Electronic Marketplaces

case studies on organizational
buyers and sellers

Jonas Nordlund
ACKNOWLEDGEMENTS

This thesis has involved twenty weeks of hard work but it has introduced me to a new and interesting field of research. This thesis bears the imprint of many people who has had an important impact on my thinking. First, I would like to thank Tim Foster for his accurate, constructive and relevant feedback. This highly increased the quality of my work. I would also like to thank my supervisor at the Swedish Trade Council (STC) Markus Onyango for assistance, guidance and patience. His continuous belief in my ability has been a strong motivating factor and has made me aim higher. I would also like to thank my additional supervisors at the STC Jonas Bydgeson at the Stockholm office and Tommy Andersson at the Chicago office, who has been so knowledgeable, idea-generative and enthusiastic about this project throughout the whole period. I would also like to place a special thanks to my friends that have helped and supported my work, it would not have been possible doing this thesis without you guys.

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Stockholm, February 2000

Jonas Nordlund
Abstract

Electronic commerce is a hot topic that is being discussed everywhere. Until today, e-commerce that caught most public attention is business-to-consumer oriented, but the big boom to come is business-to-business e-commerce. A frequent prediction is that the real business-to-business revolution is taking place outside the boundaries of individual firms, namely at electronic marketplaces. Electronic marketplaces bring multiple buyers and sellers together in a single web application and becoming very important meeting and trading forums in many industries.

This thesis aim at investigating which of organizational buyers’ and sellers’ needs an electronic marketplace can satisfy. Investigated in this thesis is the US healthcare industry. The research is qualitative and deductive. Multiple in-depth case studies were realized by using documentation and focused personal interviews, on a purposive sample including three buying organizations, three selling organizations and three electronic marketplaces. The data collected was analyzed in within case and cross case analysis.

Based on the research questions and the frame of reference, the empirical data was collected and from this data the conclusion was drawn that the electronic marketplaces have a great potential in the investigated industry. The organizations in the study had a very positive attitude towards the electronic marketplaces and the value they could add. The need for information is central in organizational buying and selling and the electronic marketplace certainly serve a great portion of those needs. The electronic marketplaces all provide industry specific accurate and targeted information, which puts them in a highly competitive position. Presently buying and requisitioning is possible at the electronic marketplaces, but some are more application software oriented and have integrated more business processes to their offering. My opinion is that the electronic marketplaces will continue to integrate electronic procurement and transaction solutions, linking the enterprise resource planning systems of buyers and suppliers.

There remain many challenges to conquer, but from my point of view the key is how to create trust. The electronic marketplaces have to communicate their advantages to potential users and get them to abandon their old way of conducting business. It is further my opinion this is a matter of time and education.
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1. INTRODUCTION
The Swedish Trade Council currently develops a service concentrating on business-to-business industry specific electronic marketplaces. This thesis is part of this newly created service and attempts to describe the organizational buyers’ and sellers’ needs and how they will use an electronic marketplace when conducting business. The chosen industry for this thesis is the healthcare industry, because of the rapid growth of electronic marketplaces within this industry.

The purpose of this chapter is to serve as an introduction for the area in which this study is performed. Some important terms will be mentioned, and interrelations between different areas will be presented. The research problem will also be defined in order to give the reader a clear picture of the field in this study.

1.1 THE DEVELOPMENT OF THE INTERNET
The origin of the Internet was an American military project called ARPANET (Advanced Research Project Agency network) which was developed in the late nineteen sixties. The aim of the project was to connect some of the military contractor computer networks with each other in an independent network that would be able to function even if parts of the network were disabled. This was the foundation of the Internet where all the connected computers could communicate with each other without passing the information through the same mainframe computer. The common protocol that was used and which controlled how the computers communicated with each other was IP, Internet Protocol. IP was and still is very easy to adapt to different computers, which meant that computers could communicate even though they did not come from the same manufacturer. This was especially interesting for universities and other organizations where a lot of different computers were used and where communication via computers hereby became possible (Floren, Gustavsson & Jedbratt, 1996).

There are three different parts that can be referred to when talking about the Internet. First is the Internet, which is often defined as a network of networks. It is the second largest network in the world, after the global phone system. Second, Intranet is an internal information system that is limited to access by users within an organization or enterprise, based on the same technology as the Internet. Third and last is the World Wide Web, a network of servers, which uses links to find and access files. The Web is then created by using words or phrases as references to links that in turn refer to other documents on the local net or cross the Internet. The term “Extranet” is often used in discussions concerning Internet. It is simply an Intranet that can be reached through an Internet or “direct line” connection. A password or another kind of identification is required to enter an Extranet (Gezelius, 1997).
1.2 DOING BUSINESS ELECTRONICALLY

The use of the Internet is continuing to grow rapidly and new applications are constantly been developed. One area where the Internet will have strong impact is doing business electronically, known as e-commerce. E-commerce can be defined as “Any activity that utilizes some forms of electronic communication in the inventory, exchange, advertisement, distribution and payment of goods and services. All forms of commercial transactions based upon the transmission of digitalized data, including text, sound and visual images. The commercial transactions of services in an electronic format” (Margherio, 1999). A definition for companies involved in electronic commerce is “Enterprises with the capability to exchange value (money, goods, services and information) electronically” (Andersen Consulting, 1998). E-commerce on the Internet is a new phenomenon, but a prior solution of e-commerce is EDI (Electronic Data Interchange). EDI solutions were developed to automate business-to-business transactions. EDI provides predefined formats for the computer-to-computer exchange in the form of business documents, including purchase orders, invoices and shipping notices. Implementing this software results in direct computer-to-computer transfer of data without any human intervention. The Internet takes the advantages of EDI and avoiding the disadvantages. Because most business users already have Internet on their desktops, the cost of access is reduced. Furthermore, because no special software or hardware needs to be installed, the timelines access is improved. An added benefit is that networks of hub models can easily be combined to offer a Web of interconnected marketplaces. As a result, the Internet provides an excellent medium for hosting robust centralized electronic marketplaces (Ehrens, & Zapf, 1999).

Table 1.1 Internet based EDI vs. EDI

<table>
<thead>
<tr>
<th></th>
<th>EDI</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Transactions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aggregated Information</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Speedy Installation</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Low-Cost Access</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Rich Media Support</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Open Marketplaces</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Web of Marketplaces</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Bear, Stearns & Co. Inc.

Until today, e-commerce that caught most public attention was business-to-consumer oriented. But the big boom to come is business-to-business e-commerce. Retail e-commerce is currently growing at an impressive 69 percent annually; business-to-business sites are exploding, growing 99 percent a year (Cohen, 1999). Forrester Research estimates that by 2003 online trade between companies will reach $1.3 trillion, compared to $108 billion in online retail spending. Another way of looking at this trend is considering that online commerce constituted 0.2 percent of b-to-b trading in 1997. In 2003, e-commerce is expected to account for 9.4 percent (Sawhne & Kaplan, 1999). Up to this point, most of the attention in b-to-b e-commerce has focused on well-established firms, such as Cisco and Dell Computer that eliminate old-economy middlemen and sell directly to business customers. But the real b-to-b e-commerce revolution is taking place outside the boundaries of individual firms. A new breed of intermediate institutions is
1.3 ELECTRONIC BUSINESS HUBS

Electronic marketplaces bring multiple buyers and sellers together in a single Web application. These hubs will dramatically improve the efficiency and effectiveness of transactions in the networked economy (Sawhney, 1999). Consumer hubs are one-way networks that deal directly with buyers and create benefits mostly for sellers. B-to-b commerce hubs tend to be two-way networks that mediate between buyers and sellers, and create benefits for both sides. Just like a traditional open-air marketplace, buyers and sellers in an electronic marketplace can interact, negotiate prices and quantities and generally allow free-market economics to rule the community of trade (Fenner, Patel & Watson, 1999).

Table 1.2 Benefits of electronic marketplaces

<table>
<thead>
<tr>
<th>Benefits of an Electronic Marketplace</th>
<th>To Seller</th>
<th>To Market Host</th>
<th>To Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides new marketing and distribution channels to customers</td>
<td>• Protects current role or creates new roles within the commerce chain</td>
<td>• Lowers up-front costs and risks</td>
<td></td>
</tr>
<tr>
<td>• Provides better customer service through online interaction</td>
<td>• Establishes high “value-add” in digital economy</td>
<td>• Provides access to more information and suppliers</td>
<td></td>
</tr>
<tr>
<td>• Provides more complete product information to buyer</td>
<td>• Increases service levels to existing customers</td>
<td>• Provides access to secondary and excess supply auctions</td>
<td></td>
</tr>
<tr>
<td>• Automate order &amp; fulfillment processes</td>
<td>• Leverages current information and customers</td>
<td>• Provides a more comprehensive solution</td>
<td></td>
</tr>
<tr>
<td>• Lowers overall operational costs</td>
<td>• Provides access to more information and suppliers</td>
<td>• Eliminates on-going software upgrades &amp; maintenance costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Utilizes outsourced expertise</td>
<td></td>
</tr>
</tbody>
</table>

Source: Net Market Maker, 1999

1.4 PROBLEM BACKGROUND

According to Kotler (1997), the interaction between buyers and sellers comprises information, products and capital flows. In each a situation, needs must be satisfied for a purchase to be successful. Both buyers and sellers use different tools to get the needs fulfilled and the electronic marketplace can be one of them. Crucial for how the electronic marketplaces will influence the industries they play a part in, is which services they will provide. In the healthcare industry the electronic marketplaces are growing rapidly and new players enter all the time. The medical technology industry is one of the most innovative in the world. Built on expertise and creativity and driven by demographic trends, the $130 billion global market for medical technology is one of the fastest growing in the world. And judging from recent estimates, it shows no signs of
slowing. (Industry Overview, 1999) Take the temperature of the medical equipment supply industry and you'll sense the next hot batch of business-to-business IPO's (initial public offering) (Davey, Oct 1999). Because the electronic marketplaces are in their early development stage, it is not certain how the organizational buyers and sellers will use the electronic marketplace and, thereby, which needs the electronic marketplace will satisfy. This discussion leads to the purpose for this thesis.

1.5 PURPOSE
The previous discussion led us to the general problem to examine. The following specific purpose has been formulated to explore:

To investigate how electronic marketplaces can better satisfy the needs of organizational sellers and buyers.

To be able to provide a solution for the purpose the following research questions has been developed:

- How can an electronic marketplace be described both from buyers’ and sellers’ perspective?
- How can the needs of organizational buyers and sellers be described regarding electronic marketplaces?
- How is the electronic marketplace influencing the buying and selling process in these organizations?

1.6 DELIMITATIONS
The area of e-commerce is vast and there are numerous interesting aspects to examine. However, as stated above, this study concerns itself with describing the relationship of needs and buying and selling processes arising in the healthcare industry. This project is done in collaboration with Swedish Trade Council and Luleå University of Technology. Since North America leads the development of electronic commerce, the size of market and the fact that most set trends are set here, this study will not be conducted at any markets other than the U.S. market.

To narrow this study, no other industry than the healthcare industry will be investigated.

This study does not focus on changes inside the companies investigated. Therefore changes at the buying or selling center will not be considered, neither how roles in the organizations nor vertical or horizontal dimensions involved in the purchase or sale.
1.7 OUTLINE OF REPORT

Chapter Two touches upon the theories that were previously published and are relevant to this study. Chapter Two is, therefore, employed as a building block utilized to address the research purpose. Chapter Three presents the conceptualization for this study. This chapter is intended to narrow down the theories presented in Chapter Two, to emphasize the theories and models that focus specifically on the purpose of this thesis. It will be the theoretical frame of reference used in this thesis. This frame of reference will also serve as a guide for the marketing survey. Chapter Four describes various research methods and presents the selected research methods for this study, as well as data collection and the reliability and validity of the collected data. Chapter Five provides the presentation of the cases, where the data also will be analyzed. Chapter Six presents the conclusions and the implications. In the appendix the interview guide and observation checklist used in this study is presented together with a short presentation of the Swedish Trade Council and the electronic marketplaces observed.
2. THEORY OVERVIEW

In Chapter One justification for why research should be emphasized in the relationship between electronic commerce and organizational buyers and sellers needs was provided and an overall purpose was developed. The purpose of this chapter is to review and describe the important bodies of literature that support this research problem and the research questions.

The choice of the theory overview is explained by the belief that combined, these theories will provide the most appropriate focus to the purpose:

“To investigate how electronic marketplaces can better satisfy the needs of organizational sellers and buyers.”

Finally, the theory overview will lay the foundation for the creation of a frame of references, which will support this specific study. The theory presentation will be organized after the three research questions, which will guide the survey and organize the data-collection.

2.1 ELECTRONIC MARKETPLACES

This section will provide theories regarding research question number one: How can an electronic marketplace be described both from buyers’ and sellers’ perspective?

In a survey presented in June of 1999, the Economist points out three acknowledged facts about the Internet’s most important characteristics. First, it shifts power from sellers to buyers by reducing the cost of switching suppliers and freely distributing a large amount of price and product information. Buyers want information they know to be accurate and advise to trust. Sellers are in no position to offer disinterested advice. That function is taken up by a third party: an electronic marketplace. The second fact is that the Internet reduces transactions costs and search costs. Reduced costs are more accessible to big enterprises because of bargaining power and quantity of transaction. Electronic marketplaces, by linking buyers and sellers together in networks on the Internet, can achieve similar savings in markets where they might otherwise miss out. Lastly, it is the speed, range and accessibility of information on the Internet and now the low cost of distributing and capturing it creates new commercial possibilities. Electronic marketplaces, sitting in the middle between buyers and sellers, are uniquely placed to collect information, add value and distribute it to those who find it most useful. (The Economist, 1999) The idea with these marketplaces is that they allow channel flows to be disaggregated, distributed across a number of specialized providers in the marketplace as well as in the marketspace, and reassembled seamlessly and frictionlessly as an integrated offering (Cohen, 1999).
When this overall presentation of the possibilities of the electronic marketplaces is described more specific description of topics concerning the electronic marketplaces will be presented. First focus will be put on the key features of the Web.

2.1.1 Key features of the Web

First, the key features of the Internet will be explained to create an understanding of what opportunities the Internet creates for e-commerce (Hoffman et al., 1995, Pålson, 1998 & Ghosh 1995).

- **Global access**: Understanding the Internet’s capability for global communication offers companies important opportunities to bring their message to a worldwide audience and to maximize the benefits of their investment in the Web.

- **Immediate real-time access**: Today, the Web is accessible 24 hours a day, 7 days a week. Such immediacy is called *real time* because, unlike conventional media, users themselves control when they send or receive these near-instantaneous information transfers. Likewise, information placed on the Net can be changed and updated in real time as well, such as product catalogues, pricing, sell sheets.

- **Virtually infinite space**: Once a company has a business Web page up, space in which to publish information resources is virtually free.

- **Multimedia**: Multimedia can be defined as communication and technology that integrates a variety of distinct media types into a single, hybrid presentation. Today, text, graphics, photos, audio, animation, video broadcast, and even 3D virtual reality spaces can be offered on the Web.

- **Interactivity**: Perhaps the single most important, and arguably the least well understood, capability of the Web is interactivity. Interactive communications on the Web are two-way communications during which users both provide and receive information.

- **Database driven information**: The Web offers marketers the opportunity to use powerful database-driven networking capabilities to enable and enhance existing business information systems.

- **Data mining and user tracking**: With the rapidly declining cost and increasing power of information processing, companies are able to remember every detail of each relationship with each customer. Thus, they are able to offer tailored communications, personalized service, and mass-customized products.

These features will be used in the conceptualization in chapter three

When the understanding for the features of the web is created the basic e-commerce criteria’s will now be described.
2.1.2 Basic E-commerce criterias
Researchers have identified several criterias that have to be fulfilled in order to secure that the customer perceives the Web as a natural purchasing tool and to create successful e-commerce. Fletcher (1995) draws attention to both service and system-related prerequisites. These prerequisites are ultimately linked to the relative advantages e-commerce offers compared to conventional commerce activities and, thus, customer satisfaction (Fletcher, 1995 & Cohen, 1999):

- **Speed of delivery:** This is essential, particularly for end consumers and home-shoppers.
- **Quality:** This is frequently subjective in nature, and the provision of recognized brand names helps create the image of quality range.
- **Up-to-date information:** Customers object strongly to shops displaying inaccurate shelf pricing, special offers not being in stock, certain sizes not being available and other price or product changes.
- **Ease of use:** The lack of ease to use is often the result of a technology focus, with little or no attention being paid to the demands of the marketplace.
- **Reliability:** This relates to the reliability of the service and the technology.
- **Costs:** It is often considered that the cost of electronic commerce must be less than traditional methods, but this is not always the case. While marginal, transaction costs are often reduced, the initial fixed cost in hardware and software, plus the costs involved in capturing, cleaning and processing data, mean that high volume is required to ensure that profits are achieved.
- **Convenience:** Convenience means different things to different people. As customers become more experienced with buying electronically, they will demand increasingly more convenient and hence sophisticated interfaces.
- **Legal environment:** There are several issues and challenges that a company has to deal with when putting up a commerce Web page. These include the security issue, payment systems, as well as copyright, taxes and encryption.
- **Build confidence and trust:** The main problem today facing electronic commerce is security. Customer will not be comfortable in carrying out business transactions on the Web until they are convinced of its security.

When the overall knowledge for the web and e-commerce is formed, the electronic marketplaces will now be explained and their key features.

2.1.3 Different electronic marketplaces
The electronic market places can operate a variety of market-making mechanisms to mediate transactions between participants in the hub. These mechanisms can be fixed-price mechanisms that are typical of catalog purchasing, or dynamic pricing mechanisms that include auctions or exchanges. (Digital Marketplaces, 1999, Davis, 1999, Sawhney & Kaplan, Dec 1999 & Bygdeson, 1999).

- **Exchange:** Create value by matching of supply and demand. Marketplaces where the specific articles for sale are listed and it is possible to purchase the products on the marketplace. They require a real-time, bid-ask matching process, market wide price determination, as well as a settlement and clearing mechanism. The exchange model works best for near-commodity items that can have several attributes, but are easy to specify and price is the deciding variable. Exchanges create significant value in markets where demand and prices are volatile by allowing businesses to manage excess supply and peak-load demand. An example on products where the exchange feature works well is energy and metals.
• **Catalog**: Creates value by aggregating suppliers and buyers. It works best in industries characterized by fragmented buyers and sellers who transact frequently for relatively small-ticket items. Given the small transaction size, it is too costly, even on the Net, to negotiate each transaction. The catalog model also works well when most purchasing takes place with prequalified suppliers and with predefined business rules, and the occasional purchase requires searching across a number of smaller suppliers. Finally, it works best for situations where demand is predictable, and prices do not fluctuate too frequently. There are two types of catalogs, the first where you generate leads and the purchase takes place outside the electronic marketplace. Second the catalogs where direct purchases are possible through the electronic marketplace and thereby direct generate sales.

• **Auction**: Creates value by spatial matching of buyers and sellers. They work best in industries or settings where one-of-a-kind, non-standard, or perishable products or services need to be bought or sold among businesses that have very different perceptions of value for the product. Capital equipment, used products, unsaleable returned products, surplus and hard-to-find products fit this description.

These features are explained further in table 2.1, which also visualize the different features for the electronic marketplaces.

**Table 2.1 Electronic marketplace features**

<table>
<thead>
<tr>
<th>Characteristics marketplace features</th>
<th>Catalog</th>
<th>Auction</th>
<th>Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does it work?</td>
<td>Demand/supply aggregation</td>
<td>Spatial matching</td>
<td>Temporary matching</td>
</tr>
<tr>
<td>How does buyers benefit?</td>
<td>Lower search and transaction costs; broader supply base</td>
<td>Catalog benefits, plus better matches, better prices</td>
<td>Auction benefits; peak-load demand management; hedge risk in volatile markets</td>
</tr>
<tr>
<td>How does sellers benefit?</td>
<td>Broader customer access, lower transaction costs</td>
<td>Catalog benefits, plus better pricing</td>
<td>Auction benefits; liquidate excess supply; manage volatility</td>
</tr>
<tr>
<td>Where it works best?</td>
<td>MRO products; pre-planned purchases; fragmented supplier base</td>
<td>Used capital equipment; perishable capacity; hard-to-specify products</td>
<td>Near-commodities; high-fixed cost assets; volatile markets</td>
</tr>
<tr>
<td>How are prices set?</td>
<td>Pre-negotiated, usually static</td>
<td>Most attractive bid, prices move in one direction</td>
<td>Marketwide bid-ask; moves up and down</td>
</tr>
<tr>
<td>Can buyers be sellers?</td>
<td>No</td>
<td>Sometimes</td>
<td>Yes</td>
</tr>
<tr>
<td>Key challenges?</td>
<td>Creating master catalog; gaining supplier critical mass</td>
<td>Liquidity, misrepresentation/fraud, fulfillment</td>
<td>Asset specificity; off-exchange trade</td>
</tr>
</tbody>
</table>

All the electronic marketplaces also provide value adding features, like industry news, articles, discussion groups, and other content (Watson, 1999). According to Mark Walsh, CEO of VerticalNet\(^1\), the single most important reason for people visiting their marketplaces is search for information. Providing the value adding information is getting more and more important, when the visitors are getting more sophisticated habits, Walsh continues. One other trend with these marketplaces realizes is integration of the business processes with the services offered. The industry specific hubs will perform a patchwork of alliances with the functional hubs (Sawhney & Kaplan, 1999).

These features will be used in the conceptualization in chapter three

The next section will explain the success characteristics for a specific industry regarding the electronic market places.

