TAMPERE POLYTECHNIC

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FINAL THESIS

B2B E-BUSINESS IN A CASE COMPANY

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ABSTRACT

This thesis was made for the Case Company, which was starting a project that was aimed at providing a comprehensive electronic business solution for their customers. To prepare for the project, the company's management gave the assignment to research the matter and to make a survey among the company's customers.

This thesis concentrates on electronic business between businesses and it is approached from the supplier's point of view. The theories and software solutions behind electronic business and the reasons for conducting it are discussed.

The secondary data section of this thesis starts by introducing two important concepts behind electronic commerce; Supply Chain Management and Logistics. Then Enterprise Resource Planning (ERP) is introduced. An ERP system is the backbone of electronic business and the source of the data that is displayed on an electronic business place on the Internet.

The main secondary data sections are about the most important subject of this study, electronic business. Electronic Data Interchange and electronic business on the Internet as well as the content of an electronic business place on the Internet are introduced.

The current situation of electronic business in the Case Company is presented.

The survey that was made for the Case Company among the company's customers has provided the primary data for this study. The research methodology and the survey questionnaire are introduced and a report on the research findings and analysis of the findings is presented. The actions taken by the company as a result of the research findings and finally recommendations made for the company are included.

Table of Contents

List of abbreviations

B2B	Business to business; between businesses
e-business	electronic business
e-invoice	electronic invoice
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
JIT	Just in time
OEM	Original Equipment Manufacturer
RFQ	Request for Quotation
SCM	Supply Chain Management
VAN	Value Added Network

1. Introduction

Electronic business is very important for companies these days. It improves business processes, customer relationships and communication between business partners. Almost all companies are involved in electronic business in some ways.

The Case Company needed someone to do research among their customers to find out the customers' interests towards electronic business and their interest in using an electronic business portal with the company. I was doing my work placement at the company at that time and I was very interested in doing research on the fields of electronic business and logistics. The company's needs and my interests met and so the idea for this thesis was born.

The main reason for doing the research was that the company did not know exactly how to best serve their customers using an electronic business portal. The objective of the research was to get valuable information from the customers in order to be able to design an electronic business place that meets the customers' needs in the best possible way. The company's management used the research results for making informed decisions regarding the use and content of the portal.

The content of this thesis is a combination of information from published literature and material provided by the Case Company, the research made for the Case Company and what I learned while working in the logistics department of the Case Company as I was working on this thesis.

2. About the Case Company

The Case Company is the world market leader in drives, controls and motion technology. The company operates internationally in automotive technology, customer goods and building technology and in industrial technology.

The Case Company has production sites and subsidiaries in 36 countries and in addition representation in 42 countries. The company's total revenue was 4,6 billion euros in 2005. The amount of personnel worldwide was about 28 200. The company made investments in the amount of 259 million euros and the sum that was invested in research & development was 193 million euros in 2005.

2.1 The Case Company in Finland

The Case Company has been operating in Finland since 1978. The Finnish subsidiary has three locations; one in Vantaa, one in Pirkanmaa area and one in Tallinn, Estonia. The distribution network of the company covers the whole Finland. Personnel amounts to about 120 employees. The Finnish sales were 73,2 million euros in 2005.

3. Supply Chain Management and Logistics

It is easier to understand the use of electronic business when considering first the concepts of Supply Chain Management (SCM) and Logistics. Electronic business is used to improve Supply Chain Management and logistics activities.

3.1 Supply Chain Management

3.1.1 What is a Supply Chain?

A supply chain includes all the functions, activities and facilities for the production and delivery of products and services from the chain's first suppliers to end customers.

Terms like supply network or supply web are perhaps more descriptive of the supply chains of today. One company can be a part of several supply chains and also the flow of at least information is no longer moving link by link in a chain but also over some links in the chain forming new links.

3.1.2 Definition of management

According to Fredendall & Hill (2001:14) the functions of a manager are to plan, organize, lead, control and improve. This rather well sums up the management functions. The subjects of management in companies are employees and material and information.

3.1.3 Defining Supply Chain Management

At its most basic, SCM is the coordination of material, information and financial flows between and among all the participating enterprises in a business transaction. (E-business 2.0 2001:275)

Supply chain management is a term with a very wide meaning. SCM aims at integrating key business processes all through the supply chain, both inside and between the member companies. That means managing and operating a company very differently than if the focus is on just one company.

It is no longer enough for companies to succeed on the company level. Success is measured on the supply chain level. Competitive advantage is nowadays hard to gain by only concentrating on the business processes inside one company.

The supply chain members must be seen as partners and working partnerships is the key to success. Partners must be carefully selected and much attention should be paid in maintaining the relationships. The relationships and information sharing between partners must be continuously improved.

SCM is more than the latest craze; it's the new way to do business. Supply chain excellence requires an effective strategy, sustained management commitment, and changes in a company's attitude, culture, and organizational structure. (E-business 2.0 2001:305)

3.1.4 Advantages of SCM

The most potential way of gaining competitive advantage is improving the supply chain. Failing to implement SCM solutions can lead to being left behind the competition.

The advantages gained by successfully implementing SCM include increased forecast accuracy and reducing supply chain costs and inventory levels. Other advantages are fast fulfilment, improved delivery performance and productivity improvements. Improved communication between members of the supply chain can be achieved. Transparency of the supply chain increases awareness of what is going on in the chain for all partners.

The ultimate focus of the supply chain is the customer. The goal of supply chain management is to maximize value to the customer. SCM can also improve customer service and in the end help keep customers.

3.1.5. SCM software

Several kinds of software has been developed to plan, measure, track, coordinate and manage the processes and information inside the supply chain and between the partners. There are software packages especially designed for supply chain management.

Perhaps the most important software for managing the supply chain is an Electronic Resource Planning system (Discussed further in Chapter 4). It ensures the functionality inside one company in the chain and it can be used to manage the whole chain.

3.1.6 Electronic Supply Chain Management

Companies are racing to find the right combination of click-and-brick supply chains, which is why you need to understand that SCM isn't technology issue but rather a business strategy for creating new, interesting opportunities. (e-Business 2.0 2001:271)

Companies need to assess their own processes and figure out in which parts of their supply chain electronic solutions can be used for the company's advantage.

In order to be able to successfully manage the most important flow, the flow of materials, the accessibility and accuracy of data is essential. And it is not enough that the data is accurate, it must also be consistent through the chain. If all partners have different names and codes for materials and these are not linked in any way, the managing of materials becomes very difficult. It is not likely that all partners can use the same codes and same terminology, but at least the companies should work towards consistent data in the chain. Electronic business solutions help make it possible.

3.1.6.1 Internet as the enabler

The Internet has made many-to-many communication in the supply chain possible. That is, the communication links are not just between two partners or from one partner to several partners, but communication can flow between all partners in the chain. The very important exchange of information in the supply chain can be substantially improved with the use of Internet.

Internet is cost-efficient as it is much more accessible and cheaper to use than for example EDI (discussed further in chapter 6). With Internet there is less need for expensive hardware and software.

3.2 Logistics

The definition of logistics according to The Council of Supply Chain Management Professionals:

The process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements. This definition includes inbound, outbound, internal, and external movements. (www.cscmp.org)

Logistics, in contrast to supply chain management, is the work required to move and position inventory throughout a supply chain. As such, logistics is a subset of and occurs within the broader framework of a supply chain (Supply Chain Logistics Management 2002:4). It is often difficult to fully differentiate the two concepts.

According to Bayles (2001), there are two logistics terms that can be used when talking about using the Internet for logistics activities. The first, e-logistics, means applying electronically logistics concepts to the aspects of

business conducted using the Internet. She defines E-fulfilment as "the integration of people, processes, and technology to ensure customer satisfaction before, during, and after the online buying experience".

Internet can be used to improve logistics processes. For example transportation and delivery information can be displayed on the Internet. One of the main challenges for the future is finding new ways to increase the transparency of logistics to business partners. Electronic business is a good way to do that.

4. Enterprise Resource Planning

An ERP implementation impacts far more than the company's software. ERP adoption significantly affects the company's culture, its organizational structure, and its business processes, staff, and day-to-day procedures. (e-Business 2.0 2001:253)

4.1 Before ERP

Before these integrated ERP systems all the company's departments had their own applications for storing and processing data. If they needed some information that was on some other department's system, they had to ask for it and possibly wait for the information for some time. Much of the information is needed in several departments and therefore had to be entered several times in the systems of one single company.

4.2 Description of Enterprise Resource Planning

The term Enterprise Resource Planning, usually known by its acronym ERP, stands for an integrated software system that allows information storing, sharing, analyzing and tracking centrally.

An ERP system is a software that consists of modules. There is a module for each department in the company. These modules include Manufacturing, Accounting and Financials, Human resources and Sales and Distribution. The modules can be custom fitted to every organization's individual needs. The modules are linked and when data is entered into the system, it will be immediately accessible where ever it is needed. All business areas can share and analyse the information.

4.3 Benefits of ERP systems

Operational transparency and easy access to all data are the key factors that Enterprise Resource Management is trying to achieve. ERP allows more effective management of business processes all through the organization.

The most significant reasons for implementing an ERP system are integration of financial data, standardized manufacturing processes and standardized Human Resource information. These are the biggest problem areas when access to data is not integrated.

4.4 Downsides of implementing ERP

The cost of an ERP system is high and it is a massive project to implement it. It can take several years to fully implement it in all business areas. Training people, converting enormous amounts of data and long wait for returns are some serious issues to consider before implementing ERP. But when the implementation is successful, the benefits can also be substantial.

4.5 The role of ERP in e-business

It is essential that the ERP system is working well before going into electronic business. The data needs to be available and accurate.

EDI can be used for transporting information between ERP systems. That is the traditional way of linking ERP systems together.

The company's ERP system is usually the backend information system for the electronic business place on the Internet. Without linking the front- and back-office applications, the sales orders that come through the electronic business place have to be manually entered into the system. ERP remains the technological backbone in the e-business era.

All the data that is available on the business place on the Internet, is stored in the ERP system and all the data that is input on the Internet is transported into the ERP system.

As the electronic business places are usually controlled by the suppliers, integrating them successfully with the ERP systems on the purchasing side is the next challenge.

5. Electronic Business

In this chapter, as well as in the whole thesis, only B2B electronic business is considered and not electronic business between companies and private customers.

5.1 History of electronic business

5.1.1 Electronic funds transfer

The first electronic business applications emerged in the 1970s. The very first application was electronic funds transfer, which allowed only payment transfers. This was still very limited and accessible only for large corporations and financial institutions.

