the Austrian market has small representation from actors like Bob Cat or John Deere the material becomes useless. In addition, Liebherr, which is one of the largest competitors for Volvo CE in Austria, is not included in the Competitor Comparisons.

Concerning the layout of the pre-sales promotion material intended for the end customer all respondents stressed the importance of having them in full color and high paper quality. The Marketing Manager and the Market Support

Manager mentioned one exception, Specification Sheets, which they stated do not necessarily need to be in full color, although some level of paper quality is required if it is handed out to the end customers. In contrast to the external pre-sale promotion material, all respondents agreed on that for all promotion material that is used internally within Bilia, e.g., the Product Manual has lower demand on the layout. Additionally, according to the Market Support Manager, the end customer had lower demand on promotion material for used equipment. For this kind of promotion material in black and white could be enough.

After sales promotion material and activities

In general the respondents were satisfied with the after sales promotion material. The order & sales department are responsible for supporting sales people and end customers who call Bilia for support. Very often the sales people or end customer calls the order & sales department and want help with clarifying which parts or attachments that they need on their machine. For after sales activities the most important promotion materials used are Spare Parts Catalogues, Attachments Catalogues, and Service Manuals. These are also the most important material for the parts personnel and service support personnel. Furthermore, the Spare Part Catalog is also used by the sales personnel in situations when end customers want to buy spare parts and sometimes it is even handed out to large end customers to ease their ordering of spare parts. The Attachments catalog is often handed out to the end customer so he can select which optional equipment, e.g., buckets, gravels, he wants on his machine.

The after sales promotion material including the Specification Sheets are very often updated and according to the Order & Sales Administrator sometimes the printed material does not even reach Bilia before it is outdated.

The Order & Sales Administrator states that in general, the after sales promotion material does not require high demands on color and paper quality, since most of it is meant for internal use.

4.2.2.3 Volvo Dealer Network (VDN)

Bilia together with the Swedish Volvo CE dealer, Swecon, participated in the VDN pilot project for the Europe region, which was launched in the end of

June 2001. Volvo CE sees Bilia as a dealer with high IT level. Bilia has for example used Volvo CE's EDI system MAS for product ordering and invoicing for more than five years. It can be mentioned that the MAS system has been launched first this year for the German dealers. Bilia also uses Volvo CE's EDI system MOPS for placing part orders.

The Market Support Manager was the project leader at Bilia for the pilot project and had an introduction course at Bilia for half a day with the back office personnel, focusing on ordering and sales, service support, and marketing. At present the spare parts and service personnel have very limited use of VDN due to that the spare parts and service material and information are currently not available on the German version of VDN. The sales personnel were excluded from the initial introduction due to that they have limited access to computers. It is the Market Support Manager's responsibility to spread knowledge about VDN to the other groups within Bilia and he is currently starting to approach the sales personnel.

Therefore, at the moment it is mainly the personnel that work internally at Bilia that has the most knowledge and experience in VDN. Internal personnel means in this perspective, personnel that support the company's external personnel, which works in direct contact with the end customers. Both the Marketing Manager and the Order & Sales Administrator do not believe that it is necessary to have specific and extensive education on VDN for the personnel. The Order & Sales Administrator could not participate in the introduction course so the Market Support Manager just gave her a very brief introduction, which was enough as she thinks that VDN is really easy to use. The Marketing Manager has the same opinion and he also did not participate in the introduction course, he only received his password and logged on. Further, he does not think that the sales people need special education on VDN; instead they need computer and Internet education in general.

The sales people at Bilia do not use the VDN yet. One reason is as mentioned above the lack of computer support. Out of Bilia's nine salesmen three have laptops. Bilia's goal is that all salesmen should have own laptops in the near future but the investment plan is still under development. Another reason is that

two of the salesmen only have two years left to retirement, and do not want to learn anything new, and it makes therefore no sense to educate them in using new working tools. The average age of the sales staff is between 40-45 years and the main part of the sales force realize the advantage with using laptops in the future. The Market Support Manager stresses that he must show the benefits that VDN and laptops can offer the salesmen in their daily work. If they see the usability of using VDN and laptops they will become interested and positive to the new working tools.

At the moment, the sales people that have laptops mainly use them to send and retrieve e-mail and sometimes for accessing the Internet. The laptops are used to a very limited degree in the interaction with the customer. Some of the sales people have access to Internet when they visit Bilia's office and service hubs but not all of them. The Marketing Manager rates the computer skills for the sales personnel to around two on a scale from 1 to 5, where 1 is beginner and 5 advanced. He also thinks that the service personnel that are working out in the field have the same level of computer skills and stressed that they need to get used to working with laptops, since many of Volvo CE's future machines cannot be served without using a laptop. The Order & Sales Administrator rates her self and colleagues as 3-4 on the scale and mentions that the main reason was that they were depended on working with computers in their daily work. The Market Support Manager and Marketing Manager rate their computer skills to be 3 to 4. They also use computers as the main tool in their work. The office in Salzburg has modern computer hardware and software as well as a local area network with an ISDN connection to the Internet. The personnel at the office also have access to ink and laser printers. The technological standard for Bilia's other branches is also relative high.

Usage of VDN

The Order & Sales Administrator uses the VDN for searching for technical product details, which is very useful for her daily work. Especially the information for Product Manuals on VDN is very good. This material is updated very fast, which is important for the order & sales department. She also searches for new information connected to Specification Sheets that are not available in printed format, which she then support the salesmen with. Searches

for contact persons on VDN, e.g., for the responsible for a country or product, is also very common and she thinks this is a very useful function. At present, the Order & Sales Administrator uses VDN three to four times a week and the usage is increasing as she becomes more and more familiar with the extranet.

The Market Support Manager uses VDN for the same purpose as the Order & Sales Administrator, to support the sales personnel's activities as well as Bilia's other dealers in the former East Europe countries. The information he searches for on VDN is among other things new Product Brochures and Product Manuals, which is not available in print.

Today the Marketing Manager uses VDN for looking at the promotion material that is available, e.g., Product Brochures and Advertising Templates. The Marketing Manager would like to use VDN two times per week but at the moment it is less. The reason is that he most of the times does not find what he is looking for and therefore loses the interest to search further. VDN does for example include a lot of material and information for compact equipment but less for the larger machines. As a Marketing Manager he also wishes for more Advertising Templates on VDN, which would support his advertising activities a lot.

When the Market Support Manager and the Order & Sales Administrator for example find a Specification Sheet or Product Brochure on VDN they nowadays more often deliver it via e-mail, mostly to an end customer who is relatively experienced with Volvo CE's products. Sometimes also an offer is sent together with the Specification Sheet if the customer knows what to have. In special cases they print it at the office and give it to a Salesman. The Salesman then includes the printed version with the offer to the end customer. Today it is becoming more and more common to e-mail an offer together with other pre-sales material to the end customer, since it is faster than traditional mail. But the traditional mail is still the main delivery vehicle for offers.

Although VDN is mainly used by parts of the back office personnel, the respondents believe that VDN will be useful also for the salesmen in the future as well as spare parts and service when this area is launched on VDN.

Cultural aspects

Regarding VDN and cultural aspects, as language, this is only a minor issue for Bilia since it has access to the German language version of the extranet. According to the respondents there although exists some information on VDN in English or other languages, which causes problems for those at Bilia that do not know English that well. The respondents themselves have no problem with English and think that this also applies for the main personnel at the office in Salzburg. The main part of the sales personnel on the other hand have limited skills in English and therefore have problems with material and information in English. At present the files name on VDN is in English but the respondents did not see this as problem, at least not in their case. The Market Support Manager states that it is not a problem to have the navigation language on VDN in English but that the document language needs to be in German.

Print from VDN

As mentioned above, the respondents do occasionally print information and material from VDN at the office, which is not available in printed form. This printed material is then usually combined with other Volvo CE original printed material for prospects to end customers.

The material that is most common to print from the VDN for the Order & Sales Administrator is Specification Sheets. The other two respondents mainly print Product Brochures from VDN. The Market Support Manager also sometimes prints parts of Product Manuals from the extranet. All respondents agreed on that printed material from VDN does not reach up to the quality standards of the Volvo CE printed material. The Order & Sales Administrator shows under the interview a Product Brochure printed from VDN and points out that it does not meet the quality standards regarding paper quality, photos, and colors. She also stresses that it takes too long time to print on the ink printer at the office, resulting in that you can only print a few pages. The Market Support Manager believes that selected pages from Product Manuals can be printed from VDN since it is originally in black and white, but it should only be used temporary and internally. Since it is essential to present printed material that is of high quality to the end customer, the common thinking among the respondents is

that printed material from VDN should only be used in emergencies. In these situations it is better to have something to show the end customer than nothing.

The respondents also believe that high quality printed material is not that necessary for business involving used equipment and that material printed from VDN therefore can be used. For this kind of business the end customer mainly wants a data presentation and does not pay as much attention to glossy brochures as when buying new products. If the salesmen uses VDN they also gets away from the problem of handling “old“ printed material such as Specification Sheets, etc, which ends up in large volumes.

Furthermore the respondents agree on that printed material from VDN could be used for internal use within Bilja, where the demands on layout and quality are not as essential. For internal use, the print out quality when printing directly from VDN is acceptable. An example of information on VDN that is suitable for printing is Competitor Comparisons. The Marketing Manager states that these could be suitable to print in black and white since they are not handed out to the end customers, only shown to them.

4.2.2.4 Future developments in print vs. online

The general opinion about the current VDN is that it is a first step in the right direction to become the single access point for communication between Volvo CE and its dealers. But there are at the same time many areas that need to be improved to achieve this goal. The positive aspects of VDN today are the relative fast access and actuality of the information, and also that the user does not need to store files on their own PCs.

One negative aspect of VDN today is that it needs to be faster, both for login and navigating. The Order & Sales Administrator does not usually have much direct contact with end customers but VDN is today too slow to use for finding information if she is talking with the end customer over the phone. The end customer cannot wait that long on the phone and instead she has to call back after finding the information. Another negative aspect of VDN at present is that it is not complete regarding information and that the updating frequency for some material is too slow. The respondents want for example more information

about older products. The ideal situation among the respondents is that VDN should include all material and information that Volvo CE offers. Regarding the updating frequency on VDN the respondents mentioned that for example that Specification Sheets and Attachments catalogues are not updated fast enough. One example is that Bilia has received the new Specification Sheets for the next series of wheel loaders in printed format but these Specification Sheets are not yet available on VDN yet. The updating frequency for this type of material has in general improved but it is still not satisfying. It is critical for Bilia's business that all information on VDN is accurate. All respondents also stressed that the starting page of VDN must be improved. Their main concerns were that it should present which files on VDN that have been recently updated as well as stating the date of updating. At the moment the users have to look up the file of interest to see if it has been updated or not, which takes too a long time due to the slowness of the system and the large amount of information. According to the respondents, the starting page should also include general news that could be of interest, both regional and global news. Today the starting page is always the same and does not catch the users interest. The personnel at Bilia also asked for Competitor Comparisons data that is regional specific on VDN.

The Market Support Manager also thinks that navigation of VDN could be improved. The structure of the menu is too long and not clear enough and it is hard to remember where you found a file in the structure, what level. VDN need a page that has an overview of what to find and how to find it but this is not easy to solve in one page. He states that at the moment the structure is good for finding material and information that you already know about but not as good for finding material that you do not know about.

Further, the respondents stress that the interactivity of VDN must be improved. It is not enough to see what material that is available. They state that it should also be possible to order it online via VDN. Now the personnel at Bilia need to order it traditionally by filling out a paper forma and fax it to Volvo CE, which make no sense. The Market Support Manager stresses that VDN today is only about one-way communication and not two-way, hence it is not a communication tool. VDN is good for downloading information but there are

no feed back functions. A simple function in this aspect is that the e-mail links on VDN today is static; hence it is not possible to send an e-mail directly from VDN. A common wish is that all e-mail links should be interactive, meaning that you only need to click on the e-mail link on VDN for sending an e-mail.

The respondents think that VDN in the future has the potential to improve the communication and support aspects between Bilia and Volvo CE, but there is still a long way to go. According to the respondents, VDN should be the main access point for all Volvo CE knowledge and information, not a gate for just printed material but for all kind of information. Improved communication also depends heavily on the two-way communication of VDN can be achieved. The respondents also have the picture of Volvo CE as a company that is relative late concerning the IT development compared to its main competitors and sometimes question the company's IT knowledge and capacity.