### 2.1.4 Industry success factors for the electronic marketplaces

(Davis, Cohen, *The Economist*, 1999)

- **Those in large and fragmented markets**: Fragmented markets provide the competitive dynamics that favors the development of infomediaries. Markets that are not fragmented are instead controlled by either a buyer or a seller (or a group of buyers or sellers), and are less likely to foster the development of infomediaries. Infomediaries create the most value in markets where buyers and sellers have difficulty finding each other. Markets that consists of a large number of complementary products and services.

- **Those with sharpest focus**: Infomediaries should focus on solving a particular problem for a particular vertical market. By declaring a distinct focus area (e.g., laboratory supplies), the infomediaries attracts buyers and sellers whose primary interest is in that particular subject area. But if the infomediaries category is too broad or murky (e.g., "supplies" instead of "laboratory supplies"), almost no one (buyers or sellers) will feel a sense of urgency to go there. By sharpening their focus, infomediaries can provide a depth of information — and, hence, customer loyalty and participation — about a particular subject that is unrivaled. Increased customer participation adds yet more depth to a firm's knowledge base, which in turn drives more transactions. To be able to provide the depth in the information domain knowledge and industry knowledge is crucial.

- **First movers**: Increasing-returns business models favor the company that moves first, and moves decisively in a particular market. Companies with more customers will attract a disproportionate share of customers; infomediaries exaggerate this effect, as their cost of customer acquisition becomes incrementally lower over time than that of an offline business. Further, infomediaries tend to develop high switching costs as a natural part of their evolution. Both of these points back up the argument that it is better for investors to pick the first-mover infomediary in a particular vertical market.

- **Big-ticket items that require complex decision-making, have a high information content and require customers to collect information from a variety of fragmented sources.**

- **Big capital spenders**: Infomediaries need capital to acquire a customer base; they have to pay more to acquire members than offline counterparts. In the early stages of developing a vertical market, competition for customers may increase, and marginal cost of each new customer may rise. Eventually, a market leader's customer base will reach critical mass and the marginal cost of acquisition will

\(^1\) VerticalNet: Is the Internet's biggest creator and operator of electronic marketplaces, and have 43 industry-specific trading communities.
decline. Winning this battle requires substantial up-front spending on brand building and customer acquisition

- **Greater inefficiency in the existing supply chain:** Inefficient retailer channels and an unpleasant retail buying experience characterize the industry.
- **Creating master catalogs and sophisticated searching.**

The business-to-business electronic marketplace is, as said before, a new phenomena. Many different names exist and in the next segment they will be named and also justification for the name chosen in this study.

### 2.1.5 Current names for the electronic marketplaces

The phrases that are being used for electronic marketplaces will quickly be examined and explained.


- **Digital or Electronic Marketplace:** Comprehensive name, stands for vertical portal, which is as industry specific as functional portals, which supply the same business models to different industries.

- **Infomediary:** Originally consumer oriented. A broader definition of the term would include any Internet intermediary that facilitates the flow of information. However, most companies that fit this description provide a broader range of products and services than facilitating the flow of information.

- **Intermediary:** The online intermediary does two things – aggregates data and facilitates transactions – to help bring buyers and sellers together. Internet based intermediaries typically provide multi-vendor, multi-product marketplaces.

- **Metamediary:** Beyond providing a multi-vendor in the multi-product marketplace, the metamediary also provides multi-services. The services can be provided directly by the metamediary, or the metamediary can invite third party service providers into the marketplace. Services provided can include quality assurance, procurement management, and fulfillment or payment settlement. These mediaries are both vertical and functional hubs. Vertical means serving a vertical market, being industry specific and being able to provide vast amounts of information. Functional hubs are concerned with business processes and operate horizontally.

- **Vertical marketplace:** Industry specific hub, which combines technology and deep expertise in a particular industry to eliminate industry specific problems for both buyers and sellers.

- **Cybermediary:** Synonymous with infomediary.

- **eMarket:** The electronic marketplace is descriptive and widely used. eMarket is a shortening and will be used in this thesis. eMarket will be defined as industry specific and neutral electronic marketplace.
2.1.6 Revenue models for electronic marketplaces

The hosts for the electronic marketplaces exhibit varying business models, depending on the key products according to Goldman Sachs (1999). They continue to say that the core source of revenue for the hosts in these models include transaction fees, auction-driven commissions, advertising, content subscriptions and software licensing. Many hosts take a percent of the aggregated sales conducted through the electronic marketplace. (Goldman Sachs, 1999)

The theory overview is now provided for the first research question and the next fragment will concern theories in relation to organizational buyers and sellers needs.

2.2 ORGANIZATIONAL BUYERS AND SELLERS NEEDS

This section will provide theories regarding research question number two:

*How can the needs of organizational buyers and sellers be described regarding electronic marketplaces?*

2.2.1 Business customers – an overview

Before entering the area of marketing and organizational buyers and sellers needs, a definition of organizational buyers will be provided.

All formal organizations must purchase products (or services) in order to be able to conduct business. For example, industrial companies buy raw materials, components, equipment, and supplies that are used in the manufacturing, maintenance, transportation, and other aspects of the firms’ activities (Johnston, Wesley & Lewin, 1994; Webster & Wind, 1972).

Business customers are organizations that buy products rather than individual consumers or households that are buying for personal consumption. The difference between organizational buying and consumer buying is illustrated by an example in Figure 2.1. (Haas, 1995):

![Business Customers Diagram](image)

Business customers are defined as organizations buying products for use, either directly or indirectly, in their operations. They can be classified into four groups, which are presented below. These groups are sometimes overlapped. (Haas, 1995)
- Private business and commercial organizations that buy products that are either directly or indirectly used in the production. An example can be the companies presented as business customers in Figure 2.1.
- Private reseller organizations such as retailers and wholesalers that buy products that are either directly or indirectly necessary for the operation of business.
- Governmental organizations that operating at the federal state.
- Institutional organizations that do not fall into the other three classifications. An example can be a private university.

Of the classified groups above, this research will focus on business, commercial and federal organizations.

Now those types of customers are identified that are being dealt with, it is time now to turn the focus of this thesis. The needs will now be discussed and theories for the conceptualization selected.

2.2.2 Needs

As a starting point for this section concerning needs will be King (1987) when he describes basic, spoken and unaware needs. One aspect that must be kept in mind is that some needs are easier to articulate than others are. The characterizes of needs by (King, 1987):

- **Basic needs.** If these needs are not fulfilled, the customer will get dissatisfied. But a company cannot create satisfied customers by fulfilling these needs. They are so evident that the customer won't declare them. It is important to know one’s customers and understand their needs to avoid them getting disappointed.
- **Spoken needs.** These are the needs the customer expects to be fulfilled and considers very important. In fulfilling these needs better than competitors, a company can win more customers. These needs are fairly easy to discover by directly asking the customers.
- **Unaware needs.** When asked, the customer cannot respond to which these needs are, since he has not experienced them. By satisfying these needs, the product or service will obtain an attractive value to the customer. If the company can find these dimensions it can gain competitive advantage and loyal customers. It is quite difficult to discover what these needs are. It is not enough to ask the customer, the company must have a thorough understanding and knowledge of their customer.

In identifying these needs, one must keep in mind that some needs change categories over time. Regarding the rapid development of e-commerce, it is quite natural that needs are changing rapidly. For example, once exciting needs are met, they become articulated needs. The articulated needs usually define the basis for competition, and exciting needs represent opportunities upon which to excel and attract new customers.

To cast a wide net for needs, the process of investigating needs is the next topic described. Urban and Hauser (1993) provide a general model and this will work as a framework for the rest of the need section and subcategories will be further described. A few of these subcategories will serve as bricks in the conceptualization in chapter three.

Urban and Hauser (1993) describe five concepts involved in description and analysis of customer needs. These concepts are showed in Figure 2.2.
Summary of Customer Needs:

- Perception;
- Preference;
- Product features;
- Segmentation; and
- Choice.

In accordance with Urban and Hauser (1993), once the customer perceptions and preferences are defined, the study of segmentation becomes critical. Segmentation will tell how needs differ between segments. Finally, one has to investigate, in depth, the links between perception and product features.

Customer Perceptions
Customer perceptions enable a company to identify the key strategic benefit dimensions. The perception is how customers evaluate competitive products. By understanding which product fulfill customer needs best, how well customer’s needs are fulfilled and whether there are any gaps between the product and the current firm’s product.

The key word in the definition of perception is “individual” (Kotler, 1997). This applies to business-to-business e-commerce as well. Headlines about e-commerce issues appear daily in the media. Perceptions are used as a “lens” to filter the complex set of cues the audience receives about the product based on its features and based on the available communications (advertising, sales-force, word-of-mouth, PR, channel of distribution, etc.). (Urban & Hauser, 1993)

Sorting customer needs into hierarchies
Structuring customer needs is important because it allows managers to understand the fundamental directions that the project must take if it is to succeed in the market place (Urban & Hauser, 1993). There are different methods to sort customer needs into hierarchies. According to Urban and Hauser (1993), two of the most widely used methods are:

- Managerial affinity diagrams, and
- Cluster analysis of customer sort.
The cluster analysis will here briefly be describe of customer sort, since this approach has more reliance on the voice of the customer, than the affinity diagram. In a cluster analysis of customer sort, needs are grouped according to their similarities.

Table 2.2 illustrates an example of a customer sort diagram, regarding the needs for coolers and picnic baskets (Griffen, 1989). This is just to describe how needs can be organized into strategic and tactical needs.

**Table 2.2 Strategic and tactical needs**

<table>
<thead>
<tr>
<th>Strategic needs</th>
<th>Tactical needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>Easy to use first time</td>
</tr>
<tr>
<td></td>
<td>Easy to operate</td>
</tr>
<tr>
<td></td>
<td>Fast to use</td>
</tr>
<tr>
<td></td>
<td>Easy to clean</td>
</tr>
<tr>
<td>Convenient</td>
<td>Easy to use</td>
</tr>
<tr>
<td></td>
<td>Lid works well</td>
</tr>
<tr>
<td></td>
<td>Container is organized, neat</td>
</tr>
<tr>
<td>Works well</td>
<td>Does not leak</td>
</tr>
<tr>
<td></td>
<td>Separates contents</td>
</tr>
<tr>
<td></td>
<td>Protects contents</td>
</tr>
<tr>
<td></td>
<td>Everything fits into one container</td>
</tr>
</tbody>
</table>

Source: Griffen (1989).

The hierarchies of primary needs are strategic. Tactical needs are operations of primary needs and a subcategory of the strategic needs.

Abraham Maslow explains in his “Hierarchy of Needs” why people are driven by particular needs at particular situations. Maslow states that people satisfy their most important needs first. When a person succeeds to satisfy an important need, that need will stop being current motivator, and the person will try to satisfy the next-most-important need. In order of their importance Maslow’s needs are physiological needs (food, water, shelter), safety (security, protection), social (sense of belonging, love), esteem (self-esteem, recognition, status) and self actualization (self-development, realization). This theory helps marketers understand how various products fit into the plans, goals, and lives of potential customers.

Hauser (1999) develops the model from a contemporary companies viewpoint. This model is very powerful because it is sequential and has a cumulative nature, continues Hauser and is explained in table 2.3.
Table 2.3 Maslow’s hierarchy of needs

<table>
<thead>
<tr>
<th>Need</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Core product and service</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Basic service, timely hours of operation and easy location</td>
</tr>
<tr>
<td>3. Social</td>
<td>Open, accessible, interpersonal, human, two-way relationship, technical service, frequent sales contact, customer service,</td>
</tr>
<tr>
<td>4. Esteem</td>
<td>Reputation, prestige, expertise, supplier that understanding and anticipating the change forces affecting the customer and then develop new products. Supplier takes initiative and risk to present solutions.</td>
</tr>
<tr>
<td>5. Self actualization</td>
<td>Inner knowledge of excellence and mastery in what he or she does. Self actualized customer relationships have achieved a state of excellence that often being described as true partnership. The buyer has made the supplier a complete and open participant in the long-term conduct of his or her business, and this drives the business.</td>
</tr>
</tbody>
</table>


It is important to understand that when one need is achieved- the focus shifts. When competitors arrive it is also important to understand the cycle time of changing customer needs to be able to identify need levels of customers. Further how customers rate the performance in different needs and how competitors satisfy needs. (Hauser, 1999)

Stages of needs will be used in the conceptualization in chapter three

Need dimensions
In industrial buying, there is often a further managerial consideration that more than one person may be involved in the buying process (Webster & Wind, 1972 & Haas, 1995). People have different motivations depending on their position in the organization. According to Jaak Akker (1998), need dimensions can be structured after the following two groups are identified:

- People with executive responsibilities; and
- People with administrative and legal responsibilities.

These two groups can be described in more detail. According to Jaak Akker one can rate their relative influence, when investigating their influence. People with the highest influence are described first in the following list:
1. Management;
2. The individual employee;
3. Information and/or system-own;
4. IT-suppliers;
5. Stockholders, suppliers, auditors, etc.;
6. Institutions;
7. Board of Directors and the CEO, who has the legal responsibilities.

To succeed, one has to balance the needs of the different interest groups within the customer organization (Jaak Akker, 1998).

Customer Preferences
To select the needs that are the most important to satisfy, a researcher needs information on customer preferences. Customers' perceptions indicate what the existing needs really are, but don’t rate these needs. Analysis of customer preferences gives the researcher the information necessary to do so (Urban & Hauser, 1993).

There are several techniques to rate customer preferences. The most principal ones are:

- Preference regression; and
- Conjoint analysis.

These techniques are not being discussed in this thesis, since they are dealing with statistical analysis of needs when the organization has some product features that need to be tested.

Because the electronic marketplace is a new tool in the organizational buying and selling process, it is interesting to investigate product features and need satisfaction. Therefore, discussing the concept of product features, and explain the key features of the Internet and the electronic marketplace follows.

Product Features
Product features tell the organization what can be done to realize the actual needs, i.e. the physical design of the product (Urban & Hauser, 1993). It is important to think in terms of feature bundles or packages (Kotler, 1997). Companies must decide whether to offer feature customization to customers at a higher cost or more standardization to customers at a lower cost.

Key features of the Internet explained previous in this chapter:

- Global access;
- Immediate real-time access;
- Virtually infinite space;
- Multimedia;
- Interactivity;
- Data base driven information;
• Data mining and user tracking.

Key features of an electronic marketplace explained previous in this chapter:
• Catalog;
• Exchange;
• Auction;
• Value Adding Features.

When one has received information about customers’ perceptions, preferences and product features, it becomes necessary to study how these differ among the investigated customers. Therefore, the attention is turned to the segmentation of customer needs.

Segmentation
Although the market has been segmented in the opportunity identification phase of development, it is also interesting to make a more macro segmentation at this phase based on the benefit importance’s (Urban & Hauser, 1993). Segmentation of target groups by their perceptions and preferences is called “benefit segmentation” (Haley, 1968). The basic idea behind benefit segmentation is that customers vary in the importance that they assign to different benefit dimensions. Grouping needs after benefit dimensions enables management to identify segment characteristics, regarding specific needs. Several advanced methods of benefit segmentation (Kamakura, 1988 & Hagerty, 1986) have emerged and models based on optimal structures have been developed to help managers in dealing with the complexity of benefit segmentation.

Some commonly used segmentation variables are:
• Demographic characteristics;
• Usage-characteristics;
• Geographic characteristics;
• Buying behavior characteristics; and
• Product characteristics (Urban & Hauser, 1993 & Haas, 1995).

What are other variables?
In addition to the organizations’ perceptions and preferences, Urban & Hauser (1993) presents typical criteria that affects purchase decisions:
• Awareness
• Availability
• Price
• Supplier reputation
• On-time delivery
• Product-functionality
• Ease of use
This will end the need overview and the attention will now be turned to organizational buying and selling.

2.3 THE INDUSTRIAL BUYING AND SELLING PROCESS
This section will provide theories regarding research question number three:

How is the electronic marketplace influencing the buying and selling process in these organizations?

The first section will explain the change in the industrial selling process because the development of e-commerce. Then emphasis will be put on the organizational buying and selling process.

2.3.1 The transformation of industrial selling
The major changes that take place when we are moving towards the network economy certainly have great impact on how business is performed. According to Wotruba (1996) the industrial selling will be undergoing a metamorphosis over the next decade, and some parts of it have already started. When changes occur in the customers buying process, the salesperson must not only be alert to recognize that change but also transmit that information to others in the selling firm and suggest procedural changes in the customer interface to maintain smooth relationship. Wotruba (1996) goes on and states that the selling process will be less and less persuasive and the seller must to a higher extend than earlier meet the customers expectations. Some purchases are of greater importance than others and will typically involve a greater number of buying influences.

2.3.2 The buying and selling process
Even though the industrial selling is going through a transformation, initially the explanation of the buying process will come from a very classic model, the eight-phased buying process by Robinson, Faris and Wind (1967). The reason for choosing this model was it is familiarity and ease of use. Because of its ease of application, it is often used in researches similar to this one. The eight phases in the Buygrid Model are:

1. Anticipation or recognition of a problem (need) and a general solution;
2. Determination of characteristics and quantity of needed item;
3. Description of characteristics and quantity of needed item;
4. Search for and qualification of potential sources;
5. Acquisition and analysis of proposals;
6. Evaluation of proposals and selection of supplier(s);
7. Selection of an order routine;
8. Performance feedback and evaluation.

A few steps of this model will be used in the conceptualization in chapter three
The organizational selling process is next to be described. The model is a nine-step model developed by Bagozzi et. al. (1998).

1. Identify and qualify buyer
2. Contact planning
3. Approach
4. Need Assessment
5. Presentation
6. Handling Objectives
7. Closing
8. Reducing post purchase problems
9. Evolve the relationship

A few steps of this model will be used in the conceptualization in chapter three

The next model is recently developed and from an e-commerce perspective. It also puts the organizational buyer and seller together. Mougayar develops it and he named it the Buyer/Seller model.

2.3.3. The Buyer/Seller model
In "Open digital markets" (Mougayar, 1998) the buyer/seller model is presented and explains the steps buyers and sellers go through and how the Internet influences each party. The buyer/seller model by Mougayar (1998) is at the heart of what needs to be transformed electronically in the buyer/seller interaction. One needs to look at each one of these steps, and investigate their sequential and non-sequential relationships. The goal of the seller/buyer model is to:

1. Replace as many steps as possible with an electronically enabled capability that brings the cycle closer to a closed-loop process.
2. Start to tie various steps together as it becomes logically or financially feasible.
3. Begin to measure the value derived from the new processes.

The steps have been identified as presales interaction, product/service delivery, and post sales interaction. It is important to think about how each one of these steps can be affected by end-to-end electronic commerce. An interesting remark is that most of these capabilities rest on the sellers. Buyers are in a situation where they will be provided with what they need from sellers that want to create efficiency in the communication and thereby increase their sales volume.
Table 2.4 Buyer/seller model

<table>
<thead>
<tr>
<th>Seller</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre sale</td>
<td>Distribution</td>
</tr>
<tr>
<td></td>
<td>Promotion</td>
</tr>
<tr>
<td></td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>Pricing policy</td>
</tr>
<tr>
<td>Sale</td>
<td>Receive order</td>
</tr>
<tr>
<td></td>
<td>Authorize payment</td>
</tr>
<tr>
<td></td>
<td>Schedule order</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Post sale</td>
<td>Ship product</td>
</tr>
<tr>
<td></td>
<td>Receive payment</td>
</tr>
<tr>
<td></td>
<td>Support products</td>
</tr>
<tr>
<td></td>
<td>Market research</td>
</tr>
</tbody>
</table>

Source: Mougayar, 1998

This model will be used in the conceptualization in chapter three

The buying side of the model has many similarities with the Buygrid model. As stated Mougayar’s model also consider the selling side, which also is included in the research question. Because the electronic marketplace will take place between buyer and seller it will now be explained the roles the intermediary have. This is to get a broader understanding for needs and expectations both buyers and sellers have on the intermediary.

2.3.4 The role of the Intermediary

Marketing activity occurs through three channels, communication channels, transaction channels and distribution channels. The function of communication channels is to enable the exchange of information between buyers and sellers, transaction channels generate sales activities between buyers and sellers. Finally, distribution channels facilitate the physical exchange of products and services. (Peterson, Balasubramanian & Bronnenberg, 1997) Bagozzi et al. (1999) created this model to explain which expectation buyers and sellers have on the intermediary and accordingly also understand needs the intermediary must satisfy that. Worth noticing is the column both for buyers and sellers. In line with Mougayar (1998) this also indicates that the same activities and needs can be found at both buyers and sellers.

Table 2.5 Functions performed by distributor for buyer and seller

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Sellers</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td>Store</td>
<td>Risk</td>
</tr>
<tr>
<td>Value</td>
<td>Finance</td>
<td>Transportation</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>Gather information</td>
<td>Promotion</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td>Personal contact &amp; education</td>
</tr>
</tbody>
</table>

Wotruba (1996) also present the role or expectation buyers have on the intermediary. The example from Wotruba (1996) lists the needs purchasing professionals in the chemical industry wanted to have satisfied, for a purchase to be considered successful:

- High quality products (performance and shipment).
- Market intelligence, to help react quickly and cost-efficiently to market changes.
- Help to eliminate cost from the entire supply chain that affects their prices.
- Keep prices competitive.
- Prove that operations are in accordance with health, safety and environmental performance standards.
- Top management must enable the suppliers to be flexible and creative when the environment changes.
- Quality standards must be built into manufacturing and distribution.