5.1.2 Telecommunication applications

EDI was the next step. It included already processing other transactions than financial ones. For example manufacturers, retailers and services were able to gain advantage at this point. The applications were then called telecommunication applications and their strategic value was realized.

5.1.3 Electronic commerce

The term electronic commerce was taken into use in the 1990s as Internet became widely used. The term usually refers to buying and selling on-line. In the beginning being involved in electronic commerce meant for companies having company web pages with some very basic information on the company and its products. Then the functionality to place orders online became possible.

5.2 Electronic business today

Today the term electronic business refers to a much wider use of information and communication technology in business processes. The information on the company's internal systems is being brought to the use of customers and other partners. The term E-business includes e-commerce and means restructuring of business processes to make the best use of digital technologies in a much wider sense.

The ultimate goal of restructuring business models is to gain competitive advantages by lowering costs, delivering greater value to customers, and developing and maintaining long-term relationships with customers.

Internet is now the main medium for electronic business. This is due to the fact that it is available for all and it is very cost effective.

5.3 The benefits of e-business

5.3.1 Lowered costs

Cost savings can be attained by reducing order and order confirmation processing, distributing, storing and retrieving time and by reducing the time used in answering customer's questions on the phone and by e-mail. Customers can see for example the product availability and order status information themselves on the Internet.

Brochures and manuals can be attained on the web and therefore printing and mailing time is reduced. There is also no need to print and send the order acknowledgements, which saves the employees' time.

5.3.2 Error reduction

When manual work decreases, the amount of errors is also reduced. Sometimes faxes get lost and typing errors can occur. Re-entering data increases the error risk. This is not a problem in e-business.

5.3.3 Improved customer service

The electronic business place is also an important customer service channel. Improving customer service and deepening customer relationships is one of the main objectives of implementing an e-business solution. This is because succeeding in managing customer relationships is one of the key factors in staying competitive. Excelling in it can bring competitive advantage. Customers have constantly increasing access to information on suppliers. This means that if a company is not meeting their customer's needs, it is likely that some of its competitors will.

The information and functionality is available and easily accessible for the customer at any time of the day almost everywhere. The customers do not need to wait until the order confirmations reach them by mail. They can see the availability as they order and they can view updated information on possible changes online as soon as it is available.

Consistently collecting and analysing customer data can essentially help companies improve customer service. Collecting customer information on the electronic business place is fairly easy. When companies know their customers better, they can also serve them better and meet the customer's individual needs. Keeping existing customers is as or more important as finding new ones.

5.3.4 Expanding the marketplace

It is easy and affordable to find new suppliers and to gain new customer groups through the Internet. Doing business in new geographical areas becomes possible and customers everywhere are easily reachable. With Internet there are no geographical limitations.

5.3.5 Reduced inventories

Reducing inventories and overhead and shorter inventory cycles are possible due to "pull"-type SCM. At best customer orders bring about the production process and the products are manufactured and deliveries are made just-in-time (JIT). The supplier does not need to keep so much inventory and wait for customers to purchase the products at some unspecified point in the future.

5.3.6 New business possibilities

Companies have used the web mainly for increasing the efficiency of current business and improving customer service. Many experts believe however that the biggest possibilities lie in finding new business possibilities and gaining advantage from them.

6. Electronic Data Interchange

In short Electronic Data Interchange, EDI, stands for automated standard form data transfer from one system to another. With the help of EDI messages, documents are transferred electronically between the ERP-systems of two organizations.

The purpose of EDI is to integrate the interaction between buyers and sellers and to automate the exchange of documents and data. EDI creates electronic networks between partners. EDI can be used for transporting forecasts, purchase orders, order acknowledgements, delivery notices, invoices and other documents that are exchanged between suppliers and buyers.

6.1 Traditional EDI

Traditionally EDI uses dedicated telephone lines or VANs, Value Added Networks. These are secure private networks for carrying the data exchanges and software for the translation of EDI messages.

When for example a purchase order is entered into the system in one company and it has been set to be sent via EDI, the order is transformed into a suitable form by an EDI translator and sent to the other organization. There the message is again translated and input into the system of the supplier.

6.2 EDI in Finland

According to Sähköisen kaupankäynnin aapinen (TIEKE 2003) most of the large companies in Finland use EDI and also many of the small companies have started using EDI due to the availability of new services and various business field solutions.

6.3 Benefits

When EDI was first introduced in the 1970s, it was believed that it would revolutionize business. EDI has changed the way companies conduct business transactions very much, especially for the large companies.

EDI connects business partners together with automated processes. In comparison to mail or fax, EDI is a faster method for data interchange. Less errors occur due to automated processes and less times needed to re-enter the data. The number of paper copies is drastically reduced. Personnel need to spend much less time dealing with paper and re-entering data.

6.4 Disadvantages

High cost and complexity of implementation are the main disadvantages of EDI. Linking new suppliers to the system can be very expensive and time consuming.

The compatibility issue is one downside. Because of the lack of standardization, there is a need for customization every time a new partner is connected to a system with EDI. Standardization would be necessary in a lot larger scale to increase the use of EDI. This is difficult because of the large number of already existing software and the amount of different software options in the market. Data conversion becomes very expensive when there are several EDI standards in use among customers.

Using private VANs makes the initial investments for creating the connections large and it takes a lot of time to get the connections up and running. Also operating EDI becomes very expensive, it is not an easy system to use. Even the large companies that have made the investments and are willing to use EDI cannot take full advantage of it as their smaller partners cannot afford it.

EDI and extranets tend to operate best in strategic partnerships, specialized relationships, and rigid performance contracts. They don't do well in the open sourcing and flexible supply chain world. (e-Business 2.0 2001:311)

6.5 Internet-based EDI

When using Internet-based EDI, many of the downsides of traditional EDI can be avoided. Traditional EDI is costly and therefore not available for all. As an EDI channel, the Internet seems to be the best alternative for making online B2B trading available to all organizations, regardless of size (Electronic commerce : a managerial perspective 2000:224). Internet is today accessible to all business partners all over the world. E-mail can replace VANs, which is a big cost advantage. All companies today use e-mail daily anyway. Implementing and operating EDI is easier over the Internet and it is not so expensive.

An external service provider can be used for transporting the EDI messages. In case of external service provider use, the EDI message is sent from the sending organization to the service provider on the Internet, where it is then transformed into a suitable form to be sent to the receiving organization. This way the software for the data conversion must not be purchased by the organizations themselves and configured every time a new partner is added. This is especially useful if several data formats are in use among the partner companies.

Internet-based EDI can be used alongside traditional EDI applications or instead of them. Many of the traditional EDI users have already started using EDI over the Internet. The future will show how well Internet applications can replace EDI.

7. Electronic Business Place on the Internet

There is a vast amount of information available that can be displayed on a B2B electronic business place. Also several functionalities can be included. Companies need to decide what information and which functions should be included on their e-business place.

In the following passages some of the most important content features of an electronic business place on the Internet are discussed. Before that some of the basic usability issues that will perhaps most concern customers are introduced.

7.1 Customer differentiation

It is vital that the business platform is customized to meet the needs of the specific company's customers. It might also be reasonable to divide the customers in customer groups or segments and to have specific functionality as well as to display only relevant information for the segments.

The division can be made according to the company or according to the specific user. Distributors might need some additional features when compared to end-customers or manufacturing customers. Engineers for example are possibly using the solution in very different ways than purchasers. Customisation can be very useful.

7.2 Usability

Finding information must be logical and easy in order to have the customers using the portal. Easiness and consistency of navigation on the portal are important. If it takes much less time to call the contact person at the supplier to find out what the customer wants to know, the customer does not feel like he is gaining benefit from using the electronic portal and as a result does not use it. The design should also be attractive, because that contributes to good user experience. Speed of uploads and downloading from the site is also important

Also the possibility to use a Help function and to get technical support and customer service regarding the portal in a timely manner is important in supporting the customer's portal use.

7.3 Security

Security issues are very important both to e-business providers and their customers. The level of security may be something the customer is worried about when engaging in e-business. The security measures taken should be explained to the customer when he registers himself as a user.

Basic security measures include encryption, a controlled registration process and authentication by user name and password when signing in. There must be some kind of a validation process before allowing the user access to a customer's information and allowing him to purchase something to make sure that the person is actually working for the company he says he is working for.

7.4 Content

The information and functions that can be included in the applications can be divided in several categories. Here are introduced five of them; products, order management and web shop, financial information, deliveries and transportation and supplier information. The most important information and functionality that B2B solutions can offer to companies are introduced in the following passages.

7.4.1 Products and projects

7.4.1.1 Product information

Online catalogues including a list of products and services with specifications are an essential part of any electronic business place. Detailed information on the products is important for both marketing and sales purposes.

The web is a good place to sell products that are on sale or for some reason should be sold fast. The products can be marketed to customers who have previously purchased the product in question or to customers who the sales employees believe could be interested in the product. The special offers do not need to be shown to all customers, just the most potential buyers.

Certificates for meeting product and material quality standards and other quality matters can be displayed for customers.

7.4.1.2 Product functionality

If the company sells software, software is easily downloaded from the business place.

Configuration software for customers' use for self customizing products can also be included if there are configurable products that can be sold over the Internet.

Search function for products usually allows customers to search for products using criteria like customer's product code, supplier's product code or product name. Search can be also made possible by typing only part of the product code or name. This can assist customers in finding products when they do not have the complete product information.

7.4.1.3 Price information

The prices for products and services should be displayed, and they must be displayed if there is a possibility to order the product online. They can also be displayed for purely marketing purposes when there is no online ordering possibility.

If there are valid customer net prices or agreed discounts for products for the customer, they should be easily visible. Also surcharges for example rush orders or express deliveries must be displayed to the customer when the customer is making the order.

7.4.1.4 Projects

The projects area is a good place to import, store and create information on projects. Often there is no common place for all the information regarding a project and everyone involved in the project has their own file or folder for the project and information sharing is not very efficient. The portal is a place where the project team members can easily store the information and it is easily accessible for all the people who participate in the project.

7.4.2 Order management and web shop

Online ordering and managing existing orders are very important functions on an electronic business portal.

7.4.2.1 Order information

Viewing previous orders i.e. sales history is an important order management functionality. When displaying and order, all the details can be viewed. These include requested delivery date, delivery address, products on the order and basically all the information that can be seen on a paper copy of an order. The difference is that the order status at a specific time can be displayed.

7.4.2.2 Availability information

Checking availability and planned delivery times for products is an important logistics functionality. The customer can see if the product is available or when it will be available. Precise delivery date confirmation at the point of order should be available for JIT deliveries.