For the future all the respondents think that printed material will and must exist parallel to online material and information, at least for the next 10 years. Although the respondents believe that for example the salesmen will use laptops more out in the field and within the next 2-3 years all salesmen will have access to laptops. The Marketing Manager states that if the end customers start to ask for more prospects by e-mail the salesmen could decrease the use of printed material. However, he states that when the Salesman goes to the customer he has to bring a printed brochure, since end customers want to look at pictures with good quality. In 5-10 years maybe we have 50 percent who uses VDN as the main information system. Additionally, VDN will not replace printed material towards the end customers since the general attitude among the respondents is that it is not as easy to read from the screen on a laptop or PC.

According to the Marketing Manager, the technological level at Bilia is upgraded continuously and all respondents seem fully aware of the importance to follow the technological development. The Market Support Manager thinks that if the IT infrastructure at the dealers improves so much, e.g. color laser printers that produce material with the same quality as traditional printed brochures, then we can use VDN for print on demand at the office but we are today far from that scenario. If this scenario becomes reality, the layout for

material on VDN maybe has to be changed, one for looking at the screen and one for printing out.

4.2.3 Rolac

Rolac is the importer and distributor of Volvo CE products in Finland. The dealer has 13 sub dealers in the country, which mainly function as selling points with small stocks. Rolac sells four of Volvo CE's product segments: wheel loaders, wheel excavators, crawler excavators, and articulated haulers.

The people we interviewed at Rolac were: A Product Manager, a Salesman, and a Training Manager. The Product Manager supports the sales people with information about the products. This means that he is responsible for having promotion material available for the sales people. The Salesman is responsible for selling Volvo CE products in a certain district. The Training Manager is responsible for educating and training the service people about how to serve the products out in the field. He is also to some extent responsible for educating the sales people when Volvo CE launches new product models. In addition, he also cares for educating the end customer of how to operate the machines and undertake simpler service on the machines.

4.2.3.1 The Finnish market

The total market for the construction equipment industry in Finland for year 2000 was 1 584 machines sold. Volvo CE's market share for 2000 was approximately 13 percent. Products segments where Volvo CE has the largest market share are wheel loaders with 43 percent and articulated haulers with 38 percent. The largest actor on the market is Caterpillar and Komatsu. They are represented in all Volvo CE's product segments. The competition is toughest within excavators.

4.2.3.2 Printed promotion material

According to the Product Manager, which promotion material that is used at Rolac depends on what language the material is in. Since the native language is Finnish and that the majority of the sales people and service people only know Finnish, this creates a language problem. The lack of English knowledge also

applies for Rolac's end customers. The average age of service people is between 45 – 50 and for the sales personnel average age is about 48 years.

Pre-sales material and activities

The Salesman's initial contact with the end customer is usually through a phone call, where an appointment is arranged. Despite the extensive use of phone, e-mail is becoming a more and more common communication tool with the end customers. The sales people meet the end customers either in their office at Rolac or in the office of the end customer. The first actual meeting is 50 percent of the times in the end customers office and 50 percent out in the field, e.g. at a construction site.

As for pre-sales material, only Specification Sheets and Operator's manuals are fully translated into Finnish. This is done by Volvo CE and Rolac does not have to pay for the translation. If Rolac wants more material to be translated, it is up to them to arrange and pay for it. Therefore, the sales peoples' most important printed material has become the Specification Sheets. The Product Manager and the Salesman regard this material as "fast" material, which is essential in the interaction with the end customer. The Specification Sheets are updated and delivered to Rolac before a new product is launched. The Product Manager measures the update frequency for the Specification Sheets to be around one to three times per year, but he claims that the trend is that the frequency is increasing. Although the Salesman and the Product Manager are generally pleased with the current promotion material delivered from Volvo CE, they stated that it is important that the Product Brochures are "glossy", although they are in English. This means that they want them to be in high paper quality and in full color.

Other product information material is also used, but only to a small extent due to the translation procedure. As Volvo CE produces more and more complex products, the Salesman stresses the importance of having translated material since this would increase his knowledge about the product and in turn increase sales. Since the sales people usually do not know English or Swedish, they only have superficial and not deep knowledge about the products. The Salesman

know that Volvo CE has a lot more printed material available than Rolac is using today, which he stated in the following way:

“We do not have knowledge about all the promotion material that Volvo CE is offering today and at the same time we do not try hard enough to search for it or find out more”

After sales material and activities

The Training Manager is generally satisfied with the current printed after sales material. According to him it is impossible to demand that all available printed after sales material should be in Finnish, since the area covers too much material and the cost would therefore be too high.

The service people use mostly Service Manuals and Specification Sheets in their daily work. The Service Manuals are the most important material. Without accurate and updated service information the service support personnel and the service people cannot repair the machines. This is also why the service people need to know about the latest changes done to machines in order for them to give the correct service, while pre-sales material is only changed if the performance of the machines is changed. Due to the Service Manuals' importance, the Training Manager is forced to translate certain important parts of the Service Manuals. This means a lot of extra work for him and the service support personnel, which have to translate the most important parts in to Finnish, e.g. news and service bulletins and the most important parts of the service manuals.

The Training Manager cannot understand why the sales people do not use more material, as he uses a lot of their pre-sales material in his education with the service personnel and sales personnel, especially the Product Manual. Sometimes technical facts are hard to find in the service material, which he more easily finds in the pre-sales material. In his education he also uses printed material from training CD-ROM, which are packed with both pre-sales and after sales material.

Compared to the pre-sales material, the update frequency for after sales material is higher. According to the Training Manager, the layout for after sales material is not that important as long it is understandable. The Service Manual is the most important material to have updated.

After sales material with high update frequency are Service Bulletins. They are delivered to the Training Manager via e-mail when changes are done to the products or if Volvo CE has news for the dealers' service personnel. The Training Manager receives Service Bulletins either by traditional mail or e-mail. The printed form arrives much later than the electronic version.

The Training Manager at Rolac is a member of Volvo Training Reference Group comprising the European region. This means that he automatically receives new education material via e-mail from Volvo CE. Furthermore, through the Volvo Training Reference Group trainers from Europe can share knowledge and experiences in their daily work.

The Training Manager often uses the fax when blueprints need to be transferred. Despite the extensive use of fax machine at Rolac, it has decreased and it is being replaced by e-mail in many situations.

4.2.3.3 Volvo Dealer Network (VDN)

At the moment the knowledge about VDN is very limited among the personnel at Rolac. The interviewed Product Manager had never entered VDN before the interview, and the Salesman had visited it only a few times together with personnel from the spare parts ordering department. Volvo CE has arranged an introduction course in VDN for the personnel at Rolac but the degree of participation among the personnel was low. The Product Manager did not participate in the introduction course and the Salesman did only participate for half an hour because he had customer visiting the office. The representatives from the sales side ask in general for more information and education of how to use VDN. The interviewed Salesman asked for more information about VDN, which shows how VDN can support and help them in their daily work.

The average computer skills among Rolac's personnel are at a rather low level. The computer skills for the sales staff are between 1-2 on a scale from 1 to 5, where 1 refers to beginner, 3 intermediate, and 5 to expert. According to the Training Manager the average computer skills for the 60 service people are even lower, around 1. But there are a few exceptions from this level and approximately five mechanics of the total service staff have higher computer skills since they have computers at home.

The Training Manager rates himself rather high concerning computer skills, between 3-4, mainly because he works a lot with computers and the Internet in his daily work. Besides using VDN, he is today also signed up on a mailing list that Volvo CE support its Training Managers with. For training sessions he mainly uses training material from the PROSIS CD-ROM on his laptop, connected to a projector. It is very seldom that he uses transparencies.

Further, the Training Manager believes that the service support and spare parts personnel are the groups that have the highest computer skills at Rolac. One reason behind this he believes is that these employees use PROSIS very much in their work and hence works a lot with computers and different software. PROSIS is seen as a good product due to that it is updated four times a year.

Only a few salesmen have laptops, which they today only use to a limited degree. The laptops are almost never used in interaction with the end customer but more for accessing e-mails from the Product Managers and sometimes for calculations. As mentioned earlier, the sales staff needs "fast" sales promotion material in interaction with the end customer. To use a laptop take too much time, e.g. to show a video, as the customer is in general time pressured. Since the sales staff is not used to work with laptops, they feel that it takes too long time to be effective. At the moment the Salesman thinks it only takes unnecessary time to use online services and computers in interaction with the end customer.

Regarding the use of the Internet, the interviewed Salesman uses the Internet for searching information about machines and the Product Manager has at some occasions ordered used equipment over the Internet. The service staff has no

access to laptops in their daily work out in the field. In general the computer skills seem relative low among the personnel in focus of our study.

The Rolac office in Vantaa has a local area network with an ISDN connection to the Internet, which facilitates fast Internet access. Most of the internal personnel use laptops or stationary computers and access to laser and ink color printers exists centrally at the office. The ordering department at Rolac has also been ordering parts from Volvo CE through the EDI system, MOPS. Recently, Rolac also orders machines from Volvo CE's MAS system.

The Training Manager points out the high average age among the sales and service personnel as a major factor of the low level of computer skills. He also sees reluctance among the sales and service personnel to adapt to changes and new ways of working, as using VDN and laptops in their daily work. The Training Manager tries to push the service personnel to start exploring VDN since his workload would decrease due to fewer questions from the service personnel, questions that can be answered via VDN. According to the Training Manager the sales people will have the same use of VDN as the service personnel, if they just took the initiative to search and learn. The Salesman on the other hand thinks that VDN is of limited use for the sales personnel and will mainly be of use for the after sales personnel.

Usage of VDN

Due to that the knowledge about VDN is very limited among the personnel at Rolac the usage of the system is so far almost non-existent. The Training Manager is the person at Rolac that has the most experience of VDN since he uses VDN to access updated training information and material, which then are used for different courses and training sessions. He is very pleased with VDN in this perspective since he now can just download the certain parts of the material that have been updated, e.g. pictures, schemes, text, etc, instead of order a whole new training CD-ROM. In the near future he will also have access to a CD-ROM burner so that he can burn his own training CD-ROMs. The Training Manager also uses some information from the computer based CD-ROM help system PROSIS for his training courses. But in education

purpose PROSIS is too slow regarding updates compared to VDN, which makes it is faster to access education material and information from VDN.

Cultural aspects

As for the printed material, the language problem also applies for VDN. It is the English version of VDN that Rolac has access to, which causes problems. Due to the currently low level of knowledge in English among Rolac's personnel, the majority of the personnel cannot use VDN effectively and it is hard to motivate the usability of the extranet. All respondents agree that it is too much to ask that a Finnish version is launched but stressed the problem. The Training Manager thinks that the language problem will eventually disappear, as younger aspirants with higher English language skills are joining the company. It will take quite some time though.

Print from VDN

At present it is mainly the Training Manager that prints material from VDN. As mentioned above the Training Manager downloads different updated training material, such as the Product Manual, from VDN, which he then translates, prints, and hands out to the sales and service personnel during the training courses. This is only for internal use and he states that for such purposes, the print out quality printed directly VDN is acceptable. The course participants can then write their own notes on the printed handouts.

Another category of employees that prints material from electronic media is the service managers and spare parts personnel. This group prints material from PROSIS that is then handed out to the service personnel working out in the field. Information about the specific part of the machine that the customer has problem with is printed. Exploded views of components are the most common information to print. Also service bulletins and machine cards are printed from PROSIS if available. The material that is printed from PROSIS is all in black and white.

The Product Manager and the Salesman on the other hand do not normally use printed material from an electronic channel in interaction with the end customer. The promotion material that is to be handed out to end customers

must be of high quality. The product manager and the Salesman think that print on demand from VDN should only be for emergencies because in these situations it is better to hand out something than nothing, despite lower quality.

4.2.3.4 Future developments in print vs. online

The respondents state that their experience of VDN at present is too limited and it is therefore too early to evaluate if the relationship to Volvo CE has been affected. Regarding the future of VDN, the Training Manager would like to see self-training courses on the VDN for the service personnel, as e-learning. He also wants a discussion forum on VDN for service Training Managers that should include an information database where you can search for solutions to various problems. He also believes that the main part of the education material will be accessible for downloading in 2003. Regarding print vs. online he states:

“For a long time ahead we need printed format for service and Operator’s Manuals as well as Specification Sheets, which means that printed material will exist parallel to online material on VDN.”