Using the purpose of this study, along with the above research questions, the attention will now turn to the necessary conceptualization of the components within the research questions and developing a frame of reference from which the necessary can collect data. This will be done in the next chapter, the conceptualization.
3. CONCEPTUALIZATION

The previous chapter provided an overview of the relevant literature for this study. The purpose of this chapter is to provide the conceptualization that would make it possible to answer this study’s specific research questions. The frame of reference, which results from this conceptualization, lays the foundation for collecting and analyzing the gathered data.

The criteria for the selection of proposed models was the research questions that were stated in chapter one and are repeated below:

- How can an electronic marketplace be described both from buyers and sellers perspective?
- How can organizational buyers’ and sellers’ needs be described regarding electronic marketplaces?
- How does the electronic marketplace influence the buying and selling processes in these organizations?

3.1 DESCRIBING ELECTRONIC MARKET PLACE

In chapter 2.1 the electronic marketplace was explained, along with key features of the Web. These theories will be the framework while observing the marketplaces from both by buying and selling standpoints. To relate the marketplace to both the buying and selling process and needs that occur, the electronic marketplace will be observed related to the key features of the web. This will hopefully give comprehensive understanding what needs that can be satisfied be the eMarket.

Table 3.1 Key features of the electronic marketplaces and the Web

<table>
<thead>
<tr>
<th>Key features of the electronic marketplaces</th>
<th>Key features of the Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange</td>
<td>Global access</td>
</tr>
<tr>
<td>Catalog</td>
<td>Immediate real-time access</td>
</tr>
<tr>
<td>Auction</td>
<td>Virtually infinite space</td>
</tr>
<tr>
<td>Value adding features</td>
<td>Multimedia</td>
</tr>
<tr>
<td></td>
<td>Interactivity</td>
</tr>
<tr>
<td></td>
<td>Data base driven information</td>
</tr>
<tr>
<td></td>
<td>Data mining and user tracking</td>
</tr>
</tbody>
</table>


3.2 DESCRIBING CUSTOMER NEEDS

To describe the needs of buyers and sellers, Maslow’s hierarchy of needs will be used in conjunction with Hauser’s supplementary ideas that turn the model into a business panorama. The idea is to classify needs in each category in the hierarchy.
Table 3.2 Maslow’s hierarchy of needs

<table>
<thead>
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</thead>
<tbody>
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<tr>
<td>Self-actualization</td>
<td>The buyer has made the supplier a complete and open participant in the long-term conduct of his or her business.</td>
</tr>
</tbody>
</table>


The needs in each category will be collected from the role of intermediary presented by Bagozzi et al. (1998) together with Urban and Hauser’s (1998) factors that affect purchase decisions to and Peterson, Balasubramanian & Bronnenberg, (1997) when they present the flows that occur between buyer and seller.

- Product functionality
- Information and communication
- Transaction
- Distribution
- Personal Contact
- Education
- Reputation and brand
- Partnership
- Additional needs identified during the data collection

When each need is classified, the intention is to use the model by Griffen (1989) and identify tactical needs for each need stated.

Table 3.3 Strategic and tactical needs

<table>
<thead>
<tr>
<th>Strategic needs</th>
<th>Tactical needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product functionality</td>
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</tr>
<tr>
<td>Transaction</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
</tr>
<tr>
<td>Personal Contact</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Reputation and brand</td>
<td></td>
</tr>
<tr>
<td>Partnership</td>
<td></td>
</tr>
<tr>
<td>Additional needs identified during the data collection</td>
<td></td>
</tr>
</tbody>
</table>

3.3 HOW THE ELECTRONIC MARKETPLACE INFLUENCING THE BUYING AND SELLING PROCESS

To place the needs in the buying and selling process Mougayar’s (1998) buyer/seller model will be used. The buying steps are very similar to the steps Robinson, Faris and Wind (1967) describe, but with some small changes to better fit the modern environment. For the selling process a combination of Mougayar and Bagozzi et al. is chosen. The main categories will be pre sale, sale and post sale. Under each category more detailed subcategories will be placed as the table below shows. It is the attention to compare both buyer and seller in the same model. This is done because activities in the selling process have related activities in the buying process and vice versa. The intention is thereby to find cross patterns between buyers and sellers.

Table 3.4 Buying and selling process

<table>
<thead>
<tr>
<th>Pre sale</th>
<th>Seller</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify buyer</td>
<td>Search/Inquire for product</td>
</tr>
<tr>
<td></td>
<td>Approach and qualification</td>
<td>Discover product</td>
</tr>
<tr>
<td></td>
<td>Need Assessment</td>
<td>Compare products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negotiate terms</td>
</tr>
<tr>
<td>Sale</td>
<td>Receive order</td>
<td>Place order</td>
</tr>
<tr>
<td></td>
<td>Authorize payment</td>
<td>Receive acknowledgment</td>
</tr>
<tr>
<td></td>
<td>Schedule order</td>
<td>Initiate payment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Receive product</td>
</tr>
<tr>
<td>Post sale</td>
<td>Ship product</td>
<td>Request support</td>
</tr>
<tr>
<td></td>
<td>Receive payment</td>
<td>Give feedback</td>
</tr>
<tr>
<td></td>
<td>Support products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Market research</td>
<td></td>
</tr>
</tbody>
</table>

3.4 EMERGED FRAME OF REFERENCE

The previous sections contained a conceptualization of preferred theories that will be part of my frame of reference. These conceptualized issues will be the pool to draw from when answering the research problem. The core of this thesis is the eMarket, why the frame of reference will have the eMarket as a hub. Further needs and the buying and selling process have to be investigated with relation to the eMarket. The eMarket strives to satisfy needs that occur in the buying and selling process. The emerged frame of reference is displayed in figure 3.1.

![Figure 3.1 Emerge frame of reference](image-url)
4. RESEARCH METHODOLOGY

This chapter describes the journey through the research process, presents the concepts central to research methodology as well as the methods used in this study. The intention in this chapter is to create an understanding for how and why the selected methods have been chosen as a guide in collecting and analyzing data. The purpose of selecting these methods is to ensure that this study will be relevant to the problem.

4.1 RESEARCH PURPOSE

Research provides information that helps to reduce uncertainty and to focus decision-making. To understand the variety of research activities, it is beneficial to categorize different types of marketing research. It can be classified on the basis of either technique or function. The next section will cover the specific stages that research often follows.

Experiments, surveys and observational studies are amongst the most common research techniques. Classifying research by its purpose or function shows how the nature of the research problem influences the choice of methods. The nature of the problem will determine whether the research is exploratory, descriptive, or causal (Zikmund, 1982).

These three basic types can be studied below (see Figure 4.1), where the exploratory research is represented by the arrows.

![Figure 4.1 Types of research, Source: Zikmund, 1982.](image)

**Exploratory Research**

Exploratory research is conducted to clarify and define the nature of ambiguous problems. It is *not* intended to provide conclusive evidence from which to determine a particular course of action (Zikmund, 1982). Here, the research is designed to allow an investigator to just “look around” with respect to some phenomenon, with the aim being to develop suggestive ideas (Reynolds, 1971). Usually exploratory research is conducted with the expectation that subsequent research will be required to provide such conclusive evidence. Thus, exploratory research might help crystallize a problem and identify information needed for future research (Zikmund, 1982).
Descriptive Research
The objective of this stage is to develop careful descriptions of patterns that were suspected in the exploratory research (Reynolds, 1971). Descriptive studies are primarily focused on describing a phenomenon and are recommended when the problem is clearly structured and when the intention is not to examine the causal relationships. The researcher knows what he or she wants to investigate, but he/she does not know the answers (Zikmund, 1982).

Casual or Explanatory Research
Explanatory studies aim at describing the relationship between and the causes to different phenomena. Causal studies typically take the form of experiments, because experiments are best suited to determine cause and effect (Churchill, 1996). Yin (1994) claims that the study is explanatory when the focus is on cause-effect relationships, explaining which causes produced which effects.

This research is both exploratory and descriptive, but mainly descriptive. The first stage is to explore how the eMarkets work and then describe the relationship between eMarkets, industrial buyers’ and sellers’ needs and the industrial buying and selling process.

4.2 SCIENTIFIC APPROACH
In a research work there should be a discussion whether if a deductive or an inductive approach shall be used. The deductive approach starts with a study of theories within the selected area that later on are tested in reality to examine if the theories have any accordance with the reality. Through this is a logical and thoughtful conclusion made. The inductive approach starts with an empirical work to formulate general hypotheses that later are tested in reality. It can be said that in an inductive approach the conclusions are done on empirical data, which gives the method a weakness if it is not build on all possible observations (Wigblad, 1997 & Kirkeby, 1994).

The empirical approach attempts to draw conclusions from what is empirically discovered. Hence, the empirical method is that of induction.

The theoretical approach means that there is a strong theoretical element that controls the researcher’s relation to methodology. Consequently, the theoretical method is that of deduction.

4.3 RESEARCH APPROACH
There are various methods of collecting information. One can choose between quantitative methods and qualitative methods. While both methods have strengths and weaknesses, the choice of method must be based on the research problem (Churchill, 1996). If the research context that is focused on is not satisfactorily investigated, the researcher needs to adopt a general and open-minded research approach. It is necessary to
find a middle course between comprehensiveness on one hand, and time and resources, on the other hand.

The *quantitative method* is structured and formalized, and defines which conditions are of special interests from the chosen research problem. The researcher is examining many objects in few considerations. This method’s result is broad and can be used in a statistical manner. *Qualitative* methods focus on providing a complete picture of the situation and increasing the understanding of social processes and interrelations (Holme & Solvang, 1991). Qualitative methods are often related to case studies and in-depth studies where the objective is to access a lot of information from few units.

The *quantitative* research approach is of a structured and formalized character, and defines which conditions are of special interests from the perspective of the chosen research problem (Wiedersheim-Paul & Eriksson, 1991). Quantitative research strives to use a consistent and logical approach toward what is being investigated and uses statistical inferences and mathematical techniques for processing the data. Furthermore, quantitative methods are often related to surveys and wide-studies, i.e. few variables on many units (Johansson & Lindfors, 1993).

Additionally, the qualitative approach is characterized by closeness to the source of information and will provide abundant information and prerequisites to gain deeper knowledge of a complex situation (Merriam, 1994).

In this study the qualitative research approach has been chosen, by virtue of the problem definition, the purpose of this study with its qualitative characteristics, and the discussion above.

### 4.4 RESEARCH STRATEGY

When the choice of methodological approach has been made, the focus turns to the research strategies available to collect the data. According to Yin (1994), there are several ways of conducting qualitative research, including experiments, surveys, histories, analysis of archival information and case studies.

Each strategy has its advantages and drawbacks, and the selection of any one of these strategies depends upon three distinct conditions:

1. The type of research question posed.
2. The extent of control an investigator has over actual behavioral events.
3. The degree of focus on contemporary versus historical phenomena.

All of the research strategies that need to be addressed when deciding on a strategy are outlined below (see Table 4.1).
Table 4.1 Relevant situations for different research questions

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Form of research question</th>
<th>Requires control over behavioral events?</th>
<th>Focuses on contemporary events?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>how, why</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Survey</td>
<td>who, what, where, how many, how much</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>who, what, where, how many, how much</td>
<td>NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>History</td>
<td>how, why</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Case study</td>
<td>how, why</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>


According to Yin (1994), the first and most important condition for differentiating among the various research strategies is to identify the type of research question being asked. Generally, “what” questions may either be exploratory (in which case any of the strategies could be used) or about prevalence (in which surveys or the analysis of archival records would be favored). “How” and “why” questions are likely to favor the use of case studies, experiments, or histories.

Furthermore, Yin (1994) states that the boundaries between the methods are not always clear and sharp; on the contrary, they often overlap each other. The objective here is to avoid important misfits.

The case study has been chosen as a research strategy, since it will provide the deeper perspective. A case study of a qualitative nature is a good method to understand and interpret observations in different phases. The choice is further motivated by the fact that I have no control over behavioral events and that I am dealing with a contemporary event.

Case Study Design
Overall, there are two options when selecting design for the case study: single-case study or multiple-case study.

The single case study is appropriate when the single case represents:
1) the single critical case, meeting all of the conditions for testing a formulated theory,
2) an extreme or unique case (e.g. in clinical psychology), or
3) a revelatory case, e.g. when the researcher has the opportunity to observe and analyze a phenomenon previously inaccessible to scientific investigation.

A multiple-case design involves more than a single case. The advantages of multiple case studies are that the resulting evidence is considered to be more compelling and more robust, but are also more expensive and time-consuming. The validity increases with the number of cases selected. (Yin, 1994) Multiple-case studies are used when the cases are expected to either produce similar results or contrasting results.

Since the research is not dependent on a single, critical, extreme, unique or revelatory case, the multiple case studies have been chosen. The choice also compares favorably.
with Yin (1994) since multiple case studies will provide more compelling and robust information about the research problem, as well as increased validity.

4.5 DATA COLLECTION

Data collection can be divided in two basic categories, primary data and secondary data. *Secondary data* is information not gathered for the immediate study at hand, but for some other purpose. *Primary data* is information originated by the researcher for the purpose of the investigation at hand. All researches should start with, or with regard to, earlier work within the same area. Therefore the first attempts at data collection should logically focus on secondary data. The most significant advantages of secondary data are the time and money they save to the researcher. Two problems that commonly arise with secondary data are: they do not completely fit the problem and they are not totally accurate. Researcher must be aware of these problems when they are collecting information, and, therefore, always consider the source thoroughly. Only when the secondary data sources are exhausted or show diminishing returns should the researcher proceed to primary data (Churchill, 1996 & Zikmund, 1994).

Six sources of evidence presented by Yin (1994).

**Table 4.2 Source of evidence**

<table>
<thead>
<tr>
<th>Source of evidence</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation</td>
<td>Stable: can be reviewed repeatedly</td>
<td>Retrievability: can be low</td>
</tr>
<tr>
<td></td>
<td>Unobtrusive: not created as a result of the case</td>
<td>Biased selectivity: if collection is incomplete</td>
</tr>
<tr>
<td></td>
<td>Exact: contains exact names, references, and details of an event</td>
<td>Reporting bias: reflects bias of author</td>
</tr>
<tr>
<td></td>
<td>Broad coverage: long span of time, many events, and many settings</td>
<td>Access: may be deliberately blocked</td>
</tr>
<tr>
<td>Archival records</td>
<td>Same as for documentation</td>
<td>Same as for documentation</td>
</tr>
<tr>
<td></td>
<td>Precise and quantitative</td>
<td>Accessibility due to privacy reasons</td>
</tr>
<tr>
<td>Interviews</td>
<td>Targeted: focuses directly on case study topic</td>
<td>Bias due to poorly constructed questionnaires</td>
</tr>
<tr>
<td></td>
<td>Insightful: provides perceived casual inferences</td>
<td>Response bias</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inaccuracies due to poor recall</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reflexivity: interviewee gives what interviewer wants to hear</td>
</tr>
<tr>
<td>Direct observation</td>
<td>Reality: covers events in real time</td>
<td>Time consuming</td>
</tr>
<tr>
<td></td>
<td>Contextual: covers context of event</td>
<td>Selectivity: unless broad coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reflexivity: event may proceed differently because it is being observed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost: hours needed by</td>
</tr>
</tbody>
</table>
For research question one three electronic marketplaces will be observed, with direct observation used in this study as the first source of evidence. As said by Yin (1994) the strengths with direct observation are the coverage of the event in real time and consideration of the context of the event. Yin (1994) continues and explains the weaknesses associated with observation, which is time and cost consuming, very selective may be differently observed. With the conceptualization as starting point, to visit all three web sites and tried to understand the different portals and how they add value to the visitors. If the answers were not found or understood at the different portals, additional phone interviews will be conducted.

The source of data used to answer the research questions two and three was interviews. An interview permits closeness to the respondent along with flexibility, which are important factors in qualitative studies (Holme & Solvang, 1991). Yin (1994) presents three different kinds of interviews:

- **The open-ended interview** is the least structured interview where the respondent is allowed and even encouraged to speak freely and provide facts and opinions about the phenomenon.
- **Focused interviews** imply the respondent being interviewed for a short period of time, e.g. one hour. Focused interviews are what could be considered semi-structured, where informal conversation may be maintained within the perimeters of certain prearranged subjects for discussion. Focused interview may also follow a certain set of questions derived from a question guide.
- **The structured survey interview** involves structured questions and is similar to a regular survey.

The interviews were all conducted face to face and followed, when needed, by phone interviews. An interview guide was developed that would allow for open ended answers and intended to let the interviewee talk as much as possible without interference.

### 4.6 SAMPLE SELECTION

Once the researcher has clearly specified the problem and developed an appropriate research design and data collection method, the next step is to select those from whom the information will be collected. One way to do this is to collect information from each...

<table>
<thead>
<tr>
<th>Participant observation</th>
<th>Physical artifacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as for direct observation</td>
<td>Insightful into cultural features and technical operations</td>
</tr>
<tr>
<td>Insightful into interpersonal behavior and motives</td>
<td>Selectivity</td>
</tr>
<tr>
<td>Same as for direct observation</td>
<td>Availability</td>
</tr>
<tr>
<td>Bias due to investigator’s manipulation of events</td>
<td></td>
</tr>
</tbody>
</table>

member of the population of interest. This complete canvass is called a census. Another way of collecting information is to collect it from a portion of the population, by taking a sample. Sampling techniques can be divided into two broad categories (Churchill, 1996):

- Probability sampling
- Non-probability sampling

In a probability sample, each member of the population has a chance of being included in the sample. A non-probability sample is a sample that relies on personal judgment somewhere in the selection process. In a non-probability sample there is no way of ensuring that the sample is representative of the population. Both probability and non-probability sampling can be further divided by type. Probability samples can be simple random, stratified, or cluster, while non-probability samples can be classified as convenience, judgment, or quota. Samples can also be categorized based on whether they are fixed samples or sequential samples. In fixed samples is the size determined before the study begins. In a sequential sample, the number of elements to be sampled is not decided in advance but is determined as the data is collected. The snowball sample is a judgment sample and also an example of a sequential sample. This sample relies on the researcher’s ability to locate an initial set of respondents with the desired characteristics. The initial respondents are later on asked if they have any names of others who have interesting information and might cooperate (Churchill, 1996).

According to Johansson & Lindfors (1993), nonprobability sampling is often used in qualitative case studies. Judgement (or purpose) sampling implicates that the information units should be selected based on theoretical purpose and relevance, which means that it must be assumed that the phenomenon or problem exists within the sample of information units. The sample is dependent on the purpose of the study rather than on whether the sample is representative or not (Johansson & Lindfors, 1993).

It is necessary that the sample consists of respondents and companies that fulfil the criteria discussed above. The most important criterion is that the sample comprises companies, in which the phenomenon in focus exists.

The sampling method used in this instance is of a non-probability nature and judgement sampling is the approach. As explained in the previous in this thesis, the healthcare industry is one of the industries where the electronic marketplaces are the most developed. The average medical device firm is a model for U.S. business: small, flexible, and market driven, with a heavy emphasis on R&D (Davey, Aug 1999). In the U.S., 6,000 hospitals and 175,000 doctors’ offices purchase products from 20,000 manufacturers and distributors (Davey, Oct 1999). The future of the medical device industry will be shaped largely by the changing demographics of the world and the speed with which new technologies are discovered and approved for use. Development cycles can last a long time, while the actual market life of a product might be relatively short. These trends together with the advanced products make the purchase process complex (Industry overview, 1999). Because of these characteristics of the industry, Readex states that many individuals — from various job functions — are involved in purchasing
decisions for products and services used in medical device manufacturing. This makes the information distribution compound. These trends together with the advanced products make the purchase process complex (Industry overview, 1999). This makes the information distribution compound. These are the reasons for why this industry is selected for this study.

The geographical area, Chicago, was selected out of convenience, because the headquarter of the Swedish Trade Council North America is located there. The second reason is the fact that the Chicago region is very active in the development of business-to-business e-commerce, both with eMarkets like PlasticNet.com and Grainger.com, but also from an academically stand point with leading research in the area from the big universities. As buyers, hospitals were selected because they are very influential in the healthcare industry. The manufacturers, or the first sellers in the distribution chain, were selected to achieve the “end to end” perspective. To choose manufacturers registers at eMarkets were used to find active e-commerce companies. Companies were then contacted to find out their attitude towards e-commerce and interviews scheduled. Individuals interviewed in each case were identified as having contacts with all the parties involved in the purchase or selling, as well as having first-hand knowledge of the current trends in the industry. The objective of each interview was to get not only the interviewee’s perspective, but also of the respective organization (hospital and manufacturer). The products selected were surgical disposables or products with similar characteristics regarding their complexity.

4.7 ANALYSIS OF DATA

According to Yin (1994), data analysis consist of examining, categorizing, tabulating, or in another way recombining the evidence to address the initial propositions of the study. Yin (1994) continues, “…every investigation should start with a general analytic strategy – yielding priorities for what to analyze and why”. The way in which the data is analyzed is of course important for any research study and for this study it will comprise the analysis of the interviews and the documentation provided by the organizations. Two general strategies are proposed by Yin (1994): either the researcher relying on theoretical propositions and following the selected frame of reference, or developing a case description, that is, use a descriptive way to present data. Within these strategies four analyzing techniques exist:

- Pattern matching: Comparing empirically based pattern with a predicted one.
- Explanation building: A type of pattern matching where the goal is to analyze the case study data by stipulating a set of casual links about it.
- Time-series analysis: Multiple measures of the dependent variable in order to look at changes over time.
- Program logic models: Combination of pattern-matching and time-series analysis, where the complex chain of patterns over time is being stipulated.

Data analysis consist of three stages: data reduction, data display and conclusion drawing according to Miles & Huberman (1994) who portray each stage as follows:

- Data reduction helps to focus, sharpen and organize data to provide the means for drawing the conclusions.
The second major activity in the data analysis is the data display, which involves taking the reduced data, and displaying it in an organized, compressed way so that final conclusions can be more easily drawn.

Conclusion drawing is the final analytical activity for the qualitative researcher. Drawing conclusions is done by noting regularities, patterns, explanations and possible configurations.

Yin (1994) also explains specific techniques for how data can be analyzed.

1. Within case analyzes: Comparing your data against the theory used in the conceptualization.
2. Cross case analyzes: Data in one case compared to data in another.

4.9 METHODS SELECTED IN THIS STUDY

The purpose of this research project can be said is mainly descriptive, with deductive and qualitative approaches. The research design utilized is multiple-case study. Preferred data collection is first secondary and then primary. As research strategy multiple case studies were selected. For the primary data collection direct observation together with face-to-face and phone interviews with open ended discussion guides were selected. Samples are non-probability judgement and the data is being analyzed within and cross case analyzes.

4.10 QUALITY STANDARDS

A researcher has to examine the chosen methods and eventual method problems. Two important concepts in this matter are reliability and validity. Reliability refers to the ability to obtain similar results by measuring an object, trait, or construct with independent but comparable measures. Evaluating the reliability of any measuring instrument consists of determining how much of the variation in scores is due to inconsistencies in measurement. The reliability should be established before it is used for a substantive study. Any scale or other measurement instrument that accurately measure what it was intended to measure is said to have validity. The validity of a measuring instrument is defined as “…the extent to which differences in scores on it reflect true differences among individuals on the characteristic we seek to measure rather than constant or random errors”. An illustration of reliability and validity can be studied in Figure 4.2. (Churchill, 1996 & Yin, 1994).

![Figure 4.2 Quality Standards, Churchill, 1996 & Yin, 1994.](image-url)
4.11 CRITIQUE OF METHODOLOGY

It is important to stay critical during the entire research process, from the first ideas through the purpose and how one plans and carries out the research to the final results.

In a research implementing any form of measurement, quantitative/qualitative errors will occur. Churchill (1996) mention four possible sources to measurement errors:

- **Respondent error**, this can occur when a respondent is not certain on his point of view, and therefore gives different answers at different times. This type of error will also arise if the respondent is guessing or deliberately gives the “wrong” answer to get the “appropriate” effect. To avoid this additional phone interviews were conducted.

- **Instrumental error**, can be caused by the way in which questions are presented. They can be sensitive, misleading, vague or even offensive. This type of error can also be caused by the sequence in which the questions are asked. The respondents in the cases all had an agenda one week in advance with the discussion topics to be able to prepare.

- **Interviewer error**, is caused by the interviewer. By age, sex, choice of clothes and appearance the interviewer can affect the respondent. This type of error also incorporates interpretation errors, i.e. the interviewer interprets the respondent’s answer incorrectly. All the interviews were recorded, to avoid misinterpretations.

- **Observation error**, during the data collection by observation, an error might occur because the same observation can never be made twice. The same preparations were made for all observations and all had the same checklist. Also phone interviews were conducted to clarify obscurities.
5. DATA PRESENTATION AND ANALYZES

The purpose of this chapter is to provide the empirical data collected from the case studies conducted. First the observation of the three eMarkets will be presented. They will all be observed from a checklist and thereafter compared with each other. Then data from the three hospitals and the three manufacturers will be presented to answer research questions two and three.

All cases will be presented the same way. First, each case will be presented and this presentation will consist of an introduction, which includes information on the organization in question, this will also include a presentation of the respondent who was interviewed and his comprehensive view of eMarkets. Then the data will be presented. Next section will be the within analyzes for the data presented, and the data will here be further reduced (Yin, 1994). This will be done according to the frame of reference.

First the research question number one will be presented (How can an electronic marketplace be described from both buyers' and sellers' perspective). Each eMarket at a time will be presented and analyzed. Next research question number two going to be presented (How can the needs of organizational buyers and sellers be described regarding electronic marketplaces?). The data will here be reduced and placed into the hierarchy of needs identified by Maslow (1954). First the three hospitals going to be analyzed followed by the manufacturers. The next data presentation and within analysis will concern research question number three (How are the eMarket influencing the buying and selling processes in these organizations?). Here the data will be reduced and placed in to the three main categories, pre sale, sale and post sale. Then the data will be within analyzed. The analyzes will be organized the same way with pre sale, sale and post sale. Under each of these main categories the data will be analyzed into the subcategories presented in the conceptualization. The data display will serve as an analytical tool when comparing the organizations to each other. This comparison is referred to as cross case analysis (Yin, 1994). The cross case analysis will be performed in the following section 5.4. Finally, the overall conclusions will be drawn and do the final recommendations in chapter six. The organization and layout of the case presentation and the analysis is presented schematically below (Figure 5.1). The cross case analysis will compare buyers and sellers with each other. Different activities appear for both buyers and sellers, but it is the intention to find corresponding activities and needs and thereby match patterns. For this reason the will be compared in the cross case section.

![Figure 5.1 Schematic display of chapter five & six.](image-url)
Each of the interviews are conducted face to face and later additional information was collected via a phone interview where needed. The three first cases are electronic market places, Hospital Network, Medibuy and OmniCell. Then three hospitals, Mount Sinai, Rush and Mercy represent the buying side. Finally the three manufacturers and sellers with Ferris Manufacturing Corporation, Milex products and Mabis Healthcare Incorporation will be presented and analyzed.

5.1 DATA PRESENTATION & WITHIN ANALYZES ELECTRONIC MARKETPLACES

Here the research question number one will be presented and analyzed.

The first case presentation and within case analysis will cover Hospital Network, which is an electronic marketplace active in the healthcare industry.

5.1.1 Data presentation - HospitalNetwork.com

HospitalNetwork is an eMarket for industry professionals in the healthcare industry. HospitalNetwork is part of VerticalNet, which is responsible for more than 40 industry specific vertical trade communities. Hospital Network was launched in April 1999. Interested visitors wishing to join Hospital Network community just have to fill in a registration form. It is free for the buyers to register. For the sellers the cost structure depends on which services they are using. To list products and invest in a storefront there is an initial cost. For the E-Commerce center it is an initial cost and then a commission based sale fee. At HospitalNetwork an additional telephone interview was conducted with Nina McEloy an industry manager.

First each feature existing at Hospital Network will be presented.

Product center
The features under the product center will be explained below.

Product info
- **Buyers guide**: Find products and vendors in one of the largest online directories available in the industry. Here it is possible to search through product categories to find specific products. When found a product contact information for the company is provided. Products available are everything from medical disposables, surgical capital equipment to housekeeping products.

- **Product showcase**: Hospital Network selects some of the best new products in the industry and presents them in the Product Showcase. Request free information on each product by checking the appropriate box and clicking Request Information at the bottom of the page.
RFQ/RFP: Here it is possible to request for quote, proposal, projects out for bid, or products out for bid. Select key word and part of the world and send the request. The solicitation will remain online until one week after the deadline for bids. The contact will then be managed direct between buyer and seller. Only the buyer can see the bids and thereby the seller does not know if any other bids has been placed.

Consulting service: Here online consulting procurement service consisting of a network of pre-qualified, independent firms is available.

Marketplace

E-Commerce Catalogs: Catalogs with storefronts are presented. It is here possible to request for information and buy direct through Hospital Network as well.

Info store: In is here possible to search for and buy books, software, videos, journals, newsletters and reports through the eMarket.

Classifieds: A valid customer account is needed in order to place an ad or reply to an ad. Fees range depending upon the type of ad placed and the length of time that it is set to run.

Suppliers

E-Commerce Center: First a brief description of the company is provided with contact information and type of products available. At next level it is possible to purchase online from a company's catalog or just request for information. The aim with the E-Commerce center to directly generate sales.

Pavilion: Hospital Network has partnered with Microsoft in the Pavilion, which features Independent Software Vendors (ISV) that built applications. The emphasis is on the ISVs applications, related products information and other content that will keep manufacturing professionals up to date.

Business Service Center: The Business Services Center is provided as a resource that Hospital Network members can use to gather information and/or purchase business-to-business goods and services online. From Business Information Services to Technical Drawing Software. Once a product is found it is possible to purchase it directly from the sponsor and when an order is placed acknowledgement is received through email.

Store Fronts: Here it is possible to research a company's products and services and requests additional information online. It is not possible to purchase on line. The aim with the storefronts is to generate leads through the storefront.

Professional center

Career Center: At the career center features like job search, recruiter center and employer spotlight is provided. The jobs are all industry specific.

Resource

Under this section discussion forum is offered together with events calendar.

Site search

It is also possible to do a site search under each category featured on the Web page.

Editorial
Industry news is here provided from different organizations and magazines as well as a Hospital Network’s own newsletter. The editors’ feature articles and provides month in review of news.

### 5.1.2 Within analysis – HospitalNetwork.com

In this section HospitalNetwork is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number one.

**Catalog**

At HospitalNetwork there exist a few different levels of catalogs. As a buyer it is possible to do a search for a vendor, product category or product. This is called the *buyers guide* and does not guarantee that it is possible to order online, to find products and contact information to the vendor or manufacturer is always available. At the *Storefront* more information about the selling company is provided. The information about the products is more detailed and includes pictures. It is also possible to contact the selling company via an email link at the storefront. Next level is catalog with electronic orders and the feature is called *E-Commerce Center*. This center has all the possibilities that the Storefront got, but it is also possible to direct place an order.

*Both the types of catalogs identified in the theory chapter are present at HospitalNetwork. The catalog that aims to generate leads, are product listing and Storefront. The catalog that aims to direct generate sales is also accessible at HospitalNetwork. Currently it is just a few manufacturers that use this feature called and most of them use the product listing.*

**Auction and Exchange**

These features are currently not available at HospitalNetwork.

*The auction works best in industries or settings where one-of-a-kind, non-standard, or perishable products or services need to be bought or sold. Capital equipment, used products, unsaleable returned products, surplus and hard-to-find products fit this description (Digital Marketplaces, 1999). Currently this feature does not exist, but the description fit the present product offer at HospitalNetwork.*

*The exchange model works best for near-commodity items that can have several attributes, but are easy to specify (Digital Marketplaces, 1999). The description of the product offering at HospitalNetwork, where the products are individual purchases and they are evaluated from many different variables and price is not essentially the deciding one, do not fit with the product characteristics identified for the exchange feature in the theory chapter.*
Value adding features

- **RFQ/RRP:** This is an electronic billboard, where you post the request or proposal. The host of the eMarket is not involved in the communication between buyer and seller. If it is a buyer that posted the message only, only the buyer can see each seller’s response. In an auction all the bids are open and the marketplace is responsible for the auction.
- **Product showcase:** Here selected new products are featured.
- **Consulting service:** A network of pre-qualified neutral consulting companies is available.
- **Pavilion:** Here ASP services are available.
- **Career Center:** A meeting forum for employers and employees.
- **Information features:** News, events, classifieds and educational material can be found and bought.

Providing the value adding features is getting more and more important, when the visitors are getting more sophisticated habits according to the VerticalNet CEO. HospitalNetwork offer these services and it is not only information features that are provided, but also features like RFP/RFQ and consulting services.

By ending the case presentation and within-case analysis of HospitalNetwork the attention is now turned to investigate the next eMarket, which is Medibuy.

medibuy.com

5.1.3 Data presentation - Medibuy.com

Medibuy is a provider of Web commerce and related Internet services within the healthcare industry. Medibuy will focus on serving the needs of the buyer and therefore serving the entire industry. Only persons or organizations that deliver healthcare services and which purchase goods and services for use rather than resale may register as buyers. The registration as a buyer or vendor will determine the portions of the Medibuy Web page to which access will be permitted. Medibuy charges annual subscription fees to parties who register as vendors on the page. Those fees are based on the level of annual sales that the vendor makes to healthcare industry customers. In addition to the subscription fees, Medibuy charges fees to the vendor for each transaction that the vendor concludes through use of the Medibuy Web page. At Medibuy an additional phone interview was conducted with John Kelly, Vice President International.

Buyers:

- **eRFP:** Submit a request for proposal form or browse the catalog with access to distributors and manufacturers from around the world for the best prices. It is possible to request for all products available on Medibuy. The vendor contacting a buyer whose request for proposal is posted on the page mostly off-line. All transactions occur directly between the buyer and vendor, and Medibuy is not a party to them. Only the buyer can see all bids.
- **eCatalog**: In the eCatalog immediate and comprehensive information and current prices on all the products and services is accessible.

- **eAuction**:
  
  Bidding: An email message will confirm that a bid has been submitted and the bid will also be available for review in the auction management center. The seller will be notified via email. Once an offer is accepted, an email will be sent from Medibuy detailing the escrow payment process, which is mandatory. All bids are open to the participants at the auction manager center.

  Selling: Posting a product to is currently free. Any correspondence will go through the Medibuy system to ensure anonymity. An email will be received every time a new bid is submitted for the products and the status for the auctions can also be reviewed in the auction management center.

**Vendors:**

- **eAuction**: The auction is explained above.
- **eRFP**: The request for proposal is explained above.

**News**:

Industry news is here provided from different newspapers and magazines.

**5.1.4 Within analysis - Medibuy.com**

In this section Medibuy is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number one.

**Catalog**

At Medibuy this featured is called eCatalog and it is possible for buyers to search for all products available at Medibuy. It is not achievable to place orders through the eCatalog.

*At Medibuy the catalog that aims to generate leads is currently present.*

**Auction**

The eAuction is managed by Medibuy and all the bids are open. Both auction and reverse auction are available.

*Creates value by spatial matching of buyers and sellers. They work best in industries or settings where one-of-a-kind, non-standard, or perishable products or services need to be bought or sold. The eAuction at Medibuy works as identified in the theory chapter.*
Exchange
This feature is not available at Medibuy.

The exchange model works best for near-commodity items that can have several attributes, but are easy to specify (Digital Marketplaces, 1999). The description of the product offering at Medibuy, where the products are individual purchases and they are evaluated from many different variables and price is not essentially the deciding one, do not fit with the product characteristics identified for the exchange feature in the theory chapter.

Additional features
- **eRFP**: Both buyers and sellers can request for proposal and the bids are only known by the party posted the message.
- **News**: Industry news is here provided from different newspapers and magazines.

The value adding features explained in the theory chapter are also present at Medibuy. The RFP/RFQ is a bidding process that intends to generate sales and then information services are also existing to create an industry platform.

By ending the case presentation and within-case analysis of Medibuy the attention is now turned to investigate the third eMarket, which is OmniCell.

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5.1.5 Data presentation - OmniCell.com

Established in 1992 as OmniCell Technologies, Inc., Omnicell.com today has over 1,200 healthcare customers. Online sign up is available for any healthcare organization. The fee to purchase items over OmniBuyer is transaction based. It is also an initial fee that differs depending on contract.

First each feature existing at OmniCell will be presented.

**Buyer**
- **OmniBuyer**: OmniBuyer is an automated requisition and procurement service. They try to streamline the purchase process by connecting healthcare institutions to any medical supplier through OmniCell’s Web-based platform. The platform enables institutions to automate and simplify the medical supply procurement process, from the initial requisition to fulfillment. The buyer has immediate access to virtually any medical supplies on the market. Each buyer and supplier must have an agreement in order to conduct business with one another and the relationship and pricing agreements remain confident between them. The buyer can search the virtual catalog or place a requisition.
- **OmniSupplier**: OmniSupplier target manufacturers and suppliers in the healthcare industry. With OmniSupplier system it is possible to automate the entire process for
suppliers, from product requisition to payment. OmniCenter make it possible for the supplier to download information on inventory levels and product usage information and upload information on patient records.

**Products**

- **Pharmacy systems:** store, dispense, control and automatically track medications in patient care areas.
- **Supply systems:** cost and information management system, which is connected by telephone lines or computer network to secured automated storage cabinets located throughout healthcare facilities.
- **Combination systems:** Combination of the two systems above.

**Data analysis service**

This is a Web decision support information system. Service provides trend analysis, decision support and regulatory compliance reports.

**News & events**

Industry news is here provided from different newspapers and magazines and industry specific events.

**5.1.6 Within analysis - OmniCell.com**

In this section OmniCell is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number one.

**Catalog**

The buyers can search product catalogs, but just search for vendors they do have contract with. It is also possible to purchase the products through OmniCell.

*One other trend with these marketplaces realizes is integration of the business processes with the services offered. The industry specific hubs will perform a patchwork of alliances with the functional hubs. (Sawhney & Kaplan, 1999) OmniCell has partnered with Commerce One to integrate the business processes to their eMarket. At OmniCell it is possible to purchase all products found direct through the eMarket. OmniCell provides the software needed and focus to stream line as much as possible in the ordering process.*

**Auction & Exchange**

These features are not available at OmniCell.
These features identified in the theory chapter are currently not present at OmniCell. They concentrate to integrate as many business processes as possible to their sophisticated catalog and do not currently have any of these two features.

**Value adding features**
OmniCell is concentrating on providing their customers with software. They have many different applications for this and they were described in the previous section, the data presentation. Industry news and an event calendar are also accessible under value adding features.

The importance of the value adding features is stated in the theory chapter. OmniCell offers information services such as industry news, but also industry consulting services.

Next research question two will be presented. The next case presentation and within-case analysis will cover Mount Sinai Hospital, which represent the first of three buyers in this study.

### 5.2 DATA PRESENTATION & WITHIN ANALYZES BUYERS AND SELLERS NEEDS

Here the research question number two will be presented and analyzed.

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**5.2.1 Data presentation - Mount Sinai Hospital**

Founded in 1919 Mount Sinai is a member of Sinai Health System, along with Schwab Rehabilitation Hospital and Care Network, Sinai Community Institute, Sinai Medical Group and Sinai Health First. Mount Sinai a 432-bed teaching, research and tertiary–care facility. Mount Sinai provide state-of-the-art health services to Chicago’s neediest residents, as well as to others in the metropolitan area who require sophisticated medical and surgical care. Mount Sinai is part of a purchasing organization called Premier, but some of the purchases are made directly with manufacturers.

Lou Madas is the Director of Material Management at Mount Sinai Medical Center. Mr. Madas has been working 22 years with purchasing in the healthcare industry. According to him the eMarkets are not well understood and used in the healthcare industry. Currently he uses the eMarkets to compare prices on products and get information about them. Mr. Madas also uses the discussion forums provided by the eMarkets to meet industry people. He went on saying within eight to ten years the eMarkets going to be real important and going to change how purchases being done and change the purchase departments.
Here the data will be presented from the interviews with Mr. Madas. The data will be presented under each need category classified by Maslow (1954) in his hierarchy of needs.

**Physiological**
The needs that were mentioned under product functionality were easy to use and reliability. Important for easy to use was to understand the product and the advantages with it from the first time using it.

**Safety**
Under the basic services Mr. Madas mentioned the importance of dual source both to spread the risk and get a wider understanding. The dual source was most important for information, but was brought up for delivery and finance as well. With dual source he meant get information or service from more than one single provider. The information in the purchasing situation has to be easy and fast to find. Furthermore the information have to be accurate, reliable and unbiased. When dealing with a new product or supplier he asks for a list of current users and talks to them about a certain product and finding their experience. He brings up the importance of finding a neutral third party as the source of the information required. If he talks to a different user he talks about length of using, problems that has come up and advantages with the product. Mr. Madas claims that his judgement is totally formed in the third parties advise.

When talking about finance and payment needs, Mr. Madas mentioned spread and minimized risk, flexibility and convenience. The finance system they use at Mount Sinai is called creative finance, which means pay per delivery, and no long range payments. This arrangement is done to avoid risk in the purchase and keep as much flexibility as possible with open-end agreements. Another need mentioned under finance was insurance, again to minimize risk. The needs named for delivery were convenience, speed of delivery, interactivity in form of tracking the product, and quality. With quality Mr. Madas meant right quantity and delivery at right time.

**Social**
The personal contact is very important and is so throughout the whole purchasing process, from first contact through the purchase and finally in the post purchase activities. The single most important need under personal contact is availability, to whenever needed reach people and get fast and correct responses. Also interaction is mentioned as an important need for the personal contact. Next important need Mr. Madas mentioned was education, how to use the products and understand the advantages with new innovations. Education about cleaning, safety and environmental issues were of priority. He says that education is an ongoing process, but of course most important when start using a new product.
Esteem

Reputation is also an important issue that is taken under consideration. Reputation of products and suppliers is a deciding factor, the more important the purchase is, the more important is the reputation. If a new product is being considered the reputation of the distributor or a third party can work as a guarantee and the purchase is more likely to be executed. With disposable and not so strategic important products the willingness of risk taking increases. The reputation is still important, but here the purchase has to be convenient and fast.

Self-actualization

Mr. Madas could not identify any needs in this category.

5.2.2 Within analysis – Mount Sinai Hospital

In this section Mount Sinai is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number two.

According to Maslow (1954) the first need in his hierarchy is physiological needs. Here the functionality of the product was identified. The tactical needs under product functionality were reliability and ease to use. Next stage in the hierarchy is safety needs and three strategic needs were identified. Information was the first need named. For information the tactical or operational (Griffin, 1989) needs were dual source, fast and easy to find, accurate and reliable. Next strategic needs were finance and payment, with operational needs, dual source, minimize risk, flexible with open end agreements and convenient. The last strategic need under the safety stage detected was delivery. The tactical needs here were convenience, speed, interactivity and delivery at right time.

Personal contact is a social need according to Hauser (1999) and the third stage in the hierarchy, under personal contact accessibility and immediate interaction were distinguished as tactical needs. Education was also identified under this category with continuousness as operational need discovered. The need of trust is important and is identified through the whole case. Maslow (1954) points out esteem as the next step in his hierarchy of needs and Hauser (1999) relates reputation and prestige to this level. Identified here were reputation and brand as a deciding factor in the purchase. Under reputation needs trust and reliability were distinguished. The needs analyzed in this case are further reduced in table 5.1.
Table 5.1 Need classification, Mount Sinai Hospital case

<table>
<thead>
<tr>
<th>Need</th>
<th>Type of strategic need</th>
<th>Type of tactical need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Reliability and ease to use</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Information</td>
<td>Dual source, fast and easy to find, accurate, neutral source and reliable</td>
</tr>
<tr>
<td></td>
<td>Finance and payment</td>
<td>Dual source, minimize risk, flexible with open end agreements and convenient</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Convenience, speed, interactivity and delivery at right time</td>
</tr>
<tr>
<td>3. Social</td>
<td>Personal contact</td>
<td>Accessibility, immediate interaction and trust</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Continuousness and documentation</td>
</tr>
<tr>
<td>4. Esteem</td>
<td>Reputation and prestige</td>
<td>Trust and reliability</td>
</tr>
<tr>
<td>5. Self-actualization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Next Rush Hospital will be presented and data for the second research question will be presented and analyzed.

5.2.3 Data presentation - Rush Hospital

The Rush System for Health, originally known as the Rush University System of Health, was a creation of Rush-Presbyterian-St. Luke's Medical Center in 1968. A unified, comprehensive health care system for approximately 1.5 million people utilizing 4500 beds, with 400 tertiary care beds located in the Medical Center.

John Webb is the Director of material management at Rush hospital. He has been working 16 years at Rush and 40 years with purchasing in the healthcare industry. Mr. Webb is familiar with eMarkets within his industry, but say that they are poorly understood and almost no one use them today. Rush has a partnership with OmniCell.com, which is a competitor of Medibuy and Neoforma. OmniCell partnered with Commerce One to build B2B relationships with their business partners. Rush is part of Novation, which is a central organization that establishes contracts with vendor. Novation do not negotiate for the hospitals, they only establish contracts. Rush then has the opportunity to use to contract or not.

Here the data will be presented from the interviews with Mr. Webb. The data will be presented under each need category classified by Maslow (1954).
Physiological
The needs that were mentioned under product functionality were easy to use and reliability. Mr. Webb says it has to be possible through education to understand the advantages with the new product and that it then works well.

Safety
Reliability in delivery is the first thing Mr. Webb mentions when talking about delivery. This is accomplished through contract with every vendor Rush Hospital doing business with. Information has to be filtered, only the right information about the right product and from the right source. So the information has to be reliable, accurate and on time. Mr. Webb goes on talking about immediate interaction during the whole purchase. He talks about the importance of face to face contact to get the immediate responses. Accessibility is also mentioned, to be able to find information whenever you have the time. Control in negotiation; not let a third party negotiate for them. Got to have control over the negotiation, to be able to back out at any time in the negotiation. This is why Rush did choose OmniCell, because there it was possible to do your own negotiation. Education is important not only how to use the new products, but to use new technology that increases the efficiency in the purchasing process. Here the immediate interaction was stressed to get a discussion during the education.

Social
Mr. Webb talks about the importance of trust. He does not do any business with someone that is not known to Rush Hospital. This is substantial so you know the products going to be delivered, have right quality and get support when problem arises Mr. Webb continues. Mr. Webb talks about the importance of the personal contact when establish a relationship and negotiate terms for a contract. The first step has to be with human contact, to get to know the person or company.

Esteem
The brand and status is important for the product. Mr. Webb claims that companies that have been in business a long time get the reputation they deserve. He still would not trust a neutral third party giving advice about a product or service, no matter what reputation they have.

Self-actualization
Mr. Webb talks about the close relationship with vendors that they have under contract and now the VAN (Value Added Network) portal OmniCell. But he continues and says that Rush does not have any relationships that are this close as described by Hauser (1999) and thereby he can not identify any needs in this category.

5.2.4 Within analysis - Rush Hospital
In this section Rush is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number two.
Needs identified in the first stage of Maslow’s hierarchy was product functionality and for this need the quality of the product was important together with easy to understand and use. For delivery tactical needs identified were reliability and quality. Further was information brought up and it had to be filtered, accurate and accessible. The next strategic need classified was education as an essential part in the purchasing situation. Operational needs were continuously performed education and with immediate interaction.

Social is the fourth level and here the personal contact was pointed out, to being able interact immediate. Further to build a relationship and trust. Trust was also broached for the two-way relationship together with convenience in the purchasing situation. The brand and reputation is important when doing business and helps to build trust. This analyze is further simplified and the needs identified in this case are put into the table 5.2.

<table>
<thead>
<tr>
<th>Needs</th>
<th>Type of strategic needs</th>
<th>Type of tactical needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Easy to use and reliability.</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Delivery, Information</td>
<td>Reliability and quality</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Filtered, accurate, accessibility</td>
</tr>
<tr>
<td>3. Social</td>
<td>Personal contact, Two-way relationship</td>
<td>Immediate interaction, accessibility, relationship and trust, Trust and convenience</td>
</tr>
<tr>
<td>4. Esteem</td>
<td>Brand</td>
<td>Status and trust</td>
</tr>
<tr>
<td>5. Self-actualization</td>
<td>Partnership</td>
<td></td>
</tr>
</tbody>
</table>

Next Mercy Hospital will be presented and data for the second research question will be presented and analyzed.

**5.2.5 Data presentation - Mercy Hospital**

Mercy Hospital and Medical Center is a 485 bed Catholic, teaching hospital with a network of medical centers serving Chicago and the suburbs. The first chartered hospital in Chicago, Mercy was founded in 1852 by the Sisters of Mercy. Mercy has an excellent medical staff. Mercy is located close to Chicago downtown. Mercy Hospital is part of a purchasing organization called Premier, where most of the purchases are being done.

Joseph M. McCarthy is Manager of purchasing at Mercy Hospital & Medical Center. Mr. McCarthy has been working 16 years with purchasing within the healthcare industry. He is familiar with the eMarkets in his industry, but says that they are not influential today. Today Mr. McCarthy use the eMarkets only to search new products and say that it is very convenient using the web as a source for information. He forecast that they will be
important in the future, when they reach a critical mass of buyers and sellers. This together with the fact that the users need time to get the education needed to use and understand the advantages with the eMarkets. Mercy is also part of the central purchasing organization Premier, which negotiate contracts for Mercy.

**Physiological**
The first need in the purchase is product functionality. To functionality the degree of problem solving together with ease to use and quality with the product.

**Safety**
Mr. McCarthy first mentions the importance of accessibility throughout the purchasing process. Always reach people when needed and fast find answers on questions that arise. This accessibility need is comprehensive and goes for many of the activities in the purchasing process.

When talking about information needs Mr. McCarthy explain that the information has to be easy to find and correct. Again the immediate interaction at all times are stressed when searching information. He goes on talking about the delivery to be on time and flexible. If he as buyer would like to change the quantity or time of delivery, it has to be possible to do even close to the shipment. Finance needs revealed was first trust and reliability. Further the convenience and security with payment was brought up. All the purchases are done under contract to minimize risk with payment; to have insurance if the seller can not fulfill the amount agreed on. This is also done to create a relationship and make an efficient process.

**Social**
As mentioned all purchases are under contract and this is not only to minimize risk, but also because Mr. McCarthy first establishes a relationship. This is substantial through the purchase regardless product and also to build trust into the relationship. This is achieved through personal meetings. Some part of the trust can also be accomplished through history doing business or reputation in the industry.

Convenience in the purchase is brought up often, to find people and information with ease when necessary. Depending on the complexity of the product being purchased, the education part differs in importance. But even in the smaller purchases the education is important and has to be executed by a sales representative or manufacturer.

**Esteem**
The trust brought up earlier can be achieved through a recommendation from a well respected third party according to Mr. McCarthy, that is a central organization or other users. The brand is also important and can work both as trust and to feel confident with a decision. A third neutral player with a strong reputation and brand can definitely play a role to satisfy esteem needs.
Self-actualization
Mr. McCarthy could not name a need in this category and says they do not have any partnerships with this close relationship, maybe in the future but not today.

5.2.6 Within analysis - Mercy Hospital
In this section Mercy is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number two.

Product functionality was brought up as first strategic need. Here solve the problem, ease to use together with quality were identified as tactical need. Next information need was mentioned with belonging tactical needs accessibility, easy to find, correct and immediate interactions. Further distinguished strategic needs were delivery and finance. Operational needs under delivery were flexible, on time and convenient. Tactical needs for finance branded were security, trust and convenience.

Personal contact is a central need in Maslow’s third stages in his hierarchy according to Hauser (1999). For personal contact tactical needs identified in this case were establish relationship and trust, immediate interaction and convenience. Additional need was education and mentioned operational needs were accessibility, convenience and continuously performed. Reputation and brand was brought up as a deciding factor in the purchase. Tactical needs under reputation were trust and confidence, especially when doing business with a new partner. The needs analyzed in this case is further reduced and presented in table 5.3.

Table 5.3 Need classification, Mercy Hospital case

<table>
<thead>
<tr>
<th>Need</th>
<th>Type of strategic need</th>
<th>Type of tactical need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Solve the task, ease to use and quality</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Information</td>
<td>Accessibility, easy to find, correct, immediate interaction</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Flexible, on time and convenience</td>
</tr>
<tr>
<td></td>
<td>Finance &amp; payment</td>
<td>Security, trust and convenient</td>
</tr>
<tr>
<td>3. Social</td>
<td>Personal contact</td>
<td>Establish relationship and trust, immediate interaction and</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>convenience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accessibility and convenience</td>
</tr>
<tr>
<td>4. Esteem</td>
<td>Brand and reputation</td>
<td>Trust and confidence</td>
</tr>
<tr>
<td>5. Self-actualization</td>
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</tbody>
</table>

Next Milex Products Inc. will be presented and data for the second research question will be presented and analyzed.
5.2.7 Data presentation - Milex Products Inc.

Milex Products, Inc. is a private company founded in 1937. Its home offices are in Chicago, Illinois. Total US workforce numbers approximately 150 with about 90 sales representatives reporting directly to Chicago. Milex sell directly to their customers through their sales representatives. Their sales network covers the entire US. For the international sales Milex have partners that distribute and sell their products. The reason for the direct domestic sale is that Milex do not want to lose the contact and relationship with their customers. The one-on-one relationship with their customers is crucial for Milex. Their products are gynecological and disposable products and they sell directly to their end-users.

Richard E Gross is the manager of business operations at Milex headquarters in Chicago. Mr. Gross has been working five years within sales in the healthcare industry. Mr. Gross is familiar with the eMarkets in his industry and the usage is growing according to him. He continues saying that he visit the eMarkets frequently and receive much information from them. Mr. Gross say that he uses the eMarkets only for information search and say it is a great resource. Milex has not participated yet for a few reasons. The first reason is timing, they are not ready. They just started using email and some electronic information exchange with their sales representatives. The next reason Mr. Gross brings up is if they participate in the eMarket they have to cut out sales representatives, they would become a vendor and would be committed to deliver to any customers. He again states the need of one on one contact with the customers because of relationship building and education. Because they are negotiate and educate the customers they have to know who they are.

**Physiological**

Mr. Gross immediately mentions Milex good reputation in the industry and the product functionality is the core and their quality is crucial to accomplish satisfaction with the product. “We got this reputation through our products and their reliability” Mr. Gross states.

**Safety**

Mr. Gross talks about the convenience when searching information and to know that the information collected is valid. When talking about taking contact with customers, Milex really get to know them and check their financial records and if any problems occurred with other business partners of the potential customers. Consequently, trust and safety are two crucial needs with payment.

Mr. Gross then talks about distribution and to feel confident with the process, to know that it works and the customers going to get the products at delivered date. To have control of the distribution is also mentioned as an underlying need.

**Social**

For Milex the key in their sales process is the personal contact with their customers through the sales representatives. This is both regarding relationship building and
education. The education is an ongoing process throughout the sales process. With the personal contact the immediate interaction comes as well. This process also establishes a mutual trust for each other.

**Esteem**
Mr. Gross says that the brand and reputation is very important, both from their perspective trusting potential customers and them finding and trusting Milex.

**Self-actualization**
Mr. Gross points out the close relationship with their customers and calls them partners and the sales representatives consultants that solving problems or improving processes.

**5.2.8 Within analysis - Milex Products Inc.**
Consistent with Hauser (1999) Mr. Gross at Milex identifies product functionality and points out the quality as core operational need. When talking about information the tactical needs classified were convenience and validity. Next need identified was payment and there confidence, efficiency and safety were tactical needs pointed out. The third and last need acknowledged at third stage, safety needs, was delivery and under delivery the operational needs were control, reliability and delivery at right time.

Personal contact is stated as a strategic need and here relationship, trust and immediate interaction were distinguished. Education was also brought up with continuousness and relationship building as operational needs discovered. The need of trust is important and is identified through the whole case and crucial for the sales process. Maslow (1954) point out esteem as the fourth step in his hierarchy of needs as shown in table 3.2 and Hauser (1999) relates reputation and prestige to this level. Identified here were reputation and prestige as a deciding factor in the purchase, with trust and reliability as tactical needs identified. The fifth and last step in the need hierarchy is self-actualization and here close partnership with the customers was identified with trust and relationship as tactical needs. The needs analyzed in this case are further reduced in table 5.4.

**Table 5.4 Need classification, Milex Inc. case**

<table>
<thead>
<tr>
<th>Need</th>
<th>Type of strategic need</th>
<th>Type of tactical need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Quality</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Information</td>
<td>Convenience, validity,</td>
</tr>
<tr>
<td></td>
<td>Finance and payment</td>
<td>Confidence, efficient and safety</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Control, reliability and delivery at right time</td>
</tr>
<tr>
<td>3. Social</td>
<td>Personal contact</td>
<td>Continuousness and relationship</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Immediate interaction, relationship and trust</td>
</tr>
</tbody>
</table>
4. Esteem
   Reputation and prestige
   Trust and reliability

5. Self-actualization
   Partnership
   Trust and relationship.

Next Ferris Manufacturing Corp. will be presented and data for the second research question will be presented and analyzed.

5.2.9 Data presentation - Ferris Manufacturing Corp.

Ferris industry is a privately owned company with headquarters in Chicago, Illinois. Ferris manufacture and sell wound care products and have hospitals as biggest customers of their products. Ferris have their own distribution network in Europe, South America, Asia and Australia. Ferris sell directly to their customers in the Chicago area, but through a distribution network to the rest of the US. For the domestic sales Ferris is part of a purchasing organization.

Jeff Dziura is Director of international sales and also responsible for the business development of e-commerce at Ferris. Mr. Dziura has been working 18 years with sales in the healthcare industry. He is familiar with the eMarkets, but does not know how well used and understood they are in his industry. Mr. Dziura says that the eMarkets are great for marketing research. They are especially good for product-oriented research and trends within the industry. Reimbursement schedule and competitive pricing are examples what you would not find on these marketplaces. The discussion forums provided on the eMarkets are useful as well as news groups, trends or certain news items. He says that they are very informative and stresses the importance of being a neutral third party.

**Physiological**
The product functionality is the core and their quality is crucial and to accomplish satisfaction with the purchases. Mr. Dziura claims that without our quality products we would not make any resells.

**Safety**
Mr. Dziura mentions the need of information and that the source of information has to be reliable. He also brings up that it has to be easy to find and provide the depth needed for the information. When searching for potential customers he communicates the importance of credibility and checks the due diligence. Further he talks about the importance of a Web page, both as a source of information but also proof credibility. Even if Ferris do not sell direct to end-user, it is important to trust the distribution
channel. They have to know that the products will arrive on time and that qualified education will be performed.

**Social**
Personal contact is important, maybe less with the possibilities of electronic communication, but will still be an essential need. The personal contact is first to establish a relationship, but also to build trust. The active interaction is also mentioned. With the personal interaction comes education, which is the core to repetitive sales according to Mr. Dziura. The possibility to perform individual and precise education is achieved through personal meetings.

**Esteem**
The brand and reputation is very important in the selling and finding new potential business partners. Mr. Dziura claims that a well respected third party can satisfy a trust need in a new customer and grant for confidence making a decision.

**Self-actualization**
Currently Mr. Dziura can not see this need in his organization. He goes on saying that with the e-commerce development it might be the case in the future with self-actualization needs, but not today.

5.2.10 Within analysis - Ferris Manufacturing Corp.
Mr. Dziura identifies product functionality as strategic need, with reliability and quality as operational needs. The next need pointed out was the need for information in the selling situation. The tactical needs were depth in the information together with accurate and easy to find. The next strategic need was finance and payment with operational needs convenient, safe and credibility. Delivery was also a spoken strategic need and the process of delivery had to be controllable and reliable.

The first social need (Maslow, 1954) is personal contact. Trust and relationship was brought up, but also competitive advantage and entry to market were mentioned for the first time as tactical needs. Further is education also recognized as strategic need with operational needs continuousness, competitive advantage and that had to be individual performed. Reputation and brand were brought up with operational needs trust, reliability and confidence. The fifth and last step in the need hierarchy is self-actualization where no needs were identified. The needs identified in this case are presented in table 5.5.

**Table 5.5 Need classification, Ferris Corp. case**

<table>
<thead>
<tr>
<th>Need</th>
<th>Type of strategic need</th>
<th>Type of tactical need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Reliability and quality</td>
</tr>
</tbody>
</table>
Next Mabis Healthcare Inc. will be presented and data for the second research question will be presented and analyzed.

5.2.11 Data presentation - Mabis Healthcare Inc.

Mabis is a privately owned company with headquarters in Lake Forest outside Chicago, Illinois. Mabis products are for example blood pressure meters, thermometer sand and disposable latex gloves. Mabis sell through a distribution network and have international sales in Europe, Asia, Africa, Middle East, Latin America, Mexico, Canada, Australia and New Zealand.

Mr. Steve Wilms is manager of domestic sales. Mr. Wilms has been working nine years with sales in the healthcare industry. Mr. Wilms is familiar with the eMarkets in his industry, but does not use them other then searching for information. He goes on saying that they are very convenient using for information search and it is easy to find information about competitors and customers. Mr. Wilms claims there is no clear cut leader among the eMarkets.

**Physiological**

Mabis good reputation in the industry is mentioned at once and the product functionality is the core and their quality is crucial to accomplish satisfaction with the products. Mr. Wilms goes on by saying the products has to satisfy the expected need otherwise Mabis will not last.

**Safety**

Mr. Wilms then goes on mentions the need of information and that the source of information has to be reliable. He also brings up that it has to be easy to find and provide the depth needed for the information. Furthermore the information have to be accurate and have to be possible to rely on it. Payment is the next need Mr. Wilms brought up and there trust, a safe and easy system is mentioned. Mabis do not sell direct to end-user, but
it is important to trust the distribution channel and feel confident that they present the products appropriate. They have to know that the products will arrive on time and that qualified education will be performed.

**Social**
The personal contact is very important and is so throughout the whole purchasing process, from first contact through the purchase and finally in the post purchase activities. The single most important need under personal contact is availability, to whenever needed reach people and get fast and correct responses. Also trust is mentioned as an important need for the personal contact. Next important need Mr. Wilms mentioned was education, how to use the products and understand the advantages with them. He says that education is an ongoing process, but of course most important when start using a new product.

**Esteem**
The brand and reputation is very important in the selling and finding new potential business partners. Trust can be achieved through a recommendation from a well-respected third party, that is a central organization or other users. To build trust and to feel confident with a purchase situation is difficult without a good reputation.

**Self-actualization**
Mr. Wilms says that Mabis have a close relationship with their customers, but could not identify any needs in this category.

### 5.2.12 Within analysis - Mabis Healthcare Inc.

In this section Mabis is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number two.

The functionality of the product was identified, in line with Maslow (1954) as the first need in his hierarchy. The tactical needs mentioned for product functionality were reliability and quality. Information need was next need distinguished and important operational needs for Mabis were reliable, easy to find, accurate and deep. Further strategic need was payment, with operational needs, trust, safe and easy system. The last strategic need detected under the third stage, the safety stage, was delivery. The tactical needs here were quality and confident. With quality in delivery Mr. Wilms intended right time and right quantity delivered.

Needs under personal contact identified in this case were trust, immediate interaction and availability. Additional need was education and mentioned here were quality and continuously performed. The needs brought up and identified were prestige and reputation. Tactical needs were trust and confidence, especially when doing business with a new partner. The needs analyzed in this case is further reduced and presented in table 5.6.
Table 5.6 Need classification, Mabis Inc. case

<table>
<thead>
<tr>
<th>Need</th>
<th>Type of strategic need</th>
<th>Type of tactical need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physiological</td>
<td>Product functionality</td>
<td>Quality and reliability</td>
</tr>
<tr>
<td>2. Safety</td>
<td>Information</td>
<td>Reliable, deep, easy to find and accurate</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Trust, safe and easy</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Confident and quality</td>
</tr>
<tr>
<td>3. Social</td>
<td>Personal contact</td>
<td>Availability, trust and immediate interaction</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Continuousness and easy to understand</td>
</tr>
<tr>
<td>4. Esteem</td>
<td>Brand and reputation</td>
<td>Trust and confident</td>
</tr>
<tr>
<td>5. Self-actualization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3 DATA PRESENTATION & WITHIN ANALYZES BUYING AND SELLING PROCESS

Here the research question number three will be presented and analyzed.

5.3.1 Data presentation - Mount Sinai Hospital

Sinai hospital is part of a central purchase organization, called Premier. Mr. Madas says there are both state purchasing organizations and national wide organization and Premier is a state organization. They pull together hospitals and gather bargaining power for them. The purchasing organization then negotiates terms for the purchase including freight, delivery, payment etc. But the purchasing organization do not take a part in the delivery or payment, they just negotiate a contract. Not all products are bought through the purchase organization; some are purchased directly from the hospital. These purchases are called clinical decisions and vary much within different categories. One example when a product is bought directly from manufacturer is when it is a soul source, which means unique product with only one manufacturer. A clear majority of the products are bought through the purchasing organization, so it is a small part of the purchases that is a clinic decision.

Pre purchasing

The need recognition is the first step in the purchase and the end-user comes with the need to the purchasing department. This recognition is done by the end user that communicates the need to the purchasing department. The normal routine is that a sales representative contacts the doctor or physician, presents the product and creates the need. The end-user then presents the need and desired product to the purchasing department. Search and discover the potential products are then done by the purchasing department. There are many different information sources and the Internet is one of them together with industry information organizations, product catalogs and other users. The negotiation is mainly a face to face process which can be as long as six weeks and includes product testing and evaluation. This varies much and depending on the characteristics of the products. The purchasing department does the negotiation, but the
end-user always participates with their knowledge of expertise. Here the relationship is established and a contract written.

All the steps in the pre purchasing stage cannot be done electronically, at least yet. The only activities that are done electronically today are the search for and compare some of the deciding variables, such as price of the products. Mr. Madas says that the human interface will decrease with the progress of electronic commerce, but it is crucial to establish contact and a relationship.

**Purchasing**

The order is placed from the purchasing department. There are three ways to place the orders, EDI, fax or phone. Today more and more orders are placed via EDI, because of the efficiency, the fact that it is uncomplicated and less human errors crop up. This is not Internet based EDI, but all Sinai’s major vendors got the same standard and new vendors start using EDI constantly. The order acknowledgement comes in electronically. When the order comes in, the receipt automatically goes up to account department and the payment is being made. Before payment goes out, the account department inquires with purchasing so the order received is correct. Since three years all the activities in the purchasing stage are done electronically and thereby reducing human errors and make a more efficient process.

**Post Purchase**

All the activities in the post purchase are done with the sales representative and a little contact with the manufacturer. Today these steps are done much with face to face contact. Mr. Madas says that this is the way it is done and the way the end users like it. A small part of the support is done via email today and he foresees that more and more will be done electronically in the future. Example on support that is done via email is back office support such as problem with delivery support that is not product specific. Mr. Madas also says it is important to have the personal contact because of documentation, to know and have proof that adequate education and support have been executed.

Most important step in the purchasing process is the need recognition. Other crucial steps are comparing products, negotiation and price protection to forecast the budget. When prices are compared Sinai try to hedge against fluctuations in price changes, and try to foresee trends. At all these stages in the purchasing process the personal contact is extremely important and this is impossible to replace electronically according to Mr. Madas. Sinai will begin a pilot project with office supply products in January 2000, that gives the end-user the right to purchase directly and all done electronically. Mr. Madas think that the end-user easier can get involved in the purchase and have a saying about even smaller purchases.
5.3.2 Within analysis - Mount Sinai Hospital

In this section Mount Sinai is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.

Pre purchasing

The pre purchasing steps includes search/inquire for products, compare products and negotiate terms.

- **Search, inquire and discover a product:** The first step in the purchasing process according to Muygayar (1998) is search for product and he recommend that buyers can search for products across various sources without really visiting their Web pages. The eMarkets are today being used as one of the tools finding information about products.

- **Compare product and negotiate terms:** When comparing products both end-users and the purchasing department are involved. Some of the comparing is currently done on the eMarkets, but just a small part of it. A third party, the central purchasing organization, does most of the negotiation.

Purchase

The purchasing stage consists of place order, receive acknowledgement, initiate payment and receive product.

- **Place order:** More and more orders are placed via EDI and all the major vendors participate in the EDI network.

- **Initiate payment:** The payment is sent from the accounting department. It is not done electronically today, but probably in a near future.

Post purchase

The post purchase activities according to Mougayar (1998), consists of request support and give feedback.

- **Request for support and give feedback:** Some of the support is done electronically, but it is a problem with documentation that has to be taken under consideration.

By ending the case presentation and within-case analysis of Mount Sinai the attention is now turned to investigated the next Hospital, which is Rush Hospital.

5.3.3 Data presentation - Rush Hospital

Rush Hospital started to send orders over the Internet two weeks ago and they are doing it through OmniCell. The possibilities to order online is already there, the problem is getting return on the information and record it as a transaction according to Mr. Webb. Advantage with e-commerce so far is less human errors and a more efficient process. He goes on claims the manufacturers to drag their feet and they are not active with the adoption of e-commerce. Mr. Webb says that because of the fragmentation in the
healthcare industry the eMarkets will be extremely useful. Now when Rush is adopting more and more e-commerce, less administrative people is needed in the purchase.

**Pre purchase**
Sales representatives contact the doctor and present the products. The doctor and or sales representative then contact purchasing department. End user can search products where they want, but not order, there are several parameters that has to be resolved, like legal issues, contracts, terms of payment and shipping. The purchase is a joint decision and the doctors always have a saying in every purchase. The use of the Internet and especially on the eMarkets will increase when searching for new products and vendors. Rush does not purchase if there does not exist a contract. So if they do not have a contract for a specific product, they have to find a new vendor and establish a relationship before continuing ordering. This is done buy a product evaluation committee, which consist of doctors, nurses and administrative staff. They have to be comfortable with the product as well as trust and feel comfortable with the vendor. Mr. Webb says that he wants the purchase to more negotiating and less clarifying. He goes on saying that the personal contact in the purchase is decreasing, but always going to be there. OmniCell is a VAN (Value Added Network) a software provider, for Rush which make it possible to order the products over their portal. The only thing needed from the customers is Internet access. So they are not new contacts through OmniCell, only more efficient according to Mr. Webb. The contract is established at Novation and then the order is made over OmniCell.

**Purchase**
Rush Hospital invested software to integrate order process a year ago. Now the order is placed from the purchasing department and when the order land, account department get automatically noticed and send payment. Rush hospital is very satisfied with the system and going to expand it. In early December 1999 they started sending orders over the Internet via OmniCell. Mr. Webb hoping to get all vendors and products purchased trough OmniCell. The reasons for this are convenience and efficiency in the purchasing process. There are less human errors and interaction. They also have a very positive experience from a pilot project with office products. All the office products are bought without a central purchasing organization. They recently started to let the end-user order products needed directly without interference of the purchasing department. The end user just send an email to the purchasing department to get OK to order the product, to make sure that Rush has a contract with that vendor/manufacturer. If a contract exist, it is just to order and that is done electronically. The first step is to meet vendors establish a relationship before doing business. The reason is less human error and a faster process. They did choose office products for the pilot project, because they are high volume and inexpensive products.

**Post purchase**
When a problem occurs after a buy or when education is needed most of this is done in a face to face meeting and includes vendor and or manufacturer from the selling side. A very small part of this is done via the email, but the email usage is increasing constantly. A third party can not replace this; it has to be done directly Mr. Webb claims.
5.3.4 Within analysis - Rush Hospital
In this section Rush is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.

Pre purchasing
The pre purchasing steps includes search/inquire for products, compare products and negotiate terms.

- **Search, inquire and discover a product:** The first step in the purchasing process according to Muygayar (1998) is search for product and he recommends that buyers can search for products across various sources. The Internet is used in the search for products today and this is mainly done on the eMarkets. They are getting a bigger and bigger part and more people are getting involved.

- **Compare product and negotiate terms:** The comparing of products are done by a product evaluating team which includes both end-users and the purchasing department. Some of the comparing is currently done on the eMarkets, but just a small part of it. The negotiating is a face to face process and not at all done over the Web.

Purchase
The purchasing stage consists of place order, receive acknowledgement, initiate payment and receive product.

- **Place order and receive acknowledgement:** The orders are placed electronically through the VAN portal. This is done to make the process more efficient by automate the process and decreasing the people involved and less room for human errors.

- **Initiate payment:** The payment is today sent direct from the Hospital to the manufacturer or vendor. The eMarket might take a function here in the future.

- **Receive product:** The purchasing department receives the product.

Post purchase
The post purchase activities according to Mougayar (1998), consists of request support and give feedback.

- **Request for support and give feedback:** The education is an ongoing process and the support and feedback are mostly done by face to face meetings, but the electronic education and feedback is growing.

By ending the case presentation and within-case analysis of Rush the attention is now turned to Mercy Hospital.

5.3.5 Data presentation - Mercy Hospital
As mentioned earlier Mercy is part of the central purchase organization Premier. Premier does most of the negotiation for Mercy. They do have clinic decisions on some
purchases, but most of the purchases are done via Premier. Mercy does all their purchases via EDI. If the manufacturer can not take the order over EDI, the manufacturers sell to distributor and Mercy then buy the product through distributor via EDI.

**Pre Purchasing**
The first step in the purchasing process is a sale representative comes to the end-user and brings his or her attention to a specific product. The majority of the sales representative that contacts the end-user has sales contract with the hospital. The end-user then goes to the purchasing department and communicates the need. The purchasing department search for potential products to satisfy the need that has arisen. Today the doctors and physicians take a more active part in the product search, when they start using the Web as a tool for information search. The purchasing department then contact the purchasing organization, Premier, and present the desired product. Premier gathers buyers and negotiates equal terms for the buyers. Mercy tries to open up for alternative products, Mr. McCarthy continues. Vendors know that they do not have to negotiate prices it is looked up, so they try to offer alternatives in their product offering.

Today some part of the product search is done electronically, but that is the only part in the pre purchase stage that is done electronically today. Mr. McCarthy claims that the end-users lack of interest and education is the main reason for the slow adoption process for electronic commerce. He goes on and says first establish a relationship then more and more can be done via e-commerce.

**Purchasing**
It is a joint decision to place an order, but the purchasing department has the ultimate authority. The order is placed electronically to the vendor. Mr. McCarthy now has the possibility to track the products more easy than before, but this still has to be done through the purchase organization or manufacturer. In a near future it will be possible to track the products directly on the Web, without asking the intermediary. The product arrives with the purchase order and gets delivered to end user, which sign and notice the accounting department. From there they compare the invoice and if everything matches payment goes out.

When Mercy receives order acknowledgement, it is automatically sent to the accounting department. They currently do not use electronically invoices, but this will soon be done. Mr. McCarthy goes on states that electronic banking is then the next step for Mercy Hospital. They are not ready for this yet, but Mr. McCarthy predicts that this will be reality in a few years.

Mr. McCarthy says that the steps in the purchasing process are efficient, but can be improved. Everything can be done electronically. The problem is the different software system, get the same backoffice software. Now accounting got their software, inventory a separate one and purchasing a third standard etc. The softwares do not work together, first when that is possible the process can be totally electronically conducted.

**Post purchase**

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Many of the problems that occur after the purchase can and are solved by the sales representative for the products. It is often problems about how to use the products and the education needed most often provided face to face. This is the way it is done and the way the end-users like it according to Mr. McCarthy. Some of the support is done via email and phone, but that is not product specific support but back office such as problem with delivery. These are problems that easy can be solved. One reason for the face to face education is documentation and proof that the adequate education is executed.

5.3.6 Within analysis - Mercy Hospital

In this section Mercy is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.

Pre purchasing

The pre purchasing steps includes search/inquire for products, compare products and negotiate terms.

- **Search, inquire and discover a product:** The first step in the purchasing process according to Muygayar (1998) is search for product. The eMarkets are today being used as one of the tools finding information about products.
- **Compare product and negotiate terms:** When comparing and evaluating a product both end-users and the purchasing department are involved. A small part of comparing products is done electronically, but it increases all the time. A third party, the central purchasing organization, does most of the negotiation.

Purchase

The purchasing stage consists of place order, receive acknowledgement, initiate payment and receive product

- **Place order:** More and more orders are placed via EDI and all the major vendor currently uses it.
- **Initiate payment:** The payment is sent from the accounting department. It is not done electronically today, but probably in a near future.
- **Receive product:** The purchasing department receives the product.

Post purchase

The post purchase activities according to Mougayar (1998), consists of request support and give feedback.

- **Request for support and give feedback:** The education is an ongoing process and the support and feedback are being done mostly in a face to face process. A small part of the support is currently done electronically, but the trend is that this part increases.

The next case presentation and within-case analysis will cover Milex products, which represent the first of three sellers in this study.
5.3.7 Data presentation - Milex Products Inc.

As brought up Milex has their own sales force that takes care of all domestic sales. Milex is not part of a buying group, all their domestic sale is done direct through the sale force. In other markets they have chosen sell to they have their distribution partners. Mr. Gross points out the crucial importance of their sales force in educating customers and establishing relationship. Milex has a product catalog on their Web page and they have received orders from markets where they do not have a distribution network. Milex just ship the products and leave it in the hands of the user. These sales have never lead to a rebuy situation. They are thinking about having video streaming on their Web page to educate customers and thereby give better support to customers outside the distribution network. This would serve both as education for customers on the domestic market and market abroad.

Pre Sale
The first step in the selling process is the sales representative locates potential customers in their geographical district. They meet them and really get to know them and analyzing what their needs are. To get the first sale is often a very time consuming process. If they win the customers trust and get a sale, the order comes in directly to the manufacturing plant. If Milex get an inquiry from the Web or another channel, they hand the lead over to the sales representatives. A very small part of the potential customer identification is done on the Web, but the trend is that more and more customers’ contact Milex via their Web page to establish contact. Before having the product catalog at their Web page it was rare that inquiries came to Milex without the sale representative being involved. These are both domestic and international potential customers. Milex try to peak their customers’ interest on the Web page, to have enough information on the Web pages to make the potential customer contact Milex.

At Milex the sales representative establishes a relationship with the new customer. In face to face meetings terms are negotiated. The sales representative then does a credit check and gets information about financial history. If the customer is approved they get authorized and sale steps forward.

Sale
When an order comes in it is then all ready pre authorized. Next they have to find out if the product is available in stock or if it has to be manufactured. When the product is not available, the buyer has to be contacted and terms negotiated.

Milex just started with EDI a few weeks ago and they are very satisfied so far. This is a clear trend in the industry, so the use of EDI will increase according to Mr. Gross. Right now it is possible sending purchase orders and invoices over the EDI system, which is not Internet based EDI. Mr. Gross also says that they will integrate more business processes in to the EDI system. By end of year 2000 most of Milex major clients will conduct their business over EDI Mr. Gross predicts. The reasons for start using EDI were to make the ordering easier, less human errors and a more efficient process. Still many customers phone the sales representative with the order, although they have the possibility place the order with EDI. Mr. Gross says, they are used to it and are not computer oriented.
The persons involved at Milex are customer service that talks to the purchase organizations and solves problems or misunderstandings that might appear. This is done via fax or phone, but email will increase in use. The availability to answer and take contact when it is suitable is mentioned as a big advantage with electronic communication Mr. Gross continues.

**Post Sale**
The sales representative visits the customers frequently and when trying to accomplish new sales and support sales already closed. Mr. Gross says that they might do some easy support electronically, but most of it must be done in a face to face meeting. As mentioned Milex have started thinking about video streaming, but Mr. Gross say that it is a poor substitute to sales representatives. A considerable part of the marketing research is today being done electronically and there the eMarkets are very useful. Mr. Gross says that he tries to keep track of trends and changes within the industry with help of the eMarkets.

**5.3.8 Within analysis - Milex Products Inc.**
In this section Milex is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.

**Pre sale**
The pre sale steps includes identify buyer, approach and qualification and need assessment according to Mougayar (1998) and Bogazzi (1998).

- **Identify buyer:** The sales representatives do the identification of the potential customers and their use of the Web when getting information about the customers are today limited. A trend is that more and more customers identify themselves by finding the Web page and contacting Milex.
- **Approach and qualification:** The sales representative approaches the customers. This is done by personal contacting them and by a face to face meeting establish a relationship. If the customer have a Web page the qualification can be done there and information about the company, partners and management are sought.
- **Need Assessment:** The need assessment is a time consuming process and are done face to face. The knowledge of the customers has to extensive and is only accomplished through personal meetings.

**Sale**
The sale steps in the selling process contains receive order, authorize payment and schedule order.

- **Receive order:** The trend is that all orders going to be received through EDI, because of the ease to use and efficiency in the process.
- **Authorize payment:** All the orders are pre authorized and the eMarkets can certainly take a role here.

**Post Sale**
Mougayar (1998) identifies the post sale activities as ship product, receive payment, support products and do market research.

- **Ship product**: The shipment are done the same day and they see no reason to provide an online service for tracking etc.
- **Receive payment**: The payment going to be integrated into the EDI system and thereby create a faster process and get a closer relationship with the customers.
- **Support products and market research**: The support and education can be done electronically to a certain point, but documentation is an important issue that has to be solved. If the sales representative visit the customer to educate or support the product Milex have proof in case of liability problems.

By ending the case presentation and within-case analysis of Milex the attention is now turned to the second seller investigated, which is Ferris Manufacturing corporation.

### 5.3.9 Data presentation - Ferris Industries Corp.

Ferris Manufacturing is part of a purchasing organization, where e-commerce growing in use. They try to be very active in their use of e-commerce by finding new business processes to integrate. Ferris have a new wound care product that they going to sell direct to the end-user and only over the Web. Mr. Dziura is convinced that e-commerce is the way to market this product. The problem is to generate traffic to the Web page and Mr. Dziura can definitely see the eMarkets being useful creating traffic to the Web page. Mr. Dziura says that they have sold directly from their Web page to markets where they do not have a distribution network. We just ship and sell Mr. Dziura says and these sales have never led to any rebuy situation, Ferris consider these sales as individual activities.

**Pre sale**

The first step is to identify, secure and qualify a distributor. Terms have to be negotiated, agreement and contracts written. Many of the potential distributors contact Ferris otherwise Ferris locate them. Ferris do know the industry well and many of the distributors, otherwise they find new customers through industry organizations and events. Mr. Dziura continues that many distributors are active on the eMarkets, which he visits at least every second day. The next step is to educate the distributor so they can promote and give the direction needed to use the products. The distributors purchase the products from Ferris and have responsibility for the products, but sell them in Ferris name. The distributors are subcontractors and take full possession of the goods. The distributors have other products that they sell, but not directly competitive products. They are products in the same category and serving the same market.

The nature of the products is sophisticated which make it necessarily to carry out a lot of service, explanation and education. That is not something that can be done electronically, according to Mr. Dziura at least not yet. That is why Ferris have a highly educated sales force that can do all this. Through this they have an entree to the market and they are able to deliver a new product or concept to that market. There are certain products that can be sold via e-commerce, a product that is generally understood by the buyer, claims Mr. Dziura and continues, products that are based on price and service. As customer you
know what you are looking for you are ready to put up your credit card number and ship to you directly. There are other products that need to be understood before purchase can be completed. E-commerce will have different roles for different products, depending on complexity, importance of purchase and price of the product.

The personal contact is also important not losing market shares, because this is the way competitors doing business and what customers are used to and like. He goes on saying that more people getting involved from the buying side, but it is too early to say from the selling side.

Sale
Ferris ship the goods to the store at the distributors warehouses. They are now looking how e-commerce will affect distribution, but it is to early to draw any conclusions says Mr. Dziura. Ferris have same day shipping when an order comes in. Most orders are driven by EDI and fax, but email is seen more and more frequent. If it is a new buy Ferris always do a credit check, they do not ship to a new customer without this information. Mr. Dziura predicts that eMarkets can certainly have a role there, if good reputation and a strong brand. Currently Ferris build contract so we do not have any problem, but as they move into selling direct to end-user with their new product line there will be taking credit cards over e-commerce. In these situations if a guarantee is available, it could speed up the process.

Ferris are setting up Internet based EDI, but have not started yet. Mr. Dziura can see all distributors getting involved. The move from non-Internet based EDI was done to achieve flexibility and get the investments down for the distributors. Ferris are also looking at doing the selling electronically, by setting up the manufacturing that way, so when the order comes in to a database it automatically spits out shipping label and ships right away. Ferris looking at shipping right from the manufacturing line and hoping to have a more transparent distribution chain in the future.

Post Sale
Most of the after sale activities are done by the sales force, solving problem and giving support. Ferris support products on their Web page and hoping to do more and more support electronically. They have some educational sections with FAQ as one example. Ferris say that they are willing to educate the end-user how to use the Web pages to gain the advantages with it. Mr. Dziura says that when a relationship is accomplished it is possible mostly communicate electronically. Today Ferris do not have electronic banking with their customers but they are moving towards it to increase efficiency and decrease human involvement and errors. Mr. Dziura carries on and claims that feedback is today increasing over the Internet. Market research is also more and more carried out over the Web and especially on the eMarkets, where trends industry news can be spotted.

5.3.10 Within analysis - Ferris Industries Corp.
In this section Ferris is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.
Pre sale
The pre sale steps includes identify buyer, approach and qualification and need assessment according to Mougayar (1998) and Bogazzi (1998).
- **Identify buyer:** Ferris do locate some of their potential customers on the Web. For the new product line it will be the major source of identification and then track them done on eMarkets.
- **Approach and qualification:** If the new potential customer has a Web page, much of the qualification can be done online. A trusted third party can definitely play a role in qualification.
- **Need Assessment:** The need assessment is done in a face to face process and is much negotiating and immediate interaction. The customers are used to being visited and only a small complement can be electronically executed.

Sale
The sale steps in the selling process contains receive order, authorize payment and schedule order.
- **Receive order:** In a near future all the orders will be received through Internet based EDI.
- **Authorize payment:** All customers are pre authorized in the qualification and the eMarkets can certainly play a role when authorizing new customers.

Post Sale
Mougayar identifies the post sale activities as ship product, receive payment, support products and do market research.
- **Ship product:** Ferris will integrate the shipping process, so when an order comes in it is automatically spits out shipping label and an invoice.
- **Receive payment:** Ferris will start using electronic banking in a near future.
- **Support products and market research:** Ferris are active and try to handle as much support as possible online, but can just be a complement to sending a sales representative to educate how to use and support the products. The market research will be done more and more on the Web, because of efficiency in the process.

By ending the case presentation and within-case analysis of Ferris the attention is now turned to the third seller investigated, which is Mabis Healthcare corporation.

5.3.11 Data presentation - Mabis Healthcare Inc.
Mabis Healthcare Incorporation is part of a purchasing organization, where e-commerce growing in use. Mabis installed EDI two years ago, but not Internet based. Mabis are not really active with the adoption of e-commerce, but so far they just have positive experiences. At Mabis they are very satisfied with their EDI and Mr. Wilms says it have helped them to achieve a closer relationship with suppliers and make the ordering process more efficient.
Pre Sale
Mabis first identify a potential distributor to carry their products. Normally they get contacted by a distributor or go through the purchasing organization. Then they contact them via telephone and set up a personal meeting. Many of Mabis products are disposable products, but Mr. Wilms stresses that it is important to evaluate the distributors. They have to have entries to selected markets and be able to educate the end-users. They also looking at their products so they match and that Mabis product will get enough attention. The qualification and need assessment are also done in face to face meeting. This is the way we want it and the best way to get to know our new customers Mr. Wilms continues.

Sale
All the orders at Mabis are pre authorized. Most of them come via EDI, which all of the major distributors is using. According to Mr. Wilms they are very satisfied with the EDI implementation. Mabis have been able to let people that were involved in the administrative part of the selling undertake other responsibilities. The process of adopting e-commerce is newly started at Mabis and Mr. Wilms is not sure what processes they will integrate to the process and how this will affect them.

Post sale
Some of the support is today done via telephone and fax, but these are back office problems like problems with distribution of the products. Almost all the product oriented support and education are done at the customer and executed in a face to face interaction. The use of the Internet when conducting marketing research is used to a small amount, but it is increasing with the increased adoption and understanding for e-commerce.

5.3.12 Within analysis - Mabis Healthcare Inc.
In this section Mabis is analyzed based on the frame of reference. The areas to be analyzed correspond to this study’s research question number three.

Pre sale
The pre sale steps includes identify buyer, approach and qualification and need assessment according to Mougayar (1998) and Bogazzi (1998).

- **Identify buyer:** The sales representatives do the identification of potential customers and their use of the Web when getting information about the customers are limited. A trend is that more and more customers identify themselves by finding the Web page and contacting Mabis.
- **Approach and qualification:** The sales representative approaches the customers. This is done by personal contacting them and by a face to face meeting establish a relationship. If the customer have a Web site the qualification can be done there and information about the company, partners and management are sought.
- **Need Assessment:** The need assessment is done in a face to face process and is much negotiating and immediate interaction. The customers are used to being visited and electronically can only be a small complement.
Sale
The sale steps in the selling process contains receive order, authorize payment and schedule order.

- **Receive order:** The trend is that all orders going to be received through EDI, because of the ease to use and efficiency in the process.
- **Authorize payment:** All the payments are pre authorized in the qualification of a new customer.

Post Sale
Mougayar identifies the post sale activities as ship product, receive payment, support products and do market research.

- **Ship product:** The shipment are done the same day and they see no reason to provide an online service for tracking.
- **Receive payment:** They have not integrated electronic banking and it is too early to know if they are going to do so.
- **Support products and market research:** The support and education can be done electronically to a certain point and today the market research that being done electronically is just a complement. The support is done via fax, phone or face to face meeting.

By ending the last case presentation and within-case analysis the attention is now turned to the cross case analysis, where each of the three research questions are analyzed.

5.4 CROSS CASE ANALYZES
In the previous section in this chapter the data collected from the interviews was presented. In addition to that the data collected was analyzed according to a within-case analysis (Yin, 1994). In this chapter the data presented will utilize in the cases as well as the within case analyzes in order to schematically display the data. The objective is to be able to discover a means by which the reduced data can be displayed so that final conclusions can be drawn.

5.4.1 Describe the electronic marketplaces
The eMarkets investigated invited the whole healthcare market, they did not have specific target market within the industry. The users had to be players in the industry and then they were free to participate.

Catalog
The catalog feature was available in all cases. At Hospital Network and OmniCell it was possible to direct purchase through the catalogs. At OmniCell all of them at Hospital Network just a small number of the vendors had the capability. Currently Medibuy generates leads through the portal, but purchase is not available.
Exchange
None of the eMarkets had the exchange feature. The exchange model works best for near commodity items that can have several attributes, but are easy to specify (Digital Marketplaces, 1999). The products offered at the eMarkets in this thesis do not fit to this description, where all purchases are individual evaluated and price do not have to be the deciding variable.

Auction
At OmniCell and Hospital Network auction is not available. Medibuy do have this feature and here both auctions were the vendors sell their product and reverse auction where buyers ask different sellers to quotes on their products. Medibuy is software provider and host the auction. Both Medibuy and Hospital Network have the RFP/RFQ feature where buyers and sellers can request for quotes and proposals.

Value Adding Features
All the cases had information features like news, events calendar and job search. This is to create an electronic industry meeting forum and thereby create traffic to the eMarkets.

OmniCell is an application software provider and has many different services like Web based trend analysis, decision support, and regulatory compliance reports. At Hospital Network different healthcare consulting services were available together with their business services center where information services could be bought.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Hospital Network</th>
<th>Medibuy</th>
<th>OmniCell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Exchange</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Auction</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Additional Features</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

5.4.2 Needs in the buying and the selling situation
From the within-case analyzes it can be seen that the organizations are in different situation regarding the adoption of electronic commerce, but hopefully it will still be possible to identify patterns and similarities in the needs regarding eMarkets in the purchasing and selling situation. Here each stage in Maslow’s hierarchy of needs will be analyzed separately in order to compare the needs identified in each case. Because both buyers and sellers have been compared from the same theoretical model, they will be compared in the same cross case analysis. The three first cases are buyers and the three following sellers which should be kept in mind when comparing the cases.

Physiological needs
When one need is achieved focus shift to the next level in the hierarchy, but only when a need is satisfied focus can shift. Product functionality is the core need and without
product functionality the next levels in the hierarchy wont matter. Identified tactical needs were in all cases, reliability or quality. The sellers all stressed the fact that without good quality they would not be in business, and the reputation comes from good quality. After that easy to use was mentioned and to understand the product from the first time using it. These are all needs that has to do with how to design and manufacture the products and because the electronic market places take place between manufacturer and end-user these needs will not be affected by the eMarkets as an intermediary. These needs will be presented in table 5.8.

Table 5.8 Cross-case of physiological needs

<table>
<thead>
<tr>
<th>Case</th>
<th>Strategic physiological needs</th>
<th>Tactical physiological needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Sinai Hospital</td>
<td>Product functionality</td>
<td>Reliability and easy to use</td>
</tr>
<tr>
<td>Rush Hospital</td>
<td>Product functionality</td>
<td>Reliability and easy to use</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>Product functionality</td>
<td>Solve the task, easy to use and quality</td>
</tr>
<tr>
<td>Milex Products</td>
<td>Product functionality</td>
<td>Quality</td>
</tr>
<tr>
<td>Ferris Manufacturing</td>
<td>Product functionality</td>
<td>Reliability and quality</td>
</tr>
<tr>
<td>Mabis Healthcare</td>
<td>Product functionality</td>
<td>Reliability and quality</td>
</tr>
</tbody>
</table>

Safety needs
In all the cases the information had to be easy to find according to the respondents. Further it was not only important to find the information easy, but also the information had to be accurate. To know that the information and the source of information are reliable was also brought up. In line with easy to find the information had to be accessible, to be able to find it when needed. Interesting was that only in one case it was mentioned the need for a neutral source of information and in another case the interactivity was declared as an information need.

For payment and finance the trust issue was brought up and was so in most of the cases, together with a safe system. To minimize risk and feel confident in the payment situation were other aspects brought up. Only in one case dual source was named as a need and this was to minimize risk involved. In most of the cases efficiency in the payment process was also mentioned. A pattern for delivery needs was time of delivery, to always be able to keep promised time for delivery. All the manufacturers identified control in delivery, to feel confident that the products were delivered by a trusted and qualified party. One need also important from buying side in delivery was interactivity, to be able to change delivery date and quantity together with track the product if problems.
Table 5.9 Cross-case of safety needs

<table>
<thead>
<tr>
<th>Case</th>
<th>Strategic safety needs</th>
<th>Tactical safety needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Sinai Hospital</td>
<td>Information</td>
<td>Dual source, fast &amp; easy to find, accurate, neutral source &amp; reliable</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Dual source, minimize risk, flexible and convenient</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Convenient, speed, interactivity &amp; at right time</td>
</tr>
<tr>
<td>Rush Hospital</td>
<td>Information</td>
<td>Filtered, accurate &amp; accessible</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Reliability &amp; quality</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>Information</td>
<td>Accessibility, easy to find, correct &amp; immediate interaction</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Flexible, on time &amp; convenient</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Security, trust &amp; convenient</td>
</tr>
<tr>
<td>Milex Products</td>
<td>Information</td>
<td>Convenience &amp; validity</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Control, reliable &amp; right time</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Confidence, efficiency &amp; safety</td>
</tr>
<tr>
<td>Ferris Manufacturing</td>
<td>Information</td>
<td>Depth, accurate &amp; easy to find</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Control &amp; reliability</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Convenience, safe &amp; credibility</td>
</tr>
<tr>
<td>Mabis Healthcare</td>
<td>Information</td>
<td>Reliable, depth, easy to find &amp; accurate</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
<td>Confident &amp; quality</td>
</tr>
<tr>
<td></td>
<td>Payment</td>
<td>Trust, safe &amp; easy</td>
</tr>
</tbody>
</table>

Social needs
Here two strategic needs are identified, personal contact and education. For personal contact the immediate interaction was a recurring need. The advantage of being able to have the face to face contact and immediate get answers on questions and problems solved at once. Additional needs for personal contact was to build a relationship and trust. To trust a person, the personal meeting had to be involved according to most of the respondents. Also convenience was brought up in most of the cases for personal contact. For education the importance of continuously performed was identified. This ongoing process was also an important element for the relationship building. Interaction was one need also branded under education, to have the contact and get immediate responses.

Table 5.10 Cross case of social needs

<table>
<thead>
<tr>
<th>Case</th>
<th>Strategic social needs</th>
<th>Tactical social needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Sinai Hospital</td>
<td>Personal contact</td>
<td>Availability, trust &amp; immediate interaction</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Continuousness &amp; documentation</td>
</tr>
<tr>
<td>Rush Hospital</td>
<td>Personal contact</td>
<td>Immediate interaction, accessibility, relationship &amp; trust</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Continuously performed &amp; immediate interaction</td>
</tr>
<tr>
<td></td>
<td>Two-way relationship</td>
<td>Trust &amp; convenience</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>Personal contact</td>
<td>Relationship, trust, immediate</td>
</tr>
</tbody>
</table>
Esteem needs
In all the cases operational needs for brand and reputation were words like trust, confidence and reliability. It was mentioned that especially when buying from or selling to a new partner this was important. The importance of reputation was greater when the products had an essential strategic role. Mentioned in a few cases was trust and confidence can be achieved by a well-respected third party indirectly involved.

Table 5.11 Cross case of esteem needs

<table>
<thead>
<tr>
<th>Case</th>
<th>Strategic esteem needs</th>
<th>Tactical esteem needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Sinai Hospital</td>
<td>Brand &amp; reputation</td>
<td>Trust &amp; reliability</td>
</tr>
<tr>
<td>Rush Hospital</td>
<td>Brand &amp; reputation</td>
<td>Status &amp; trust</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>Brand &amp; reputation</td>
<td>Trust &amp; confidence</td>
</tr>
<tr>
<td>Milex Products</td>
<td>Brand &amp; reputation</td>
<td>Trust &amp; reliability</td>
</tr>
<tr>
<td>Ferris Manufacturing</td>
<td>Brand &amp; reputation</td>
<td>Trust, reliability &amp; confidence</td>
</tr>
<tr>
<td>Mabis Healthcare</td>
<td>Brand &amp; reputation</td>
<td>Trust &amp; confidence</td>
</tr>
</tbody>
</table>

Self-actualization needs
Hauser (1999) identifies Maslow’s self-actualization needs as inner knowledge of excellence and mastery in what a business partner does. None could really identify any needs in this level of the hierarchy. In one case it was identified as partnership with their customers and they called the sales representative consultants that performed their services for the customers. A more accurate interpretation was made in the Ferris case. With the development of transparency in the distribution chain this kind of relationships will most likely appear in the future, according to Mr. Dziura. Ferris the company that in my opinion was most knowledgeable about e-commerce together with Rush hospital mentioned this.
5.4.3 The electronic marketplaces influence on the buying and the selling process

In this section of the cross case analyzes the buyers and sellers will be analyzed. When this analyzes is done the buyers and sellers will be compared and visualized in the buying selling process designed in the conceptualization.

Pre purchase

Most of the purchases are done via a central purchasing organization according to the interviewed people in the cases. They gather a group of buyers and thereby bargaining power, then negotiate equal terms for the participated hospitals.

- **Search/inquire for product:** In these cases the end-users are not computer oriented, but still when using the Internet for product search the result has been to satisfaction. The eMarkets are as mentioned a new phenomenon, so the buyers in these cases started using them newly. Still they all agree on the ease using them and finding the right information. There are many different tools when searching for information and the eMarkets are definitely one of them and they increase in use.

- **Discover product:** In the discover of products the eMarkets certainly will have a role as one of the possible alternatives.

- **Compare product:** Comparing products are done by a product evaluation committee and include testing the product. Some deciding variables can be compared at an eMarket, variables such as price and administrative variables. Most of it is done by the evaluation committee and done without utilize the Internet.

- **Negotiate terms:** The negotiation is mostly done face to face, to achieve immediate interaction and trust for the other party. Currently nothing of the negotiation is done on the Web and the respondents could not see this being done in the future either.

Purchase

- **Place order:** All the hospitals in the cases currently use EDI to place orders and it is growing in use. Only one of the hospitals use Internet based EDI today. They use an eMarket as a VAN for the purchases, which is the only activity in the purchase being done there.

- **Receive acknowledgment:** When using EDI the acknowledgement is sent automatically when an order is received.

- **Initiate payment:** Today none of the hospitals use electronic banking, they envision it as the next step in the e-commerce development.

Post purchase

- **Request support:** The request for support is mostly done via fax or phone, but also a growing part over email. This is taking communication when they all ready have a relationship established and that is why the respondents see the electronic part growing.

- **Give feedback:** The education is an ongoing process and exclusively performed face to face. This is also where most of the feedback is given.

The attention will now be turned to a cross case analysis for the selling side.
Pre sale
- **Identify buyer:** A small part of the identification of buyers is done on the Web, but it is increasing. A trend is that more customers than before are now identifying themselves and requests for information. This is because of the development of the companies Web pages where products are posted.
- **Approach and qualification:** The approach is done via phone or personal meeting today, but qualification on the Web is increasing.
- **Need Assessment:** Need assessment is a time consuming process and is mostly done in face to face meetings. The reasons for this are the need for immediate interaction and the customers’ behavior, that they are used being visited.

Sale
When coming to this stage in the sales process a relationship is established and the customers are qualified.
- **Receive order:** Most of the orders are received via EDI and the manufacturers trying to get customers ordering this way. Only one of the manufacturers are presently setting up Internet based EDI.
- **Authorize payment:** All the manufacturers pre authorize all customers in the qualification, so payments are never authorized at this point.

Post sale
- **Ship product:** The shipment is done the same day and without involvement of the Internet.
- **Receive payment:** A trend is that sending invoices and receiving payment will be done electronically. The invoices are the next step in the EDI development and will happen in not a distant future.
- **Support products:** Product oriented support is mostly done face to face at the buyer. All the manufacturers do some support on their Web page, some more than others, but all of them thinking about it. It is a problem with documentation if electronic support is being done that has to be considered.
- **Market research:** The Internet and the eMarkets is a great medium for market researches and will continue to grow according to the respondents.

Comparing selling and buying process
In the search for products all participating buyers are using the eMarkets. They all agree on the usefulness of the eMarkets and these marketplaces will only grow in importance when searching products. The sellers identify buyers and they have started using the eMarkets, but just to a limited amount and as complementary to other main tools. The buyers use the eMarkets when comparing products, but only some variables that are easy measurable such as price. The negotiation and need assessment is mostly a face to face process and no one use the Web today and could not see this change in the future. The trend is clear as crystal when it comes to place and receive orders, EDI will continue to grow and take close to 100% of all orders. This is not Internet based EDI, only one buyer and one seller use Internet based EDI and the other do not consider it. Here the eMarkets have a role as value added networks for participating players. All the participating
companies are looking how to integrate more activities electronically in the ordering process, such as electronic invoices, banking, automatically shipping labels. Request for and give support is a face to face process and will continue to be this way, predict the interviewees. Two of the sellers are trying to put some support function on the Web, but just as a small supplement. The Web is very useful for the market research conducted by the sellers. This is an efficient and accurate media for market research and the use will continue to expand. This is displayed in table 5.12.

Table 5.12 Comparing selling and buying process

<table>
<thead>
<tr>
<th>Seller</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre sale</strong></td>
<td><strong>Search/Inquire for product</strong></td>
</tr>
<tr>
<td>Identify buyer</td>
<td>The eMarkets are today being used by all participant buyers and the usage constantly growing.</td>
</tr>
<tr>
<td>Small parts of the identification of buyers are done on the Web, but it is increasing. A trend is that more customers identify themselves through the Web.</td>
<td>Discover product</td>
</tr>
<tr>
<td>Approach and qualification</td>
<td>In the discovery of products the eMarkets certainly will have a role as one of the possible alternatives.</td>
</tr>
<tr>
<td>More and more qualification is done electronically.</td>
<td>Compare products</td>
</tr>
<tr>
<td>Need Assessment</td>
<td>A few variable are today being compared at the eMarkets and they agreed on this will not grow rapidly.</td>
</tr>
<tr>
<td>This is a face to face process.</td>
<td>Negotiate terms</td>
</tr>
<tr>
<td><strong>Sale</strong></td>
<td><strong>Place order</strong></td>
</tr>
<tr>
<td>Receive order</td>
<td>Almost all orders are placed via EDI.</td>
</tr>
<tr>
<td>Almost all orders are received via EDI.</td>
<td>Receive acknowledgment</td>
</tr>
<tr>
<td>Authorize payment</td>
<td>Acknowledgement is returned automatically when using EDI.</td>
</tr>
<tr>
<td>All orders are pre authorized in the qualification.</td>
<td>Initiate payment</td>
</tr>
<tr>
<td>Schedule order</td>
<td>No one of the buyers use electronic banking today, but they will in a near future.</td>
</tr>
<tr>
<td><strong>Post sale</strong></td>
<td><strong>Request support</strong></td>
</tr>
<tr>
<td>Ship product</td>
<td>The request for support is done via fax or phone, but also email.</td>
</tr>
<tr>
<td>Ship products are done without help of the Internet.</td>
<td>Give feedback</td>
</tr>
<tr>
<td>Receive payment</td>
<td>Most of the feed back is given face to face during education and a small part via phone, fax or email.</td>
</tr>
<tr>
<td>The trend is that sending invoices and receiving payment will be done electronically in a not distant future.</td>
<td></td>
</tr>
<tr>
<td>Support products</td>
<td></td>
</tr>
<tr>
<td>Most support is done face to face, but the electronically part of the support is growing.</td>
<td></td>
</tr>
<tr>
<td>Market research</td>
<td></td>
</tr>
<tr>
<td>The Internet and eMarkets are use in market research.</td>
<td></td>
</tr>
</tbody>
</table>
5.5 SUMMARY
The above case presentation and within-case analysis has provided the opportunity to review the findings of the cases. The analysis continued then by displaying the analyzed information to make it more readable and manageable and seek similarities and dissimilarities between the cases and the chapter ended with this cross case analysis. The conclusions in the next chapter will be based on these similarities and dissimilarities found in the cross case analysis.
6. CONCLUSIONS AND IMPLICATIONS

This chapter will provide the overall conclusions regarding the findings of this study. These conclusions will then lead to implications for management, for future development of theory in this area, as well as implications for future research.

Specifically, the conclusions that can be drawn from the analysis of the case studies are discussed below. Based on the preceding analysis of the data, the conclusions will be divided into three categories:

1. Those conclusions that can be drawn on how to describe an electronic marketplace.
2. Those conclusions that can be drawn when describing organizational buyers and sellers needs regarding electronic marketplaces.
3. Those conclusions that can be drawn on how the electronic marketplaces influence the organizational buying and selling process.

6.1 CONCLUSIONS REGARDING ELECTRONIC MARKETPLACES

The availability to efficiently reach an enormous amount of information is maybe still the biggest advantage of the Internet. The eMarkets in this study all provide many different information tools to generate leads or directly generate sales. The eMarkets are all industry specific and the registered users are all organizations in the healthcare industry. This means the users are knowledgeable and demand accurate and targeted information to match their needs. The multi vendor catalog is therefore a key feature that all the eMarkets in this study have. The catalogs have multi-variable search alternatives that enable to narrow down the search just to present wanted results. It is possible to search for vendors, product groups or products. It is also possible for the vendors to present their products in more detail. This can be done in features like the storefront, at Hospital Network. The more sophisticated catalogs also offer the opportunity the buy direct through the catalog and in this study the eMarkets provides software needed to fulfill the purchase.

All the eMarkets in this thesis also try to satisfy a need for information not only directly related to generate sales. Examples would be industry news and events calendars. At the eMarkets it is also possible to sign up for free newsletters and this is opened to anyone interested. This is a way to create awareness and a strong brand and make the portal an industry meeting point. Another common feature is career centers, where employers and future employees can meet. According to Mark Walsh, CEO at VerticalNet, features like this will be more and more important to generate traffic to the eMarket when the users get more and more sophisticated Web habits. Also services, such as industry consulting services can be bought at the eMarkets. Other services identified were information services to spot trends in the industry and to help forecast future activities.

The auction is also a feature at the eMarkets investigated and this is a both buyer-driven and seller-driven auction. Here the eMarkets provide the software needed to participate in the auction and they also host the auction. One feature, not identified in the theory chapter but present at two of the eMarkets, that also includes bidding is the request for proposal sent out by buyers and request for quote sent out by sellers. The bids are
anonymous and only the party sending the request gets to see all bids. The contact is always direct between buyers and sellers often taken off-line.

One attribute identified in the theory, but not in the observations was the exchange. I believe the reason for this is the nature of the products dealt with at the healthcare eMarkets. For an exchange to work the price has to be the deciding variable and the standardized product has to continuously being bought. In the healthcare industry each purchase is individual and many variables decide whether to buy or not, therefore no exchange exists.

When having the accessibility to purchase directly on the eMarket, commission on the sales is mandatory. Other revenue models are initial costs and annual fees. All the fees identified in the theory are identified at the observed eMarkets.

The attention will now be turned to the conclusions that can be drawn regarding how organizational buyers’ and sellers’ needs can be described regarding eMarkets.

**6.2 CONCLUSIONS ORGANIZATIONAL BUYERS’ AND SELLERS’ NEEDS REGARDING ELECTRONIC MARKETPLACES**

To describe buyers and sellers needs in this thesis Maslow’s (1954) hierarchy of needs is being used as a starting point. The foundation of the model is from a psychology standpoint describing the different stages humans go through and how the focus shift once a need is satisfied. Hauser (1999) make his interpretation of the model and put it in a business environment, it then becomes useful when describing the organizational buyers and sellers needs and what must be fulfilled to satisfy them.

The essence is to fulfil the needs regarding the core product and its functionality. Without satisfying this need the other needs are irrelevant. The next need to satisfy is basic services and here the intermediaries can take an active role to increase satisfaction. The need for information is essential in all decisions and the eMarkets are today one of the information tools. Found in this study was that the information had to be easy and fast to find. Further accurate and accessible is mentioned as attributes for the information and the importance to interact with the source of information. The key features of the Web, explained in chapter two by Hoffman et al. (1995), Pålson (1998) and Ghosh (1995), create great opportunities serving these demands. With the Internet global real-time access 24 hours a day is possible. Further, the opportunity to communicate two-way in multi-media put the eMarkets in a highly competitive position, together with the fact that the Internet offers the provider to update and target information to only provide accurate information. Another need that arises in almost all situations is to minimize risk. Most mentioned when talking about needs direct related to capital. Further needs are a flexible and efficient system for transactions. If the eMarkets integrate application software for a secure and efficient system for payment these needs can be met. The organizations in this study all state a desire to see this integration, but no one done it today. Needs concerning receiving products is flexibility and quality, which means the right product delivered at the right time. Additional for the delivery was to have control over the distribution
network. Here many of the participating organizations agreed that the eMarkets would take control if getting involved, that is why they were skeptical participating.

Interesting with the personal contact need, that also is related to many activities in the industrial buying and selling processes, is that depending on the stage in the e-commerce adoption process different answers were found. The importance of personal contact is stressed in all cases, but the Internet has decreased the demand for personal contact. Common needs mentioned was immediate interaction, accessibility, trust and convenience. In one case the entry to market and competitive advantage was brought up and this is a competitive advantage as long as the buyers expect the vendors to personally visit them. As discussed earlier in this section the Internet's advantage regarding interactivity, accessibility and convenience is clear pointed out. When it comes to trust and build relationships the human contact is essential and it is hard to overlook that fact. From my standpoint it is all a matter of education and how we are used to doing things. This is a deeply settled behavior, which should be difficult to change. As stated, different attitudes towards personal contact were found in the cases dependent of e-commerce education and usage. Undoubtedly this is a demanding challenge facing all Internet commerce. Isaacs (1999) claims that trust has become a commodity almost more valuable than the products themselves. This brings the discussion on to the next need namely reputation. Needs declared in this study under reputation were trust, confidence and reliable. From this finding it is easy to see the link between reputation and trust. Isaacs (1999) goes on and says reputation and pre-existing relationships can easily take precedence over the lowest prices.

The comprehensive conclusion is that the eMarkets face many challenges when trying to satisfy organizational buyers’ and sellers’ needs. Currently the eMarkets mostly satisfy information needs and they will increase the portion of needs satisfied. It is important to understand all the dimensions of the needs being expressed to conquer these challenges. My opinion is that trust is the key in this process. From the result of this study it can be said that trust is very much achieved from reputation. To achieve a good reputation it takes a lot of education for the users to be able to understand the capabilities and advantages with the eMarkets and feel comfortable using them.

The attention will now be turned to the conclusions that can be drawn regarding the influence the eMarkets have on the industrial buying and selling process.

6.3 CONCLUSIONS REGARDING THE ORGANIZATIONAL BUYING AND SELLING PROCESS

Major changes that take place when we are moving towards the network economy certainly have great impact on how industrial selling is performed, according to Wotruba (1996). In the cases in this study it can easily been concluded that the eMarkets are part of the change Wotruba talks about. It is a great interest for the eMarkets in all the cases in this study and the participants all agree that the eMarkets are poorly used and understood in the industry. It is not clear how the eMarkets will change the structure of the purchases, only that it will change it. One of the reasons mentioned why they will have
strong impact is the highly fragmented healthcare industry, it is extremely difficult to keep track of all buyers and sellers as well as product innovations. Today the general purchasing organizations (GPO) more or less control purchasing in the healthcare industry, with manufacturers, distributors and hospitals as members. One question that pops up is how the GPO’s will react on the eMarkets. One scenario is that they get active in the eMarkets and thereby keep their strong position in the industry. The other scenario is that they do react powerful enough, which can open up the industry and each vendor and buyer act individually through the eMarket.

The search for information is what has driven all participants to first take contact with the eMarkets. The end-users, doctors and nurses, are not computer oriented according to the interviewees, therefor it is people from the purchasing departments that mostly visits the eMarkets today. The buyers currently use the eMarkets to compare products and to take contact with vendors, but just to a small extend. The information search is not only about finding potential buyers and sellers, but also to meet industry people in discussion forums and find industry news and to spot trends. Undoubtedly the eMarkets have already taken a role as information provider and as a virtual industry venue.

The buyers and sellers have not taken the next step to go on from finding a product to purchase it through the catalog or auction. This is a matter of time, most of the manufacturers and hospitals are as mentioned early in their adoption process of e-commerce. One of the manufacturers has transferred to Internet based EDI and they are in my opinion closest taking this step. There is one exception, namely Rush Hospital. They have partnered with OmniCell.com, the application software provider oriented eMarket. Rush aiming doing all their purchases over OmniCell and they have an establish relationship with all the vendors they do business with through the eMarket, so no new contacts are taken at OmniCell. In all the other cases most of the purchases are being done over EDI. Two of the hospitals are initiating a pilot project to let the end-user order direct from the vendor. This to decrease the contact with the purchasing department, in these purchases relationships are established and contracts written with the vendors before direct purchases take place. The EDI will continue to grow and will in a not distant future reach close to 100% of all purchases, according to the respondents in this study. The buyers and sellers are all talking about integrating more business processes to be done automatically, activities like electronic invoices and electronic banking.

In the post sale most of the contact is direct between buyer and seller. These are activities like, requesting for and supporting products and giving feedback and education. Nearly all of this is done face to face and a very small parts done electronically. One interesting problem that came up with electronic education is documentation. If the selling organization take the active part and send a representative to educate the buyer they know appropriate education is performed, which later if problems occur can have liability motives. The selling organizations have also thought about video streaming, as a part of education, but just as pilot projects. These were just small experiments, but they are aware of the possibility and will probably start using it to a bigger extend.

In this study all the respondents agreed on that the eMarkets were poorly understood and used. They all had a very positive attitude towards them and positive experience the
contact they have had so far. They also all agreed on that the eMarkets will be very influential in the future. With this in mind the overall conclusions will now be drawn on how the eMarkets better can satisfy organizational buyers and sellers needs.

The information need occurs in many different activities in the organizational buying and selling process. When buyers searching for products and when sellers searching for potential buyers, but also when market research being done are just a few examples. Today the eMarkets serve many of these needs with the great advantages the Internet provides. When technology being developed further the eMarket will serve more and more of these needs. Lustig (2000) stated that video streaming together with immediate voice-chat is now being developed at eMarkets. This will enable the eMarkets not only to inform better and in more detail, but also to efficiently include needs that used to be satisfied through personal contact. When being able to educate buyers better, it is my opinion that the users will increase trust in the eMarkets as well.

All the organizations in this study using EDI and developing more business processes to be done electronically. When the online procurement is growing the eMarkets will being able to serve needs as efficient and safe payment and delivery. All the vendors talk about how important control is in the distribution network is and being able to educate their buyers to get re-buys. All of them have taken the opportunity when orders coming in through their Web page to sell products outside their distribution network, which is state as the core in their selling process according to all of them. It is also my believe that, when the online education will be further developed vendors will more frequently sell to new markets and the eMarkets will then grow in use.

Already eMarkets like OmniCell is application software oriented and this trend will continue to integrate with the key features explained in the theory chapter. According to Goldman Sachs (1999) the eMarkets will enhance the proposition and include financial services, logistics and customer service to streamline the value chain. This means that the buyers and sellers can find more and more of their business processes at on single portal, namely the eMarkets. When integration of inbound as well as outbound logistics being done most of the buyers’ and sellers’ need can be met.

Further it is my estimation that the eMarkets will satisfy different needs for different products, at least in an early stage. Products without a strategic importance are more likely to be bought at the eMarket. Products that are inexpensive and are being bought in high volumes. For capital intensive products with more complex purchasing decision process satisfaction for information needs are sought at the eMarkets. Here the risk willingness is low and it is an extensive product evaluation that includes many individuals.

A conclusion worth noticing is the close relationship between buyers and sellers. Today they are doing all their purchases under contract. Is it economic profitable to break these

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well functioning contracts? This must be kept in mind when entering an eMarket. Further how will these relationships change when the eMarkets grow and maybe also integrate procurement software. It is further my opinion that the eMarkets will integrate these processes mentioned in the conclusion. When this happen the eMarkets will help deepening the relationships between buyer and seller and help make the value chain transparent. So in the future I certainly think that the eMarkets can and will satisfy most of the organizational buyers and sellers needs.

6.4 IMPLICATIONS FOR MANAGEMENT

These implications will be from a Swedish manufacturer of healthcare products standpoint and how they can benefit from the eMarkets.

As this marketing study has proceeded, my thoughts have been more and more direct towards what will happen to the eMarkets after the end of this thesis. As mentioned in the conclusions, I most definitely see a huge potential for the eMarkets. The features offered, all reports being written and all the organizations in this study show great interest for them. A conclusion that also has been drawn is that all the investigated organizations are in a very early stage to adopt the eMarkets and conduct business there.

There are certainly barriers when entering the US market. Some of them are marketing related, e.g. what strategies to use to win market shares. Other problems occurring when a member of the EU doing business with the US. A barrier that is directly related to the healthcare market is the general purchasing organization’s (GPO). According to Lustig (2000) there are six big GPO’s in US and they have most vendors, distributors and hospitals as members. They deal with a wide range of products in the industry, but not all. Mr. Lustig points out that products like surgical capital equipment are often sold direct from manufacturers to end-user. Consequently a manufacturer for capital intensive products is more likely to get a contract with a hospital then a manufacturer for disposable products. On the question how the GPO’s will respond to the eMarkets Mr. Lustig answered “The jury is still out”.

When talking about implications direct regarding eMarkets in the healthcare industry it is still very early. The first contact for the organizations with the eMarkets has been information oriented. Therefor to be present at electronic catalogs the eMarkets can definitely generate leads to drive potential buyers contacting them. For example at Hospital Network only one vendor has an e-commerce center, which means possibility to purchase direct through the catalog. At the Medibuy catalog it is not possible at all to purchase direct through the catalog. This means that nearly all vendors present at the product catalog have currently the strategy only to generate leads. If entering today leads can certainly be generated, but I belief because of the structure in the healthcare industry, with the GPO’s and close relationship between buyers and sellers, it is difficult to transform the lead to a purchase.
Spera (1999) claims that before GPO’s were setting the rules, and smaller manufacturers often found themselves left out in the cold while larger companies negotiated long-term supply contracts. Spera (1999) continues saying that this will shift when the eMarkets get more established. When it will become possible to online educate the buyers better about the products and sell direct through the eMarket will grow the chance increases to generate sales. As said in the conclusions when the trust for the eMarkets increases, it is my opinion that the buyers are also more likely to seek new vendors through the eMarkets.

From being focused on the management implications, the attention will now turn to the implications from a more academic point of view, namely those of theory and future research.

6.5 IMPLICATIONS FOR THEORY
This research has contributed to theory in that it has offered an observation of a phenomenon within a specific setting. Past research has provided me with theory from which I have formed research questions. These research questions were to serve as a foundation, when attempting to investigate how eMarkets better can satisfy organizational buyers and sellers needs, in the case studies.

The contribution to theory is based on real life observations based on the research problem that was formed in this field of study, and that can be added to what has been examined and described in previous research. However, since the development of eMarkets still is in its infancy and changes quickly, there are still a lot of issues out there in the reality that needs to be explored, described and examined. Among other interesting and important things, I believe that the usage of eMarkets will continue increase rapidly, why additional research has to be done.

This will brings us to implications for further research.

6.6 IMPLICATIONS FOR FUTURE RESEARCH
This thesis has provided an insight to a field of study where it still remains a great deal of areas in which to conduct additional research. Examples are to:

- Many of the conclusions should be general, but it would be interesting to investigate other industries.

- Because the rapid development of business to business electronic commerce and the lack of knowledge on the organizations investigated it would be interesting to investigate the same organizations some time from now.
- How the key features of the eMarkets will develop and which new features will occur in the feature.

- Compare different eMarkets in different industries regarding features. Further to investigate the characteristics of the industries and how this will affect the use of the eMarkets.

- To investigate which business processes organizational buyers and sellers want integrated to the eMarkets.

- Investigate how the organizational buying behavior will be affected by the eMarkets, regarding internal changes in the organizations.

- Investigate how the organizational selling will be affected by the eMarkets, regarding internal changes in the organizations.

- Investigate how the general purchase organizations will respond to the threat or opportunity of the eMarkets.

- Investigate how the relationship between buyer and seller will develop, when the eMarkets are growing.
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APPENDIX

Appendix A: Company presentation, The Swedish Trade Council
Appendix B: Observation checklist
Appendix C: Discussion guide buyer
Appendix D: Discussion guide seller
Appendix E: eMarktes, HospitalNetwork, medibuy & OmniCell
Appendix A

*Company Presentation*

The Swedish State and Business community, represented by the General Export Association of Sweden, jointly own the Swedish Trade Council. The STC is headquartered in Stockholm, Sweden. The organization has 45 offices abroad and operates in close collaboration with Swedish embassies and consulates. The services offered by the Swedish Trade Council extend over the whole process of establishing and expanding sales of Swedish products and services, or Swedish exporting companies, outside of Sweden. The services are divided into three areas: Export Information, Export Development and Export Consulting. Gross turnover for the STC in 1998 was MSEK 456. As a portion of total financing for Swedish Trade Council operations, Government Assignment funding has fallen from 59 percent in 1991 to 32 percent in 1998. The employees at STC are young and well educated. The average age is 35 and 78 percent have a university degree (Swedish Trade Council annual report 1998).

*The Swedish Trade Council and electronic marketplaces*

The Swedish Trade Council became a pioneer when launching their eMarket Service and continues being a leader in Sweden when it comes the electronic marketplaces. The goal of eMarket Services is to help companies find and evaluate electronic marketplaces. They focus on business-to-business markets in specific industries. The Swedish Trade Council’s eMarket Services provide essential information about electronic marketplaces in form of facts and figures put together as reports and suggested reading. A list of business-to-business marketplaces divided by industry with links to the eMarkets and fact sheets with detailed information on reviewed marketplaces are also offered by eMarket Services.
Appendix B

**Observation Checklist**

Corporate Id and date of incorporation

Enrolment and Benefits

*How to join?*

*Costs involved?*

*What is required?*

Characteristics and key features

Identify and explain the features from both buyers and sellers perspective. With regards to the key features of the web. How they take part in the purchasing process and identify which products are being sold?

Exchange

Catalog

Auction

Value Adding Features

Performance

Software solution provider?

How many companies are present?
Appendix C

Questions buyers

1. Identification of the interviewed person
   What is your position in the company?
   How many years have you been working in your present area?
   How many years have you been in the industry?

2. How well known and understood are the electronic marketplaces in the healthcare industry?

3. R.Q 1 How can the needs of buyers and sellers be described?
   Can you describe the needs that occur in your buying situation? Explain the cause of these needs and how they are being satisfied?

I have Maslow hierarchy of needs as starting point.
   1. Physiological: This would be the core product or service.
      *Strategic* | *Tactical*
      Product functionality

   2. Safety. This would relate to basic services.
      *Strategic* | *Tactical*
      Delivery
      Finance & payment
      Store
      Information

      *Strategic* | *Tactical*
      Two-way relationship
      Technical service
      Risk
      Value added features
      Convenience,

   4. Esteem: Reputation and prestige are type of needs here.
      *Strategic* | *Tactical*
      Reputation
      Brand
      Status

5. Self-actualization Both parties involved are complete and open participant
   *Strategic* | *Tactical*
   Partner ship

Can your needs in the purchase situation be categorized like this? Why/Why not?
Can you describe your specific needs in each category? Important needs?
Is there anything I have left out?
Is there anything you would like to add?
4. R.Q 3 How are the electronic marketplaces influencing the buying processes? Can your purchase be divided into different stages from a defined beginning to a defined end? Which are the actions your company makes during these stages?

**Pre purchase:** What are the actions in each step and how are they being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
1. Search/Inquire for product:
2. Discover product:
3. Compare products:
4. Negotiate terms:

**Purchase:** What are the actions in each step and how are they being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
5. Place order
6. Receive acknowledgment
7. Initiate payment
8. Receive product

**Post purchase:** What are the actions in each step and how are they being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
9. Request support
10. Give feedback

Can your purchasing process be described like this? Do you agree or disagree? Is there anything I have left out? Anything you would like to add?

What are the most important steps in your purchase?
Are there any steps you would not feel comfortable doing electronically?
Where do you feel that the eMarket can make the process more efficient?
Does the process differ much from different purchase situations and products?
Can you estimate the length of the process? Can this be shortened by eMarket?
How many people and departments are involved? Can this be changed by an eMarket?
Anything you would like to add?
Appendix D

Questions Manufacturers

1. Identification of the interviewed person
   What is your position in the company?
   How many years have you been working in your present area?
   How many years have you been in the industry?

2. How well known and understood are the electronic marketplaces in the healthcare industry?

3. R.Q 1 How can the needs of buyers and sellers be described?
   Can you describe the needs that occur in your selling situation? Explain the cause of these needs and how they are being satisfied?

I have Maslow hierarchy of needs as starting point.

5. Physiological: This would be the core product or service.
   Strategic  Tactical
   Product functionality

6. Safety. This would relate to basic services.
   Strategic  Tactical
   Delivery
   Finance & payment
   Store
   Information

7. Social. Needs in this dimension are accessible, interpersonal, human.
   Strategic  Tactical
   Two-way relationship
   Technical service
   Risk
   Value added features
   Convenience

8. Esteem: Reputation and prestige are type of needs here.
   Strategic  Tactical
   Reputation
   Brand
   Status

5. Self-actualization Both parties involved are complete and open participant
   Strategic  Tactical
   Partner ship

Can your needs in the purchase situation be categorized like this? Why/Why not? Can you describe your specific needs in each category? Important needs? Is there anything I have left out? Is there anything you would like to add?
4. R.Q 3 How are the electronic marketplaces influencing the buying processes?
Can your selling be divided into different stages from a defined beginning to a defined end? Which are the actions your company makes during these stages?

**Pre Sale:** What are the actions in each step and how are the being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
1. Identify buyer
2. Approach & qualification
3. Need assessment

**Sale:** What are the actions in each step and how are the being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
4. Receive order
5. Authorize payment
6. Schedule order

**Post sale:** What are the actions in each step and how are the being completed today? Could this be done electronically? Could this be done by an eMarket? Why/why not?
7. Ship product
8. Receive payment
9. Support products
10. Market research

Can your selling process be described like this? Do you agree or disagree? Is there anything I have left out? Anything you would like to add?

What are the most important steps in your purchase?

Are there any steps you would not feel comfortable doing electronically?

Where do you feel that the eMarket can make the process more efficient?

Does the process differ much from different purchase situations and products?

Can you estimate the length of the process? Can this be shortened by eMarket?

How many people and departments are involved? Can this be changed by an eMarket?

Anything you would like to add?
Appendix E

HospitalNetwork.com

www.OmniCell.com

Medibuy.com