Inventory levels at various plants and warehouses and other product locations can be displayed. The customer can see in which factory the product is manufactured and how much time it takes for the product to be manufactured or assembled and shipped to its destination.

7.4.2.3 Tracking orders

The tracking of orders can be made possible according to several criteria, for example specific order date or order time span, purchase order number, supplier's sales order number or product code. The customer can view for example all orders that he has made during a time period or all orders that include a specific product.

7.4.2.4 Checking order status

Customers can check the status of their orders. The customer sees if the order has been created in the system, if it is acknowledged, delivered, invoiced or if the payment is already cleared. It is important that the order status information is frequently updated and always up to date. If there is a change in the acknowledgement date for example, the customer should easily see that the date has changed. The customer can be informed of all changes for example by e-mail. Also a search for changes in orders might be valuable for the customers. They could at once see all changes that have been made in their orders.

7.4.2.5 Online ordering

Electronic business is much more than just buying and selling online. However this is one of the major functions in an e-business solution.

It is vital that all data on products and customers is accurately maintained before offering customers the possibility to order online. Usually there is an existing contract with the regular customers regarding pricing, payment terms, deliveries and some products that have customer specific safety stock, for example. The customer should not need to fill in the customer specific information. The information should be transferred to where needed when the customer signs in and enters the business place.

When ordering, the general legal aspects, like sales terms and conditions must be not only visible to the customers but also excepted by them.

In practice online ordering usually means having an online catalogue where customers can look for products and select them to the shopping cart or basket for purchasing or customers can type in the product descriptions or codes on an electronic order form and order products, which they already are familiar with.

Customers can also be offered to use an electronic shopping list, to which they can add products for ordering right then or some time later. The shopping list can then be transformed into an order or just some items from the list can be added on an order. Uploading shopping lists from the customer's ERP system can also be made possible.

It is not necessary to have an online ordering possibility for all materials. The differentiation should however be clear for the customer. Perhaps only spare parts are sold online or some product groups are included in the web shop and others are not. There can be several product filtering methods depending on the kind of goods the company sells.

7.4.2.6 Inquiries

Sending inquiries and requests for quotation (RFQ) are valuable functions especially if all the company's products cannot be directly ordered online. For example if the customer needs a customized product, he can send an RFQ with the specifications. The challenge here is how the inquiries and RFQs can be processed by the right people fast enough to meet customer needs.

7.4.3 Financial information

Information on billing, open invoices and invoice due dates can be displayed to the customer. Tracking invoices by invoice number or invoicing date can also be valuable for the customers.

Electronic invoice (e-invoice) can also be taken into use. The benefits of electronic invoicing include fast invoice delivery, decreased material expenses, better customer service, less manual work and possibility for electronic filing. This is beneficial for both the supplier and the customer (TIEKE 2003). Also a possibility to pay online can be included.

7.4.4 Deliveries and Transportation

Information on carriers, lead times and transportation costs can be displayed. The customer can specify a preferred carrier when ordering. If the customer has a carrier specified and has an account number with the carrier, that can also be imported from the customer data to the online ordering process.

7.4.4.1 Tracking deliveries

Customers can see from the order status check if a shipment has already been shipped. However sometimes more specific information is needed in the form of delivery tracking functionality. Tracking deliveries is especially important if the company has a lot of JIT deliveries and deliveries from distant locations around the world. The customer can be informed when a delivery has been made for example by e-mail.

Tracking deliveries usually means that the supplier provides a link on the portal to the carrier's Internet page. This is assuming that the carrier in question provides a tracking functionality for its shipments.

Most of the biggest carriers, like UPS or TNT, provide frequently updated information on the location of a shipment of even a single parcel. By just typing in a Bill of Carriage number or another reference number, the customer can view where the shipment is at a specific point in time.

7.4.5 Supplier information

Here is mentioned some other information that is usually included on the portal. Especially customer service personnel's contact information is important.

Companies usually display at least some organizational information where ever they are present on the web. Company introduction with some basic facts and

figures is usually included. Much more specific information can also be displayed if it is believed that it is of interest to the customers. Company news including personnel changes and recent business results can also be included.

Information on the sales and service personnel including customer's own contact persons' names and contact information, and perhaps also their responsibilities and schedules should be included.

Also information on the competitors can be displayed. This includes benchmarking, competitive product and service offerings and market share information.

An electronic business place is a good place to market for example new products. There might also be some printable marketing material available, for example logos, posters and other marketing material for distributors.

8. Electronic business in the Case Company

8.1 Purchasing

Currently the Case Company is using EDI in most of its purchasing functions. Most of the purchasing is inside the Case Company, that is, purchasing from the different plants of the Case Company, which makes linking ERP systems in different country units with EDI convenient. Also some external suppliers are connected to the company with EDI.

8.2 Sales

Most of the Customers' purchase orders still come to the Case Company by fax, e-mail or regular mail and they are manually entered into the ERP system.

Some of the purchase orders also come through an external service provider. Some customers use a service provider for sending their purchase orders for the Case Company to access them on the service provider's web site. The supplier is sent an e-mail when there is a new order in the supplier web. This is a buyer-side service and allows automated purchasing services for the customers. The purchase orders and order acknowledgement travel electronically between the customer and the service provider. However, the Case Company's employees must print the orders from the service provider and enter the orders manually into the ERP system and again confirm the orders on the service provider's web site just as with orders received by fax, mail or e-mail.

8.2.1 EDI in the Case Company

The Case Company started their first EDI connection with a customer two years ago. At the moment the Case Company is using EDI with 3 customers. The company is planning to increase the amount of EDI connections with customers in the near future.

This EDI process in the Case Company is highly automated. The customer places an order, which is then electronically transferred to the Case Company's ERP system. The order confirmation also goes from the Case Company's ERP system directly to the customer's system.

8.2.2 The electronic business project in the Case Company

The Case Company has web pages on the Internet. There is a lot of information on products but so far there has been no integration with order management or

online ordering. A lot of the information on the web page will also be included on the electronic business place.

The Case Company has been using SAP R/3 as their ERP system for about two and a half years now. It is running well and the employees are used to using it. As already mentioned in chapter 4, an ERP system is a prerequisite for comprehensive electronic business activities. The possibilities to increase the use of EDI are not so many and now modern, more available ways of doing business are in the company's interest.

The Case Company had analyzed the market and was aware that their competitors had built B2B business portals. So it was decided in the company to implement a customer interface to better serve customers and also improve company's internal efficiency.

Being a subsidiary of a large international company is naturally beneficial in many ways and it can also make it much easier to start an electronic business project. The technology for it already existed and an electronic business place had already been taken into use in few other country units. The Finnish subsidiary of the Case Company could benefit from the previous experiences and perhaps learn from the mistakes of other subsidiaries.

Customizing the interface to meet the needs of the Case Company's Finnish customers was however necessary. It was decided, that as a preparation for the project, a research among customers should be made in order to find out their perceptions and needs regarding electronic business.

9. Research methodology

The empirical part of this thesis is based on a customer research that was conducted among the customers of the Case Company in the autumn of 2006.

9.1 Purpose of the research

The purpose of the research is to determine the Case Company's customers' perceptions of electronic business and their attitudes towards different electronic business functionalities if made available by the Case Company .

9.2 Research problem - discovery and definition

When the decision to do research was made, it was already decided in the company that an electronic business solution will be taken into use in order to better serve customers and to remain competitive.

When starting to form the problem definition, the question was not whether an electronic business portal should be taken into use, but what the portal should include and what the customers find important. It is very important to have the customers' input when developing something for their use.

The research problem statement: How to best meet customer needs regarding the electronic business platform?

9.3 Objective of the research

The objective of the research was for the management to be able to make informed decisions regarding the content and functionality of the electronic business solution. The ultimate objective was to be able to meet the customer needs regarding the solution.

9.4 Selection of the research method

Survey was chosen as the method for collecting primary data. A survey is used to collect quantitative information about subjects in a population. The objective of the research, the nature and size of the target population and the nature and amount of the questions were the main reasons for using this research method. This also lead to ruling out interview as the research method and to choosing to use a questionnaire.

A well designed questionnaire is easy to fill in and the data is collected and processed fast and easily. One of the advantages of using a questionnaire is that the responses can be anonymous, which generates honest answers.

It was decided that the survey should be conducted using an electronic questionnaire. E-mail and Internet were considered the most suitable medium as sending an e-mail with a link to an Internet survey is economical and convenient for all. E-mail is the easiest and fastest way to reach customers nowadays.

9.5 Sampling

In this case the population to be studied is the Case Company's existing Customers. The company has altogether around 2500 customer companies and 17 distributors. Original Equipment Manufacturers (OEMs), distributors and some large end customers were included in the sample.

9.5.1 Selecting sampling units

The sales managers together with the salesmen chose which customers and which of their representatives were included in the sample. The goal was to find the most potential users for the application.

The purchasers and engineers at the customer companies were the target population for the survey. They are the ones who the Case Company expects will be using the electronic business portal in the future.

9.5.2 Sample size

Considering the size of the Case Company's customer base and the fact that only active customers, that had purchases in the year 2006 were included, it was decided that the sample size should be around 300. At least 100 responses were needed for the proper validity of the research and satisfactory response rate.

9.6 Data collection

The data was gathered using an electronic questionnaire. This was a good way to collect the data as the invitations were sent by e-mail and the link to the questionnaire was easily displayed on the e-mail. The customer responses were stored on the survey application and were immediately available to be analyzed.

There was also a possibility to print the questionnaire, fill it in and return it by mail (but none of the respondents chose to do so).

9.7 Data processing and analysis

After the data was gathered, it was processed using a computer software, Microsoft Office Excel. The data was fed into the software and analysed using the program. Statistical analysis consisted mostly of portraying frequency distribution and cross-tabulation. Charts were used to present the data in descriptive and easily comparable form.

9.8 Possible errors

The two major survey error types are random sampling error and systematic error.

9.8.1 Random sampling error

Random sampling error is caused by chance variation and results in a sample that is not absolutely representative of the target population.
(Essentials of marketing research 2003:173)

9.8.2 Systematic error

Systematic error falls into two general categories. Nonresponse error, the first category, results from subjects' failing to respond to the survey. Response bias occurs when a response to a questionnaire is deliberately falsified or inadvertently misrepresented.

The second category of systematic error includes administrative problems such as inconsistencies in interviewers' abilities, cheating, data-processing mistakes, and so forth.
(Essentials of marketing research 2003:173)

10. The Questionnaire

The questionnaire preparation is an important stage as the questionnaire plays a vital role in a survey research. The questionnaire must be easy to fill in and the questions and answer alternatives must be easily understood. The design of the questionnaire and the attractiveness of the invitation should also be considered.