Since the end customers demand high quality printed material the Product Manager and the sale man believe that printed material can never be replaced completely.

5. ANALYSIS

In this chapter we analyze our empirical findings by comparing it to our theory. We start by analyzing the different parts of our communication model. Thereafter, we analyze VDN and its affect on Volvo CE's relationships to its dealers.

5.1 Industrial promotion delivery model

In this section we analyze the empirical findings by comparing it to our industrial promotion delivery model. We start by covering the sender part of the model and thereafter continue with the industrial promotion activity, the receiver, and finally the technology part.

5.1.1 Sender

According to the theory, the sender needs to have sufficient capital, knowledge and skills, and a functioning organization to deliver promotion activities for the selected media. With over one hundred years of experience in the transport vehicle industry and operations in over 100 countries, Volvo Group is known for being financially stable. The Volvo Group possesses total assets of 200.7 billion SEK with financial assets of 5.3 billion SEK.

Due to the long history in the industry Volvo CE has gained knowledge and skills in how to communicate with its dealers. This is evident in its developed system for delivering promotion material in the traditional way through printed catalogues. Volvo CE was not the industry's first mover in the development of extranets. Instead the company was relatively slow taking on the new technology, giving the competitors a head start. Our empirical findings also show doubts among some of the dealer respondents regarding Volvo CE's IT knowledge and skills. Despite this, Volvo CE has in less than one year launched an initial version of an extranet and is thereby gaining in on the competitors' head start. To achieve the quick development of the extranet, Volvo CE used both internal and external knowledge and skills. The company employed a Senior Advisor within e-commerce and an E-business Manager due to their earlier experience and knowledge in e-business to be responsible for the

extranet project. Other external sources of knowledge and skills, such as consultancy firms were also used as experts in the field.

Concerning organizational factors, Volvo CE meets the basic qualifications for delivering industrial promotion activities in print and online. The development of Volvo Dealer Network comprised people from all major departments within Volvo CE including a consultancy firm. While regions and product companies are responsible for information creation and delivery, the extranet core team is responsible for coordination. Last resort for decision-making for what promotion material to publish are the different regions. Although the product companies may be the initiators to the development of promotion material, it is the regions that decide what to publish in print and on the extranet. The actual printing of promotion material is located in different places dependent on for example cost issues and local modifications. Often the product companies, which are located in the different regions, responsible for its own printing, but the printing can also be done centrally by Volvo CE.

5.1.2 Promotion activity

The promotion activity area is a central part of the industrial promotion delivery model. To be able to analyse our case company's current promotion activities, we first categorized their promotion activities according to news and public relations, pre-sale promotion activities, and after sales promotion activities. Second, all activities in the categories are placed in the model below, taking in to consideration the sales cycle and where the promotion activities are aimed, internally or externally. The different promotion activities can be divided according to Figure 5.1 below. The material that is placed in the external category is handed out to the end customer. Material that is placed in the internal category is mainly used internally at the dealers.

Figure 5.1 Categorization of promotion activities

	Pre-sales activities	After sales activities
External	<i>Volvo Spirit</i> <i>Cubic Metre</i> <i>Press Releases</i> <i>Product & Product Family</i> <i>Brochures</i> <i>Specification Sheets</i>	<i>Attachments Catalogue</i>
Internal	<i>Product Manuals</i> <i>Competitor Comparisons</i> <i>The Sales Manual</i> <i>Advertising Templates</i>	<i>Service Manuals</i> <i>Service Bulletins</i> <i>PROSIS</i> <i>Spare Parts Catalogue</i>

Source: own, 2001

In our analysis of the promotion activities, we exclude cost factors. Although this factor is very important in all business decisions, we have not been able to collect specific information about each individual promotion category.

5.1.2.1 News and public relations

News and public relations includes Press Releases, and the customer magazines, Volvo Spirit and Cubic Metre. The general *purpose* with this promotion category is to keep the dealers and end-customers updated on Volvo CE's business process and product offers with relative short and focused information messages. The purpose is hence both internal and external. It can for example cover information about new product launches, Volvo CE's financial results, cuts in personnel or new employees, and new co-operations etc.

Although the material in news and public relations is aimed both externally and internally, the *layout & design* of the material in the category is generally high due to the high paper quality and full color pictures. One exception in this sense

are the Press Releases, which normally consist of a lot of text and therefore does not have high demands on layout.

As for the *Volume* factor, News and public relations material consist of the relatively small amount of pages.

As for the *frequency* of updating News and public relations material, it is relatively high. Both customer magazines Volvo Spirit and Cubic Metre it is updated four times per year and Press Releases are updated very irregularly.

Volvo Spirit and Cubic Metre is not *standardized*, and instead *customized* to the main markets taking up market related issues. Press Releases are standardized, despite the language differences.

5.1.2.2 Pre-sales promotion material

This category consists of promotion material that is used by the dealers in the first step of the selling process, the initial customer contact, to the actual closure of the deal. This category is further divided up in two sub categories: internal pre-sales promotion material and external pre-sales promotion material.

Internal pre-sales promotion activities

Internal pre-sales material includes material that the dealer mainly uses internally within its organization. The *purpose* with this kind of promotion material is mainly for the dealers' sales people to learn more about the products when they are not selling. The purpose is hence internal. Examples of this kind of promotion material are Product Manuals, Competitor Comparisons, the Sales Manual, and Advertising Templates.

Most of the internal pre-sales promotion material has relatively low level of *layout*, since much of the material is in black and white and is made for internal use.

In general, internal pre-sales promotion material has is the high number of pages and the *volume* is therefore high. Both the Sales Manual and the Product Manuals consist of many pages. Although the Competitor Comparisons have

fewer pages it is dependent on how many models the dealer wish to see. Advertising Templates are required to be designed in a software program, hence stored on a file, before they are printed out and these usually takes a lot of storage place.

The *frequency* of updating for the internal pre-sales material is mainly connected to when new machine models are launched. Our case company releases in general a new machine model every second or third year, and the frequency is therefore relatively low. The frequency for Competitor Comparisons is slightly higher since they have to be updated as soon as a competitor releases a new machine model.

Internal pre-sales material has high level of *standardization*, despite the language customization.

External pre-sales promotion activities

The external pre-sales promotion material is material that the dealer uses in the direct interaction with the end customer. This material is produced in large volumes and is also supposed to be handed out to the end customer. The *purpose* with external pre-sales promotion material is to support the dealers' selling activities of new equipment to end customers. The purpose is hence external, since it is supposed to be used in the interaction with the end customer. Examples of this sub category are Product and Product Family Brochures, and Specification Sheets.

This type of material is primarily in the form of “glossy” promotion material, which means that it has high quality in *layout and design*.

The current *volumes* of the external pre-sales promotion material are relatively low in comparison to the other promotion material. Product and Product Family Brochures are between 8 – 15 pages and Specification Sheets are even shorter, but never less than 4 pages.

Also the *frequency* for updating for pre-sales promotion material is relatively low since it is based on when new machine models are launched. One

exception is the Specification Sheets. These are updated more frequently and need to be delivered quickly to the dealers. This situation is common when new machines are just launched, since many changes are done to them in the early release stage.

As with the internal pre-sales promotion material, also the *standardization* level for external pre-sales promotion material is high and the material is also produced in large volumes.

5.1.2.3 After sales promotion material

The after sales category includes all customer support information from Volvo CE to its dealers that takes place after the actual closure of the deal, hence the final part of the sales cycle. This area is large since it includes not only material for the new products, but also for old products that need service and maintenance. The general *purpose* with this category of material and information is to support the dealer in their after sales activities by providing it with service support information for the machines if they need to be repaired or complemented. The after sales category consists only of internal promotion material, although one exception, the Attachments Catalogue, is also aimed externally towards the end customer. Examples of promotion material in this category are Service Manuals, Service Bulletins, the CD-ROM based computer system PROSIS, Spare Parts Catalogue, and Attachments Catalogue.

In general, after sales material requires low demands on *design and layout*. Much of the material is published in black and white and according to Volvo CE, it is more important that the information is accurate, complete, and easy to understand, than to be in glossy layout. Two exceptions are the Spare Parts Catalogue and Attachments Catalogue. These two catalogues need to have some degree of layout quality, since they also are aimed externally towards the end customer. Still the degree of layout and design is relatively low.

When speaking about the *volumes* of the material is high, since most of the internal after sales promotion material has high number of pages. One exception is the Service Bulletins. These usually consist of only a few pages.

Since the CD-ROM based computer system, PROSIS contains most of Volvo CE's after sales literature it is regarded as having high volume.

The *frequency* for updates for internal after sales promotion activities is generally high with changes made to the material many times per year. By sending out printed Service Bulletins, the dealers are able to be updated about the changes.

In *standardization* aspect the majority of the internal after sales promotion activities is standardized, excluding the differences in language.

5.1.2.4 Promotion activity summary

To summarize the analysis of the promotion activity area, we below in Table 5.1 present the different related factors for each promotion activity category.

Table 5.1 Summary of promotion activity factors

	News and Public relations	Internal pre-sales material	External pre-sales material	After sales material
Purpose	External/Internal	Internal	External	Internal/External
Layout & Design	High	Low	High	Low
Volume	Low	High	Low	High
Frequency of updates	High	Low	Low	High
Standardization	Low	High	High	High

Source: own, 2001

5.1.3 Receiver

This area covers first a task analysis of how Volvo CE's printed promotion material, mentioned in the section above, is currently being used by the dealers. Thereafter, the dealers' layout preferences of the used printed material are analyzed. The section continues with an analysis of the computer experiences

and skills of each dealer role, which is followed by the different dealer roles' willingness to adapt to new ways of working. Finally, cultural implications is presented and analyzed.

5.1.3.1 Task analysis

According to the theory the company must know in detail in which situation the different roles use the promotion material and how the user uses the promotion material. This is why a task analysis is done of the material used at the dealer below.

News and public relations

News and public relations material such as the customer magazines, Volvo Spirit and Cubic Metre, is mainly used by the sales personnel in the interaction with the end customer. However, it is also used as internal information for employees within Volvo CE and at the dealers. In this meaning the customer magazines works as external pre-sales material, which is handed out to both new end customers and existing end customers by the Salesmen. The respondents saw especially the Cubic Metre as valuable using it as a regional newsletter.

Internal pre-sales promotion activities

The internal pre-sales promotion material such as Product Manuals, Competitor Comparisons, the Sales Manual, and Advertising Templates is mainly used by the sales personnel at the dealers to learn more about the products when they are not selling. By doing this they are more prepared with sales arguments when they meet the end customer. In addition, the Training Manager at Rolac uses internal pre-sales material, especially the Product Manual in his education with the sales and service personnel. According to him it is sometimes easier to find technical facts in the internal presales material than in the internal after sales material. Advertising Templates was only frequently searched for at Bilia. There the Marketing Manager used the VDN to search for Advertising Templates, which would help him a lot in his advertising activities.

External pre-sales promotion activities

External pre-sales promotion material includes Product and Product Family Brochures, and Specification Sheets. This material is provided by the marketing personnel, but almost exclusively used by the sales personnel at the dealers in their selling activities. By first approaching the driver with glossy external pre-sales promotion material, the sales personnel try to influence him. To close the deal, the sales personnel need to meet the manager at the end customer. The meetings with the manager can either be at the dealer's office or at the end customer's office. An offer is being created and put in a folder together with different external pre-sales material, which is then delivered to the end customer mostly via traditional mail or personally. More external pre-sales promotion material is needed for new end customers, and less is needed for the experienced or existing customers.

According to the respondents, the Product Brochures and Specification Sheets are the most important material and are often handed out to the end customer in a sales meeting. One exception is the Finnish dealer, Rolac, who only use Specification Sheets since they are translated into Finnish.

As mentioned above, the majority of the respondents find Specification Sheets as most important to have updated and according to the Market Support Manager at Bilia, the delivery time for Specification Sheets is too long. Since they are often updated by Volvo CE, he states that it is hard to be sure of having the latest version. An ongoing trend at Bilia and in the Volvo CE hub in Konz is to deliver Specification Sheets downloaded from the VDN via e-mail to end customers and dealers who more or less know what kind of product they want. This is very common when printed Specification Sheets do not exist, since it according to the respondents is better to deliver it electronically than having nothing. The order & sales personnel at Bilia often downloads Specification Sheets from VDN and either forwards it to the sales personnel or directly to an end customer. Sometimes they also print it out, hand it to the sales people to use in a sales meeting, but this is only in emergencies. The general attitude among the respondents were that Specification Sheets for used equipment printed from VDN are sufficient in layout for handing out to the end customers.