10.1 Preparing the questions

Preparing the questionnaire (See appendix A for the original questionnaire and Appendix B for the English translation) took several stages. The objectives of the research and the questions were discussed initially with the Supply Chain Manager of the Case Company. After the initial versions of the questions for the survey were ready, the questions were refined several times to ensure the best possible wording, consistency and respondent friendliness. It was important that there would be enough questions to get all the needed information from the customers and also there should not be too many questions. The longer the questionnaire, the less willing people are to fill it in.

10.2 Questionnaire design

The questionnaire as a whole should have an attractive look and form. It is important that the questionnaire is easy to read and fill in. In case of an electronic questionnaire form also the usability of the electronic form must be considered.

The final questionnaire consisted of eleven questions. This was the amount of questions that were needed in order to find out all the necessary information.

The questions fell into four categories and they were divided in the following four groups according to subject:

- ♦ Customer background information
- ♦ Electronic Business
- ♦ Electronic Business Place at the Case Company
- ♦ Technical information

Each question category had two to four questions. One of the questions was further divided into four parts.

10.3 Adapting the questionnaire

When the questionnaire was ready, it was given for the managing director and sales managers for comments and review. Also some of the sales assistants and the Case Company's global project manager for electronic business reviewed the questions. The review led to a few minor changes and some additions in the questions' answer alternatives.

10.4 Cover letter design

The cover letter for the questionnaire (See Appendix C for the original cover letter and Appendix D for the English translation) was designed to interest people to answer. It started with an introduction of the researcher and then the purpose and background of the research were described.

It was stated on the cover letter that the responses are anonymous. This was in order to attract many respondents and to get honest responses. Because of the anonymity it was not possible to use incentives to encourage the customers to answer and so the wording in the letter had to convince people to answer the questionnaire.

10.5 Follow-up

A remainder letter (See Appendix E for the original remainder letter and Appendix F for the English translation) was sent to the customers two weeks after the first e-mail in order to get more responses. The customers who had already answered were thanked and the ones who had not were encouraged to do so. In the remainder letter the customers were given an additional week to answer the questionnaire. The remainder letter generated several new responses.

11. Report on the Research Findings

On this report the research findings are presented and analyzed. Figures are used to present the data in descriptive and easily comparable form.

11.1 Background and participation data

The survey was conducted using an electronic questionnaire. The invitation to the survey was sent to selected customer representatives by e-mail. The customers were given in total three weeks to answer the questions.

The questionnaire was originally sent to 315 customer representatives. They were chosen by the sales managers and salesmen. The e-mail addresses came from them as well.

14 e-mails were returned to sender as the address did not exist or perhaps it was not correct. The correct addresses for these respondents were not found so the invitation to fill in the survey never reached the target. This only accounts for 4 percent of the sample and therefore does not affect the validity of the survey.

The sample size was 315 customers. 127 of them answered, making the response rate 40 percent. This is considered an acceptable response rate for the validity of the research.

11.2 Customer Background information

The customer background information that was relevant to the research was the customer segment and the customer representative's, that is, the respondent's, position in the company.

Especially customer segment was important as customer segmentation on the portal was one of the issues the Case Company wanted to solve. Distributors are the main focus group of the electronic business place and the intention is to have all the distributors of the Case Company using the portal.

11.2.1 Question 1: Does your company operate as

71 percent (90) of the customers who answered the questionnaire were Original Equipment Manufacturers (OEMs) and 11 percent (14) were the Case Company's distributors (See Figure 11.1). 18 percent (23) of the respondents consisted of the group "other".

The group "other" consists of large end customers, which the Case Company does not have many. Usually end customers do their business with the distributors.

The Case Company has altogether approximately 2500 customers and 17 distributors. Only active customers, that had purchases in the year 2006 were included in the sample
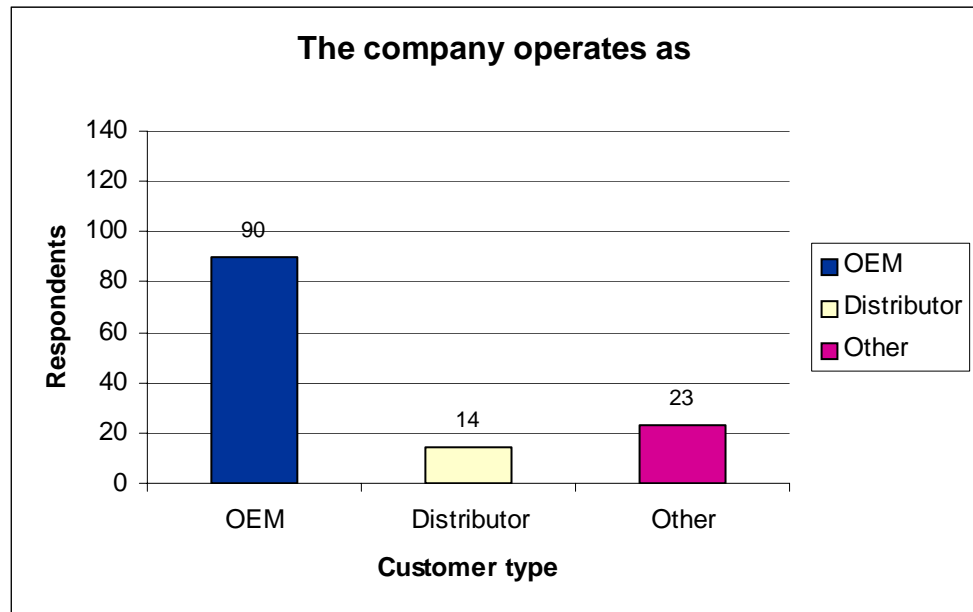

Figure 11.1 The company operates as

11.2.2 Question 2: The respondent's position in the company

66 percent (84) of the respondents were in purchasing and 24 percent (30) were in engineering. 10 percent (13) were in the category "other" (See Figure 11.2).

Here the group "other" includes service and maintenance personnel.

This represents the potential users of the business place well. Mostly it is targeted to the purchasing personnel at the customer companies, but also functionality to serve engineering personnel will be included.
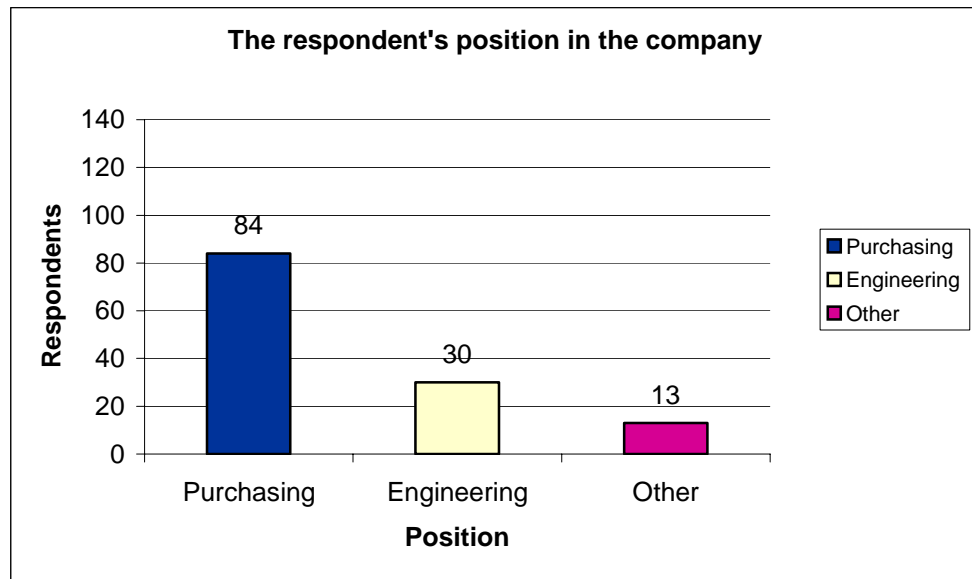
The respondent's position in the company

Figure 11.2 The respondent's position in the company

11.2.3 Conclusion of customer background information

Most of the respondents were employed by OEMs and their position in the company was purchasing. The division of the respondents describes well the total customer base of the Case Company and the target users of the portal.

11.3 Electronic business

The Electronic business section gathered information on the current situation of electronic business in the customers' purchasing process and the respondents' general opinions on it.

11.3.1 Question 3: Are you at the moment using electronic business places with other suppliers? Mark all the functions that you are currently using with your suppliers.

Over 80 percent of the respondents are using electronic business places for a function or several functions with other suppliers (see Figure 11.3). All of the distributors are using electronic business places and 80 percent of the OEMs use them.

Clear differences can be seen between the different functions. Viewing product information is clearly the most used function in all the customer groups. This was used by over 60 percent of the respondents. Of the distributors almost 93 percent answered that they view product information on their suppliers' electronic business places. For distributors this percentage was 60.

Purchasing was the second most used function. 45 percent of all respondents already use electronic business places for purchasing. As much as 86 percent of the distributors use them for purchasing.

Checking product availability and e-invoice are the least used of these functions.

Clear differences can also be seen between the customer groups. The distributors are clearly using electronic business places more than the OEMs and others.
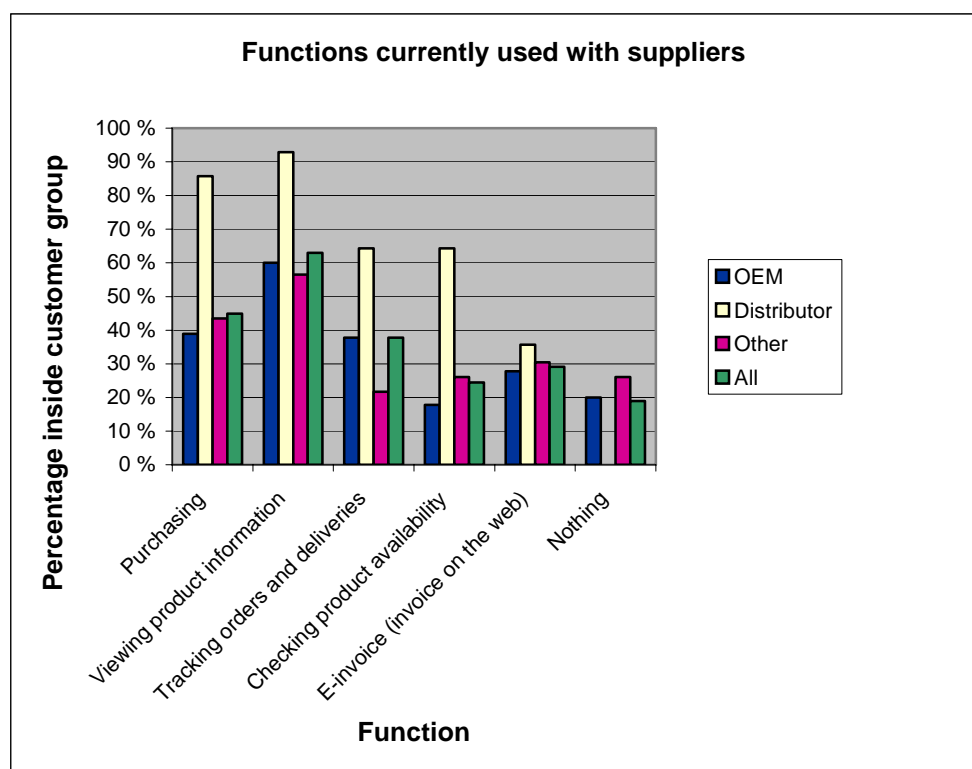

Figure 11.3 Functions currently used with suppliers

11.3.2 Question 4: Which of the following qualities do you value in internet-based solutions?

The most valued qualities were the easiness to find the needed information and that the information is up to date (See Figure 11.4).