After sales promotion activities

After sales promotion material includes Service Manuals, Service Bulletins, and PROSIS. This kind of material is mainly used as instructions for the service personnel working with the machines out in the field or in the workshops at the dealer. In addition the service support personnel use it to educate and keep the service people updated about changes, through Service Bulletins, and give instructions to the service personnel. The Service Bulletins are sometimes delivered via e-mail to the Training Manager at Rolac, since it is important that the information reaches the service people quickly repairing the machines.

The CD-ROM based computer system PROSIS, which contains most of Volvo CE's service literature, is mainly used by the service support personnel, but also by order & sales personnel and spare parts personnel. According to the majority of the respondents, the service support personnel use PROSIS to find service instructions for the machines. Order & sales personnel and spare parts personnel use it to find parts and attachments for the end customers. It is also common to print instructions directly from PROSIS, which is then given to the service personnel working out in the field. In addition, the Training Manager at Rolac uses PROSIS in his training sessions by using a laptop and a projector.

Volvo CE tries to promote the PROSIS and although it is updated more often, the dealers find the printed material more convenient since you can bring it to the customer wherever he is. The Spare Parts Assistant in Konz stated, that to use the PROSIS you have to bring the customer to the office and use a computer, which many parts and service people prefer to avoid.

Although the main part of the after sales promotion material is used internally, some is also used externally, such as the Attachments Catalogues. This is mainly handed out to the end customer, but it can also be used by order & sales personnel, service support personnel, and sales personnel.

Spare parts and Attachments catalogues are used in a similar way. Spare parts personnel, service support personnel and sometimes sales personnel use the

Spare Parts Catalogue to support the end customer in selecting spare parts to their machines. The Attachments Catalogue is used mainly by order & sales personnel and sales personnel to support the end customer in the selection of attachments to their machines. Common is for the sales people or end customer to call the order & sales department at Bilia or the Spare Parts Assistant in Konz, asking for help with clarifying which parts or attachments that they need on the machines. Sometimes the sales personnel in Konz, Germany and Bilia also hand out external after sales promotion material to large end customers in order to ease their ordering of spare parts and attachments.

The task analysis for all promotion activities above matches with Volvo CE's purpose with the promotion material.

5.1.3.2 Layout preferences

In order to know how a specific promotion activity should be delivered, it is also important to analyze the receiver's preferences about the layout for the promotion activities.

As for the layout, all respondents agreed on a general rule for the layout of all promotion material: Everything that is handed out to the end customer, needs to be in full color and high paper quality. Everything that is used internally at the dealer, requires lower level of layout.

This means that promotion material in the categories public relations and news and external pre-sales, should according to our respondents be in full color and high paper quality. The material in these categories are all used in the interaction with the end customer, and also handed out to the end customer. According to the respondents the end customers have lower layout demands for promotion material for used equipment.

As mentioned earlier, our respondents state that when it comes to internal promotion material, which is only used at the dealer, the requirements for layout are much lower. More important is for the material to be accurate, easy to understand and delivered quickly to the dealers. In addition, according to the respondents at Bilia, high quality paper and full color is not necessary for

promotion material for used equipment. As pointed out earlier, there are exceptions in the after sales category. Spare Parts Catalogues and especially Attachments Catalogues require some level of paper quality.

Finally, all respondents stated that printing directly from VDN, results in sufficient print-out quality for internal use. Additionally, the respondents' layout preferences for all promotion material are in accordance with Volvo CE's current layout and design of the promotion material.

5.1.3.3 Computer experience and skills

When analyzing the factors: computer and skills, willingness to adapt, and to some degree the cultural aspects, it is according to our industrial promotion delivery model helpful to start by mapping the different roles that the receiver consists of. The roles should be categorized according to the stages of the sales cycle in order to see how the different factors are related to each category. By doing this, the analysis of these factors becomes more structured and easier to undertake. From our empirical study we identified categories of employees at the dealers for both pre-sales and after sales activities. We also covered personnel that are mainly focusing on either internal or external work tasks within the dealers. These categories are presented in Figure 5.2 below.

Figure 5.2 Categorization of roles

	Pre-sales activities	After sales activities
External	- Sales Personnel	- Service Personnel
Internal	- Marketing Personnel	- Order & Sales Personnel - Spare Parts Personnel - Service Support Personnel - Training Manager

Source: own, 2001

The groups of employees that can be placed in the pre-sales category are personnel from the sales and marketing departments. Personnel from the sales department, such as Sales Managers and sales people, focus on external sales activities towards the end customer. Sales Managers can also support the sales people's activities but in this study this role is treated as an external focused role. Regarding representatives from the Marketing Department, the empirical study included both Marketing Managers and Marketing Assistants that both have internal focused tasks when supporting the sales and service people in various situations. We also include the Product Manager role in this category since his task also is to support the sales personnel.

In the after sales category we place the back office personnel. The service personnel working out in the field is focusing on external activities. The other three groups, order & sales, spare parts, and service support are mainly undertaking internal after sales activities, as supporting the sales and service personnel. These groups are occasionally dealing with end customers but the main focus is on internal tasks. The Training Manager is also included in the internal after sales.

When considering an electronic channel, which in this study is focused on an extranet, for delivering promotion activities it is according to the theory of most importance that the users have the necessary basic computer experiences and skills for using this channel. The users at the dealers must have the knowledge to access and login on VDN, search for material and information, download material, attach files to e-mails, etc. This requires not extensive computer experience but the user must although have the basic knowledge in working with computers and the Internet to be able to use VDN effectively.

When studying the computer experiences and skills of the various groups of employees in our study it becomes evident that there exist differences among them. It cannot be stated from the empirical findings that there exist any differences in computer experiences and skills between personnel from the pre and after sales categories. The differences can instead be noticed between the internal and external categories.

In general it seems as the computer experience and skills are higher for personnel that work internally at the dealers than for the personnel working more externally. The sales and service people working out in the field are rated low, close to beginners regarding computer experiences and skills. The only exception is the sales people at the German dealers, which the respondents rated close to average. The internal focused personnel such as marketing and back office personnel are on the other hand rated over average.

It seems as the internal category of employees have the necessary computer knowledge for using the electronic channel VDN effectively while representatives from the external category need to improve their computer knowledge level one notch.

When analyzing the empirical findings it becomes evident that one major reason for the difference between the internal and external category is based on how much the users work with computers in their daily work. The internal category is heavily dependent on working with computers to solve its different working tasks. The order & sales personnel handle for example the majority of the purchasing and sales activities via Volvo CE's EDI system, MAS, and the spare parts and service support personnel are very dependent on the CD-ROM based help system, PROSIS. A clear example that supports this finding is the Training Manager at Rolac who uses computers and the Internet daily in his work and rated himself well above average regarding computer experience and skills. The other two respondents at Rolac use computers only to a limited degree in their work and rated themselves with a clearly lower grade. The majority of the external focused employees, as sales and service personnel, do not use computers or laptops in the daily work and therefore seem to have lower computer knowledge.

The user's age can also play an important role regarding the level of computer experience and skills. The extremely fast but still relative young development of IT results in that younger people are much more used to working with computer while older people have been working a large part of their lives before being forced to work with computers and Internet. In this case we define

older people as people born in the 40's to 50's. One should remember that the Internet did seriously enter the stage as recently as 1993. The average age of the German and Austrian dealers' sales people is approximately 40-45 years and about 48 years for the Finnish sales people. The average age for the service people in the study is between 45-50 years. All respondents stated that it was the older service and sales personnel who had the lowest computer knowledge while the younger ones had much more knowledge in this area. Hence, the high average age for sales and service personnel that concerned all interviewed dealers is an important factor. Although, the age factor plays an important role it is not as decisive for level of computer knowledge as the usage level. The Training Manager at Rolac is over 50, and still has very good computer skills, due to the fact that he is forced to work with IT to carry out his work effectively.

Another difference that could be noticed between the interviewed dealers was that the personnel of the German and Austrian dealers seemed to have in general higher computer experience and skills than the personnel than the Finnish dealer. Although this difference is not that clear. This difference becomes noticeable as the representatives from Volvo CE Konz and Bilia stated that there is no need for education in how to use VDN, only for promoting its benefits. The only exception is the older sales people at the German dealers that need training in using VDN, which once again stresses the higher age factor. The general attitude among these respondents is that their personnel already have the basic knowledge of how to access sites, navigate, download information, etc. The respondents from the Finnish dealer on the other hand asked for courses that focused on how to use VDN as well as showing its benefits.

Both the German and the Austrian dealers are well ahead concerning IT activities, which contributes to the generally higher IT level for their personnel. Many of the German dealers are today operating e-business for used and rental equipment and the Austrian dealer has been using Volvo CE's EDI system for a long time.

5.1.3.4 Willingness to adapt

Delivering industrial promotion activities electronically, through an extranet, involves changes to the personnel's currently working habits and procedures. VDN becomes a new working tool for the Volvo CE dealers, which the personnel have to learn and get used to working with. The theory states that in order to successfully implement a new IT tool, as VDN, the involved roles must have a positive attitude towards changes and new technology, which makes the willingness to adapt of most importance.

The degree of willingness to adapt to VDN among the dealers' personnel is not the same for all roles. The willingness to adapt among the personnel in focus follows the same pattern as the former factor, computer experience and skills. Hence, the internal category of personnel is more willing to adapt to new IT tools and solutions than the external category. This similarity is due to the fact that the willingness to adapt is related to the level of computer knowledge. In this case it is much easier to learn to work with VDN if your computer knowledge is at least at an average level, since you then already have the required skills and can start using it directly. The empirical findings clearly showed that the sales and service personnel out in the field are most reluctant to changes and new ways of working. The majority of these two groups are at present not used to work with PCs or laptops and therefore mainly see VDN as a burden for their daily work, as it takes too long time to use laptops, etc. One example of this attitude is the Salesman at Rolac who stated that VDN is of limited use for the sales personnel.

The degree of willingness to adapt is also related to the age of the employees. It seems as the younger generation sales and service personnel are more open for changes, which was confirmed by a statement from the Sales Manager at Volvo CE Konz. Also the respondents at Bilia mentioned this by giving the example of the two salesmen that have two years left to retirement and do not want to learn anything new and it is therefore no use educating them. Once again it should be stressed that the average age of the sales and service personnel in focus of the study is rather high.

All respondents agreed on that all information about VDN towards these groups must be focused on showing the usability that VDN offers the employees in their daily work. This is of course also important for the internal category of personnel but not as critical as for the external category.

5.1.3.5 Cultural aspects

If the media vehicle in focus is seen in an international context it is according to the theory important to consider cultural aspects that can arise and affect the choice and design of delivery medium. Since our study focuses on industrial promotion activities in an international perspective the cultural aspects apply for our study. The empirical findings point at one major cultural factor of importance, namely language. Further, it is the English skills of the dealers' personnel that are in focus.

All the dealers of the study have to various degrees problems with the information on VDN that is in English. The Finnish dealer, who is working in a relative small market, has the most difficulties as the majority of its personnel have low level of English skills. At present all information has to be translated to Finnish before the personnel can use it, this concern all Volvo CE printed promotion material as well as information printed from VDN. Since this dealer has access to the English version of VDN, the lack of language skills becomes a real problem. Although some parts of the personnel at manager level seems to have an average level of English language skills, the majority only knows Finnish. It is therefore difficult to promote the usage of VDN to the majority of the personnel, which need to have the information online in Finnish to be able to use the extranet effectively. The Finnish respondents forecast that this problem most probably will diminish in the future, as younger employees with better English language skills will join the company, but this will take quite some time. Until then, VDN will be of only limited use for the majority of the personnel.

The English language skills of the German dealers are at the same level as of the Finnish dealers, but it does not affect the VDN usage to the same extent since they access the German version of VDN. But there are still problems as the file names are in English and sometimes lack German explanations. In these

cases the missing language skills becomes a real issue for using VDN effectively. According to one respondent it is very difficult to translate the English file names if you are not working in that specific field. Also in this case the respondents stated that this has to be improved in order to promote it to the personnel.

The English language skills in Austria seem higher than for Germany and the Austrian dealer also has only minor problems with information on VDN in English. As for Germany the dealers have access to the German version of VDN but do not see the English file names as a major problem. The sales people were mentioned as having lower English language skills than the internal personnel at the offices but this does not create a major problem for using VDN.