The help desk and the visual design of the web site are not so relevant for the customers.
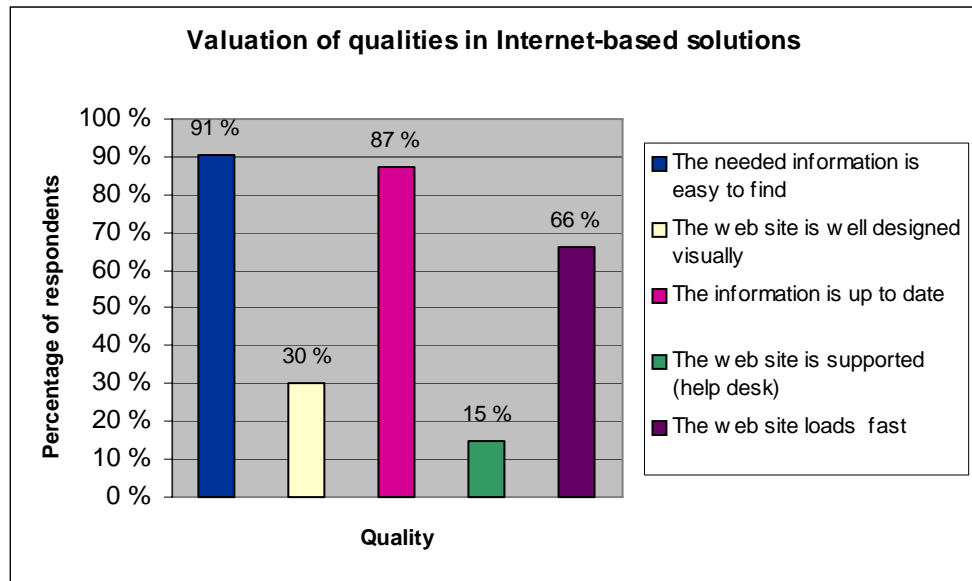
Figure 11.4 Valuation of qualities in Internet-based solutions

11.3.3 Question 5: Which of the following advantages do you think electronic business offers you?

Fast availability of product information and direct access to order and delivery information are the advantages the customers value most (See Figure 11.5).

The least valued functions were easy access to the contact persons' contact information and the possibility to send inquiries to suppliers through the business place.

Figure 11.5 Advantages that electronic business offers

11.4 Electronic Business Place at the Case Company

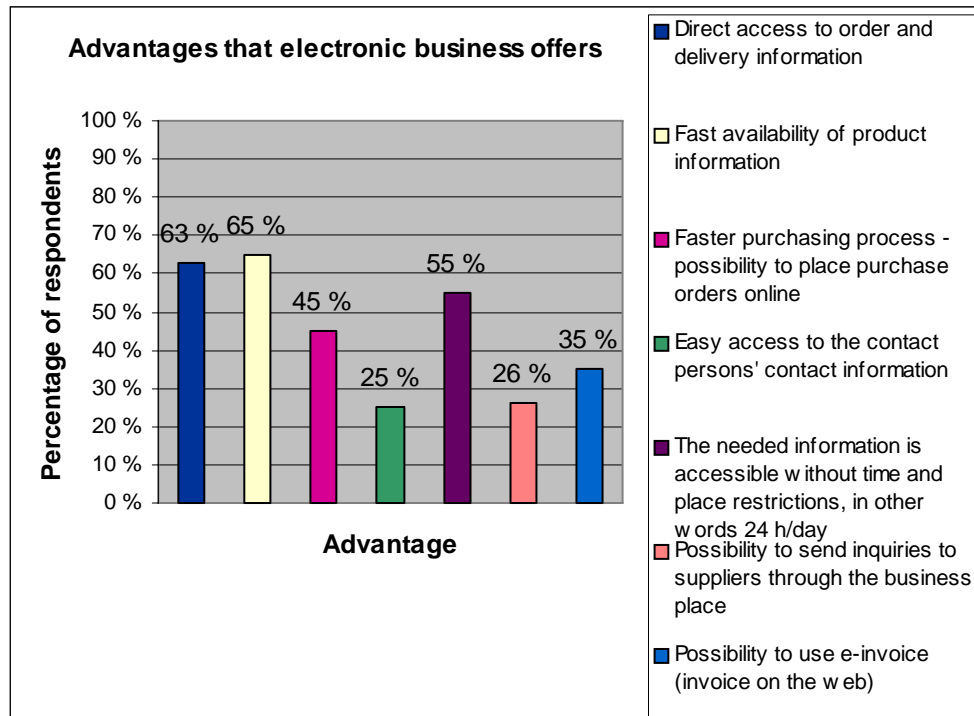The purpose of this question series was to find out the customers' interest in using specific features of electronic business with the Case Company. A scale of 1 to 5 was used in questions 6 and 7 to determine not only if the customers are interested or not, but also how interested they are. The data in question 6 was analyzed on the customer group level to get more information on the need for segmentation and the extent of it.

11.4.1 Question 6: How interested would you be in using the following functions/features if they were available on the Case Company's web portal? Evaluate on a scale of 1 to 5, where 5 =very interested, 4 =quite interested, 3 =somewhat interested, 2 =not very interested, 1 =not interested at all.

11.4.1.1 Products

The functions/features that were considered here were:

Technical information (A), Price information (B), Brochures (C), Product availability information (D), Placing a purchase order online (E), CAD drawing library (F), Viewing spare part information and documentation (G),

Information on new products (H), Special offers, product campaigns (I), Downloads of technical settings updates (J) and Downloads of engineering and dimensioning programs (K).

The customers were at least somewhat interested in most of the features (See Figure 11.6). The most interesting functions were viewing technical information, price information and product availability information. Placing purchase orders online was not at all as important as viewing the product related information.

The differences between the customer groups were not very big in general.

Figure 11.6 Interest in using functions : Products

11.4.1.2 Training

The functions/features that were considered here were:

Viewing available courses (A), Purchasing training text books (B), Leaving a request for contact / a request for a training offer (C) and Placing training orders (D).

The customers found the training section somewhat interesting or not very interesting (see Figure 11.7).

There are no mentionable differences in interest between the customer groups or the features.
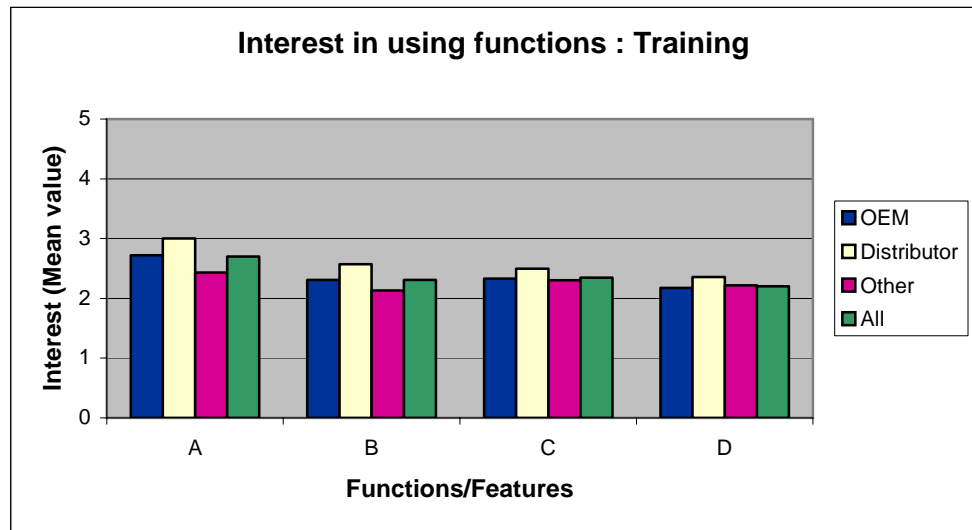
Figure 11.7 Interest in using functions : Training

11.4.1.3 Projects

The functions/features that were considered here were:

Access to engineering documents (A), Saving own documents for the supplier's use (B), Service and start up related files in electronic form (C)
Project status information (D) and Filing a project online, for example saving changes, pictures and memos (E).

In general the customers were somewhat interested in the projects area (see Figure 11.8).

The respondents were especially interested in accessing engineering documents and service and start up related files in electronic form.