The general high average age of the dealers' personnel seem to be related to the level of English language skills, as the respondents think that these skills will improve with younger aspirants joining the dealers. Despite that the level of English language skills for the Finnish dealer and the German dealers seem to be equal, the German dealers manage this issue better due to the size of the German market that justifies translation of the information in printed and online format to German. If the Germans had to access the English VDN version they would have been in the same situation as the Finnish dealer.

The empirical findings cannot prove that there exist any clear differences in English language skills among the different categories, the pre-sales category compared to after sales category or the internal category versus the external category.

5.1.4 Technology

According to our theory delivering promotion activities, electronically or in print, requires some level of technology. It is therefore important to analyze the technological level at both the sender and receiver.

5.1.4.1 Sender

Since Volvo CE has been delivering promotion activities in print for several years the company possesses the appropriate equipment for designing and printing such promotion material. Also when it comes to delivering promotion activities electronically through an extranet, Volvo CE evidently due to our empirical findings possesses the appropriate system requirements.

5.1.4.2 Receiver

In our study of the three dealers in the construction equipment industry in the European market, one can see that the level of technology is acceptable for the internal personnel at all three dealers. At the office of each dealer of the three dealers, the internal personnel have stationary PC's or laptops with access to Internet through an ISDN connection and ink and laser printers.

Very few of the external personnel, sales personnel and service personnel, have laptops, although access to computers normally exists when they arrive to the dealer office. All respondents realize the importance of upgrading the technological level at the dealers, and according to them most of the sales personnel will have laptops in the nearest future. The Volvo CE headquarters in Konz is also pushing its dealers to improve the technical level by offering them to buy laptops and they are presently focusing on equipping the service personnel with laptops.

The Volvo CE headquarters in Konz is trying to push the dealers to improve the technical level by offering them to buy laptops and is presently focusing on equipping the service personnel with laptops.

To summarize, according to our empirical findings the level of technology is relatively high for internal personnel and lower for external personnel.

5.1.5 Concluded analysis of promotion activities

In this section we analyse and weight all different factors related to each promotion material category. This is done in order to see which media that is most suitable for delivering the specific promotion category.

We firstly find that the areas *sender* and the sender part of *technology* fulfill the necessary requirements for delivering promotion activities in both print and online. It should be noted that we have not included the cultural aspects, as language skills, in our analysis below. The reason for this is that this factor only concern one of the dealers interviewed, namely the Finnish dealer, and therefore does not influence the media selection.

5.1.5.1 News and public relations activities

According to the theory, factors speaking for delivering this category in print are the high level of layout, since it is handed out to the end customer and that the material has low volume. In addition, the low level of computer experience and skills and rather low willingness to adapt among the sales people speaks for delivering it in print. Also the low level of technology at the sales personnel points towards delivering it in print. Speaking for delivering it online is the high level of update frequency and low level of standardization. With this background, it seems as print is the best delivery media, since the factors speaking for print weight the heaviest. The fact that the material is handed out to the end customer and the high demands on layout are key factors for this choice. These key factors also reduce the potential for delivering it as a hybrid due to its lower layout quality.

5.1.5.2 Internal pre-sales promotion activities

According to the theory, factors speaking for delivering this category in print are the low level of computer experience and skills and willingness to adapt as well as the lack of IT resources the sales personnel. In addition, the low update frequency and the high standardization level speak for print. Speaking for delivering the category online is the low level of layout, since it is used internally and the high volume of the material. With this information, it seems as print is the best delivery media, since the factors speaking for print weight the heaviest. A key factor in this case is the low level of computer experience and skills at the sales personnel, which also makes a hybrid alternative inappropriate. One exception in this category of promotion material are the Advertising Templates. These are used by the marketing personnel, who have a higher level of computer experience and skills as well as IT resources. These facts speak for delivering Advertising Templates online.

5.1.5.3 External pre-sales promotion activities

According to the theory, factors speaking for delivering this category in print are the high level of layout, since it is handed out to the end customer. The majority of the material has also low volume, low update frequency, and high level of standardization. In addition, the low level of computer experience and skills, relatively low willingness to adapt, and low technology level among the sales personnel speak for delivering it in print. In this category of promotion material the weight for delivering it in print is very strong. Delivering the material as a hybrid is not an option, since the layout demands are too high. One exception in this category is promotion material for used equipment, which has lower demands on layout, and seems suitable to be delivered online.

5.1.5.4 After sales promotion activities

The majority of the after sales promotion material is used internally at the dealers, and has therefore low demands on layout and design, which according to the theory, speaks for online. For the Service Bulletins, Spare Parts Catalogue, and PROSIS, the factors that speaks for online are the high update frequency and high volume. The personnel working with these documents have relatively high computer experience and skills, high willingness to adapt, and sufficient access to IT resources. For all this material, online is a very suitable alternative. A hybrid is not necessary, since printing from online is of sufficient layout quality for internal use. Furthermore, the Service Manuals seem most suitable to be delivered in print. This is because the service personnel lack the necessary computer experience and skills, the willingness to adapt, and IT resources. These factors also make a hybrid less suitable. Finally, the Attachments Catalogues are also most suitable to be delivered in print, since it is handed out to the end customers. A hybrid is not an option, since it requires higher paper quality.

5.2 VDN's impact on the dealer relationships

In this section we analyze the current use of VDN, and thereafter its affect on the relationships between Volvo CE and its dealers.

The empirical study shows that the dealers are at present only using VDN to a limited extent. According to the respondents, the recent launch of VDN is the major reason behind the low usage. Additionally, the missing material and information for the parts and service personnel on VDN on the German version are also contributing to the low usage. The types of personnel among the dealers that are currently using VDN are mainly the internal personnel. The Finnish dealer Rolac is the dealer that uses VDN the least and it is only the Training Manager that has started to explore the extranet and use it in education purpose. The German dealers have only started to explore VDN and it is mainly Sales Managers that are currently using the system to support the sales people. The VDN usage for the Austrian dealer is higher than for the other dealers, although it is still not used to a large extent. It is the order & sales, marketing, and sales department that are using the extranet within the Austrian dealer. Despite that we have mentioned the sales department as a current user of VDN, it is still mainly for internal use as representatives from this department use the information to support the sales people that are working directly with the end customer. The information that is used from VDN today varies. Examples are technical data as Specification Sheets and Product Manuals, and also Product Brochures, Competitive Comparisons, Advertising Templates, and Training material.

Due to that VDN has been only available for the dealers for less than four months, which contributes to the low usage of the extranet, it is difficult to say if the relationships between Volvo CE and the dealers in focus have been affected. Our questionnaire to the dealers covered if the launch of VDN has changed the business relationship with Volvo CE with regard to communication, support, and trust and confidence aspects. The communication aspects comprised attributes as more and faster communication with Volvo CE and the support aspect included if the access to accurate and updated information had been improved. The final aspect regarding trust and confidence focused on these aspects to Volvo CE as well as Internet technology in general, as e-commerce. The respondents generally stated that it is too early to tell if the relationships to Volvo CE have been improved. The respondents from the Finnish dealer stated that their experience of VDN is too limited to judge if the relationship to Volvo CE has been affected. The German dealer stated that the

support aspect has been slightly improved but that there still is a long way to go. The German and Austrian dealer also stated that their confidence in Volvo CE regarding IT activities, as VDN, is limited and that they see the company as running behind its competitors in this field. Volvo CE's ability to implement new IT solutions fast and effective was also questioned.

The general attitude among the respondents is that an extranet as VDN has the potential to strengthen the relationships to Volvo CE, comprising improved communication, support, and trust and confidence. This thinking is in accordance with the theory, which states that an extranet can have significant impact in building, managing, and strengthening customer relationships. All respondents shared the same opinion that the thinking behind VDN is promising for the future with the aim to become the single access point for communication between Volvo CE and its dealers. Further, Volvo CE initial goal to present the information available has partly been achieved. But VDN must be improved in several areas to achieve strengthen relationships with its dealers. At present VDN has to include some important features that are missing as well as improve some features, which the theory states as critical for achieving strengthen relationships. These lacking features were also pointed out in the empirical findings, which are two-way communication, interactivity, accurate and updated information, complete information, customization, and fast access.

5.2.1 Two-way communication

According to the theory communication is the critical factor in an extranet environment; it is the very foundation for tight business relationships. One respondent stated that VDN today is only about one-way communication and not two-way, hence it is not a complete communication tool. At present, VDN offers the users to downloading information, which is good, but there is no possibility to send feed back to Volvo CE or other way to communicate with the company, as e.g. online ordering. The communication aspect is at the very center of the RM and CRM theories for creating strong relationships between business partners and thus is critical for VDN. According to the CRM theory it is technology, as an extranet, that enables a shift from one-way communication

to two-way communication, which increases the chances to satisfy the customers' needs.

5.2.2 Interactivity

The communication issue is very much related to the interactivity aspect. The interactivity of VDN at present is represented by the possibility to search for information and download it and to choose language, hence rather limited. The respondents asked for more interactivity in various ways, one example being the possibility to order material that only exist in printed format directly online, via VDN. The current system is that the dealers have to order this material traditionally by filling out a paper forma and fax it to Volvo CE, which make no sense to the dealers. Non-static e-mail links were also mentioned, thus it should be possible to send an e-mail directly from the extranet by clicking on the e-mail link. For the future the Training Manager at the Finnish dealer suggested e-learning on VDN in the form of self-training courses on the VDN for the service personnel. The service personnel could choose individually when they wanted to take a course, which truly places interactivity in the center. Also a discussion forum on VDN for Service Training Managers with an information database where you can search for solutions to various problems were mentioned as possible functions for the future. This online knowledge is according to the theory a way to improve group dynamics. According to the extranet theory, interactivity is major strength of extranets and should be take full advantage of. Speed of response is an important factor to achieve successful extranet relationships. Additionally, the RM and CRM theories focus on interactivity to improve relationships, the business partner should have the possibility to interact with the company in real-time.

5.2.3 Accurate and updated information

The accuracy of the information on VDN is satisfying for some areas but not as satisfying for others. The possibility to fast update information for the user to access is according to the theory a major advantage of extranets. The empirical findings revealed that the dealers are depending on accurate and updated information and that the updating frequency for some material was to low, although it has been improved. Specification Sheets and Attachments Catalogues were examples that were stressed as not updated fast enough. The

German and Austrian dealer also stressed that it is vital to change the current starting page of VDN, in order to promote the extranet and achieve revisit. At present, the starting page consists of the same information every time the user login on VDN and it should instead be continuously updated with interesting news and other information that catches the users interest. This news should not only be regional information but also include any global information that can be of interest, e.g., that Volvo CE or one of its competitors have closed a big deal somewhere in the world. The respondents thought that the planned launch of the customer magazine, Der Kubikmeter, on VDN is one step in the right direction. This is a magazine that the dealer find very useful and interesting. The Austrian respondents also wished that the recently updated files on VDN should be presented on the starting page. In this way the user would not have to look up the files of interest himself, which otherwise takes time and decreases the user's interest in VDN. Delivering the right information at the right time is fundamental for RM and CRM as well as for extranet theory.

5.2.4 Complete information

Related to this thinking, the respondents also stressed that VDN does not cover all areas; hence the information is not complete. It is foremost the parts and service areas for the German version of VDN that need to be included. The ideal situation is according to the German dealer that VDN should include all material and information that Volvo CE offers, including information about older products if possible. The extranets ability to store large amount of data is another of its advantages, which was confirmed by the statement of one respondent that pointed that the personnel do not have to store information on their own PCs .

5.2.5 Customization of information

Another major concern of the present version of VDN is that Volvo CE is not taking advantage of the extranet's ability to customize information, which is according to the extranet theory a fundamental strength. The respondents asked for Competitive Comparisons that were customized for their respective region, hence the competitor products that are lined up to the Volvo CE products must be valid for their market. If the end customer does not have any knowledge about or has not even seen the products that are included in the competitive

information, the comparison is of no use. Also different access levels to VDN, as the executive channel for the dealer managers, were mentioned. Both these examples are about customization, which are among some of the most vital ingredients in RM and CRM theory. Technology applied in the right way in a RM or CRM context allows the company to provide customization and personalized attention to the business partner so that the right information is delivered. Consequently, possibilities for strengthen relationships is facilitated.