This was one of the issues the Case Company especially wanted to find out. It was not decided beforehand if the projects area should be included on the portal. The customers' interest on it had to be researched first.
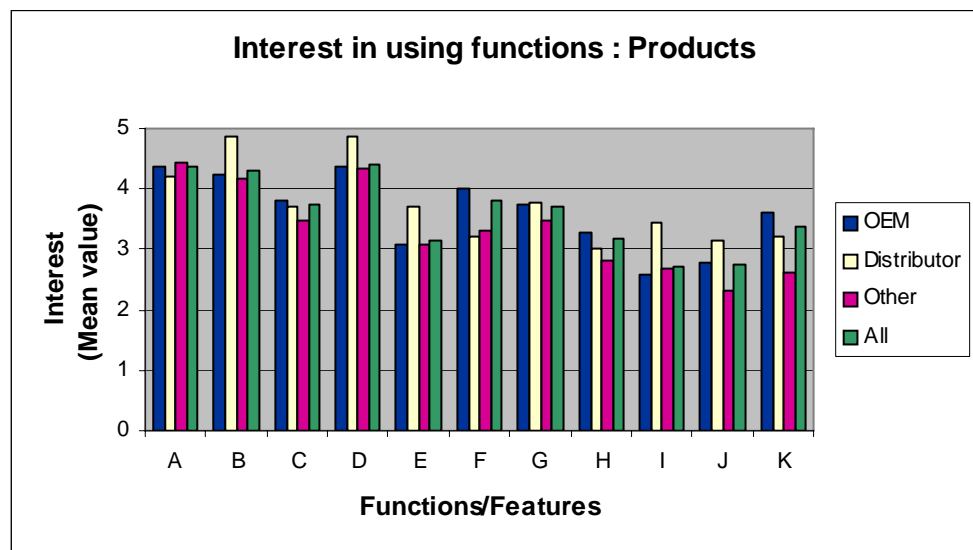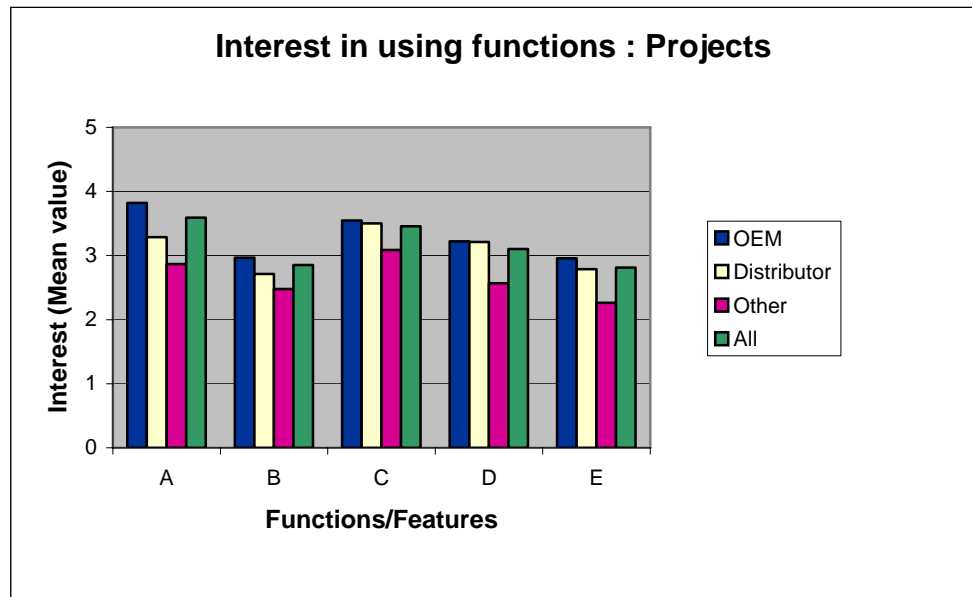
Figure 11.8 Interest in using functions : Projects

11.4.1.4 Contacts

The functions/features that were considered here were:

Viewing own contact persons' information (A), Help Desk (B), Sending requests for quotations online (C) and Viewing Case Company's organisational contact information (D).

There is not much difference between customer groups or functions when it comes to interest in the contacts section (see Figure 11.9). In general the respondents are somewhat interested in contacts.

The most interesting feature was viewing own contact persons' information. Customers find it also quite interesting that requests for quotation can be sent online.

Figure 11.9 Interest in using functions : Contacts

11.4.2 Conclusion of interest in using functions on the Case Company's web portal

Generally the customers are rather interested in most of the features. The respondents valued the products section highest of all the four sections on average.

Training was the least interesting section to the customers. Not very interested was the lowest evaluation that the functions received and none of the features were valued below 2 on average.

11.4.3 Question 7: How interested would you be in using the following features of the supply chain process? Evaluate on a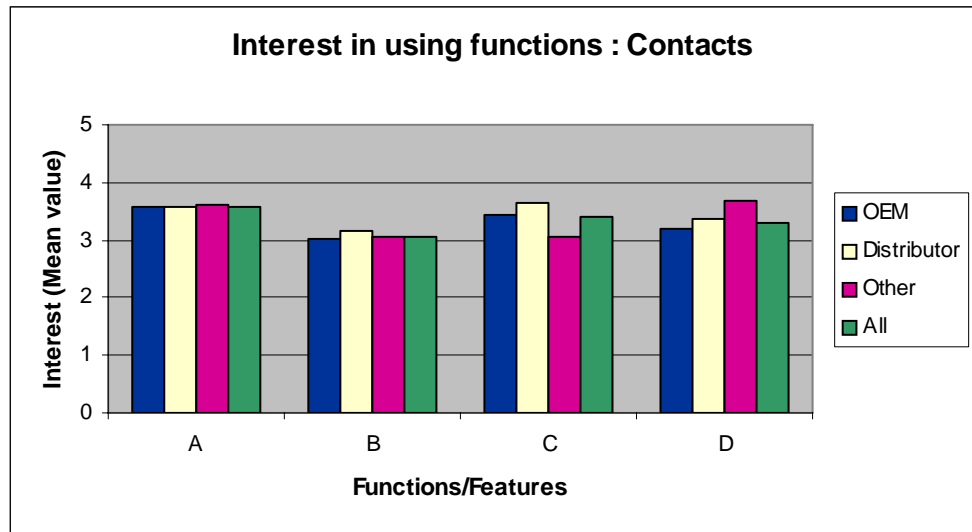 scale of 1 to 5, where 5 =very interested, 4 =quite interested, 3 =somewhat interested, 2 =not very interested, 1 =not interested at all.

The functions/features that were considered here were:

Viewing net prices (A), Viewing confirmed delivery date (B), Placing orders online (C), Availability information and planned delivery times for products (D), Taking e-invoice into use (E), Viewing invoices and printing copies of them (F), List of own orders (G), Viewing order status (open, delivered, invoiced etc.) (H), Tracking freight information (I), Printing order confirmations(J), Material search with own material codes (K) and Printing delivery notes (L).

The most interesting features were viewing confirmed delivery date, then availability information and planned delivery times for products, and then viewing net prices (see Figure 11.10).

Availability information seems to be very interesting to the respondents. At the moment only 24 percent of the respondents are using electronic business places for viewing product availability information according to the results for question 3. The fact that they are so interested in viewing availability information on the Case Company's electronic business place might suggest that there is a need for suppliers to offer this feature to their customers.

Invoice related features are the least interesting for the customers. This is somewhat surprising when considering for example that electronic invoicing is so beneficial for the customers (see chapter 7).

Figure 11.10 Interest in using features of the SC process

11.4.4 Question 8: Are you interested in a direct EDI connection to Case Company? Mark the processes/functions that you are interested in.

The focus of the survey was in the electronic business place on the Internet, but the Case Company is also interested in connecting more customers to the company with an EDI link. The company wanted to know if the customers would be interested in it.

Here the differences between customer groups are rather big (see Figure 11.11). In general, the distributors are the most interested in an EDI connection. OEMs are the least interested.

Electronically from ERP-system to another moving purchase orders and order acknowledgements are both interesting to almost half of the respondents. Especially interested in Purchase orders via EDI are the distributors.

About 40 percent of the respondents are not interested in an EDI connection at all.

Here it can be seen that invoices via EDI are not so interesting to the customers. As already mentioned when analysing question 7., This is somewhat surprising when considering for example that electronic invoicing is so beneficial for the customers (see chapter 7).
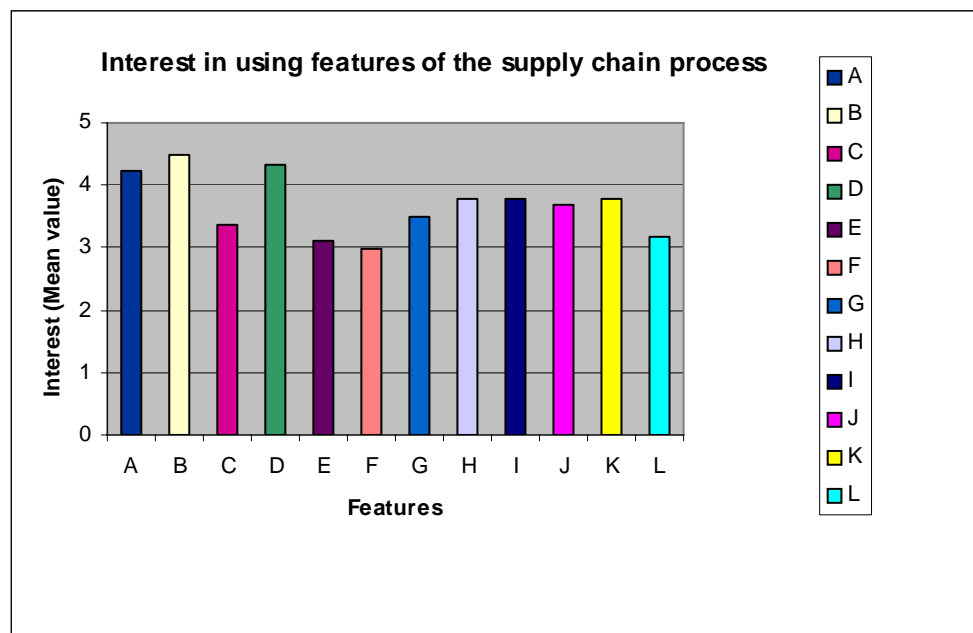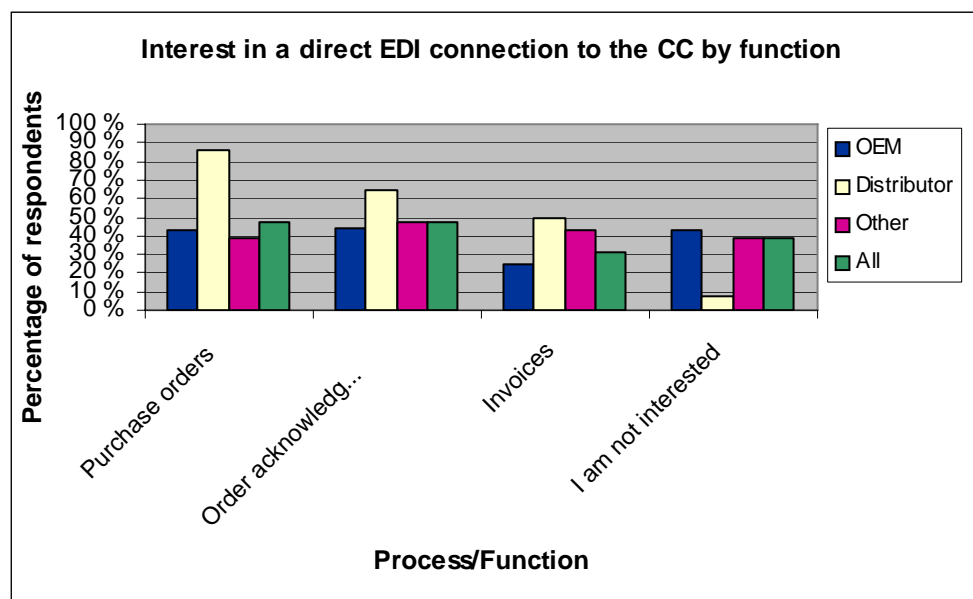

Figure 11.11 Interest in a direct EDI connection to the Case Company

11.4.5 Question 9: What other additional functions would you like the Case Company to offer at the electronic business place? Here you can also make other requests regarding the electronic business place.

One open question was also included in the research to get some customer responses and opinions that were perhaps not going to come up in the other questions.

Question nine was designed keeping on mind the interests of the Case Company and was not considered so relevant for this research in general.

15 of the respondents gave free form comments on the subject. Here are mentioned few of the most interesting responses.

♦   Possibility to get spare part drawings and maintenance and repair instructions for product maintenance electronically. Availability and prices for spare parts.
♦   In requests for quotation quick contacts e-mail or phone.

As regards to the second comment, it is not only necessary to have specific features on the business place, but it also needs to be carefully considered that the functions serve the customers in the best way possible. One example of this is the processing of requests for quotation. They need to be delivered to the Case Company's personnel quickly to be processed as soon as possible.

11.5 Technical information

11.5.1 Question 10: Which ERP-system are you currently using?

77 percent of the respondents are using some other ERP-system than SAP or Baan. 16 percent of the respondents use SAP and 7 percent use Baan (see Figure 11.12).

It is easier to start using for example EDI with the SAP users as the Case Company also uses that system.
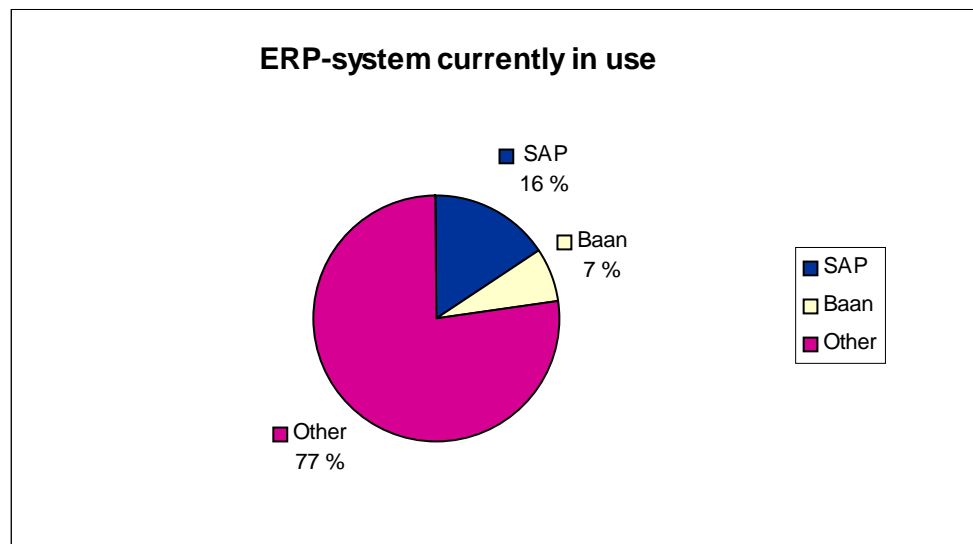
Figure 11.12 ERP-system currently in use

11.5.2 Question 11: Which web browser do you use?

Almost all of the respondents use Internet Explorer as their web browser (see Figure 11.13). Only 6 percent use some other browser.

The only browser that is supported by the Case Company's portal in the beginning is Internet Explorer. It seems that that is not a big problem as most of the customers use it anyway.
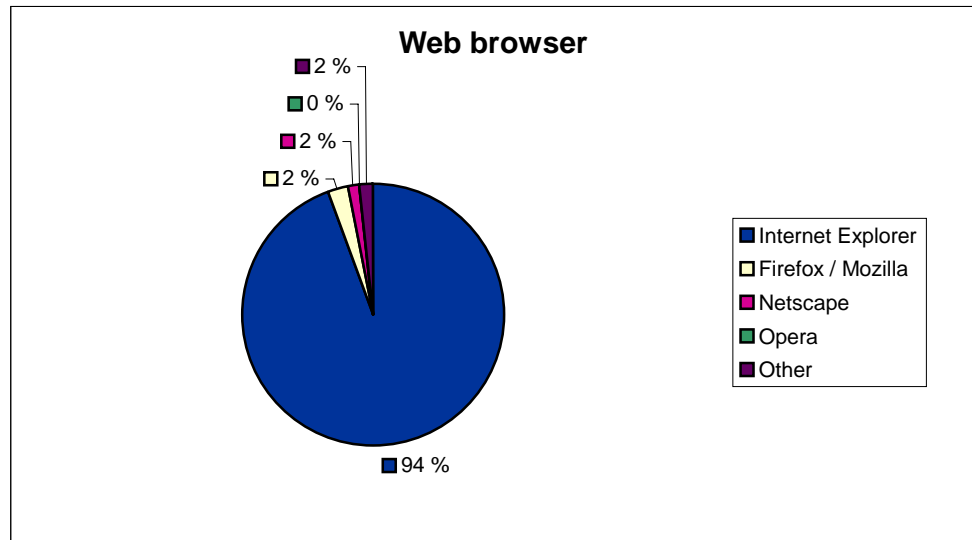

Figure 11.13 Web browser

12. Conclusions

Electronic business is becoming increasingly more important in the business to business environment. Being involved in electronic business and constantly improving it helps in remaining competitive.

The research findings show that in general the customers are interested in electronic business and they seem to be interested in using an electronic business place with the Case Company. They are especially interested in the product and price related information.

According to the research findings the customers would not be interested in a mere web shop. According to the respondents, they are mainly interested in the overall logistic benefits.

12.1 Actions taken by the Case Company

The findings of the survey proved to be very useful to the Case Company and they were able to better make decisions regarding the electronic portal based on the results.

As a result of the research findings the customers were segmented. The distributors and OEMs had somewhat differing interests and therefore the electronic business place should be customized to meet both customer segments' needs.

On the basis of the research findings the Case Company decided to take a project area into use on the portal. This is because the respondents showed interest in it.

As availability information was so important to the customers, the Case Company decided to show the customers availability information on the plant level. Availability information will however not yet be shown on the subsidiary level.

12.2 Recommendations for the Case Company

It is important not to forget the importance of customer input regarding the electronic business place. Therefore it might be valuable to make another customer survey some time after the customers have started to use it. Then the customers could be asked about their experiences; what they have found positive and what negative aspects, and what they perhaps feel is missing from the portal. The customer input helps improve the business place further.

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Appendices

Appendix A: Sähköinen kaupankäynti Case Companyn kanssa -kysely

Asiakkaan taustatiedot

1. Toimiiko yrityksenne

- ☐ Koneenrakentajana
- ☐ Case Companyn jälleenmyyjänä
- ☐ Muuna

2. Vastaajan tehtävä yrityksessä

- ☐ Hankinta
- ☐ Suunnittelu
- ☐ Muu

Sähköinen kaupankäynti

3. Onko teillä tällä hetkellä käytössä muiden toimittajien kanssa sähköisiä kauppapaikkoja?
Rastita kaikki ne toiminnot, jotka ovat nykyisin käytössä jonkun toimittajanne kanssa.

- ☐ Ostaminen
- ☐ Tuotetietojen näkeminen
- ☐ Tilausten ja toimitusten seuranta
- ☐ Tuotteiden saatavuuden tarkistaminen
- ☐ E-lasku (verkkolasku)

4. Mitä ominaisuuksia arvostatte internet-pohjaisissa ratkaisuissa ?

- ☐ Tarvittava tieto on helppo löytää
- ☐ Web-sivu on hyvin suunniteltu visuaalisesti
- ☐ Tiedot ovat ajan tasalla
- ☐ Web-sivustolle on tuki (help desk)
- ☐ Sivusto latautuu nopeasti

5. Mitä etuja koette liittyvän sähköiseen kaupankäyntiin?

- ☐ Suora yhteys tilaus- ja toimitustietoihin
- ☐ Tuotetietojen nopea saatavuus
- ☐ Nopeampi ostoprosessi – mahdollisuus tehdä ostotilauksia internetin kautta
- ☐ Omien yhteyshenkilöiden yhteystietojen helppo saatavuus
- ☐ Tarvittavat tiedot ovat saatavilla ajasta ja paikasta riippumatta eli 24 h/vrk
- ☐ Mahdollisuus lähettää kyselyjä toimittajalle kauppapaikan kautta
- ☐ Mahdollisuus e-laskun (verkkolaskun) käyttämiseen

Case Companyn sähköinen kauppapaikka

6. Miten kiinnostuneita olisitte käyttämään seuraavia toimintoja/ominaisuuksia, mikäli ne olisivat Case Companyn web-portaalissa? Arvioikaa asteikolla 1-5, jolla 5 =erittäin kiinnostunut, 4 =melko kiinnostunut, 3=jonkin verran kiinnostunut, 2 =ei kovin kiinnostunut, 1=ei lainkaan kiinnostunut.

Tuotteet

- ☐ Tekniset tiedot
- ☐ Hintatiedot
- ☐ Esitteet
- ☐ Tuotteen saatavuustiedot
- ☐ Ostotilauksen tekeminen internetin kautta
- ☐ CAD-kuvakirjastot
- ☐ Varaosatietojen/-dokumentaation tarkastelu
- ☐ Tuoteuutuuksiin perehtyminen
- ☐ Erikoistarjoukset, tuotekampanjat
- ☐ Työkaluohjelmistojen päivitystiedostojen lataus
- ☐ Suunnittelu- ja mitoitusohjelmistojen lataus

Koulutus

- ☐ Kurssitarjontaan perehtyminen
- ☐ Oppikirjojen ostaminen
- ☐ Yhteydenottopyynnön jättäminen /Koulutustarjouksen pyytäminen
- ☐ Koulutustilauksen tekeminen

Projektit

- ☐ Suunnitteludokumenttien saanti
- ☐ Omien dokumenttien tallennus toimittajan käyttöön
- ☐ Huoltokansio sähköisessä muodossa
- ☐ Projektin statuksen seuranta
- ☐ Projektin arkistointi webissä, esim. muutoksien, kuvien ja muistioiden tallennus

Kontaktit

- ☐ Omien yhteyshenkilöiden tietojen katsominen
- ☐ Help Desk
- ☐ Tarjouspyyntöjen lähettäminen webistä
- ☐ Case Company organisaation yhteystietojen katsominen

7. Miten kiinnostuneita olisitte käyttämään tilaus-toimitus –prosessin osalta seuraavia ominaisuuksia? Arvioikaa asteikolla 1-5, jolla 5 =erittäin kiinnostunut, 4 =melko kiinnostunut, 3 =jonkin verran kiinnostunut, 2 =ei kovin kiinnostunut, 1=ei lainkaan kiinnostunut.