5.2.6 Fast access to information

The empirical findings also pointed to that the speed for VDN sometimes is slow, regarding the access and navigation speed. Fast access to information is a feature that the theory states as central to extranet communication. Also the navigation system on VDN was regarded as rather complicated and difficult to handle. Both these factors are affecting the extranet's usability, which is very important to consider. If the user does not find the system easy to use he will lose interest in using it.

The potential of VDN is hence only exploited to a limited degree and there are a lot of areas that needs to be improved. Although, it should be mentioned once again that the current version of VDN only is a beta version and that Volvo CE plans to develop the extranet in many aspects in the near future. The current users of VDN seem relative satisfied with what the extranet can support them with and they see its usability. According to the respondents, to promote VDN for the dealers' other personnel demands that the areas covered above need to be improved, the personnel will otherwise lose interest. These areas in focus must also be improved to facilitate strengthen relationships, since they are critical factors in RM and CRM.

6. CONCLUSIONS AND IMPLICATIONS

In this chapter we draw conclusions based on the analysis of the empirical findings as well as implications derived from these conclusions. Suggestions for future research are also taken up in this chapter. We start by presenting the general conclusions. Thereafter we present the managerial implication, which is followed by the theoretical implications. The chapter ends with our suggestions for future research.

6.1 General conclusions

The starting point of our thesis originates from our main problem below:

MAIN PROBLEM

How can a MNC in the construction equipment industry deliver industrial promotion activities electronically and how will it affect its dealer relationships?

The fierce competition among the global players in the construction equipment industry has resulted in an increased focus on cost reduction. One way of decreasing these costs is to deliver industrial promotion activities online, instead of in printed form. The fierce competition has also actualized the importance of achieving strong business partner relationships to stay competitive. The questions are then, can online industrial promotion activities replace industrial promotion activities delivered in a printed form and how will this online delivery affect the business relationships.

As a starting point of our study the focus was on extranets as the main electronic delivery media for industrial promotion activities. Firstly, we had to gain understanding in which promotion activities a MNC in the construction equipment industry undertakes towards its dealers. Secondly, we analyzed how these promotion activities affected the dealers' sales activities towards the end customer. Finally, we had to determine the IT level at the dealers in order to see the potential for delivering these industrial promotion activities online.

In order to determine the potential for delivering industrial promotion activities electronically, we developed a model comprising four areas: sender, promotion activity, receiver, and technology. By analyzing our empirical findings, we were also able to determine how an electronic media affects the relationship between manufacturer and dealer.

Below we present our most important findings from our case study regarding how each category of promotion activity should be delivered. Thereafter we present our findings related to how an extranet can affect dealer relationships.

6.1.1 Electronic delivery of industrial promotion activities

We found from our case study that the largest potential for delivering promotion activities online is for promotion material that is aimed for internal use within the dealers' organization. The main reason for this is that the internal material has lower demand for layout, since it is not handed out to the end customers. Further we found that promotion material for after sales activities have larger potential for online delivery than promotion material for pre-sales activities, since after sales promotion material has lower demands on layout than pre-sales promotion material.

In addition, we came to the conclusion that at present all Volvo CE's promotion material in print should also be delivered online. The main reason for this conclusion is that a transition period from print to online is needed for all promotion activities. Radical changes affecting habitual working procedures cannot be done over night. Another reason behind this conclusion is that the dealers' personnel should be able to use the online material in emergencies, such as when printed material is not available. We found in our study that the internal personnel occasionally printed material from VDN to support the sales personnel with. We also found that the promotion material presently presented on VDN is usually more commonly sent to the end customers as attachments to e-mails. In these emergency situations we think that it is better to hand out material of insufficient quality than nothing at all. In addition, it is an advantage if the dealers can see all Volvo CE's printed promotion material on VDN, either for ordering or for self-studies.

In our case study we found that printed promotion material will never completely be replaced by online promotion information. This is especially evident for promotion activities aimed at the end customers; when an end customer purchases a new machine, he wants to have some glossy material to bring home. Instead, industrial promotion activities delivered electronically should function as a complement to industrial promotion activities delivered in the traditional way. It is a matter of being able to decrease printed promotion material by delivering it online, and thereby achieving cost advantages.

Based on our study we can conclude that the construction equipment industry is at present far from ready for an immediate transition to deliver promotion activities online. The transition period needs to be at least 5 to 10 years and as stated earlier the printed material will never be replaced completely. The transition period is not the same for all promotion activities, as some will need less time. The transition period is shortest for all material that is used by the internal after sales personnel, since this personnel is used to working with IT tools and see it as usable in their daily work. As mentioned above, the low layout demands are also an important factor.

6.1.2 Dealer relationship impacts

Regarding VDN's impact on Volvo CE's relationships with its dealers we found that it is too early to see any impacts. We found that the usage of VDN among the dealers is at present low and mainly includes internal personnel. The low usage is mainly due to that the fact that the extranet has only been accessible for the dealers for four months. Further, we found that VDN must be improved in several areas to achieve strengthened relationships and take advantage of all possibilities an extranet offers. The following areas of improvement are: two-way communication, interactivity, accurate and updated information, complete information, customization, and fast access. The most important issue is the communication aspect. At present, VDN is only about one-way-communication and not two-way, which is critical for strengthened relationships. Finally, if these areas are improved VDN and extranets has high potential to strengthen dealer relationships.

Our main conclusion drawn from our case study is that there is no obvious answer to how a MNC in the construction equipment industry can deliver industrial promotion activities electronically. When analyzing the empirical findings through our model we found out that the media selection decision is dependent on the specific case in question, and how the areas with related factors of our model are weighted against each other. Furthermore, we conclude that in our case study it is too early to say how electronic delivered promotion activities affect the dealer relationships. However, our analysis shows that the potential for strengthened relationships is high if the promotion activities are delivered via an extranet, which takes advantage of all its possibilities.

6.2 Managerial implications

This section presents the managerial implications to our case company, Volvo CE. Firstly, we state our recommendations regarding the delivery of industrial promotion activities and the implementation of online promotion delivery. Secondly, we state our recommendations regarding Volvo CE's extranet, VDN, and how it can be improved to strengthen the company's dealer relationships.

6.2.1 Delivery of promotion activities

Our general recommendations regarding the different delivery alternatives print, online, both, and hybrid are stated below together with an explanation.

- No need for a hybrid alternative

In our study of Volvo CE, the company considered to develop a hybrid, which means that the user should be able to print selected parts of online information, specially designed for printing on a standard printer. Taking into consideration the fact that most of Volvo CE's promotion material is already delivered online on VDN; we were able to examine the dealers' preferences about this online promotion material. According to them, a hybrid cannot replace printed promotion material handed out to the end customer due to its low layout standard. The current design of promotion material delivered on VDN today is also sufficient for printing out on a standard printer to use in emergency

situations or internally. There is thus no need for Volvo CE at present to invest time and money in developing a hybrid.

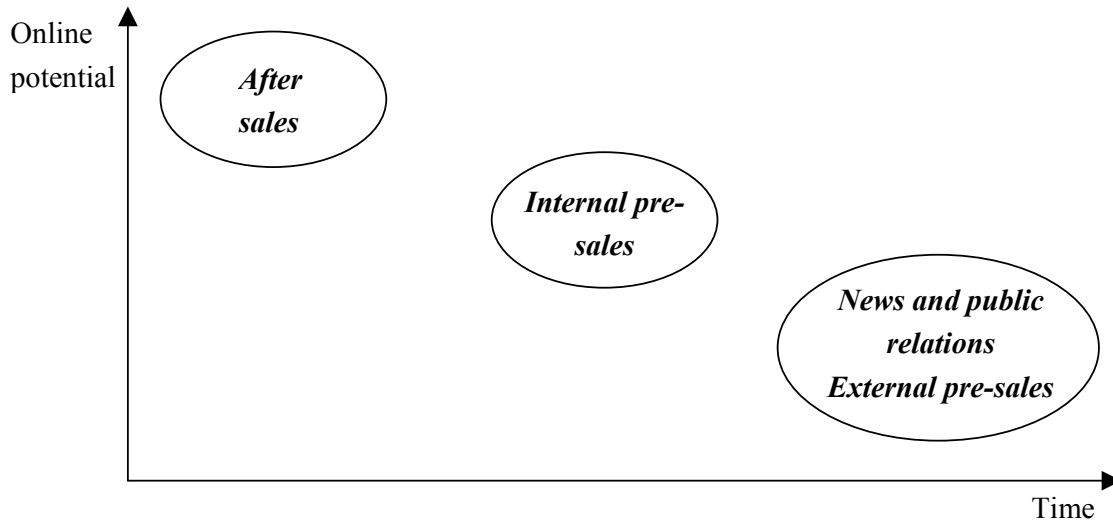
- Deliver the promotion activities both in print and online

In our study we found that many potential users of VDN had low knowledge and experience of IT tools. This means that no radical changeover from print to online is possible. Instead a parallel system, which means that the promotion activities need to be delivered both in print and online, is required for a longer period in order for the users to become acquainted with the electronic medium. Furthermore, we found two other reasons why Volvo CE should deliver the promotion material in the two media. The dealers should be able to use the online material in emergencies, such as when printed material is not available. In addition, it is an advantage if the dealers can see all Volvo CE's printed promotion material on VDN, either for ordering or for self-studies. Furthermore, as stated in the general conclusions, online promotion material will never completely replace printed material.

6.2.2 Implementation of online promotion activities

In order to rate the online potential for the industrial promotion activities of our case company, Volvo CE, and their future implementation pace, we firstly categorized them in groups with similar traits. The result is presented in Figure 6.1 with an explanation below. In addition, as there were some exceptions in each group, we also rated each individual promotion activity regarding online potential and future implementation pace. This provides Volvo CE with a more detailed presentation of its promotion activities. The result is presented in Figure 6.2 with an explanation below.

Figure 6.1 Implementation pace for online promotion activities I



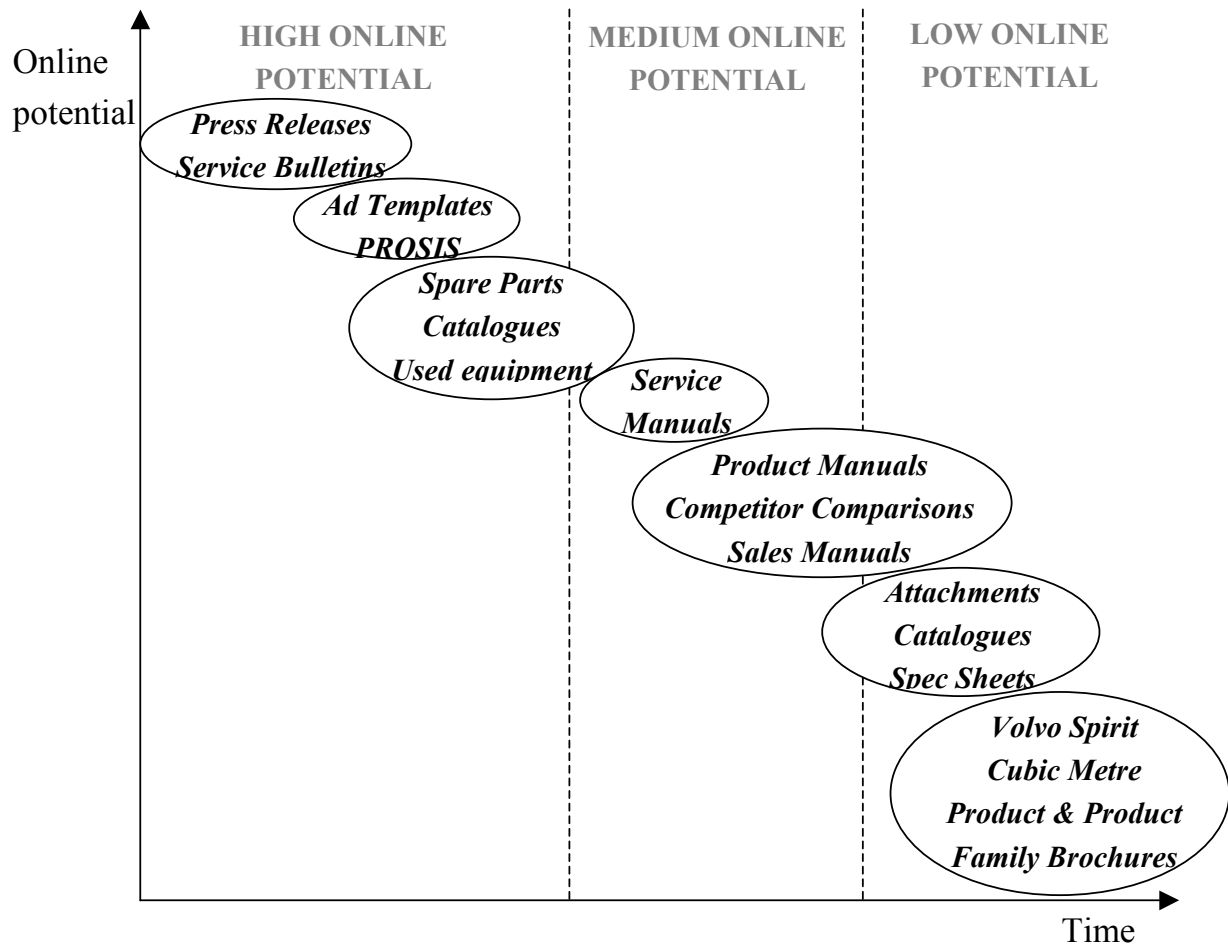
Source: own, 2001

In our study we found high potential for online delivery of industrial promotion activities within the *after sales* stage of the sales cycle. The main reasons behind this are that after sales material has a lower demand on the layout of promotion material than pre-sales activities. In addition, the internal personnel working within after sales also have high IT knowledge and experience. By delivering promotion material on VDN, Volvo CE will therefore first experience that they are able to reduce the delivery of printed material within internal after sales activities. This is also where the transition period from print to online will be shortest.

Further, we found *internal pre-sales* promotion activities to have medium potential for online delivery. Although the material is used internally, the sales personnel at the dealers using the material do not, at the moment, have the required computer knowledge and skills for online delivery.

Finally, for *news and public relations* and *external pre-sales* promotion material the potential for online is low, since the end customer requires printed glossy promotion material for new products. Here we found that the need for printed promotion material will last longer and most probably never be replaced by online information.

Figure 6.2 Implementation pace for online promotion activities II



Source: own, 2001

Promotion material considered to have high online potential are Press Releases, Service Bulletins, Advertising Templates, PROSIS, Spare Parts Catalogue and promotion material for used equipment. This promotion category consists mainly of after sales material.

Press Releases are firstly aimed for public magazines and delivering them online will not be a disadvantage since internal personnel at the dealers get the information through the customer magazines. *Service Bulletins* are short messages, already today delivered via e-mail to some of the internal after sales personnel. This personnel can easily print them from VDN and distribute them among the other service people.

Advertising Templates and *PROSIS* also have high online potential since they both are already in a digital form. The only thing speaking against online delivery of *PROSIS* is its rather large size, which may result in a long downloading time if the user has a slow connection.

The main use of the *Spare Parts Catalogue* is internal, and also this material is considered to have high online potential, although sales personnel and some end customers use it occasionally. Promotion material for *used equipment* had lower demand on layout according to our empirical findings and delivering it online is a good complement to the printed versions.

Promotion material that has medium online potential is Service Manuals, Product Manuals, Competitor Comparisons, and the Sales Manual. This category consists mainly of internal promotion material.

Service Manuals are mainly used by the external service personnel, but also by internal service support personnel and training. Those Service Manuals that are used internally have high online potential, but since they are mainly used externally by the service personnel who have relatively low computer skills, their online potential is lower at present.

Product Manuals, Competitor Comparisons, and the Sales Manual are all internal pre-sales promotion material. All this material is also suitable to be delivered online since it is used internally. However, since the material is solely used by the sales personnel who at present have relatively low computer skills, the transition period from print to online will be longer than for the Service Manuals.

Promotion material that has low online potential is Attachments Catalogues, Specification Sheets, Volvo Spirit, Cubic Metre, and Product & Product Family Brochures. This category consists mainly of external pre-sales promotion material.

Attachments Catalogue is one exception from the after sales category. Although it belongs to the after sales promotion material category, the

Attachments Catalogue has to have relatively high layout. Due to these facts the online potential is low. *Specification Sheets* are also promotion material that is handed out to the end customer, but with lower layout demands than other external pre-sales promotion material. Still the fact that they are handed out to the end customer makes them less suitable to be delivered online.

Volvo Spirit, Cubic Metre, and Product & Product Family Brochures are all promotion material that is handed out to the end customer. Due to that the material is in the form of glossy promotion material with high layout demands, the online potential is very low. The most suitable way to deliver this material today and for a long time ahead is in printed form.

6.2.2.1 Estimated cost savings for Volvo CE

In this section we roughly estimate the cost savings that Volvo CE can achieve by reducing its promotion activities delivered in printed format and instead deliver these activities online via VDN. It should be stressed that this calculation is based on our own assumptions and the figures are therefore only approximate. We support Volvo CE's forecast, which states that cost reductions can be achieved within five years if a satisfying extranet is developed. As mentioned earlier, this forecast takes into consideration the development cost of VDN as well as the need to have a parallel system of promotion activities delivered in both print and online.

According to Volvo CE, the total annual cost for production and distribution of its printed promotion material is approximately \$ 1.5 Million. Within five years, we estimate the total annual cost savings for production and distribution of printed promotion material to be approximately 30 percent or \$ 450 000. This forecast is presented in Table 6.1 below.

Table 6.1 Estimated cost savings

Total annual Printing & Distribution Costs	\$ 1 500 000
Estimated % reduction in printed promotion material	30%
Annual cost savings after 5 years	\$ 450 000

Source: Own, 2001

Considering the fast development within IT and the increased possibilities the Internet offers, the 30 percent reduction may seem low. However, facts justifying the 30 percent reduction are that VDN is in its very starting phase and the construction equipment industry is far from ready for an immediate transition to deliver promotion activities online.

As presented in Figure 6.1 earlier, the highest potential for online delivery and cost reductions is within after sales promotion activities. Therefore, this category will stand for the largest part of the 30 percent cost savings mentioned above.

6.2.2.2 Ways to shorten the transition period from print to online

In order to shorten the transition period from printed promotion material to promotion material online, we recommend Volvo CE to take the following measures:

- Educate the dealers about the advantages with VDN

Although the VDN has just recently been launched, the early release phase is very important. In our study we found that the general computer knowledge and experience among the external personnel is low. Furthermore, VDN's possibilities and advantages have not been made clear for the target audience. Volvo CE must promote the advantages and usability of VDN in order for the dealers to stay interested and realize that they will gain on turning to VDN. Furthermore, in order to increase the general computer knowledge at the

dealers, Volvo CE has to educate the dealers in basic and practical computer usage. If Volvo CE wants to faster replace its promotion activities in print aimed internally with an electronic medium, the company must also strive to upgrade the computer knowledge and skills among the dealer personnel working out in the field.

The initial education course about VDN conducted by Volvo CE was only the first step to introduce the dealers to the new IT tool. In the future, as more functions are added, education at the dealers will be needed even more to keep the VDN interest alive. In addition, we believe that the demand for customized education will be even more important as people learn differently and since VDN offers different advantages for different personnel.

- Promote upgrading of IT level at the dealers

Along with the increased computer knowledge at the dealers, the rapid development within IT today, puts pressure on the dealers to invest in new hardware. According to our empirical findings, the general level of IT resources is too low at the dealers, especially among the personnel working out in the field. By encouraging the dealers to invest in new hardware, such as laptops for external personnel, the use of online promotion material will in the future increase and the printed promotion material will decrease. We believe that Volvo CE's hub in Konz' strategy to push the dealers external after sales personnel to upgrade its IT resources, such as laptops, is a good initiative and should be implemented to a greater extent in other markets.

- Consider cultural aspects

Our study clearly showed that cultural aspects in the form of language skills, is a critical aspect to consider when operating in an international environment. The language skills affect the Finnish dealer most, both for promotion activities delivered in print and online. If the VDN shall be of any use for the majority of the Finnish dealer personnel, the language on the extranet must be in Finnish. We are aware of that this is almost impossible to motivate from a business

point of view, due to the limited size of the Finnish market, but we still want to raise attention to this issue.

Our study also showed that the language problem also affects the German version of VDN, but to a much lower degree. Our recommendation is that all information on this version of VDN should be in German, including the file names. Even though that the dealers in Germany and Austrian dealers only have some problems with the English file names, all information should be in German in order to make VDN most effective for the personnel in focus. This is especially important for the German market, since it is the largest market for construction equipment in Europe. Furthermore, this is also important for the promoting aspect of the extranet in general.

6.2.3 Improvement aspects of VDN

According to our study, an extranet has the potential to strengthen dealer relationships. However, in order to achieve this the extranet in question has to comprise all the fundamental features stated by the extranet theory, which are accuracy and timeliness of information, real time communication, interactivity, and customization capabilities. These features are all central in the RM and CRM concepts for creating strong relationships between business partners.

The empirical findings revealed that cost reduction is not the short-term goal of VDN. Volvo CE expects to achieve cost reductions by delivering promotion activities online within five years, in the best case. Instead, Volvo CE regards VDN at present as an important cornerstone in the “One company vision”, which aims at delivering a more unified message to its dealers and to strengthen the dealer relationships. Our conclusion regarding the present version of VDN is that it is not sufficient by far for improving Volvo CE’s dealer relationships.

The current areas of VDN that need to be improved are as mentioned earlier: one-way communication, interactivity, accurate and updated information, complete information, customization, and fast access. We are aware that VDN today is only in the early development stage, but we think that it is necessary to point out the areas that have to be improved at this early stage. The findings

from our study stress the importance of improving these areas fast in order to better promote the extranet to new users and increase its usage in general, hence facilitate strengthened relationships. The need for fast improvements is also critical if Volvo CE wants to keep up with its competitors, as Caterpillar and John Deere, in this field.

Below we present our five most critical and urgent suggestions of improvements of VDN in a chronological order; hence the most urgent area is presented first.

1. *Continuously updated starting page.* The general attitude among the dealers was that the starting page on VDN is the most urgent feature that has to be improved. The starting page should be continuously updated with interesting and useful information and news in order to attract the dealer personnel to visit the extranet. The information should be both of regional and global nature. This issue is especially critical in this initial phase of VDN, as Volvo CE must create interest for the extranet among the dealers.
2. *Add the service and spare parts areas for German version of VDN.* Our study pointed to the emergent need for including these two areas on the German version of VDN. Volvo CE should strive for including these areas as soon as possible in order to create interest for VDN that covers the whole dealers' organizations. If only parts of the dealer's personnel can use the extranet it will be harder to promote its usability for the rest of the personnel since the different departments within the dealers are not isolated from each other. As the goal with VDN is to incorporate the whole dealer organization it is of great importance that this goal is achieved in the initial development stage.
3. *Region specific competitive comparison information.* The representatives from the sales department stressed the importance of having access to Competitive Comparisons that were customized for their respective region. Competitive comparison information is critical for selling construction equipment machines and must be customized for the

specific market in question. If the end customer does not have any knowledge about or has not even seen the products that are included in the competitive information, the comparison is of no use.

4. *Online ordering of printed promotion material.* The findings from our study also stressed the need for the possibility to order printed promotion material directly online, via VDN. The current system take no advantage of the extranet's possibility to automatize this process.
5. *System for presenting recently updated files.* This issue is related to the discussion about the starting page presented above. In our study it appeared that VDN need a system for presenting the recently updated files. At present, the user finds it time consuming to do this by himself. If this problem could be solved the usability of the extranet would increase to a large extent.

Beyond the emergent areas presented above, there are also other critical areas of VDN that Volvo CE needs to improve rather quickly.

The customization aspect in the form of different access levels to VDN, as an executive channel for the dealer managers, is one critical issue that needs to be achieved. If Volvo CE manages to deliver the right information at the right time to the right dealer personnel, the possibilities for strengthened relationships are large. The usage of VDN can only be justified if the dealers can access the information that is of special importance to them.

Another area that needs to be improved is the interactivity of VDN. At present VDN offers almost no interactivity. One easy way to improve this aspect is to implement non-static e-mail links. By doing this the dealers can send questions to the responsible personnel at Volvo CE directly via VDN. The online ordering function mentioned above is a major step towards improved interactivity.

Also the update speed is critical for VDN, as for all extranets. We found that some areas of VDN at present are not updated fast enough, e.g. Specification

Sheets for new machines. Our empirical findings show that the dealers' selling capabilities are heavily dependent on accurate information from Volvo CE. The update speed must be a central issue for Volvo CE's future development of VDN. It all comes down to deliver the right information at the right time. The access and navigation speed of VDN are also issues to take into consideration. The empirical findings show that VDN sometimes take too long time to access and navigate. It is important for Volvo CE to work on increasing this speed in order to promote the extranet's usability, as fast access to information is fundamental in an extranet context for strengthened relationships.

Finally, our study pointed at the future potential for Volvo CE to place different training courses on VDN, in the form of e-learning. E-learning is here focused on the dealers' external personnel, as sales and service personnel. Due to the current relative low computer knowledge and skills as well as IT resources for this type of personnel, we think that this feature on VDN has to be postponed for the future. Although, we believe that this kind of online education will be very useful for the dealers when they are ready for it, and consequently a major chance for Volvo CE to improve its dealer relationships.

6.2.3.1 Concluding thoughts

Here we present our concluding thoughts regarding the future for VDN, which has emerged during our study.

By improving the different issues mentioned in the section above we believe that Volvo CE has every chance to strengthen its dealers relationships since the fundamental ideas of RM and CRM will be fulfilled. As stated by Volvo CE, improved dealer relationships are critical for the company's goal to regain the number three position in the construction equipment industry. Additionally, Volvo CE's main competitors, Caterpillar, John Deere, Komatsu, and CNH, are already ahead concerning IT activities such as extranets. These competitors have moved on to more advanced extranet functions, such as online ordering as well as order delivery status. This makes fast improvement of VDN's lacking areas even more essential. We also believe that fast improvement of the weak areas would improve the dealers' perception of Volvo CE regarding IT competence. An improved perception in this perspective is important for Volvo

CE if future IT activities from the company are going to be well accepted by the dealers, and hence result in a fast and smooth implementation phase.

Further, we think that if Volvo CE is going to be able to achieve its “One company vision” the company must take advantage of VDN’s ability to act as a single access point for the dealers. Even though Volvo CE’s organization is at present dispersed, the dealers must not notice this when interacting with the company via VDN. The Volvo CE organization “behind” the extranet must function effectively regarding the support and delivery of promotion activities via VDN.

We believe that strong dealer relationships are a key success factor in the future construction equipment industry, which can be facilitated by a VDN that comprises all fundamental features taken up in this study.

“The vision of the Volvo Dealer Network is to become an indispensable part of everyday life for Volvo Construction Equipment and its dealers.” (Volvo CE internal material, 2001)

Only when VDN is improved and more complete and the organization behind the extranet is functioning effectively, the vision of VDN can be realized.

6.3 Theoretical implications

In this section we present the theoretical implications with regard to our own developed model.

As we started our research process we realized that there are a limited number of theories connected to our research area. We therefore had to develop our own industrial promotion delivery model to be able to solve our main problem. The established theories that we have based our model on are related to two areas; marketing communication with focus on media selection and theories focusing on online documentation. As our model proved to be valuable for answering our main problem, we can state that these theories have proven to be very suitable for the development of our model. The theories focusing on media selection are very suitable since they cover the general issues in focus when

sending a message between a sender and a receiver. The theories for online documentation are appropriate for our study and model due to the fact that they take up critical aspects of how to best handle the print versus online dilemma.

Our study shows that there are many different factors that need to be taken into consideration when deciding if an industrial promotion activity is suitable for electronic delivery or not. The decision needs to be taken on a rather extensive information base.

Our main theoretical conclusions from our case study are:

- The opportunities that electronic delivery of industrial promotion activities offer is dependent on the type and nature of the promotion activity as well as the characteristics of the targeted receiver.
- The electronic delivery of industrial promotion activities should be seen as a complement to traditional ways of delivering promotion activities.
- The possibilities to improve business relationships are heavily dependent on the characteristics of the chosen electronic promotion delivery medium.

6.3.1 Implications of the industrial promotion delivery model

After having applied our industrial promotion delivery model on our case study we come to the main conclusion that it has proven to be usable to solve our main problem. It has also proven to contain all parts that are necessary in order to make a decision regarding media selection and the potential for electronic promotion delivery.

As mentioned earlier in our thesis, the purpose with the model is to provide a framework for a company regarding which information to collect before making a decision of how to deliver a particular industrial promotion activity most effectively. To give further clarification to the model some explanations and implications regarding the areas of investigation, need to be stated.

Given the four areas to analyze, sender, promotion activity, receiver, and technology, we have found that the two areas *sender* and sender part of *technology* are more fundamental for the continuing analyze. These two areas need to be at a certain level in order to have electronic delivery as an option in the final decision making stage.

The central area of the industrial promotion delivery model, *promotion activity*, proves to cover a broad variety of different industrial promotion material in the construction equipment industry. We believe the reason behind this is that the products in the construction equipment industry are expensive and technically complex, providing many functionalities to the user. The manufacturer must therefore document all technical details and practical instructions for the dealer and end customer. Furthermore, the cost factor connected to each industrial promotion activity is very important to take into consideration in a business perspective. As mentioned earlier we were not able to include this factor for each industrial promotion activity in our analysis.

Furthermore, an area that includes extensive analysis is the *receiver*, since it includes many broad factors that have to be taken into consideration. Our study also shows that industrial promotion delivery in the construction equipment industry at the receiver side includes many people with different roles and backgrounds. This complicates the situation for the sender, who has to take into consideration the different promotion needs of all people in order to optimize the delivery of promotion activities.

In addition, as mentioned earlier, the model will not give any right or wrong answer for which delivery media to select. The initiator of the investigation must finally subjectively weigh all different areas including the underlying factors against each other to come up with an appropriate strategy. This implies that the outcome of the investigation is case specific, hence different from case to case.

6.3.2 Future aspects for online delivery

When considering the future for Volvo CE and its ability to deliver promotion activities online, we present some final thoughts that have arisen during our study.

During the last decades the development within IT has proceeded in an extremely rapid speed. Its major breakthrough came with the public access to Internet. When Internet was launched for less than ten years ago it was only a way to publish information in a new format and only people with high computer knowledge and skills was able to use it. Today, people take Internet and its possibilities for granted in their daily life either for searching information or communicating through e-mail. Within business, online delivery of information has in many situations become the main way to distribute information among employees and business partners. Despite this fact, one dilemma with the general IT development is that the development of new IT tools goes much faster than its functionalities. Some take on the new technology fast and others has a longer learning process. We strongly believe that the IT tools for delivering industrial promotion activities electronically will be further developed and improved in the future.

However, the online potential in the construction equipment industry is not only dependent on the development of IT tools, but also on the dealers' ability and willingness to adapt to these new tools. Additionally, not only the dealers, but also the end customers must, in the future, accept these new tools. This implies for example that the end customers accepts promotion information presented on a computer screen or sent via e-mail to a larger extent than today. The end customer is in this perspective a major determining factor. Hence, there are many factors that must be in place before online is a given alternative for delivering industrial promotion activities. Finally, in the longer perspective we believe that all industrial promotion activities in the construction equipment industry have high potential for online delivery. In the meantime, the decision is not a decision of either online or offline, it is a combination.

6.4 Suggestions for future research

During our study we found other interesting research areas. Therefore, we in this section we give suggestions for possible future research areas related to our subject.

- Due to the recent launch of Volvo CE's extranet VDN and the generally fast development within the IT area, another similar study would be of most interest to undertake in the future. The potential for delivering industrial promotion activities electronically in such a study would most probably differ.
- Since our study included three dealers in the Western European market, it would be interesting to expand a future study to include more dealers and interviews within this market in order to get a more complete picture and confirm our findings. Furthermore, by expanding the study to other developed parts of the global construction equipment market such as the NAFTA region, our findings could be verified.
- Another interesting angle of a study would be to focus on developing markets, where the IT level is lower and under development, compared to in developed markets. The possibilities for delivering promotion activities electronically in such markets would most certainly be different in comparison to our findings.

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Communication Manager

Marketing Assistant

Sales Manager

Spare Parts Assistant

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Market Support Manager

Marketing Manager

Order & Sales Administrator

APPENDIX A

Questions for Volvo CE, Eskilstuna

Extranet

The extranet development

- a) Why extranet
- b) Purpose/objective with extranet
- 1. What documents are currently on the extranet
 - a) Categories of information
 - b) Print on demand
 - c) Objectives/Purpose categories online documents
 - d) Access levels/customization
- 2. Responsibility
 - a) Who decides what to publish online? (Regions)
 - b) Who publish online/How many? (Operative)
- 3. Costs for extranet
 - a) Staff
- 4. Strengths online
- 5. Weaknesses online
- 6. Competitor status

Extranet design

- 7. How decides what to put online
 - a) Customer preferences
 - b) All online?
 - c) What formats are used (print on demand)?
 - d) Criteria for decisions on design (format etc)

Technology level at user

- 8. Categories of customers
 - a) Funding?
 - b) Training?
 - c) Future development

Print

9. What documents are currently in print
 - a) Categories of information
 - b) Objectives/Purpose with each category
 - c) Customization
10. Costs for print
 - a) Staff
 - b) Material
 - c) Production/Printing
 - d) Distribution
 - e) Location for printing and distribution
11. Strengths print
12. Weaknesses print
13. Competitor status
14. Print vs. Online
 - a) Differences in documents online and print
 - b) Redundancy?
 - c) Estimated savings by publishing online
 - d) Future development

APPENDIX B

Questions for Volvo CE dealers

Market information

1. Market size for Construction equipment industry:
2. Market size for product segments where Volvo CE is present:
3. Volvo CE's market shares in these product segments:
4. Biggest actors in the market:
5. Product segment where the competition is toughest:

1 Printed Material

a) What kind of printed material from Volvo CE do you use today, e.g. product brochure, family brochure, spec sheets, parts catalog, service manuals, product and sales manual, news, etc.

b) Who in your organization uses the printed material previously mentioned?

c) How do different people within your company use the printed material?

-Marketing people

-Back office (either machine ordering or parts and service)

-Sales people

d) What printed material, or part of printed material, is critical to have updated?

e) What printed material is critical to have in high quality (glossy) colors?

f) What printed material is not as critical to have in glossy colors?

g) Positive and negative aspects about current printed material within the company?

How could the negative aspects be changed?

2 Volvo Dealer Network (VDN)

a) Technology resources for different roles within the organization?

- Hardware (PC, Laptop - Mhz, RAM,)
- Software (browsers)
- Internet connection (band width)
- Type of printer (matrix, ink, laser)

b) How would you grade your own computer skills? (1-5; 1=novice, 3=intermediate, 5=expert)

c) What kind of education have you had about the VDN?

d) For how long has your company had access to VDN?

e) In which situations and for what purpose do you use VDN?

-What kind of information from VDN do you use?

-How often do you search on VDN for the information previously mentioned?

f) Do you think that there is a need to have more time sensitive information like alerts on-line? E.g. sales alerts, products alerts, bulletins, Press Releases, newsletters

g) For which staff in your company is VDN most suitable at present? Eg. sales people, manager, parts & service, product specialists, etc.

h) What are the strengths and weaknesses with VDN?

-How could VDN improve your daily work and support increased sales?

i) Is the VDN suitable for your business concerning cultural aspects? E.g. language, etc.

j) Has VDN changed your business relationship with Volvo CE?

- Communication aspects (more often, faster etc.)
- Support aspects (accurate and updated information etc.)
- Trust & confidence aspects (to Volvo CE, Internet technology in general)

2.1 Print from VDN at dealer location

a) Do you print any information from VDN and if so, how often (different roles)?

- How do you use this printed material (different roles and in which situations)

b) What do you think about material that has been printed from VDN (different roles)?

2.2 Print vs. Online

a) How would you prefer each of the material you use today to be delivered? (Alternatives: both online and paper, printed only, online only, hybrid)

b) Is there any printed material of which relevant parts could be put online on VDN and printed when needed, in order to have updated information? E.g. a relevant part of a glossy printed brochure can be on-line and printed and then added to an existing product brochure.

If so, how should this material be designed? E.g. colors, layout, etc.

3 Future

a) How would you like to use the various printed material in the future?

b) How would you like to use VDN in the future?

c) What would make you sign on to the VDN and use it more?

d) Do you have any future plans to invest in technology resources? E.g. PC, laptops, Internet connection, software, education, etc.

e) How do you visualize your use of the Internet and other computer technologies in your daily work in the future? E.g. online ordering, laptop usage, broadband, etc.