- ☐ Nettohintojen näkeminen
- ☐ Vahvistetun toimituspäivän näkeminen
- ☐ Online-tilausten tekeminen webissä
- ☐ Saatavuustiedot, toimituspäivä tuotteelle
- ☐ E-laskun käyttöönotto
- ☐ Laskujen katsominen ja kopioiden tulostaminen
- ☐ Omien ostotilausten listaus
- ☐ Omien tilausten statuksen seuranta (avoin, toimitettu, laskutettu tms.)
- ☐ Rahtitietojen näkeminen (tracking)
- ☐ Tilausvahvistuksen tulostus
- ☐ Tuotteiden etsintä omilla materiaalikoodeilla
- ☐ Lähetteen tulostus

8. Oletteko kiinnostunut suorasta EDI-yhteydestä Case Companyn kanssa? Merkitkää ne prosessit/tapahtumat, joiden osalta olette kiinnostunut.

EDI (Electronic Data Interchange) tarkoittaa automaattista tiedonsiirtoa järjestelmästä toiseen. Sen avulla dokumentit, esim. tilaukset, tilausvahvistukset ja laskut, kulkevat sähköisesti toiminnanohjausjärjestelmien välillä.

- ☐ Ostotilaukset
- ☐ Tilausvahvistukset
- ☐ Laskut
- ☐ En ole kiinnostunut

9. Mitä muita lisätoimintoja haluaisitte Case Companyn tarjoavan sähköisessä kauppapaikassa?
Tässä voitte esittää myös muilta osin toiveita sähköistä kauppapaikkaa koskien.

_____
_____
_____
_____

Tekniset tiedot

10. Mitä toiminnanohjausjärjestelmää käytätte tällä hetkellä?

    ☐ SAP
    ☐ Baan
    ☐ Muu

11. Mitä web-selainta käytätte?

    ☐ Internet Explorer
    ☐ Firefox / Mozilla
    ☐ Netscape
    ☐ Opera
    ☐ Muu

Kiitos vastauksestanne!

Appendix B: Electronic Business with the Case Company -questionnaire

Customer background information

1. Does your company operate as

- ☐ OEM
- ☐ Case Company's distributor
- ☐ Other

2. The respondent's position in the company

- ☐ Purchasing
- ☐ Engineering
- ☐ Other

Electronic Business

3. Are you at the moment using electronic business places with other suppliers? Mark all the functions that you are currently using with your suppliers.

- ☐ Purchasing
- ☐ Viewing product information
- ☐ Tracking orders and deliveries
- ☐ Checking product availability
- ☐ E-invoice (invoice on the web)

4. Which of the following qualities do you value in internet-based solutions?

- ☐ The needed information is easy to find
- ☐ The web site is well designed visually
- ☐ The information is up to date
- ☐ The web site is supported (help desk)
- ☐ The web site loads fast

5. Which of the following advantages do you think electronic business offers you?

- ☐ Direct access to order and delivery information
- ☐ Fast availability of product information
- ☐ Faster purchasing process – possibility to place purchase orders online
- ☐ Easy access to the contact persons' contact information
- ☐ The needed information is accessible without time and place restrictions, in other words 24 h/day
- ☐ Possibility to send inquiries to suppliers through the business place
- ☐ Possibility to use e-invoice (invoice on the web)

Electronic Business Place at the Case Company

6. How interested would you be in using the following functions/features if they were available on the Case Company's web portal? Evaluate on a scale of 1 to 5, where 5 =very interested, 4 =quite interested, 3 =somewhat interested, 2 =not very interested, 1 =not interested at all.

Products

- ☐ Technical information
- ☐ Price information
- ☐ Brochures
- ☐ Product availability information
- ☐ Placing a purchase order online
- ☐ CAD drawing library
- ☐ Viewing spare part information and documentation
- ☐ Information on new products
- ☐ Special offers, product campaigns
- ☐ Downloads of technical settings updates
- ☐ Downloads of engineering and dimensioning programs

Training

- ☐ Viewing available courses
- ☐ Purchasing training text books
- ☐ Leaving a request for contact / a request for a training offer
- ☐ Placing training orders

Projects

   ☐ Access to engineering documents
   ☐ Saving own documents for the supplier's use
   ☐ Service and start up related files in electronic form
   ☐ Project status information
   ☐ Filing a project online, for example saving changes, pictures and memos

Contacts

   ☐ Viewing own contact persons' information
   ☐ Help Desk
   ☐ Sending requests for quotations online
   ☐ Viewing the Case Company's organisational contact information

7. How interested would you be in using the following features of the supply chain process? Evaluate on a scale of 1 to 5, where 5 =very interested, 4 =quite interested, 3 =somewhat interested, 2 =not very interested, 1 =not interested at all.

   ☐ Viewing net prices
   ☐ Viewing confirmed delivery date
   ☐ Placing orders online
   ☐ Availability information and planned delivery times for products
   ☐ Taking e-invoice into use
   ☐ Viewing invoices and printing copies of them
   ☐ List of own orders
   ☐ Viewing order status (open, delivered, invoiced etc.)
   ☐ Tracking freight information
   ☐ Printing order confirmations
   ☐ Material search with own material codes
   ☐ Printing delivery notes

8. Are you interested in a direct EDI connection to Case Company? Mark the processes/functions which you are interested in.

EDI (Electronic Data Interchange) stands for automated data interchange from one system to another. With the help of EDI, documents, for example orders, order acknowledgements and invoices are transferred electronically between ERP-systems.

   ☐ Purchase orders
   ☐ Order acknowledgements
   ☐ Invoices
   ☐ I am not interested

9. What other additional functions would you like Case Company to offer on the electronic business place?
 Here you can also make other requests regarding the electronic business place.

_____
_____
_____
_____

Technical information

10. Which ERP-system are you currently using?

       ☐ SAP
       ☐ Baan
       ☐ Other

11. Which web browser do you use?

       ☐ Internet Explorer
       ☐ Firefox / Mozilla
       ☐ Netscape
       ☐ Opera
       ☐ Other

Thank you for answering!

Appendix C: Saatekirje

Hei,

Olen Jenni Kaivolainen, BBA-opiskelija liiketalouden linjalta Tampereen ammattikorkeakoulusta. Teen tutkintotyötäni Case Companylle liittyen sähköiseen kaupankäyntiin.

Case Company on käynnistämässä sähköiseen kaupankäyntiin liittyvää hanketta ja pyytää siihen liittyen palautettanne. Oheisen kyselytutkimuksen tavoitteena on kartoittaa millaisia sähköisiä palveluja Te Asiakkaana haluaisitte lähitulevaisuudessa käyttää. Mielipiteenne on tärkeä, koska palveluja tullaan rakentamaan Teidän käyttöönne. Teiltä tuleva palaute auttaa Case Companya luomaan ja ohjaamaan tulevaisuuden sähköisiä palveluja sekä niiden sisältöä tarpeitanne vastaavaksi.

Kyselyyn vastataan anonyymisti, eikä vastaajaa voida yhdistää vastauslomakkeeseen. Vastausaikaa on 9.10.2006 asti. Sähköinen kyselylomake avautuu alla olevasta linkistä:

Voitte halutessanne myös tulostaa kyselylomakkeen, täyttää sen paperilla ja postittaa minulle. Olen valmis vastaamaan mahdollisiin kyselyä koskeviin kysymyksiinne sähköpostilla tai puhelimitse. Yhteystietoni löytyvät alta.

Kiitos jo etukäteen palautteestanne,

Ystävällisin terveisin,

Jenni Kaivolainen
Tampereen ammattikorkeakoulu
Sähköposti:
Puhelin:
Osoite:

Appendix D: Cover letter

Hello,

I am Jenni Kaivolainen, a BBA-student at Tampere Polytechnic. I am doing my Final Thesis for the Case Company regarding electronic business.

The Case Company is starting a project regarding electronic business and is asking for your input on it. The purpose of the attached survey is to map what kind of electronic services You as a Customer would like to use in the near future. Your opinion is important because the services will be built for Your use. Your feedback will help The Case Company create and modify the future electronic services and their content to satisfy your needs.

Answering is anonymous and the respondent can not be connected to the answer form. You have until 9.10.2006 to fill in the questionnaire. The electronic questionnaire opens from the following link:

If You wish, You can also print the form, fill it in on paper and send to me by mail. I am ready to answer all the questions You may have about the survey by phone or by e-mail. My contact information is below.

Thank You in advance for your input,

Best regards,

Jenni Kaivolainen
Tampere Polytechnic
E-mail:
GSM:
Address:

Appendix E: Muistutus

Hei taas,

Olette saaneet alla olevan sähköpostin sähköiseen kaupankäyntiin liittyvästä kyselystä kaksi viikkoa sitten. Moni onkin jo vastannut kyselyyn. Suuri kiitos kaikille teille kyselyyn jo vastanneille!

Jotta kaikki ehtisivät vastata, on vastausaikaa pidennetty. Mikäli ette ole vielä vastanneet kyselyyn, voitte tehdä sen pe 13.10.2006 mennessä. Sähköinen kyselylomake avautuu alla olevasta linkistä:

Kiitos palautteestanne,

Ystävällisin terveisin,

Jenni Kaivolainen
Tampereen ammattikorkeakoulu
Sähköposti:
Puhelin:
Osoite:

Appendix F: Remainder

Hello again,

You have received the e-mail below regarding a survey on electronic business two weeks ago. Many have already answered the questionnaire. A big thank you to you who have already answered!

So that everyone has enough time to answer, the answering period has been lengthened. If you have not yet answered, you can do it at the latest on Fri 13.10.2006. The following link opens the electronic questionnaire:

Thank you for your input,

Best regards,

Jenni Kaivolainen
Tampere Polytechnic
E-mail:
GSM:
Address: