

Project name: E-market qualification and training

Project Number: 01114

## ***Facklig slutrapport eMarket Services***

### Summary:

During this project eMarket Services has:

- Studied the eMarket area and further developed models and theories on the use of eMarkets in international business.
- Developed a model for analysing participation in eMarkets from a cost/benefit perspective.
- Gathered user experiences through interviews and drawn conclusions on the progress of eMarkets.
- One pre-normative model and theory developed by eMarket Services during the former project is the main functions of an electronic marketplace related to the inefficiencies in the respective industry.
- Stimulated the development of eMarkets through a series of seminars, networks, newsletter and articles.

**In this report we present the knowledge we have generated through research and coordination between the Nordic trade promotion organisations, in cooperation with other trade promotion organisations in the eMarket Services project.**

### **Summary of the eMarket situation**

Electronic marketplaces with several buyers and many sellers will become increasingly important to enable companies to successfully reach their target markets, and effectively buy and sell products.

By an electronic marketplace, we mean a web site with trading functions for several buying and selling companies where the provider of the web site has no control over the prices of the products.

eMarkets are still at an early stage and rapidly changing. There are still many eMarkets around the world and it is hard for companies to keep up with these changes. Many small and medium sized enterprises (SMEs) are not aware of the growing importance of eMarkets for international business. After the collapse of the financial IT-bubble many companies believe that eMarkets are dead or useless. The demand for information on eMarkets is

consequently low at most TPOs. Now eMarket Services' cases with user experiences show that eMarkets begin to make a real difference in the export business to many SMEs. Surveyed SMEs find the cases very useful to understand the benefits of eMarkets. There is a need to transfer case study knowledge from the experienced to the inexperienced companies. Many independent eMarkets have shifted their strategies to providing IT-solutions in specific industries. At the same time consortia-backed B2B eMarkets were founded to facilitate procurement and collaboration for large companies. 2002 also saw the trend for global corporations to adopt hybrid strategies that involve using both private and public eMarkets. The consolidation of independent eMarkets has continued in 2002. The importance of consortia-backed eMarkets has increased dramatically and many independent eMarkets show increasing business.

## **Conclusion**

Electronic marketplaces for companies will become important tools for international business. Currently eMarkets are becoming important to companies in certain industries, like automotive, chemicals and plastics and transportation. Some industries have eMarkets with a considerable volume of transactions. Many independent eMarkets are not attracting sufficient buyers and sellers to become of interest. The importance of electronic marketplaces varies between different industries.

The eMarkets that expand sufficiently will considerably simplify international business and, in some industries, totally change the way these companies do business.

It is important for businesses to do a cost benefit study to realise the challenges for the individual company.

eMarkets and e-commerce in general are changing international business profoundly. It is particularly difficult for SMEs to understand and respond to the changes. eMarket Services' partner TPOs understand that we have an important role to play in guiding companies in how to use eMarkets. We also realise that in order to stay abreast of the changes ourselves, we need to learn from each other.

By transferring knowledge about the eMarket experiences of SMEs in the Nordic countries, we have been able to show how eMarkets create opportunities in international business, and help prepare companies for new risks and hurdles.

Through the support of the Nordic Industrial Fund it has been possible to increase the competitiveness of Nordic export companies.

Jonas Bygdeson

Project leader, Swedish Trade Council. Head of eMarket Services

### Examples of reports, cases and articles on eMarkets by eMarket Services:

*"Cost / Benefit of eMarkets- A User's Perspective" January, 2002*

*"Norwegian public procurement via eMarket" February, 2002*

*"Introduction to eMarkets & Why Export Companies should care about them" July 2002*

*"Achieving goals by using the IBX eMarket" September, 2002*

*"eMarket saves small Danish Fish business" September, 2002*

*"Trust Barriers and Trust Marks" October 2002*

Facklig slutrapport eMarket Services .....	1
1 eBusiness tools .....	4
2 Electronic Marketplaces .....	5
2.1 Introduction to electronic marketplaces .....	5
2.2 The role of the eMarket .....	6
2.3 Categories .....	6
2.4 In which industries will eMarkets become important? .....	10
2.5 Anti trust issues .....	10
2.6 How do eMarkets earn money? .....	11
3 Private exchanges .....	13
3.1 What are Private Exchanges? .....	13
3.2 Advantages of Private Exchanges .....	14
3.3 Disadvantages of Private Exchanges .....	14
3.4 The elements of Private Exchanges .....	14
3.5 Operating a Private Exchange .....	15
3.6 Joining a Private Exchange .....	16
4 Trading on an electronic marketplace .....	17
4.1 Introduction .....	17
4.2 Marketing information .....	17
4.3 Pricing .....	22
4.4 Ordering process .....	24
4.5 Trust .....	26
4.6 Collaboration processes .....	28
4.7 eMarkets provide additional services .....	29
5 Cost benefits of Electronic Marketplaces .....	31
5.1 Why should export companies care about eMarkets? .....	31
5.2 The costs of eMarkets .....	33
5.3 Benefits .....	34
6 Visions and Future Trends .....	40
6.1 The early development .....	42
6.2 Which eMarket model will survive? .....	43
7 eBusiness issues .....	47
7.1 Marketing on the Internet .....	47
7.2 Payment .....	48
7.3 Electronic communication .....	50
7.4 The legal framework for eBusiness .....	52
7.5 Organisational issues .....	61
8 Checklist: Corporate Website .....	63
9 Checklist: Selecting an eMarket .....	65
10 Checklist: Trading on an eMarket - eCatalogues .....	76
11 Checklist: Decision Maker's Cost / Benefit Analysis Guide .....	79

## 1 *eBusiness tools*

There are many tools of the eBusiness trade, and they are used to replace the traditional tools of business to automate and facilitate the processes of pre-sale, sale and post-sale. Most of these will be covered in detail in later chapter, but are put in context and covers the range from smaller systems (eMail) to advanced (eMarkets). Usually, the more advanced systems require that the company is using and has implemented the smaller systems. By this is meant that the use of e.g. an electronic marketplace has a better chance of success if the company has implemented direct communication (ability to automate the order process), an Internet web site (marketing) and uses eMail (communication):

**Email** - email is a complement to traditional marketing and sales communication tools. Large books have been written on effective use of eMail and there are rules and common guidelines on how and when to use the tool effectively.

**Corporate Website** - The first use of the web site was as a marketing and support tool. With the availability of standard tools, even the smallest company is able to set up their online shop. The difficulty however, lies in the organisational changes that have to be made and is a strategic decision that requires more resources than was first imagined.

**Direct communication** - In contrast to the web-site, which reaches a number of customers/suppliers, direct communication is set up as a direct link between your company and the partners. There are standard components and protocols that can be used, but in principle it is a one-to-one communication tool. Depending on the transaction volume, the communication can be half-automated or fully automated, depending on how tight the integration between front-office systems (deals directly with the customer) and back-office systems are. EDI is an example of direct communication.

**Electronic Marketplaces / eMarkets** - These are many-to-many exchanges. There will usually be guidelines and criteria that define who can join the marketplace, but in principle they are open to any supplier/buyer within the industry or area that the marketplace targets. At the marketplace, one supplier is not able to set the price, but must follow the normal rules of supply and demand.

We have decided to define eMarkets as many-to-many exchanges. Another very important category is the private exchanges:

**Private exchanges** - These are eMarkets that are one-to-many: one supplier and many customers, or one customer and many buyers. The word "private" means that the "one" is controlling the eMarket, that is deciding who can join, setting the criteria of the transactions, deciding on prices etc.

Sometimes we are asked: when will B2B eMarkets take off? If you look back on the last 2-5 years, you will see that it already has.

## ***2 Electronic Marketplaces***

### ***2.1 Introduction to electronic marketplaces***

Electronic marketplaces, eMarkets, with several buyers and many sellers are important tools that enable companies to successfully reach their target markets, and effectively buy and sell products in their local country and abroad. Large industry players, who commit to trade substantial volumes, back many eMarkets. The use of eMarkets is simplifying international business and, in some cases, totally changing the way these companies do business. This makes it very important for all companies operating internationally to learn how the eMarkets in their industry function.

#### **Definition**

We define an electronic marketplace, eMarket, as a web site with trading functions for several buying and several selling companies. The provider of the electronic marketplace has no control over the prices of the products. Buyers and sellers do business with each other and pay a fee to the eMarket. The electronic marketplace has some trading functions like price negotiation in the form of an auction or catalogue of products with the possibility to request a quote or order online.

Electronic marketplaces are often closed to companies that are not members. Sometimes only registration is required to become a member. In other cases new companies have to be invited by an existing member or go through a qualification process as well as pay membership fee.

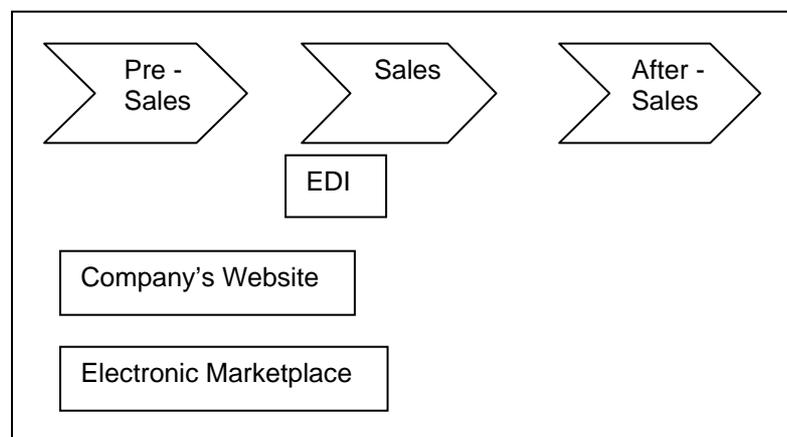
Electronic marketplaces are sometimes called exchanges.

Examples of e-businesses, which we do not define as an eMarket, include:

- **Directory:** Is only a list or database of companies. It does not have tools to search products in a catalogue or to request quote.
- **Private Exchange** (*see next chapter*): A large company creates a solution for trading with their own suppliers or buyers.
- **Online distributor:** A distributor that represents many brands and sells the products online. Only one seller controls the price of the products.

## 2.2 The role of the eMarket

The eMarket is one platform for electronic business. The corporate website is of course another important information and communication channel for e-business. The company may choose to use the corporate website not only as an information and communication channel but also taking orders over the website. The electronic marketplace can serve both as a marketing channel in the pre-sale phase, as well as a sales channel. The eMarket is a complement to direct communication between computers like EDI, Electronic Document Interchange in the sale phase.



**Figure 1 Different roles of e-business tools in the sales process. Source: eMarket Services**

## 2.3 Categories

Electronic marketplaces may be divided into three categories based on their main stakeholders and operators:

**Independent eMarket** – Is operated by a third party who is neither buyer nor seller. It is open for all buyers and sellers in an industry or region.

**Industry consortium, sales-oriented eMarket** – Is operated by a limited number of co-operating companies for efficient sales to a large number of buyers.

**Industry consortium, purchase-oriented eMarket**– Is run by a limited number of large buyers in order to obtain an efficient purchasing process. The eMarket is open to their existing suppliers.

We are increasingly seeing hybrids of these categories. In many cases large companies have created a purchase-oriented eMarket, but in order to make it attractive to the suppliers they make the eMarket independent by creating a separate company.

## Independent eMarkets

Independent eMarkets are open to all serious participants in a particular industry. The provider of an independent eMarket is expected to be a neutral third party. This means that competing companies can be members of the same eMarket. If established participants in the industry act as the eMarket provider, it can be difficult to maintain neutrality and gain the confidence of other players. In many cases, however, large companies from the industry are shareholders of the eMarket, and commit substantial trading volumes. In order to make the eMarket attractive to all the companies in the industry the eMarket operates as an independent company.

The number of independent electronic marketplaces has fallen in recent years.

Examples of independent eMarkets:

ChemConnect - Chemicals

Phonetrad.com - Mobile telephones and accessories

aconex - Australian Construction Exchange

## Sales-oriented eMarkets

Sales-oriented eMarkets offer products from a limited number of sellers. This can be a group of established suppliers who jointly start to use the Internet as a marketing channel. In other cases, new participants, together with manufacturers of complimentary products, create an electronic marketplace in order to disseminate information or to sell their products.

The sales-oriented eMarkets can often support the manufacturer (seller) by offering electronic systems for ordering, payment and logistics. It adds value to the customer by enabling him to purchase products from several specialist manufacturers at a specific location on the Internet rather than having to click through several sites. In many cases the buyer on a sales oriented eMarket is a retailer. In sales-oriented eMarkets the providers of the marketplace choose the products available for sale.

#### Example 1

Swedish-based eMarket Toolstore offers products from Bergman & Beving Tools. Others include ESSVE, Jaktia, Luna and Skydda. Companies can place orders, check stock levels, track deliveries or view their order records. Product and environmental information is also available. The Gallery contains product information and images of over 100,000 products. The Toolstore portal has been in operation since Spring 2000 and by 2001 30%, or € 67 million, of the company's total orders goes via Toolstore according to Kennet Göransson, Vice Managing Director of Bergman & Beving Tools.

[www.toolstore.se](http://www.toolstore.se)

#### Example 2

FindMRO.com<sup>TM</sup> was launched in 1999. The eMarket is a division of W.W. Grainger, Inc., a North American distributor of tools, maintenance and repair products to industry. FindMRO.com has entered a partnership with ENI-NET (a company directory offering products and services to the environmental and building industries) and eFiltration (an e-commerce site offering filtration products). FindMRO's relationship with over 12,000 suppliers gives them access to 100,000 brands and in excess of five million products.

[www.findmro.com](http://www.findmro.com)

## Purchasing-oriented eMarkets

Large companies who seek to rationalise their purchasing and keep prices low often run purchasing-oriented eMarkets. In many cases, it is not direct material to be used in the products that are purchased on purchasing-oriented eMarkets, but rather indirect or MRO (maintenance, repair and operation) material. Research shows that approximately 30% of purchases relating to maintenance and repairs today are purchased without formal contract arrangements. This so-called maverick buying makes the purchases 50% more expensive. With an Internet-based purchasing system, it is possible to involve all company purchasing personnel in using general agreements with approved suppliers and discounts. Approved suppliers must regularly provide a digital catalogue of their products for use on the eMarket. Buyers can then individually and securely place orders with an approved supplier. Purchasing companies sometimes permit new suppliers to offer products and services on the network.

#### Example 1

In the beginning of March 2000, competitors Ford, General Motors and Daimler-Chrysler decided to merge their purchasing-oriented eMarkets. Later, Renault and Nissan also joined together with other auto-makers. They have created one large purchasing channel for accessing existing and new suppliers. It was named Covisint, and the first trial transactions took place in October 2000. In this instance, the suppliers are required to use a common channel instead of several different ones.

[www.covisint.com](http://www.covisint.com)

#### Example 2

In the daily consumables industry, Transora is an eMarket involving collaboration between over 50 different companies, including, amongst others

Campbell Soup Company, The Coca-Cola Company, Colgate-Palmolive Company, Danone Foods, Inc./The Dannon Company, Inc. The Gillette Company, H.J. Heinz Company, Heineken International, Johnson & Johnson CCI, Kellogg Company, Nestlé Holdings Inc. PepsiCo, Inc. The Procter & Gamble Company Unilever NV

[www.transora.com](http://www.transora.com)

Electronic marketplaces will become important tools for companies to do international business. However, many independent eMarkets have had difficulties attracting sufficient buyers and sellers and many have had to shut down operations. In order to get sufficient commitment and trading volumes most marketplaces have had to attract large players either as shareholders or core clients or both.

In some cases purchasing oriented eMarkets loose customers since large companies have started building up their own private eMarkets, which are commonly called Private Exchanges. In the private exchanges the buyer admits and deals with its traditional suppliers. These Private Exchanges can be open to new suppliers or closed and restricted to only well known and certified companies.

### **Vertical or horizontal**

**Vertical eMarkets** are suited to specific industries, for example medical technology, chemical, building construction material, steel or textiles. Several companies participate in vertical eMarkets to buy or sell direct material. For example, a company producing hygiene articles can buy raw materials of paper from one vertical eMarket and chemicals from another.

**Horizontal eMarkets**, on the other hand, are region-, functional- or process-oriented. In horizontal eMarkets, companies primarily buy indirect material that supports their businesses. Some examples are office equipment, consulting services or spare parts.

Sometimes eMarkets for several industries within a limited geographical region are considered to be horizontal.

Sometimes marketplaces for several industries within a limited geographical region are considered to be horizontal, e.g., Taiwan Products Online, where many Taiwanese companies present their products in an eMarket.

[www.manufactures.com.tw](http://www.manufactures.com.tw)

## ***2.4 In which industries will eMarkets become important?***

The inefficiency is greatest in industries that are very fragmented. These are industries with many buyers and many sellers and where it is difficult to obtain information about companies, products and prices in different parts of the world. Buyers and sellers can both profit from the fact that eMarkets help them more effectively find customers and products, place and receive orders and obtain the best price.

In less fragmented industries, eMarkets do not have the same importance. If all the buyers know all the sellers in their market or if collaboration and ordering processes are already efficient then there is less need for an eMarket.

Examples of industries where eMarkets are becoming important are:

- Construction
- Chemicals
- Transportation

## ***2.5 Anti trust issues***

Many have questioned if eMarkets would create unfair competition or cooperation. When several leading companies in the automotive industry decided to make a joint investment in Covisint, the project was scrutinised by competition regulating authorities in both the US and EU. The authorities approved Covisint after inspection.

Large companies are thus allowed to take part in the same eMarket, but not co-operate on purchasing or sales.

## ***2.6 How do eMarkets earn money?***

Most eMarkets earn their revenue with various fees. The fees charged usually vary with the type of user (seller or buyer) and the extent of usage. Transaction fees are sometimes only charged to the seller or the buyer - and in some cases, both. The main revenue sources are:

- Membership fee
- Percentage of the value of the transaction
- Flat fee per completed transaction
- Fee for hosting a company's product catalogue
- Fees for further exposure over and above basic product information
- Advertisement (banners and links)
- Leasing or sale of software for e-commerce
- Sale of industry information compiled
- Additional services like logistics and financial services
- Consulting fees

Initially analysts believed that transaction fees would be the main revenue model. Now a membership fee appears to be most commonly used.

Some eMarkets are not run as profit-making companies, but rather as co-operative solutions for efficient processing of transactions. The owners trade on the platform and want to keep the cost as low as possible.

Since 2001 a trend has been for many eMarkets to become solution vendors of specific e-commerce applications. Target clients are large companies that want their own private eMarket.

The eMarket Accesspaper developed an e-commerce platform for the paper and pulp industry. When the platform was almost ready, the venture capital ran out. The distributor CellMark who wished to use it for integration and communication with suppliers and customers then bought Accesspaper.



### ***3 Private exchanges***

Private exchanges are very successful means of doing business, and several large companies have launched Private Exchanges and thereby attracted many suppliers.

A study by Forrester Research states that more than fifty percent of all companies expect to conduct their purchasing activity using a Private Exchange by 2003. Major companies like Boeing, Cisco, Dell, DuPont, Ford, General Electric and others have built Private Exchanges.

#### ***3.1 What are Private Exchanges?***

In the previous chapters we have already introduced the Private exchanges. According to our definition, these are not marketplaces because they are “one-to-many” instead of “many-to-many” exchanges. This means that **one company** controls the exchange and thereby also the rules and access.

We define a Private Exchange / marketplace as an Internet hub, operated by a single company, to support commercial interactions with its own known suppliers and/or buyers. It is often used to integrate a company’s internal systems (such as ERP) with its external trading partners.

Some of the features, which currently distinguish Private Exchanges from public eMarkets, include:

- Run by a single company for the purpose of buying, or selling, with it’s own known suppliers or customers.
- The proprietor of the Private Exchange, controls membership access. That is, suppliers, and/or buyers must be invited or approved before access is granted. Usually, those invited or approved to join, are current suppliers or customers to the proprietor of the exchange.
- Private exchanges are oriented towards using the Internet hub to streamline Supply Chain Management (SCM) and/or Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) integration. Public eMarkets by contrast tend to focus more on bridging market inefficiencies (such as information about the true state of supply and demand) by facilitating the interactions of many buyers and many suppliers.

In a Multiple Private Exchange several buyers and sellers use the same platform for their Private Exchanges. eMarket Services ([www.emarketservices.com](http://www.emarketservices.com)) lists major Multiple Private Exchanges in our directory of eMarkets.

Single Private Exchanges, with only one company as buyer or seller, are not listed in eMarket Services’ directory of eMarkets.

### ***3.2 Advantages of Private Exchanges***

Whereas public marketplaces mainly focus on the buying and selling, Private Exchanges has a much stronger focus on management of the relationships between the owners various business units and its trading partners. Although such collaboration functions are available in public marketplaces, they are easier to operate within a Private Exchange due to the complexity of the process when they are focused on the needs of only one company – the owner.

A major benefit of the Private Exchange is the control that the owner can exercise, both on the content and the participants. This control also enhances security issues, since the owner is controlling the participants and their individual access to the exchange. Since control is located to one company, Private Exchanges can launch quickly with functionality tailor-made to the owners requirements.

### ***3.3 Disadvantages of Private Exchanges***

The factors that make the advantages are also those that make the disadvantages. The company that owns the exchange has to bear all the costs of operations. Other eMarkets like consortia and independent marketplaces can spread the cost on all their participants.

The Private Exchange has a tendency to only focus on the owner's current needs and expects the participants to conform to its practice. Like their public counterparts, it is difficult for Private Exchanges to attract and keep suppliers, but Private Exchanges also face added challenges.

Although access to a Private Exchange may be a pre-requisite to sell to the company, suppliers may be unhappy to trade in an environment where they have to follow the rules of the exchange operator.

In addition, the suppliers have the disadvantage of having to comply with different sets of practices of various exchanges rather than standardizing on a limited set of procedures to optimise their own processes.

### ***3.4 The elements of Private Exchanges***

Since Private Exchanges are set up by and operated by a single owner, it is impossible to define the exact content and possibilities within the exchanges.

The aim of the Private Exchange is to integrate the whole business process through the design, sourcing, planning, procurement, enabling of suppliers and selling. We will here mention some of the possibilities that are mentioned by providers of software for such exchanges:

### **Design**

Teams of product engineers, production managers and end customers are involved in the various stages of a products life cycle to manage the entire design process.

### **Source**

Linking of online bidding to design documents and tools to analyse procurement spending. The owner of the exchange can build close relationship with key suppliers and its various business units.

### **Plan**

The exchange can use collaborative forecasts to drive procurement, sourcing and other supply chain activities. It can alert its affected members when major changes occur in order to update stocks and buffer inventory.

### **Procure**

The exchange can support procurement of direct and indirect materials. It can offer tools for centralised contracts management, automatic generation of purchase order.

### **Enable suppliers**

Suppliers have access to order management capabilities and can aggregate content from multiple catalogues, incorporate their own offerings into the exchange catalogue and integrate with third-party exchange services.

### **Sell**

The owner can use the exchange to allocate sales order to multiple suppliers, integrate fulfilment processes, offer sales promotions and targeted marketing campaigns.

## ***3.5 Operating a Private Exchange***

In planning to establish a Private Exchange, a company should consider the strength of its market position relative to the competition, the size of its ecosystem and the strength of its influence over partners in the value chain. A Private Exchange makes business sense for a company that has a dominant position within its value chain.

Over time Public Marketplaces will probably attract a larger group of buyers and suppliers than Private Exchanges. With its reach and volume, public markets will probably be able to offer a broader range of sophisticated features and value-added services. When that happens, companies may reconsider whether it makes sense to maintain a Private Exchange with its

troubles and costs. Most likely some Private Exchanges will then continue for highly specialized and sensitive operations, but interoperate with public eMarkets to gain the benefits of a larger network. That way, they can have their privacy without becoming shut-ins.

A Private Exchange that manages to connect the business eco-system will enable the owner to perform collaborative demand planning with retailers and distributors as well as collaborative supply planning with suppliers. The suppliers of Private Exchange solutions promises such things as:

- Reduced time to market
- Shorter cycles from order taking to fulfillment
- Lower prices
- More efficient processes
- Lower capital investment
- Tighter control throughout the eco-system

In our opinion, these are valid goals, but the cost and the complexity of the Private Exchange should be considered carefully.

### ***3.6 Joining a Private Exchange***

Since public eMarkets so far has not had the financial success of been able to attract enough participants, Private Exchanges has become the favorite choice of large companies.

Smaller suppliers therefore need to prepare for the possibility of Private Exchanges to become an important channel for their sales to existing and/or new customers. This means, having basic e-business tools and a strategy for how the Internet fits with their current and future business operation (such as how to get approved to join the Private Exchanges of target customers).

## ***4 Trading on an electronic marketplace***

### ***4.1 Introduction***

There are inefficiencies in every industry; such as getting updated information on the latest and best products, and knowing the best price in times of excess capacity or lack of products.

One pre-normative model and theory developed by eMarket Services is the main functions of an electronic marketplace related to the inefficiencies in the respective industry, as described in detail below.

### ***4.2 Marketing information***

In many industries, the main inefficiency is the lack of updated information concerning available products on the market. This includes:

- Knowledge of new products
- Which suppliers have available capacity

Which suppliers have products in stock that can be delivered rapidly?

Electronic marketplaces aim to make business contact and transactions easier and cost effective. The value of an electronic marketplace is greatest in industries where there are many hurdles or specific inefficiencies in the market. Although the functions are not always the same in different eMarkets, this chapter will identify five types of inefficiencies that an electronic marketplace can reduce through five main trading functions.

Inefficiency	eMarket Function
<p>Marketing information</p> <p>It is difficult for sellers to reach buyers and for buyers to locate companies and products.</p>	Electronic Catalogue
<p>Pricing</p> <p>It is difficult for sellers and buyers to obtain information about supply and demand in order to get the best price.</p>	Auction or exchange
<p>Ordering process</p> <p>It is time-consuming for buyers and sellers to process many orders in differing formats. Many purchases are made without efficient systems and without formal purchasing agreements.</p>	eCommerce solutions for placing and receiving orders.
<p>Trust</p> <p>It is difficult to judge whether payment and/or delivery will be made in new business relationships</p>	Control / scrutiny of participating companies.
<p>Collaboration processes</p> <p>Many specialised companies are today involved in international projects / processes and it is often difficult for companies in the process chain to gather and share information.</p>	Collaboration tools for design and specification of products

The increase in international trade also increases the need for updated market information.

It is difficult to search for new products in general business directories, such as the 'Yellow Pages' because these directories are not customised for your industry and usually not efficient when searching for specific products. Searching with general Internet search engines is not efficient either.

For regular purchases from known suppliers it is costly for the suppliers to provide updated product information to their customers. The alternative so far has been to find the information in the suppliers' paper catalogues, which is time consuming. Researchers and buyers who purchase chemicals or medical equipment for example, can have several shelves of catalogues to search through and can spend several hours every week locating specific products.

## Electronic Catalogues (eCatalogues)

eMarkets can create value by providing catalogues categorised according to industry standards. The catalogue can focus on a specific region or industry. They are targeted to the needs of the industry and the companies are listed together with information concerning product areas. Some catalogues feature itemised product listings. By publishing these on the Internet, they become accessible to a large number of potential customers all over the world.

An eCatalogue is an electronic version of a company's paper catalogue, which describes its products and services. If a company has an eCatalogue, this usually also implies that a company's customers can access this electronic content using some form of eCommerce tool, such as EDI or an eMarket (private or public) or directly via the company's web site.

The information an eCatalogue may contain includes:

- Article or part numbers of the products a company produces or sells
- Description of product
- Quantities available
- Prices per unit, prices per order size, prices for different customers etc
- Images (possibly also video and sound)
- Links to web sites for related information

Some eMarkets have **catalogues with online-order** where the buyer can place orders directly. Electronic catalogues have several advantages compared to traditional catalogues:

Standardised format	All companies present their products according to a specific format, which makes it easier to find products and, above all, to compare them.
Searchable	Using catalogues as well as supporting text
Updated	Using an administrative interface, the seller can update the catalogue as frequently as he wishes.
Depth of information	Offering extensive information, technical specifications, images etc

## eCatalogue providers

Many eMarkets provide a service to build eCatalogues for suppliers. In some cases, these will be hosted on the eMarket's server and in other cases the supplier can host the eCatalogue on its own server (behind its corporate firewall), but still use the eMarket to receive and execute orders. Some eMarkets offer their members a choice of options.

The eMarket may also work with a Solution Provider specialising in Catalogue building and management. Such eCatalogue Solution Providers also sell their services directly to companies (usually large) that wish to develop an eCatalogue without the help of an eMarket.

Below is a list of some of the major eCatalogue Solution Providers. The list is not exhaustive, but is provided to give an overview of the spectrum. More details about the companies are found in the December 2001 feature report at [www.emarketservices.com](http://www.emarketservices.com).

- ArcadiaOne
- Cardonet
- Cohera / Peoplesoft
- Microsoft
- Poet Software
- Requisite Technology
- Saqqara Systems

Other smaller providers include:

- EMCAT
- ComOps
- Congex
- Hubshop
- Medianet
- Webforum

How your company best could build an eCatalogue, depends of the size and the nature of your company's business. A small business with a modest number of product items may be best served joining an eMarket in their industry, allowing the eMarket to build and host its catalogue.

Your company may also want to distribute this catalogue to other eMarkets, so it should be careful to negotiate with the first eMarket the flexibility to be able to do so. Some small companies also have complex catalogue needs. A distributor for example, may want to maintain more control over his eCatalogue due to his large number of catalogue items. In this case he may wish to still be part of an eMarket but host his catalogue locally.

## eCatalogue standards

There is currently no single unifying product catalogue standard, however there are several initiatives underway to standardise the collecting, storing, formatting / structuring and sending of catalogue content. These include UN/SPSC, eCI@ss (product classification / taxonomy, communication), and RosettaNet (for formatting and communicating in the high tech industry).

UN/SPSC was developed by United Nations and Dun & Bradstreet and is available in several languages. Other existing classification schemas can be mapped against UN/SPSC. You can find more information at: [www.eccma.org/unspsc/](http://www.eccma.org/unspsc/).

It is likely that several dominant standards will emerge based on industry specific initiatives. Companies should not wait for a standard to emerge but try to select an eMarket that either uses an eCatalogue taxonomy that claims to map to several taxonomies and/or, if choosing a vertical eMarket, look carefully at whether that eMarket is either a leader in its industry (and helping to form an industry standard) or an eMarket that is compatible with the industry leader.

To read more about initiatives for developing standards, companies should visit [www.eccma.org](http://www.eccma.org) - The Electronic Commerce Code Management Association (ECCMA). It was formed in April 1999 to support the development and maintenance of open standards for content. ECCMA delivers simple, practical, commercial solutions for content standardization that can be implemented in any syntax. ECCMA currently has over 1300+ members from 46 different countries.

## What do eCatalogues cost?

The most expensive way to develop an eCatalogue is to do it all yourself. At first, this option can seem inexpensive because companies often forget to include and measure their in-house time needed. With the "D.I.Y" option, a company also risks making the wrong decisions about taxonomy and structure.

If a company decides to work directly with a Solution Provider on developing a tailored solution, the cost will depend on the complexity of their needs. This may be the right approach if the company is large and has a substantial private network of suppliers and customers.

Joining an eMarket, the company will usually face two scenarios:

**Scenario One:** The supplier has a major customer who is already a member or a part owner in the eMarket. The customer has encouraged its suppliers to join the eMarket. This is usually the least expensive way for a supplier (possibly free depending on the industry) to join an eMarket and have his eCatalogue built and hosted by the eMarket.

**Scenario Two:** The supplier joins the eMarket without already having a major customer. Here the supplier may either pay a package price for the whole catalogue (which might include building, hosting updating, help desk support etc) or they may be able to choose to pay for the eCatalogue per line item.

If the supplier buys the package, an indicative price may be around US\$ 20,000 for a 15 to 20-page catalogue with 200 to 1000 articles. If a supplier has a very small number of articles in their portfolio, say 20 to 60 articles then they may be better off not opting for the package, but rather paying per line item and for extra services separately.

### **4.3 Pricing**

In some industries, the demand and supply for products and services is unstable, and the current price from different suppliers can be hard to track. This is the case with:

- Cyclic industries, such as paper and steel, where choice does not increase or decrease to any great degree when demand changes.
- Perishable goods, such as fruit & vegetables, certain electronic components and computers.
- Surplus in cases where it is difficult to judge the demand. This can also apply to second-hand equipment.
- Excess and lack of capacity in industries with high fixed costs such as telephony, transport and printing.

The result is that prices will vary considerably when several suppliers have an opportunity to place a bid on a particular purchase enquiry.

### **Auction or exchange**

In an eMarket, many buyers and sellers can enter products for sale and/or place bids. This is achieved by the eMarket by the use of auctions or exchanges, and companies achieve the price that the current market is willing to pay.

Information concerning supply and demand is concentrated and easily accessible to all in the eMarket. The functionality makes it easy to receive bids and compare prices. Parameters other than price can also be compared in the eMarket.

In a **pure exchange**, prices are set during constant trade. Prices fluctuate and trade is not limited to a certain period of time. Products purchased in this type of exchange are often of a standard nature (commodities). Examples are exchanges for electricity, gas and telephone capacity. Buyers and sellers are frequently anonymous, and participants can be both buyers and sellers.

Example:

Steelworks, which are producing at less than anticipated capacity. They can sell electricity in an exchange, such as Altra Energy Market, without other steelworks discovering that they are not working at full capacity.

[www.altranet.com](http://www.altranet.com)

In a **simpler form of exchange**, sellers enter a variety of goods for sale and request bids (RFB -Request For Bid). Similarly, buyers can request a quotation (RFP –Request for Proposal, for not so easily specified products, or RFQ –Request for Quote, for easily specified products). Examples of these kinds of exchanges exist for steel, paper, and food items.

Occasionally, the seller may choose to target an offer to all except their competitors or only to existing customers. The recipient of the offer can choose to accept it or place a counter-offer. The products can be of a standard nature or more specific.

When a buyer requests a quotation via the eMarket, the seller can either enter a quotation, which will be featured when the buyer returns to the eMarket, or send the quote by e-mail.

Some electronic marketplaces summarise deals on the marketplace and list the day's price for selected products.

In an **auction**, it is normally specific products that are being sold. It can be second-hand or surplus equipment, for example a job lot of electrical components. During a limited time, buyers can put in offers for the product or job lot. The price increases until there are no higher offers.

In a **reverse auction**, the buyer enters a request and sellers put in offers. The price of the offers falls throughout the course of the auction.

Example 1

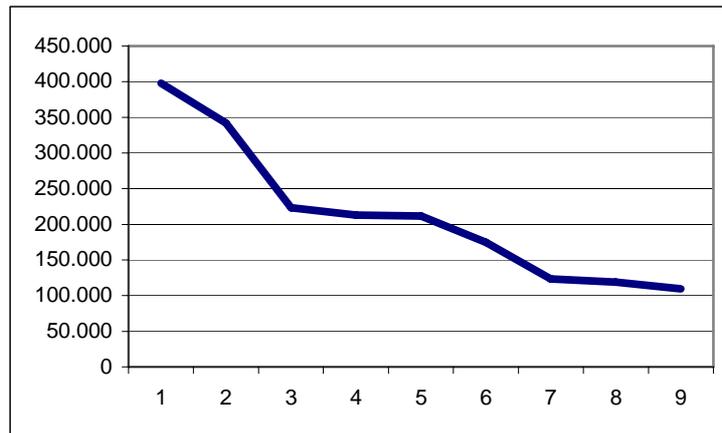
Proaño is a flower grower from Ecuador that has benefited from the eMarket **Flowergrower.com** by eliminating middlemen. 20% of their plants are now sold directly to florists via the eMarket.

Proaño have thereby increased their margins, and at the same time, the florists get a better deal. Proaño is also certain of receiving payment for goods which otherwise would be lost due to the perishable nature of flowers.

[www.flowergrower.com](http://www.flowergrower.com)

### Example 2

A buyer who used the eMarket **Printoffer** received the following nine offers for the same print item:



The difference between the highest and lowest quote is almost 290.000 SEK or 263 %.

An interesting observation is that there probably are plenty of buyers on the traditional market who have purchased at the higher level without being aware of cheaper alternatives.

On the other hand, the more expensive offers could have been made because the suppliers' equipment was not suited to the commission being quoted, but they had spare capacity and "gambled" on getting an order.

[www.printoffer.com](http://www.printoffer.com)

## 4.4 Ordering process

For the buyer, it is an expense to order and pay for goods. It is common for companies to have well-developed processing flows and routines for production. At the same time however, it is equally common that purchasing administrative costs are high relative to the cost of goods purchased, particularly for maintenance products and consumables.

This is because administration is time-consuming. It takes time for buyers to place orders with many different suppliers. Even if major resellers offer products from many manufacturers, it is time-consuming to use different ordering routines or forms, and one must keep track of different order numbers and invoices. This is time that companies want to reduce, especially for products that are not vital for production of the company's own products/services. The price for these indirect products is normally low. Maintenance materials (MRO – Maintenance, Repair, Operations) and other consumables, such as office supplies, are examples of such products. It is

also often the case that these indirect products are not purchased by the buying department and they are conducted outside purchasing agreements and without negotiated discounts. This adds to inefficiency and wastage.

For the seller it is also an expense to process orders. If sales involve a large number of low priced orders, then the costs for the ordering process can be high compared to their price of the goods.

Many smaller companies realise the benefits of encouraging customers to order from their web site. There are, however, two main obstacles for companies seeking to develop their own e-commerce system.

- It is expensive and difficult to purchase an e-commerce system. An e-commerce system requires a well-structured supporting ERP system and this is expensive to implement. Only larger companies with high sale volumes are today able to have their own web site with a developed e-commerce solution.
- Existing resellers make a living acting as middlemen for orders. They do not like customers ordering directly from the manufacturer. The reseller frequently gives added value over and above the actual sale in the form of stock delivery and service of products.

### **eCommerce systems**

An eMarket becomes an efficient medium for **customers** to channel, customise and standardise purchases, whether it concerns existing agreements or new suppliers. It is therefore possible to reduce both processing and purchasing costs. The **seller** has the opportunity to reach new customers; they receive orders in a standardised format and can reduce both the number of errors and the cost of processing orders.

By changing the order process, customers can also reduce their processing costs and achieve better prices for large volume purchases as well as larger discounts. One area that has received a lot of attention is the trade with MRO. According to the Centre for Advanced Purchasing Studies in the United States, these indirect product purchases account for more than a third of all expenses in a company and almost 60% in the service sector. A small reduction of indirect costs will therefore have a significant effect. In practice, it means that all company buyers can use one channel where they can rapidly locate current information, make comparisons and buy from several suppliers.

In most companies, “unauthorised” purchases take place where it is not certain that negotiated agreements and discounts are used. Using one eMarket for such purchases makes it easier for the company to benefit from negotiated agreements.

The added value for sellers is that they do not need to develop their own eCommerce solution for their web site, but can purchase an eCommerce solution provided by the eMarket. Using the electronic marketplace makes it cost-effective, effortless and secure to sell products.

Electronic marketplaces developed today have support for transactions built into their catalogues. It is possible to order a listed product or request a quotation using the electronic marketplace. At present, orders are normally sent by e-mail to the supplier. Some electronic marketplaces also handle payment and delivery. The sophistication of the technical solution varies, but the trend is towards integration of both buying and selling companies' business systems.

#### Example - e-commerce system

Proceedo is a purchasing-oriented eMarket for indirect goods and services. They have the following tale to tell:

"Allgon is a company producing solutions for cordless telecom and data communication. They found that administration was growing faster than turnover. The number of new suppliers increased - as did the number of invoices - and it became necessary to create a more efficient purchasing process. Negotiated agreements were not being utilised. Allgon had great difficulty circulating

information within the organisation, which meant that staff did not buy from the supplier who offered the best price. It was difficult to disseminate information concerning existing agreements to new staff. The company also had many different locations, which added to the problem of distributing information.

Allgon needed a user interface for indirect purchases, i.e. purchases for goods unrelated to production. It was also important that the interface was intuitive and self-explanatory so that staff could effortlessly start making purchases via the eMarket. They also required a complete functioning process starting from the placement of orders to payment completion. This would help reduce their high administration costs. They also needed assistance handling supplier data since they realised this was very time-consuming. In order to solve these problems, Allgon chose to use the eMarket Proceedo.net.

Since the introduction of Proceedo.net, Allgon have identified marked improvements in the process. It is possible now for Allgon to provide authorisation in advance to identified employees to purchase up to a certain amount or within a particular product group. This makes it easier later for Allgon's accounts department to pay invoices without having to check first whether purchases have been authorised. Allgon has also gained increased control over purchases and the use of Proceedo.net has led to more employees buying from suppliers with whom the company has negotiated agreements. The purchasing costs reduced when more staff bought from the supplier who offered the best terms."

[www.proceedo.net](http://www.proceedo.net)

## 4.5 Trust

In some industries, it is easy to find a buyer or seller of a certain product; but the problem is that the parties lack confidence in each other. If the seller thinks

they won't get paid, the costs are high for securing payment in the form of letters of credit, bank guarantees or credit insurance. The buyer, on the other hand, must be able to trust that the right goods will be delivered.

Sometimes transactions do not take place because companies do not want their competitors to obtain information about their activities. One manufacturer can experience a product shortage, whilst the competitor has a surplus of the same product. If the transaction can take place anonymously via a middleman, then the parties can trade with each other.

### **Control of parties**

The electronic marketplace provides an efficient method of receiving quotations from a large number of trusted suppliers. A buyer is unlikely to accept a quote from a completely unknown seller without examining references and calculating whether they can deliver the right quantity on time. The eMarket can therefore stipulate certain requirements for the participating companies. These can include creditworthiness or membership of a particular association or group. In order to provide quality control, the eMarket can collaborate with a third party who carries out quality checking services for customers demanding such a service.

An eMarket can ensure that serious businesses participate by screening members. Business risk decreases as the buyers gain confidence in companies that participate in the eMarket. They can search for, and order products from many suppliers with whom they have not previously dealt.

The eMarket can add value by offering anonymous transactions. Sellers with a surplus do not run the risk of their competitors obtaining this information. In the electronic components industry, where it is often difficult to assess demand, the available components can reach companies that need them. The eMarket ensures that buyers and sellers get their goods and payment is made.

#### **Example 1**

If a steelworks has a contract to purchase a certain volume of electricity, but their production is less than estimated, they will want to sell the spare energy. At the same time, they will not want their competitors to know that they are not operating at full capacity.

An eMarket such as Automated Power Exchange gives added value to the market by offering anonymity and at the same time, the buying companies are able to trust in the unknown party.

[www.apx.com](http://www.apx.com)

#### **Example 2**

In the international market for trade in mobile telephones and peripherals, it is commonly known that many borderline criminal and criminal transactions take place.

For those companies wishing to purchase legally, it can be difficult to know whether they are dealing with an honest partner. Phonetrade.com is an eMarket with contacts around the globe, which provides a "level playing field" for honest traders. Perhaps their greatest value is that they offer checks of participants. In the near future, they also hope to be able to offer control of goods in connection with a potential deal.

[www.phonetrade.com](http://www.phonetrade.com)

## **4.6 Collaboration processes**

As globalisation increases, companies are increasingly involved in both temporary and long-term collaborations. Collaboration takes place between departments or offices around the world as well as externally between companies, particularly between companies in the value chain. Traditionally, companies have worked mainly with information within the company (from simple material planning programs to complete business systems). Now the focus is increasingly on creating processes and communication paths through part or the entire value chain.

In such relations, it is frequently difficult to gather and share information, especially when there are more than two parties involved. How do you know that everyone involved in the project has access to the information? How do you know that everyone has the latest version of a document? How can two participants located at different places, work on a drawing at the same time? How do you know that they have access to the same tools and the same versions of those tools? The global business of today makes high demands on processes and tools to simplify work and avoid duplication.

### **Collaboration tools**

In an eMarket, it is possible to use tools for collaboration. Drawing or design programs, document and template handling are some examples. If the eMarket develops and provides the tool, then the participating parties know that everyone is using the same tool, the same version and that the documents are available over the Internet 24 hours a day.

In addition, the cost of providing this modern tool to each individual company is kept low, since several companies share the cost by participating on the eMarket. This is particularly important for small and medium-sized companies that might have limited resources to develop such tools or operate the latest version.

Example – Collaboration tools

Covisint has a tool, Collaboration Manager that has been developed in partnership with MatrixOne. The benefits of this tool include: Ability to share documents and control versions; Implementing work flows in a structured manner; Visualisation of CAD drawings online – i.e. one can set up an online meeting based on documents, one can mark them up and share the modifications in real time; Web Conferencing.

[www.covisint.com](http://www.covisint.com)

#### ***4.7 eMarkets provide additional services***

Apart from the main functions that have been described above, an eMarket can add value by providing additional services. This can be done in collaboration with external parties.

Additional services, which provide more in-depth co-operation between participating companies, are becoming increasingly important as a way for eMarkets to differentiate themselves from their competitors. We have divided these additional services into primary and secondary services.

##### **Primary additional services**

Primary additional services are services that can be directly linked to a transaction, such as:

- Transport
- Credit, Financing
- Insurance
- Quality control

##### **Secondary additional services**

Secondary additional services are services that indirectly support transactions, such as:

- Trade news
- Recruitment forum
- Discussion forum



## ***5 Cost benefits of Electronic Marketplaces***

### **Learning objectives**

- Understand the potential benefits of joining an eMarket
- Understand the different types of costs
- Know the difference between a Business Case and a Strategic Case when assessing costs and benefits of an eMarket.

### ***5.1 Why should export companies care about eMarkets?***

It is important for each company to ask itself:

- What do I wish to achieve or improve about my business?
- What are the alternative ways of achieving my objectives?
- What are the short-term measurable benefits (Business Case) and (or) long-term advantages (Strategic Case) for each of the alternatives?

It is important to recognise clearly what you want to achieve. An eBusiness solution will not necessarily be the only way to achieve a particular objective. Some problems can be solved easily and cheaply with simple process changes.

When you know what you want to achieve, you can compare your needs with the benefits that can be obtained through eMarkets like finding customers in new markets, get requests for quote on your products, efficient communication of product information, low transaction costs.

The objective is of course to increase profitable business. In an ideal situation your company's communication with the most important suppliers and customers are integrated, automated and collaborative. The tighter the link, the better your position – or the least likely you are that a customer suddenly decides to buy from someone else.

When considering the costs and benefits, each business case is different. This chapter will try to give you some guidelines to make it easier to decide.

In order to assess the Costs and Benefits of B2B marketplaces, there are three dimensions that have to be considered.

- Are you making a STRATEGIC or BUSINESS decision?
- Are you BUYING or SELLING?
- Are you trading DIRECT or INDIRECT (MRO) material?

## What is a strategic or a business case?

Before making a decision to join an eMarket, it is necessary to know if this is a case of strategic or business decision since the evaluation of the benefits and costs would be different.

A **Strategic Case** focuses on expectations about the future, that are often difficult to quantify in economical terms but that nevertheless may be critical to a company's future survival. It may include many of the aspects covered in a SWOT analysis.

A **Business Case** by contrast normally focuses on a short timeframe and on known and quantifiable facts about the past and future. A Business Case will focus more on cost comparisons and revenue flows. It must be measurable or it is not a Business Case.

It is fine to have both a Strategic Case and a Business Case for a decision, but they will not necessarily always be compatible. For example, the Business Case for a Purchaser to join an eMarket may be marginal. The costs may be higher than the estimated savings, particularly if the company already has substantial legacy eBusiness infrastructure. However the Purchaser may believe that they must join the eMarket because they risk losing market share to their competitors who have taken the step.

The reason the distinction is important is because companies often are unclear or forget why they made a decision and later try to measure its success with the wrong parameters. For example they try to measure the success of a decision that was strategic, with cost parameters.

## Are you buying or selling?

The issues will be slightly different for suppliers and buyers and will depend on what the company's objectives are. Some questions will have clearly quantifiable answers (and therefore form part of the business case) and others will have both quantifiable and non-quantifiable answers that support a business case and a strategic case.

Questions you might ask are:

"Will this eMarket become a more valuable way for me to do my marketing and PR in the future?"

This could be answered in the following ways:

- **Business Case:** Yes, because I will be able to reduce my current marketing expenditure by \$X, because my existing customers use the eMarket and a large number of my potential customers are there or will join. I will be able to reduce the following (...) current marketing activities and instead focus on using the eMarket.

- **Strategic Case:** Yes, because I believe this eMarket is going to become the dominant eMarket in my industry. My existing and potential customers are likely to join the eMarket. That will make it easier for me to find and communicate with new and existing customers

"How will using the eMarket affect the competition between my suppliers?" could also be answered in the following ways"

- Business Case: Based on the experience of our competitor A, it will increase the competition and we can expect cost savings of X%
- Strategic Case: We believe it will increase transparency of offers between our suppliers and give us greater choice and bargaining power.

### Direct or indirect material?

As a Supplier you are trying to reach and hold on to your customers. In most cases you have to be where the customers are and use their accepted purchase channels. In some industries the use of eMarkets is playing a major role – such as the chemical or the automotive industry. If your customers are demanding that you supply product information electronically, or enter your offers through an online auction, you have to be prepared and able to do so.

As a buyer, the distinction between direct and indirect material is important. Buying indirect materials is usually a matter of making a business decision; that is choosing the method that gives you the highest profit. This translates into the lowest price and the lowest cost of transaction.

Studies made shows that the processing cost of small orders is about 75 Euro (Alcatel, 1999). The ability to save on transaction costs by using eBusiness solutions can quickly add up to large amounts, but here we are talking mostly about indirect material.

For the direct material, the choice of suppliers is usually long term commitments, adherence to standards and on-time delivery. The choice of direct material suppliers is a strategic decision, and evaluation of the eMarkets must also be seen in this context.

## 5.2 The costs of eMarkets

There are two kinds of cost to consider. The direct costs to be paid to the eMarket and the major cost, which is the time and resources of your company.

The direct costs to the eMarket are either a fixed cost or a transaction cost. By contacting the eMarkets in question you will find the information about their conditions. Many eMarkets have started up with a transaction cost, but especially in trades of high volume and few transactions, a fixed fee is more acceptable to the customers. The fees are often negotiable and depending on transaction volume.

The fixed fees can be one or several of the following:

- Membership Fee (yearly/monthly)
- Application Licencing Fee (for specific solutions like WebEDI and Collaboration tools)
- Hosting Fee (eg catalogue hosting)

In some cases only the sellers pay a fee to the eMarket. In other cases, particularly where large companies are buying, the buyers pay the highest fees. In the Nordic eMarket IBX the large buyers pay 2/3 of the fees and the suppliers 1/3.

The next cost to consider is the time and resources that must be spent to integrate your business with the eMarket. Some eMarkets offer only a webinterface and e-mail communication, without further integration. If you are selling products or services you may need to provide an electronic catalogue. How this is best done and the cost is dependent on the information you already have. The eMarket should be able to guide you and offer a service to assist you, but as a guideline an eMarket has told us that they calculate a cost of 2 Euro per item in the catalogue. For larger volumes many eMarkets offer integration with your business systems. Such solutions allow communication directly between computers, without having to manually enter information in a webinterface.

In addition you also have to consider your own costs for IT-development. Training of your own employees and the continued costs for updating information and receiving orders have to be taken into account.

### **5.3 Benefits**

As mentioned above, you should decide if participation in an eMarket is a Strategic or a Business decision. Benefits of Strategic decisions are not measured in the short term, but have to do with the development of your company in the long term.

If you have taken the costs of implementing an eBusiness solution and/or joined an eMarket you can expect to reap some of the following benefits. The benefits gained from eMarkets differ between industries and companies.

As a seller:

- Market and introduce new products
- Access to a tool where you can update product information in one place, which is accessible to all customers using the eMarket.
- Get requests for quote on your products from new and current customers
- In a reversed auction you can get information about the price offered by the competition compared to your price, where as

- Facilitates order taking over the Internet without creating or implementing an e-commerce solution on your own website
- You have an advantage when you approach other large companies on a purchase-oriented eMarket, until most of your competitors are there.
- Reduce excess capacity and stock and get the best market price.
- Learn about new markets
- Reduce administrative overheads
- Monitoring of competitors
- Monitor how the development of eMarkets changes the value chain in an industry

As a buyer:

- Efficient way to search, compare and purchase products
- Each transaction can save you time and money. Less man-hours are spent on automated business processes.
- Reduced maverick buying. By implementing routines and stricter control, each purchase is done through previously approved agreements through the eMarket.
- Reduced price – updated information on availability and prices makes it possible to select the best offer.

### Examples

We have asked representatives from two eMarkets what the benefits of using their marketplace are:

#### COVISINT

The large automakers GM, Ford and Daimler Chrysler have created an eMarket to make their procurement more efficient. Other automakers like Renault, Nissan, Peugeot, Citroen have joined the eMarket as buyers.

Covisint mentions specific benefits within the areas of: Applications: Auctions, RFQ, Catalogues, Collaboration Manager, Supply Chain Management

#### Auctions

For buyers: Auctions shorten the decision time for choosing a supplier. They reduce the commercial investment (i.e. reduced travelling to visit suppliers) and they increase savings.

For suppliers: Auctions increase a supplier's knowledge of the market. He knows now how competitive his price is in the market relative to his competitors.

## RFQ

A purchaser is able to collect the information online from the Buyer Managers within the firm and share this information in real time with suppliers. Specifications can be updated constantly and suppliers are guaranteed that they get updated information at the same time as their competitors.

Building the RFQ like this online, shortens the time it takes to process an RFQ and the time to select a supplier. This has a direct impact on the production time of a vehicle, as suppliers today are involved earlier in helping to develop a vehicle. So if you can reduce the time it takes to find a supplier from 8 to 6 weeks for example, this takes 2 weeks off the time taken to develop a car. This is important because the automotive industry is very competitive.

### Collaboration Manager (collaborative engineering)

This tool has been in partnership with MatrixOne. The benefits of this application include:

Ability to share documents & control versions

Implementing work flows in a structure manner

Visualisation of CAD drawings online - i.e. one can set up an online meeting based on documents, one can mark them up and share the modifications in real time.

Web conferencing

### Catalogue (this tool is used only for indirect materials)

The benefits of this tool include:

The buyer has a view of all the parts or articles that his organization has decided to buy and maverick buying is reduced. In addition the tool provides a structured workflow and provides an online environment for rules to be implemented faster with reduced paperwork (e.g. obtaining senior approval for a purchase that is above an officer's authorized limit). The buyer is then freed up to focus more of their effort on negotiation and selection of suppliers.

The supplier benefits because the buyer is forced to comply with negotiated agreements. Another benefit for the supplier is that he needs only to invest in one integrated connection to Covisint rather than many point to point connections with different buyers. If he decides not to integrate his back-end system, he can still access all the information through the web browser and the information is stored in a rigorous and structured way with Covisint.

### Supply Chain Manager (suite of products)

- Supplier Connection / Web EDI (the 1st product in the Supply Chain package)

This tool involves routing EDI messages via the web and is used for sale / purchase of direct materials. The users who benefit most from this tool are 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> tier suppliers. The reason for this is:

80% of tier one suppliers already have an EDI connection to their OEM buyer, but

Only 30% of Tier two suppliers have EDI and the connectivity percentage is

lower, the further down the supply chain you go. For small suppliers further down the supply chain, it is expensive to have point-to-point EDI connections to their buyers and it is expensive to map to their different buyers' standards. By using Web EDI, suppliers don't need to invest in hardware. They can connect once to Covisint and without making any changes in standards and without any more investments, they obtain EDI connection to their buyers who are also connected to Covisint.

- Covisint Fulfilment (the 2<sup>nd</sup> product in the Supply Chain package)

In the traditional way for a buyer to obtain direct production inputs, the buying plant would send a shipment request to a supplier. Through better buyer / supplier collaboration it is possible for the buyer to see the supplier's inventory levels and production plan. The buyer can also set up minimum and maximum rules with the supplier about inventory levels, for example that the supplier's inventory level should never exceed 3 days of production output and should never be less than 1.5 days of production output. With these rules, the supplier is able to see how often he should ship product to the buyer without waiting for a shipment request. In addition it is possible for the buyer to see which containers are in transit and which are in the warehouse.

[www.covisint.com](http://www.covisint.com)

## QUADREM

Quadrem is a marketplace for the mining industry, based in Texas, USA. The eMarket has a global reach and several large mining companies as shareholders.

The benefits for buyers / suppliers using Quadrem are:

Buyers:

Purchasing Effectiveness:

By aggregating their internal demand, a buyer is able to improve the consistency of prices they pay for purchases. The buyer is also able to discover more easily the prices they are paying for purchasing the same inputs in different plants / factories. The eMarket offers a buyer its own private online space, and this makes it easy for the buyer to see exactly what he is buying and what he is paying for each purchase.

Total Cost of Ownership

Demand coordination reduces the buyer's cost of owning & maintaining the goods he has purchased. For example, a buyer who purchased equipment / machinery is able to better track what for his different factories have purchased, compare purchases across plants and track what it is costing to maintain the machinery.

Efficiency

The eMarket improves a buyers transaction efficiency (less re-keying of data, automation of Purchase Orders / Invoice processing etc)

The eMarket reduces the level of competence needed for an individual to execute a purchase. So for example, a maintenance officer is able to purchase the ball bearings he needs without passing this task on to another officer. This reduces the processing time of transactions.

The eMarket can help increase disposal revenue by making it easier for a company to dispose of 2nd hand equipment, unused inventory etc

Suppliers:

Selling Effectiveness

The eMarket increases a supplier's customer base. For example, a supplier is more easily able to identify new customers through the eMarket or increase sales to an existing customer by selling to different offices of the same customer in different geographic locations.

The eMarket increases an existing buyer's contract compliance with a supplier, thereby improving sales that a supplier makes as a result of each signed customer.

The eMarket increases sales revenue generated per customer relative to the cost of maintaining that customer

#### Total Cost of Selling

The eMarket improves the efficiency of a seller's advertising expenditure. Traditional advertising has a much lower success rate in reaching the real target customers than advertising or marketing done on the right eMarket. So a seller's marketing costs to acquire a customer is lower on an eMarket

#### Efficiency

The eMarket increases a supplier's inventory turnover. It reduces outstanding accounts receivables by speeding up the time it takes to execute a payment. As Purchase Orders, Invoices, Payment Advices & Shipment Advices are electronic, there is no need to re-key data, resulting in less errors and thereby increasing the speed of payment.

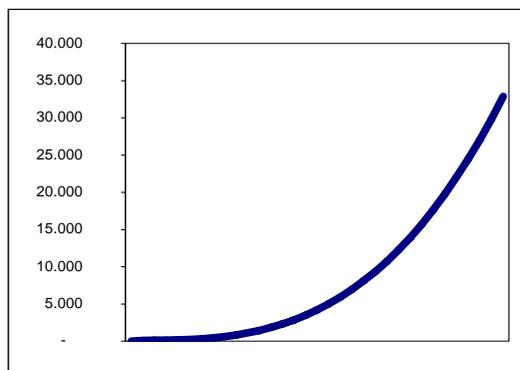
[www.quadrem.com](http://www.quadrem.com)

## 6 Visions and Future Trends

### Learning objectives

This chapter will try to explain some of the changes that you can expect in the near future. We are not able to give solid predictions, but will try to give you some guidelines that can be used to draw your own conclusion based on realistic expectations of the eMarket possibilities.

**If it seems too good to be true – then usually it is not!**

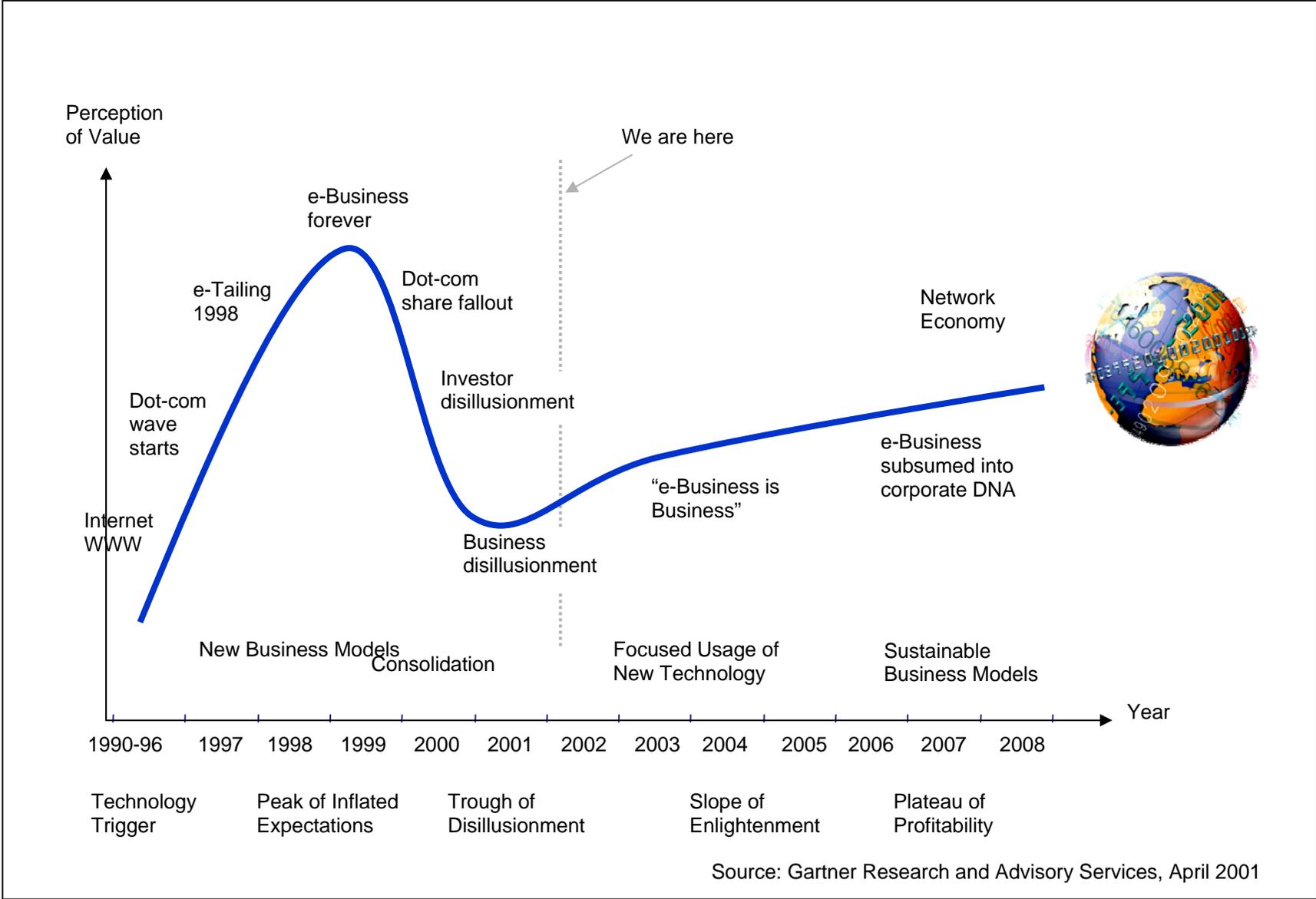


When predicting the future of eBusiness and eMarkets, it is easy to start with a graph like to one above. According to most market analysts, this is the curve that shows the future of everything that is “electronic”. Every presentation you have seen over the last years showed this growth, and for a long time each investor assumed that the new business also had new business models. The downfall of the dot-coms has proved them wrong.

It is therefore easy to turn from over optimism to doomsday pessimism, which is equally wrong. What is necessary to remember is that the technology that enables electronic communication (commerce and collaboration) makes it possible to develop new business opportunities and make the old routines more efficient. The question is how this can be done, and which companies or cooperation that makes it happen.

As in any new technological development, there is a hype period, which attracts a lot of new players that sees a business opportunity. As the hype period ends, the market will consolidate and as usual we will be left with a few major companies that will be able to corner a significant share of the market.

Since eMarkets are providing value to almost any industry, there will be different alternatives and solutions depending on each industry and their readiness and their product/service fit to eBusiness.



## ***6.1 The early development***

With the advance of Internet technology came the possibility of an effective tool for business. This could come in three categories:

- Increased effectiveness - Lets you save money
- Access to information - Helps you find customers and new markets
- New business models - Introduces new business opportunities

The focus of the first eMarkets was based mainly on the possibilities of the technology, and how the computer systems could be make transactions less costly. It is easier to attract users to the idea of saving 20-30%, than to convince them that electronic communication is the best strategy for the future.

The advance of electronic marketplaces also coincided with the boom of dot-coms, and investors pumped millions of dollars into the companies that promised explosive growth. The problem facing them was how to attract enough participants to the eMarkets, since the core idea of increased effectiveness and access to information assumes that e.g. the buyer is able to find his suppliers through that particular eMarket – and vice versa.

There is no doubt that the systems being developed were very advanced and capable. New tools like on-line auctions were made available, and the users – although generally not happy with the eMarkets – saw that electronic exchanges would handle a major part of their supplies within the next 3-5 years.

The first users to be attracted was mainly the buyers – they saw the opportunity of saving money on purchase of indirect materials, but the suppliers were sceptical: Why should they join, when all they achieved was less attention at an eMarket with hundreds of other suppliers that all tried to lower the price to win the bid. The suppliers were more interested in keeping their long-time relationship with their customers.

If there was a new market to be entered, new customers to be found – or they had overproduction that could be sold anonymously, even the suppliers could be convinced to join an eMarket. It is not surprising that the early success stories came from the buyers.

At the same time the industries that were dominated by a few, large players saw the possibilities of electronic transactions. The car industry is an example of this; through the Covisint marketplace, they could streamline the purchasing process and the size of the car manufacturers was the factor that forced the suppliers to join the market.

## ***6.2 Which eMarket model will survive?***

B2B eMarkets are here to stay, but not in the current format. Too many eMarkets perceived themselves as engine to make easy money. Neither the customers nor the suppliers want a new intermediary that controls the business exchange. However, both customers and suppliers want a faster and a cheaper way of doing business – and the future attraction will focus on the eMarkets ability to provide collaboration tools and new business models.

Over the next few years, it is likely that from one to three major eMarkets will survive in each industry and/or region. These major eMarkets will become involved with a large portion of the industry's communications and transactions and will provide a number of business services.

Other eMarkets will fail, merge in with the major remaining players or differentiate themselves into a niche role. We have already seen many eMarkets depart via shut down, merger, or acquisition. Others are refocusing on providing software, content, becoming Application Service Providers (ASPs), or providers of standardised software for the eMarket business. Since the first wave of eMarkets came in the US, this is also where most eMarkets are closing down.

While eMarkets have begun to conduct transactions, these transactions have so far been relatively small as a percentage of total industry transactions and have been limited by the simple eMarket services currently available (RFP/RFQ, auctions, etc.). However, several large eMarkets have high volume and an important share of the sales and purchases of the companies involved.

Compelling success stories have emerged as companies like Dell, Wal-Mart, Cisco, HP, and Solectron have used private collaborative commerce approaches to support their specific business objectives, enhance the power of their trading networks, and drive rapid Return on Investment (ROI). As these companies manage complex (and increasingly virtual) supply chains, they are finding that the highest value comes from the most complex collaborative commerce capabilities. As a result, they are deploying those capabilities within their private collaborative commerce environments. Examples of these complex capabilities are: collaborative order management, collaborative product commerce (CPC), and supply chain planning collaboration capabilities such as Collaborative Planning, Forecasting and Replenishment (CPFR) and Vendor Managed Inventory (VMI).

These success stories have demonstrated that private collaborative commerce is likely to occupy an important role in B2B even as industry consortia evolve into "Industry operating systems". Private collaborative commerce efforts can provide:

- Company specific capability vs. one-size-fits-all eMarket
- Ability to rapidly deploy capabilities and get ROI
- Reduced need to pay an eMarket for services
- Reduced risk of depending on a 3rd party to deliver capability
- Competitive advantage vs. public eMarket parity
- Allows companies to maintain control of capabilities, liquidity, security, trade partner relationships, & pace of capability build-out

### **Independent eMarkets**

The first eMarkets was often the technologically advanced providers that were independent of both suppliers and purchasers. They offered effective solutions for eCommerce to a market that was not ready and did not see that they could reach new customers. The independent (public) eMarkets also struggled to overcome the reluctance to modify the internal processes of the companies.

Initially focused on eCommerce, they enabled the buy/sell transaction and provided value-added services around the transaction. While these independents offered an essential, standardized commercial process that all companies need, the independents did not offer these customers any sustainable advantage.

Traditional eMarkets and auctions created value in a number of different areas such as:

- Strategic pricing
- B2B coordination
- Resale
- Risk and prediction
- Knowledge management

The independent eMarkets are having a difficult time at the moment. Due to easy access to money from investors, many independent eMarkets were able to grow quickly, but not able to fulfil the very optimistic promises they made to their investors. Without the backing from the industry they were focusing on, they also had problem attracting enough users to reach critical mass.

Our guess is that a limited number of independent eMarkets will survive, mainly in the commodity markets, but many will evolve to become service providers to industry-run initiatives.

## **Consortia eMarkets**

Consortia eMarkets had the advantage of group pressure; the purchasers could unite and force the suppliers to offer their products through the new sales channel. The advantage for the purchasers was effective transactions and reduced cost through lower prices.

As a general distinction, industry consortia eMarkets appear to have a leg up on their third party competitors in the form of financial commitments from their founders and members and, more importantly, commitments for transaction flow. In some industries, consortia eMarkets have "locked-up" a large portion of future transaction flow. In general, this indicates that consortia eMarkets are more likely to survive the ensuing "thinning out" of the market and to become the "industry operating systems" within their industries. It is our expectation that most of the surviving (vertical) eMarkets will be industry consortia.

As Julian Chu from Mainspring says: "We at Mainspring believe that the consortia-led public exchanges will essentially become "utilities" within their given industry sectors. As an industry-wide group, they inherently do not convey strategic competitive advantage on their participants, but are well suited to addressing issues that leverage scale: setting industry standards, executing transactions with small/non-strategic partners, and sharing best practices.

Many of our clients believe, as we do, that the real strategic opportunity is in private exchanges. In particular, manufacturers have a great opportunity to build customer-facing private exchanges that deliver real value to their key channels partners through real-time information sharing and collaboration.

The end goal is to build sustainable differentiation from competitive suppliers and shift the terms of trade away from price, toward value-added services. In this way, manufacturers can blunt the impact that greater retail scale, buying power, and consumer knowledge will have on their shrinking margins."

## **Private exchanges**

In cases where one company was big enough to afford the cost, they build their own electronic exchanges. Such private exchanges were open only to those that were specifically invited. For the suppliers, a private exchange was not an alternative marketing channel, but focused on effective procurement.

Today, private exchanges are the next wave of e-markets, but their benefits are more from collaboration and information sharing than about transactions. In our opinion the private exchanges will move to various kinds of collaboration.

The current environment will allow leading organizations to step back and consider the opportunity eMarkets present. Moving forward, cooperation between competitors will increase, and consortia-led projects are progressively emerging as the leading model.

Future B2B markets will provide critical capabilities for supply chain coordination and collaboration:

- Collaborative design
- Demand forecasting
- Supply chain planning
- Sourcing & supplier management
- Sales order management

#### Collaborative eMarkets

According to Mark Holman CEO of the eMarket consortia, **e2open**, eMarkets as we know them today will disappear from most industries.

Their replacement, secure collaboration networks, will strengthen relationships among trading partners and enable new models of collaboration. They will enable better, faster decisions through synchronized information, optimised processes and extended brainpower.

Why the disappearance of first-generation eMarkets? Their focus on buy-sell transactions and pricing pressures undermine strategic trading partner relationships. Companies are increasingly seeking value discovery rather than pricing pressures, and companies are discovering value through collaboration. This drive toward collaboration will evolve today's eMarket metrics away from transactions and liquidity and toward the agile exchange of intellectual capital and information.

As a result, independent eMarkets will identify their unique specialties (e.g., industry content) and become software and service providers. Or they will exit the market.

In their place, shared-services networks will emerge to enable efficient product lifecycle collaborations among trading partners. These networks will enable private collaborations on the public network, causing the distinction between public and private eMarkets to fade. Their customers will recognize substantial ROI by avoiding the significant costs of building their own private eMarkets. They will also gain business benefits, such as better product designs, lowered inventory costs, higher levels of customer satisfaction, faster time to market.

e2open is a next-generation collaboration network in the electronics industry. Through our technology, industry content, electronics industry solutions and growing network of participants, we enable our customers to outsource business processes and technology investments outside of their core competencies while retaining and indeed strengthening their competitive advantages and tightening relationships with key partners.

## ***7 eBusiness issues***

### **Learning objectives**

This chapter discuss some eBusiness issues that apply both to eMarkets and other types of eBusiness such as solutions on the corporate website. The issues are:

- Marketing online
- Payment
- Electronic communication and integration
- Trust and Security
- Organisational issues
- Rules and regulations

After this chapter you should be able to understand

- Different ways to market your products on the Internet
- How payment can be transacted in eBusiness
- Why computers need to communicate
- That EDI and XML are just definitions which must be further expanded by standards that explains they actual content
- That SSL and PKI are ways to provide security when you are on-line

### ***7.1 Marketing on the Internet***

Marketing on the Internet should take place in conjunction with other forms of marketing. If the company is to conduct a marketing campaign including press advertising or direct mail, the campaign should be coordinated with information on your website. Always include information on your website and e-mail possibilities in the preparations and follow-up from a trade exhibition. Non-Internet marketing information should always state the company's www-address.

On the Internet, the main ways of bringing traffic to your Internet site are these:

- Search engines
- Partnerships and links
- Advertising
- Electronic marketplaces

With the well-known **search engines**, which have developed into “portals”, it is important that those who may be searching for the company or its products can “hit” the company. By entering various forms of search words that the visitor may be expected to use, your company can increase the probability that

it will be placed high on the list produced by the search. It is also important to register the company with the different search engines and see how often the company appears in their hit lists.

A good strategy is to form **partnerships** with other companies and organisations that have Internet sites visited by the relevant target group. Via links and referrals from these sites, it is possible to obtain the right kind of visitor to the company's own Internet site. The partners enjoy mutual benefit from linking to services with complementary offers. At the same time, it is important not to lead the visitor away too quickly to the pages of others, before he has had time to register what is being offered on the company's own pages.

**Advertising** with "banners" on well-visited sites may be cost-efficient if the right target group is found. For example, a trade journal operating a highly developed service on the Internet may be a good site for advertising. Advertising space is bought for a specific period or a certain number of exposures. It may be wise not to link to from the banner advertisement to the company's home page. Instead the visitor may be brought to a special page, for example, with a specific offer. The visitor may then be linked on to the company's main site.

**Electronic marketplaces**, described in the previous chapter, are also pages that are well visited by specific target groups. In these, the company can come in and present its business and products in an environment that suits the customer.

**Email** is a good tool for marketing, if you use it carefully. You can ask customers to sign up for a newsletter. By sending information about your area of expertise, you can regularly remind your customers of your company and the products and services you are providing. Customers may be interested in special offers and information about new products, but it is important not to use this channel to the extent where your customers get disturbed (so called "Spam").

## **7.2 Payment**

E-business today is mainly about finding suppliers and products streamline the order process and negotiate price. The payment is still mainly done by traditional invoice. Increasingly the electronic marketplaces have solutions for electronic payment. They are carried out in separate infrastructures and financial flows.

- Payment card
- Payment direct via Internet banking
- E-checks
- Electronic invoices

## Payment cards

Between businesses, too, payment cards are becoming an increasingly common means of payment. Payment cards include credit, debit and charge cards. With a credit card you have a credit to a certain level. With a debit card the charges will be deducted from the customer's bank account. Charge cards have no credit, so the balance must be paid off every month. Major players like Visa and MasterCard issue payment cards.

Payment cards are used especially for payments on limited amounts and from suppliers that the purchasing companies does not have regular contact with. Signing the credit card payments may be done in several ways.

- With a signature faxed in at purchase
- A signature previously sent in to cover all future purchases, a "signature on file"
- Online without identification, with transfer of card number and date of validity using "SSL"
- Encryption
- Online with identification by PKI infrastructure.

The advantage of credit card payment online is that both buyer and seller receive immediate confirmation that the order has been received and the payment approved. The disadvantage of not being able to identify the buyer is that the risk is the seller's if the credit card holder denies the purchase.

## Payment direct

In certain countries including Finland and Sweden, many businesses and private individuals have Internet bank accounts. Payment then takes place when the account holder approves transfer of the amount involved, direct from the buyer's account to the seller's account at the same bank. At the time of writing, however, this system has poor facilities for dealing with customer credits in connection with returns etc.

## E-checks

In the US electronic checks are being introduced. It uses the same legal and business protocols associated with paper checks. The advantages are of course faster processing and lower transaction costs compared to traditional checks.

## Electronic invoices

The flow of invoices and payments between the financial systems of sellers and buyers, and the banks, is becoming more and more electronically based. Different types of electronic invoices will cut the amount of paperwork. Many large buyers are now demanding electronic invoices from their suppliers. The

supplier sends an invoice electronically to the buyer, who accepts the payment.

### ***7.3 Electronic communication***

In order to integrate the business processes, different systems need to communicate. With a proprietary, in-house system each company sets their own rules and methods for communication based on the needs of the company at that time.

From this modern version of Babel it is very difficult to communicate with more than a few others, since every “language” has to be translated back and forth as the information is sent and received. To overcome the communication problem, EDI was developed.

#### **EDI**

EDI (**E**lectronic **D**ata **I**nterchange) is the electronic communication of business transactions, such as orders, confirmations and invoices, between organisations. Third parties provide EDI services that enable organizations with different equipment to connect. Although interactive access may be a part of it, EDI implies direct computer-to-computer transactions into vendors' databases and ordering systems.

The Internet is expected to give EDI quite a boost, but not by using private networks and the traditional EDI data formats (X12, EDIFACT and TRADACOMS). Rather, XML is expected to be the glue that connects businesses together using the Web as the communications vehicle.

In order to build an EDI message, you have to follow the standards according to the type of message you are to send, such as EDIFACT.

#### **EDIFACT**

EDIFACT (**E**lectronic **D**ata **I**nterchange **F**or **A**dministration **C**ommerce and **T**ransport) is an ISO standard for electronic data interchange (EDI) that was proposed to supersede both X12 and TRADACOMS as the worldwide standard.

More information can be found at United Nations Directories for Electronic Data Interchange for Administration, Commerce and Transport (<http://www.unece.org/trade/unttdid/welcome.htm>) where you can follow a link to the Joint Syntax Working Group (JSWG) ([www.gefeg.com/jswg](http://www.gefeg.com/jswg))

You don't have to be a computer old-timer to know that this industry is fond of 3-letter abbreviations. Each week there appear new ones that are promising to solve all existing problems. Usually, these abbreviations are then split up into sub groups before they are replaced by new solutions. This being said, the main objective is all the time to provide solutions to existing problems – which

they usually manage to do, but they are not able to give solutions to all the new possibilities that are then wanted.

One of the hottest buzzwords of our time is XML, and the salespeople you are talking to will tell you that their solution is built on XML and is therefore the one and only way to go. Unfortunately, XML is just a standard – again the definition of the content <the tags> has to follow before it can do you any good.

## XML

XML (EXtensible Markup Language) is an open standard for describing data from the W3C. It is used for defining data elements on a Web page and business-to-business documents. It uses a similar tag structure as HTML; however, whereas HTML defines how elements are displayed, XML defines what those elements contain. HTML uses predefined tags, but XML allows tags to be defined by the developer of the page. Thus, virtually any data items, such as product, sales rep and amount due, can be identified, allowing Web pages to function like database records. By providing a common method for identifying data, XML supports business-to-business transactions and is expected to become the dominant format for electronic data interchange (see EDI).

### XML and HTML

Following are examples of XML and HTML tags. Note that the XML statements define data content, whereas the HTML lines deal with fonts and boldface. XML defines "what it is," and HTML defines "how it looks."

#### XML

```
<firstName>Maria</firstName>  
<lastName>Roberts</lastName>  
<dateBirth>10-29-52</dateBirth>
```

#### HTML

```
<font size="3">Maria Roberts</font>  
<b>October 29, 1952</b>
```

Since its introduction, XML has been hyped tremendously as the panacea to e-commerce, but it's only the first step. The human-readable XML tags provide a simple data format, but the intelligent defining of these tags and common adherence to their usage will determine their value. For example, cXML (Commercial XML) from Ariba and CBL (Common Business Library) from Commerce One are some of the first XML vocabularies for business data. DSML is a set of XML tags that defines the items in a directory. XML tags are defined in an XML schema, which defines content type as well as name. XML

tags can also be described in the original SGML DTD format, since XML is a subset of the SGML language. There are several Web sites that provide repositories for publishing and reviewing XML schemas.

Unlike HTML, which uses a rather loose coding style and which is tolerant of coding errors, XML pages have to be "well formed," which means they must comply with rigid rules.

In order to combine the structure of XML (using tags) and the exchange of information, new groups and definitions appear. Here is one: "ebXML". At [www.ebxml.org](http://www.ebxml.org) you can read the following:

Q: What is ebXML?

A: ebXML is a modular suite of specifications that enables enterprises of any size and in any geographical location to conduct business over the Internet. Using ebXML, companies now have a standard method to exchange business messages, conduct trading relationships, communicate data in common terms and define and register business processes.

Let us end this section on Electronic Communication by saying that it makes sense to use the same definitions when you want to communicate, but you still have to be able to express your content.

## ***7.4 The legal framework for eBusiness***

This overview focuses on the legal framework for domestic and cross-border eBusiness in Europe, but also on initiatives to create global harmonization.

Development of an Information Society and a well-functioning European Internal market for products and services hinges on a legal framework at a Community level without national legislative differences and uncertainties. EU has during the last few years adopted a number of legal acts on various issues related to eBusiness, while other acts are still in the pipeline. Europe is thus well on the way to creating a harmonised Internal market for eBusiness.

### **EU directive 2000/31 on electronic commerce**

A major step in this direction was taken by the adoption of the EU directive "on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market". This will lead to unified legislation not only in the present 15 EU member states and the 3 EFTA/EEA countries, but also the up to 10 EU candidates. This directive will be implemented in national legislation in most of these countries during 2002, and thus govern the relevant eBusiness issues both domestically and for cross-border activities.

The objective of the directive is to contribute to the proper functioning of the internal market by ensuring the free movement of information society services. Such services are usually paid for; they are delivered electronically and over a distance, when the recipient of the service individually places his order.

### **Establishment and compliance**

Each EU/EEA state shall ensure that the information society services provided by entities established on its territory comply with the directive and the national implementing provisions. A service provider may thus be established in only one EU/EEA state, but still deliver services cross-border to recipients in each of the other states. The definition of "establishment" in this context requires the service provider to effectively pursue an economic activity and use a fixed establishment, the presence and use of technical means such as a server is not enough.

### **General information to be provided**

The directive requires a minimum of information to be provided, such as:

- Name of the service provider and the geographic address at which he is established
- Details related to the service provider including e-mail address, where he is registered in a trade or similar public register and his registration / identification number, authorisations where relevant, VAT identification number where the goods/services are subject to VAT.

Where prices are referred to, these are to be indicated clearly and unambiguously and must indicate whether they are inclusive of tax and delivery costs.

### **Commercial communications**

For reasons of consumer protection, commercial communications shall be clearly identifiable as such, including the natural or legal person on whose behalf it is made. All promotional offers such as discounts, premiums and gifts shall be identifiable, also promotional competitions or games etc.

### **Contracts and Placing of the order**

EU/EEA states shall ensure that their legal systems allow contracts to be concluded by electronic means.

The directive stipulates a number of information requirements such as the different technical steps to follow to conclude the contract, filing and accessibility of the concluded contract, correction of input errors prior to the placing of the order, languages offered etc. The service provider shall also indicate any relevant code of conduct to which he subscribes and information on how those codes can be consulted electronically.

The wording of the directive states: "Contract terms and general conditions provided to the recipient must be made available in a way that allows him to store and reproduce them". We recommend installing a system with a sequence of steps whereby the customer/recipient has to open the page containing terms and conditions before placing an order. Documentation of the fact that the customer had opened this page might later prove to be a vital piece of evidence.

The wording of the directive states: "the service provider has to acknowledge the receipt of the recipient's order without undue delay and by electronic means". We recommend using a system, which automatically and immediately acknowledges all orders; this will ensure documentation in cases of later claims.

### **Liability of intermediary service providers**

**Mere conduit:** The directive clarifies when the service provider is not liable for the information transmitted as long as he does not initiate the transmission, does not select the receiver, does not select or modify the information contained in the transmission, etc.

**Caching:** Under certain conditions, the service provider is not liable for the automatic, intermediate and temporary storage of information.

**Hosting:** Under certain conditions, the service provider is not liable for the information stored at the request of a recipient of the service.

### **Concluding remarks**

The text of the directive itself, and the national laws implementing it, contains a number of very specific requirements meant to protect the customers both domestically and across borders. We therefore recommend companies engaged in eBusiness to clarify to what extent these requirements are applicable to them, and to set up systems to ensure compliance.

### **VAT on electronic commerce.**

E-commerce across borders raises a number of questions related to VAT, especially on B2C and on digital products and services. In order to eliminate existing competitive distortion, an EU directive and a regulation have recently been adopted. The most important changes affect traders established outside the EU on their sales to individuals within EU.

Under the new Directive 2002/38 EU suppliers will no longer be obliged to levy VAT when selling these products on markets outside the EU. However, the new rules will require that suppliers of digital products from outside the EU will have to charge VAT on sales to private consumers within EU, just as EU suppliers have to do. Non-EU suppliers will be required to register with a VAT authority in any one Member State of their choice, and to levy VAT at the rate applicable in the Member State where the customer is resident. The VAT rate

applicable to non-EU suppliers to consumers (B2C) will in any Member State be the same as the rate charged by local suppliers.

The non-EU e-commerce business will be able to use a special simplified registration scheme. This single registration model can be completed online without the need for a fiscal representative or for any physical presence. Regulation 792/2002 cover such measures necessary for the registering of foreign e-commerce traders for VAT purposes and for distributing the VAT receipts to the Member States where the services were actually used.

### **Electronic invoicing**

The development of electronic commerce has made it necessary to establish a legal framework for the use of electronic invoicing to enable tax administrations to continue to perform their controls. This includes electronic storing of invoices, self-billing, outsourcing of invoicing operations, centralisation at one location for invoicing customers in all EU Member States, etc.

Such a legal text has been adopted: Directive 2001/115 "amending Directive 77/388 with a view to simplifying, modernising and harmonising the conditions laid down for invoicing in respect of value added tax." The directive shall be implemented in national legislation by 01.01.2004 and thus also cover trans-border situations. Enterprises are, however, recommended to contact their local VAT office to clarify whether domestic application is already acceptable now.

To ensure that public invoicing requirements does not vary from country to country within EEA, the directive contains a list with the heading: "only the following details are required for VAT purposed on invoices". Enterprises are advised to consult this directive and prepare for such a harmonisation.

### **Copyright and Industrial property, in Europe and globally**

The Information Society and the global use of Internet has led to increased importance of legal rights related to copyright and industrial property. In spite of European harmonisation and global agreements in certain areas, a truly harmonised legal framework does still not exist. In this context, it is particularly important to put more emphasis on the protection of intellectual property rights. The aim is to obtain Community-wide protection of intellectual property rights through a simple application system, with legal certainty and at a reasonable price.

#### **Copyright**

"EU Directive 2001/29 on the harmonisation of certain aspects of copyright and related rights in the information society" is an important piece of new legislation. Copyright and related rights play an important role as they protect and stimulate the development and marketing of new products and services

and the creation and exploration of their creative content. The directive supplements existing Community legislation and clarifies a number of issues where national provisions on copyright and related rights vary considerably between EU member states. The deadline for implementing this directive in national legislation is 22 December 2002.

The Directive thus clarifies the copyright protection and the exclusive right to control distribution. The directive also provides for an exhaustive enumeration of exceptions and limitations to the reproduction right and the right of communication to the public. In certain cases of exceptions or limitations, rightholders should receive fair compensation for the use made of their protected works or other subject-matter.

Rightholders recognised by this Directive should have an exclusive right to make available to the public copyright works or any other subject-matter by way of interactive on-demand transmissions. Such interactive on-demand transmissions may be accessed by the public from a place and at a time individually chosen by them. Member States shall also provide adequate legal protection against the circumvention of any effective technological measure.

### **Community Trade Mark**

The regulation on the Community Trade Mark and the Directive for the Harmonisation of National Legislation form the basis for the present EU-wide system. The Trademark office set up in Alicante is now preparing for the transition from a Community trademark covering 15 countries to one covering anything up to 25 countries. The Trademark Office now receives some 60.000 applications a year, and has turned out to be a first important tool for industry. The ambition is now to develop a system of Community-wide protection for industrial designs compatible with that provided for trademarks.

### **Community patent and EPO**

The EU has for many years tried to establish a Community Patent, and as part of the Lisbon process it was hoped that the Community Patent proposal would be adopted by the end of 2001. The four key principles of this proposal are affordability, legal security, procedural efficiency and simplicity. In spite of considerable efforts the proposal has not been adopted, and due to the difficult question of languages it is rather unlikely that it will be adopted by the end of 2002. The question of language for the submission of applications is still being discussed: Should they be in English, French or German only, or are additional languages accepted?

The present proposal for a Community Patent and guidelines recognise the central role to be played by the Munich-based European Patent Office (EPO) in granting and administration of Community Patents, whilst recognizing that national patent offices should also play an important role. This role for national patent offices would include advising potential applicants for Community Patents, receiving applications and forwarding them to the EPO and disseminating information about Community Patents.

Under the Commission's proposal, Community Patents would be issued by the existing EPO. National and European Patents would coexist with the Community Patent system, so that inventors would be free to choose which type of patent protection would best suit their needs.

### **WIPO and UNICTRAL**

The World Intellectual Property Organisation is the traditional forum for negotiating international treaties dealing with intellectual property. EU has been an active partner in negotiating WIPO Treaties on the international registration of Trademarks and Designs, and the two new Treaties, which were adopted on the protection of authors ("WCT") and on the protection of performers and phonogram producers ("WPPT").

The UNICTRAL Working Group on Electronic Commerce is dealing with two projects aimed at global harmonisation regarding eBusiness. Negotiations are taking place regarding the "Electronic contracting: provisions for a draft convention", but many uncertainties remain. It is not clear whether the proposed convention should cover only B2B transactions or also consumer transactions, and whether it should cover non-sales transactions in intellectual property rights.

UNICTRAL has conducted a survey: "Legal barriers to e-commerce in international treaties dealing with international trade" and focus on the removal of legal barriers to electronic commerce caused by form requirements currently existing nationally and in international treaties.

### **Trust and security**

While a comprehensive coverage of the issues trust and security is beyond the scope of this section, we can give you some orientation points, observations and links for further reading. When we talk about data security we need to break the issue up into two main parts. The first deals with transaction security and the second with data storage.

There are many ways to deal with transaction security, but here we discuss the two that are most relevant to eMarkets. They are:

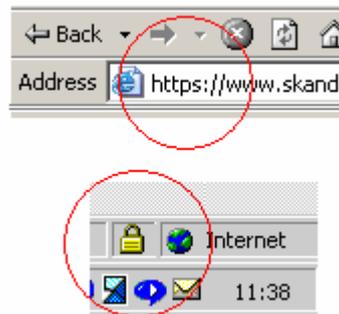
- Server Based Digital Certificates using SSL encryption
- Individual Digital Certificates based on Public Key Infrastructure

Most eMarkets and other B2C sites use the SSL Server Based Certificate system to allow their users to transmit data securely to their site. The eMarket will in addition often make use of a pin code system to validate the identity of the eMarket users, and these users are normally pre-screened before they are issued with pin codes.

In the SSL Server Based Certificate System, it is the eMarket's web server that has the digital certificate. An eMarket can purchase such a certificate from certificate vendors / authorities such as Verisign. There are many companies

issuing certificates and you as the user can choose which companies you want to recognise as trusted Certificate Authorities, so that only eMarkets holding certificates issued by these authorities, will you recognise as secure. Most web browsers will be default-set to accept a number of Trusted Root Certificate Authorities such as GTE CyberTrust, Verisign, Deutsche Telekom and others. You can change or add to these if you wish.

The letters SSL stand for Secure Socket Layer. You can tell if you are inside a SSL secure part of an eMarket because your Internet browser will show the address as https://www as opposed to just http://www. Your browser will also show a picture of a closed lock.



SSL gives you a secure encryption-based connection between your Internet browser and the web server of the eMarket. There are different levels of SSL encryption and the one considered adequately secure today for banking purposes is 128 bit key.

## SSL

SSL (**S**ecure **S**ockets **L**ayer) is the leading security protocol on the Internet. When an SSL session is started, the server sends its public key to the browser, which the browser uses to send a randomly generated secret key back to the server in order to have a secret key exchange for that session. Developed by Netscape, SSL has been merged with other protocols and authentication methods by the IETF into a new protocol known as Transport Layer Security (TLS).

So as an eMarket user, what does the SSL connection tell you about the eMarket? It tells you that data encryption is employed and that the data you see is really coming from the site you are visiting. It tells you that the domain name (URL) is tied to a registered business / company / organisation as specified on the certificate (you can click on the little lock icon and this information is shown). This company information is verified in the real world by the certificate authority (eg Thawte, Verisign etc) by sighting the company registration documents and by verbal communication. What the SSL connection does not tell you is how well the eMarket runs its business. You should also look carefully at the eMarket's member registration process, because it is this that determines how much you can rely on the integrity of the trading companies using the eMarket.

You also need to remember that SSL only protects the transfer of information between your browser and the eMarket's server, but it does not protect your data once it is on the eMarket's server. This is where it becomes important to know about the eMarket's data storage procedures.

The most secure way to perform Internet transactions is by using Individual Certificates based on Public Key Infrastructure (PKI).

## PKI

PKI (**P**ublic **K**ey Infrastructure) is the policies and procedures for establishing a secure method for exchanging information within an organization, an industry, a nation or worldwide. The heart of a PKI is the certificate authority (CA), which issues digital certificates that authenticate people and organizations. The PKI includes the use of these certificates as well as digital signatures and all the Web browsers, e-mail programs and other applications that support the process.

There are many applications of PKI. Good applications provide transacting parties with the following security:

- Transactions are only with the intended party and the identity of that party is verified
- Transactions are protected in transit
- Transactions cannot be repudiated and will be legally binding
- Transacting parties will have financial recourse should something go wrong

Very few eMarkets currently offer Individual Certificates based on PKI but banks and public authorities around the world are starting to roll this out and it is possible that eMarkets will use this system in the future.

PKI is a highly secure system that makes use of private and public keys by which transacting parties are able to encrypt and decrypt data / messages. With a PKI system each transacting party has a digital certificate (DC) that is registered with a trusted certifying authority and contains identifying information about the owner of the certificate. PKI also makes use of digital signatures that, together with a user's DC and Public Key, proves that a communication originated with a particular sender and reached the recipient exactly as it was sent.

There are several solutions based on PKI and it is not yet clear which will dominate, but a front-runner is the global PKI solution developed by [www.identrus.com](http://www.identrus.com). Identrus was formed by 8 of the world's largest banks: ABN AMRO, Bank of America, Bankers Trust (since acquired by Deutsche Bank), Barclays, Chase Manhattan, Citigroup, Deutsche bank and HypoVereins. Today Identrus has 23 equity owners and a total of 50 banks around the globe. Financial institutions that participate in the Identrus solution serve as Certificate Authorities (CA's), establishing the identities of their corporate customers and certifying them as trusted trading partners on the Internet. Identrus Certificate Authorities (i.e. the banks) issue unique digital ID's to their customers.

Several banks such as Nordea, Deutsche Bank and ABN AMRO, are currently piloting the Identrus solution. When its roll out is complete, banks will be able to issue their customers with smart cards containing their digital certificate information. Cardholders will be able to use these in any machine that has a smart card reader, including personal computers, to identify them in conducting eCommerce (whether it is B2C or B2B).

One way that the PKI system can be used for eCommerce is the following. A seller provides his Certificate (which has been issued to him by his bank) information to the buyer, via an eMarket or other eCommerce site. The buyer then transmits the seller's certificate information to his (the buyer's) bank, and the buyer's bank validates the certificate with the seller's bank.

## Data Storage

The extent to which an eMarket's data storage procedures and privacy policies are important will depend on how you intend to use the eMarket. Companies using eMarkets for the sale and purchase of strategic / direct goods are likely to be more demanding than those using eMarkets for transacting in indirect goods and services. The purchaser of strategic goods, as opposed to the seller, is also more likely to demand a higher level of data storage security.

As an eMarket user, important questions to ask include:

- Who has access to my company's ERP system?
- Where is my company information stored? Is it stored on the eMarket's server or in my company's ERP system
- How is information stored on the eMarket's server? Is it in encrypted format or stored as plain text?
- Has the system been subjected to a security audit? This includes examining the way in which the system was produced and the software/operating system that it relies upon.

Another relevant part of an eMarkets security infrastructure is the physical and technical security of the equipment it uses. Key questions include:

- Where is the eMarket's data center located?
- Has the eMarket thought about on-site monitoring, TV cameras, and hardware based devices to prevent hacking and to detect intruders?

To provide their users answers to these questions, most good eMarkets post information on their site about their security and privacy policies. For anyone planning to use an eMarket, this is important reading.

## Final words on trust

Security and trust is a wide topic to cover. It could also include the users trust of an eMarket, the companies that offer their services or the customer that wants to buy them. For a more detailed view on trust, please see the article "The challenge of online trust in B2B" on Netmarkets Europe: [http://www.netmarketseurope.com/insider/papers/nme\\_trust.pdf](http://www.netmarketseurope.com/insider/papers/nme_trust.pdf)

## 7.5 Organisational issues

It is primarily not machines that have to function if electronic business is to work. Introducing new technology together with new procedures can create a good deal of uncertainty in the organization. Certain types of work disappear and completely new skills are needed to ensure that the whole system works. Many people in your chain of sale and distribution, including external partners get their way of working changed. It is important to bed the system down and explain how the organisation is to deal with the contacts and enquiries that are received via the Internet.

As we said, the company's Internet site is no brochure. It is a way of communicating. When visitors to the Internet page are encouraged to get in touch, the company should also be quick to respond. Within 24 hours, the visitor should have received a reply from the company if, for example, he has completed a form encouraging the visitor to get in touch.

Updating is crucially important. The danger is, in developing its Internet site, the company becomes over-ambitious and places a huge amount of information on the Net. Once the development project is complete and the enthusiastic project leader has perhaps left the company, it may be difficult to keep the information updated. Against this background, it is vital to state clearly who are responsible for ensuring that the information is accurate and that these people have the time and resources to carry out this work.

Example:

Lars-Berno Fredriksson, Managing Director of Kvaser AB, has this to say about his company's Internet venture: "The Internet is a precondition for a small business to be able operate in a world market. Up to now, the results from our Internet venture have only been favourable. Our information distribution costs have fallen to near enough zero, while customers obtain the information when they need it. We have placed all the information, which we previously printed, on our Internet site, together with some software for downloading. Our hardware is mostly delivered without documentation, which customers download from the Internet. We charge extra for printed information. To date, we have received only favourable responses to this concept...."

[www.kvaser.se](http://www.kvaser.se)

## **8 Checklist: Corporate Website**

How do others do?

A

1. Go to <http://www.kvaser.se/support/>
2. How can customers get help?
3. Do they leave the customer with just on-line support or can you contact them?

B

4. Go to <http://www.blueair.com/resources/cleanairresources.html>
5. How does BlueAir help the customers with their problem?
6. How do they make it interesting for the customers to come back to their website?
7. Do they make it easy for customers to buy the product?

**How can I use this knowledge to improve our corporate website?**

Pre-sale: How can our website support our marketing?

- Do all target groups find information on our website? New customers, current customers, potential sales representatives?
- Do we provide information about the problem the customer is trying to solve with our product? Or do we provide information only about the product itself?
- How can we improve the information to current customers?
- Which information could we add that could reduce other marketing costs? Documentation to read or download that is today printed and sent, photographs to advertising bureaus.
- How can we reduce the risk of competitors getting information?

Sale: How can we sell our products using Internet?

- Do we have many small orders or few large?
- If you have few large orders: How can the website support our product specification and order process?
- Do our distributors have online-sale capabilities?
- Could we sell on-line to markets where we do not have representation on the ground at the moment?
- Are prices clearly visible?
- Do the prices communicate the value of your merchandise/services?
- Does the online sales price encompass the whole cost of distributing the product to the customer (ie credit card transaction fees, bank charges, taxes, insurance etc)?
- What shipping charges are applicable for delivering the product to the customer's location?
- Is information available on an estimated delivery date?
- Is confirmation information provided for a successful online transaction?
- Does the confirmation information re-state the full price and delivery information?
- Are contact details available should a problem arise?

Post – sale: How can we improve customer support?

- What sort of information can we put on our Internet site that will save the customer time?
- What can I do to reduce the customer's uncertainty?
- What can we do to make the customer feel personally welcomed?
- How can we present information about the subject in a way that arouses the customer's interest?
- How can we get the customer to share his experiences of the product?

## 9 Checklist: Selecting an eMarket

Check Point - Identify the eMarkets in your industry and targeted markets		
	<p>Use the eMarket Services directory of eMarkets, searchable by geography and industry. Use of the directory is free of charge. <a href="http://www.emarketservices.com">www.emarketservices.com</a></p>	<p>The information about each eMarket listed in the eMarket Services' directory, is obtained from each site itself. Once you have read the information in our directory and made a shortlist of interesting sites, you should go on to check the actual sites.</p>
Issues	<p>Do you want to use an eMarket for the procurement or sale of non-strategic business inputs such as office supplies or travel services?</p> <p>Do you want to purchase strategic inputs such as direct materials for a production process?</p> <p>Do you want to sell finished goods?</p> <p>Which eMarkets exist in your industry.</p> <p>Which of these is open to companies from your geographic region?</p> <p>Does the eMarket operate in the countries where you would like to reach new customers?</p>	<p>EMarkets for the procurement or sale of non-strategic business inputs such as office supplies or travel services, and eMarkets for all industries are called: General Horizontal eMarkets, Procurement Focused eMarkets, and MRO (Maintenance Repair and Operations) eMarkets.</p> <p>eMarkets for the sale or purchase of strategic goods and services (i.e. materials that are used in the manufacture or production of finished goods) are called Vertical eMarkets</p> <p>Check also the products bought and sold in the eMarket. Can you buy / sell the products / services you want in this eMarket?</p>
Why	<p>By using the eMarket Services directory, you will save a lot of time in scoping the possibilities and eliminating irrelevant sites.</p>	

Check Point – Ownership and History		
Issues	<p>Who owns the eMarket?</p> <p>Who operates the eMarket?</p> <p>How long has the eMarket been operating?</p> <p>Are they making a profit or at least covering their costs?</p> <p>Does the eMarket have large investors or significant venture capital?</p> <p>Do the investors have a long-term perspective?</p> <p>Is it likely that the eMarket will still be in business in five years time?</p>	<p>Names of investors and owners of the business</p> <p>Name of CEO and management team</p> <p>Names of significant strategic alliance partners in the business</p> <p>Some eMarkets publish their financial results on their site to assure users that the business is stable.</p> <p>Even if the eMarket is currently not making profits, if it is “backed” by large industrial players, it is probably likely to have a reasonable degree of financial security.</p> <p>This is difficult to assess, but eMarkets with significant industrial backing may have a strategy and vision that is more forward looking than those without this backing do.</p> <p>Most eMarkets will have a section called “About Us” where you’ll usually find this information</p>
Why	<p>Your competitors or your key customers may be an owner in the eMarket. You should look for an eMarket that is financially secure and structurally stable.</p>	

Check Point – Liquidity		
Issues	<p>How many registered members use the eMarket?</p> <p>Reference Customers - which companies are using the eMarket?</p> <p>How much trading is taking place?</p>	<p>Some eMarkets will publicise the number of members or the percentage market share they have (either in terms of value of business done or number of companies using an eMarket in a region)</p> <p>Names of Industry customers</p> <p>You may not be targeting a large number of users but you may want to find specific customers. Some eMarkets promote the names of some of their member companies.</p> <p>Transaction statistics - some eMarkets show statistics on the trade volume generated such as:</p> <p>Value of sales per month / quarter / year</p> <p>Number of completed sales per month / quarter / year</p> <p>Number of opportunities / RFQs posted</p> <p>Case studies on significant business deals</p>
Why	<p>You may want to know this information in order to gauge how likely you are to win business through the eMarket and weigh up the possible cost / benefit of different eMarkets.</p>	

Check Point - Membership and Cost		
Issues	<p>Are you eligible to use the eMarket?</p> <p>Are users required to register?</p> <p>What are the terms of the User Agreement that users sign?</p> <p>Does the eMarket screen new companies before they are admitted as members to the eMarket?</p> <p>What are the fees?</p> <p>Who pays them, buyers or sellers?</p> <p>When they are levied?</p>	<p>Often the eMarket will have a section called FAQ (Frequently Asked Questions). This section will usually have answers to questions like who is eligible to join.</p> <p>Look at the information provided in the section dealing with new member registrations or applications. Other relevant information will be found in Terms and Conditions.</p> <p>Some eMarkets perform credit checks and / or verify the legitimacy of companies who register as members</p> <p>The types of fees used by eMarkets include:</p> <p>Membership fee (paid yearly, monthly or at other intervals). It can vary depending on the service package and number of services you choose to use.</p> <p>Transaction percentage - this can range between 0.025% and 5%. Depending on the industry, sometimes it is payable by the seller, sometimes the buyer, sometimes both.</p> <p>Flat transaction fees. These are fixed amounts payable on any transaction regardless of the transaction value.</p> <p>Catalogue hosting fees. Sometimes these are called storefront hosting fees</p> <p>Fees to post a Request for Quote or other opportunity notice</p> <p>A combination of any of the above, payable in different circumstances</p>
Why	<p>Most professional eMarkets have a registration process that is required before access is granted. Most users want this because it provides them some assurance that they will meet legitimate businesses in the eMarket.</p> <p>It is important to assess the fee structure of the eMarket. You should also weigh this up against the amount of business you are likely to win / generate and compare this with other possible eMarkets</p>	

Check Point - Trading Tools		
Issues	<p>Which trading tools does the eMarket offer?</p> <p>Do the trading tools address the pain points of the industry?</p> <p>Do the trading tools address the needs of your company?</p>	<p>eMarkets vary in terms of the sophistication and range of trading tools offered. Some eMarkets offer a whole range of tools and some simply offer one or two. The range could reflect the quality of the eMarket or it could just reflect the fact that the eMarket has chosen to focus on a niche process.</p> <p>eMarket Services has an explanation at <a href="http://www.emarketservices.com">www.emarketservices.com</a> of each of the trading tools typically offered by eMarkets. These include:</p> <p>Industry Directory: A list, usually searchable, of companies</p> <p>Catalogue with electronic ordering: A list, usually searchable, of products</p> <p>Auction: A time limited sale where the buyers' bid in increments until the auction closes.</p> <p>Reverse Auction: A time limited purchase where the sellers bid in decrements until the auction closes. Most of the time the purchaser awards the business to the lowest bidder, but not always.</p> <p>Exchange: Request for Quote / Request for Proposal format: A flexible way of tendering for business. This tool is often used for products, services or projects that are complex or which have a number of specifications that need to be considered.</p> <p>Fixed price / limited time sale offers: This is used with items that a company may not always have available in their catalogue of products / services for sale</p>
Why	<p>It is important to consider the range of available trading tools, in order to determine whether and to what extent you will be able to use the eMarket. For example, if you have a complex or tailored product, an exchange / RFQ / RFP would probably be the most suitable tool, as it would allow you flexibility to decide when to sell / buy and to negotiate aspects such as price, quality, delivery and other terms. For clearly defined products, a Catalogue hosting solution may be sufficient for your needs.</p>	

Check Point – Security and Privacy

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Issues</p>	<p>Does the eMarket reveal the identity of its members?</p> <p>Does the eMarket allow users to have anonymity in certain circumstances?</p> <p>Who has access to my company's ERP system?</p> <p>Where is my company information stored? Is it stored on the eMarket's server or in my company's ERP system</p> <p>How is information stored on the eMarket's server? Is it in encrypted format or stored as plain text?</p> <p>Has the system been subjected to a security audit? This includes examining the way in which the system was produced and the software/operating system that it relies upon.</p> <p>Are employees, as a condition of employment, required to adhere to and practice strict security guidelines in their day-to-day job functions?</p> <p>Is there an IT Security Policy in place to ensure that staff is educated on the importance of confidentiality and security?</p>	<p>Some users of eMarkets may not want their identity to be visible in specific transactions. For example a seller of a product may wish to dispose of excess inventory through different channels without wishing to affect the normal retail price of their product or without wishing to reveal any information to his competitors.</p> <p>Most eMarkets publish their Privacy Policy on their web site. It is important to read this.</p> <p>The data security provided by an eMarket depends on both the technical infrastructure and operational procedures of the eMarket.</p> <p>On the technical side, when we talk about data security we need to break the issue up into two main parts. The first deals with transaction security and the second with data storage.</p> <p>There are many ways to deal with transaction security. The two that are most relevant to eMarkets are:</p> <p>Server Based Digital Certificates using SSL encryption</p> <p>Individual Digital Certificates based on Public Key Infrastructure</p> <p>To provide their users answers to these questions, most good eMarkets post information on their site about their security and privacy policies. For anyone planning to use an eMarket, this is important reading.</p> <p>Emarket Services has an article about Transaction and Data security on its web site.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Why</p>	<p>Companies who are large or well known are more likely to desire a degree of privacy or anonymity if they join an eMarket. It may be enough that the trading tools provide for anonymous transactions, while the membership list shows them as a member of the eMarket.</p>	

Check Point – Ethics		
Issues	<p>Are there sufficient stakeholders in the eMarket to ensure marketplace independence?</p> <p>Who in the eMarket has access to sensitive data? What assurances does the eMarket provide about the way that they use data?</p> <p>What information does the eMarket store about my company, prices, and trading history?</p> <p>To what extent are buyers allowed to conduct group purchasing to reduce their input costs?</p> <p>How are participants selected / admitted and should any parties be excluded?</p> <p>Do the terms of the eMarket's staff employment contracts take the sensitivity of their position into account? For example, are there any requirements about how long a staff member must wait before seeking employment with another industry player if they leave their employment at the eMarket?</p>	<p>Related to the issue of data security is that of the eMarket's Privacy Policy. Ethics by contrast, apply more to the operational procedures and methodology of the eMarket and are most relevant to eMarkets that have been established by industry consortia.</p> <p>To research these matters, read the eMarket's Privacy and Security policies</p>
Why	<p>These issues are most relevant if you are afraid of collusive behaviour or price manipulation by either buyers or sellers in an eMarket.</p>	

Check Point – Risks of non-payment or sub-standard product delivery		
Issues	<p>Does the eMarket help you manage your trading risks when it comes to issues of non-payment or of delivery of sub-standard product?</p>	<p>Key things to look for to reduce these risks include:</p> <p>Escrow services / electronic letter of credit</p> <p>Many eMarkets will offer escrow services, usually through an alliance with a bank or a solution provider like <a href="http://www.escrow.com">www.escrow.com</a></p> <p>Online link / strategic alliance with a credit rating agency like Dun &amp; Bradstreet. <a href="http://www.dnb.com">www.dnb.com</a></p> <p>Online link / strategic alliance with an inspection agency like SGS (Société Générale de Surveillance) or Bureau Veritas for the verification, testing and certification of products / services before transacting. <a href="http://www.sgs.com">www.sgs.com</a>&amp;<a href="http://www.bureauveritas.com">www.bureauveritas.com</a></p> <p>Online link / strategic alliance to an independent assessor who checks on a vendor's ability to trade and to produce.</p> <p>Foreign Exchange risk management services (eg alliance with a bank that offers hedging services).</p> <p>Most eMarkets that deal in cross border trade will also have links to a currency converter such as <a href="http://www.oanda.com">www.oanda.com</a></p>
Why	<p>These services can reduce your trading risks. Companies doing international business should take steps to reduce their risks but at the same time should weigh up the risk compared with the cost of eliminating risk.</p>	

Check Point - Legal Risk Management		
Issues	<p>What are the legal terms and conditions?</p> <p>What chances do you have to get a fair process in case of a dispute?</p>	<p>Most eMarkets will have a section entitled Legal Notices or Terms and Conditions. Some will stipulate a jurisdiction that will prevail in the event of a dispute between parties. You should read these notices carefully and if you are concerned, seek professional legal advice as to the implications for you as a use / member of the eMarket.</p> <p>Most eMarkets will also require you to sign a User Agreement, which will stipulate the obligations, duties, and responsibilities of the participating parties. Usually, by submitting an application form, a user agrees to be bound by these rules.</p> <p>Many eMarkets also provide a moderation service to their users, to help parties, in the event of a minor dispute, to find a speedy and non-litigious solution.</p>
Why	It is essential to understand your legal risks and obligations in doing business in any form.	

Check Point – Logistic fulfilment & support in calculating landed costs		
Issues	<p>Does the eMarket have an online link / strategic alliance with a logistics eMarket or offer a choice of transportation services providers?</p> <p>How long will it take to deliver goods and at what cost?</p>	<p>Relevant components to calculating the landed cost of a product include: import customs / duties in the destination market, shipping and freight charges, insurance on transport and credit risk, inspection charges and bank costs for processing payments and documentation handling. Some eMarkets have a facility to calculate landed cost.</p> <p>Some eMarkets will help you do part of your international market research by providing you with links to international tariff databases such as the International Customers Tariffs Bureau <a href="http://www.bitd.org">http://www.bitd.org</a></p> <p>There are other logistic risks in doing business in an eMarket. The best way to manage these is through preparation and research. Depending on strategic significance of the business, a visit to the target market and the potential customer is recommended. The Trade Promotion Organisation in your country will be able to help you in arranging this visit.</p>
Why	An eMarket that helps you fulfil the logistic side of a transaction can save you time and money.	

Check Point – Interoperability		
Issues	<p>What are your needs in terms of interoperability? (connection between your ERP-system and the eMarket)</p>	<p>Interoperability refers to the ability of an eMarket to communicate with a variety of software applications.</p> <p>Many eMarkets claim that they support ERP integration. This means that the eMarket is able to communicate with a range of ERP (enterprise resource planning) systems.</p>
Why	Interoperability is desirable because an eMarket user may want to join several eMarkets without having to change any of his company systems.	

Check Point - Service Orientation, training and support of eMarket users

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Issues</p>	<p>Are contact details of the eMarket easy to find? Eg: phone / email / fax / address</p> <p>Does staff at the eMarket respond to correspondence?</p> <p>Is the eMarket web site operational 24 hours a day, 7 days a week</p> <p>Is support available at times when you need it, eg in your time zone?</p> <p>Does the eMarket offer an online demo tour to give users an overview of how the system works before they sign up?</p> <p>Does the eMarket provide training support (either face-to-face or by telephone) to help a new user sign up as a member or prepare to participate in an online auction?</p> <p>Does the eMarkets respond to user feedback and adapt to users' demands?</p> <p>Is the functionality of the eMarket easy and intuitive to use?</p>	<p>An eMarket should be contactable to start with.</p> <p>If you are serious about joining an eMarket, we suggest you first contact them to test their responsiveness.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Why</p>	<p>It is important to identify the extent of an eMarket's service orientation. Service will usually also be an indication of the adequacy of their staffing and it could become particularly important to you if you have a problem.</p> <p>Training support of new users is an important service. It can save you a lot of time and be the difference between choosing one eMarket over another.</p>	

## **10 Checklist:** ***Trading on an eMarket - eCatalogues***

### **What features are desirable in an eCatalogue?**

- Should be compatible with the standards that are evolving in the supplier's industry
- Should be built so that the supplier can distribute it to multiple destinations. For example, a supplier may want his eCatalogue to be submitted to other eMarket in his industry as well as a general MRO eMarket and possibly also other customers' solutions.
- Should allow the supplier to present multiple product attributes and allow the supplier to maintain control over how his products are differentiated on attributes other than just price. Other attributes include: brand recognition, specifications, contract terms, warranties, and delivery options.
- Should allow the supplier to have multiple pricing models (for different customers and volumes) and link contract terms to specific items
- Should be easy to update, i.e. that it comes with a good content management tool for additions, deletions and changes. It should also support different levels of user access.
- Should be based on a flexible, extensible platform (so that it can grow with you).

### **What are some practical steps companies can take to get started?**

- Take some time to look at your business process and what your major customers and competitors are doing. If you are a supplier in a chain, some of your customers may already have given you some alternatives to getting on board.
- Start looking at how your products / services fit within the UN/SPSC system.
- Consider working with an eMarket. By joining a horizontal eMarket for indirect materials, you can gain skills and knowledge that you can also apply to the strategic part of your business.
- If you decide not to go with an eMarket, some of the solution providers also offer entry-level eCatalogue solutions for SMEs. But getting the solution is only one step. Consider how you are going to manage the change both within your business and in training buyers on using your tool.
- Look at the trends within your industry and what the dominant players are doing.

Case Study:

IBX [www.ibxnordic.com](http://www.ibxnordic.com) is a procurement exchange for indirect materials / services based in Scandinavia. Key members include Ericsson, Novo Nordisk and SEB. IBX offers members the option either to host their eCatalogue on their local server or on IBX's server. Services IBX provides for suppliers include:

Suppliers must be invited to join by a customer who is a member of IBX

Catalogue Services - creation of catalogues through categorization and normalization (based on seller unique dictionaries). IBX uses version 5.02 of the UNSPSC classification system at the 8-digit level.

Order Routing and Order Management application hosted on IBX (if seller has not integrated directly via xml)

Electronic Invoices (creation and/or routing)

Catalogue Upload, Conversion and Publishing (to buyer specific format)

Sales statistics

Trading Partner Directory for Professional Purchasers

On-site training, Helpdesk & Support

Example - Catalogue:

One example of a fragmented industrial market with many manufacturers is medical equipment. The companies are small and often very specialised with world-leading products within their niche market. In the United States, there are over 9000 companies and in Europe over 5000 with an average of 43 employees. The manufacturers are very research-oriented and it is estimated that a new product will not dominate the market for more than 3 years. For these small companies it is therefore very expensive to distribute information about new products.

The buying process is also fragmented in the sense that many individuals influence purchasing decisions. In a hospital, specialists need information about the latest developments within their specific field. At the same time, there are purchasing managers both in specific departments, as well as located centrally, who make decisions on what to buy. Even if the information is available in catalogues, it can take a long time to search for the product. To the buyer, the cost consists of searching for products that he or she is aware of, and being aware of the best products available that could possibly lower costs or increase the quality of treatment.

One example of an electronic marketplace for medical equipment is Neoforma. At Neoforma, buyers can enter their products in Neoforma's catalogue. The manufacturers can either advise their product area or enter itemised product listing, sometimes even with 3-D images. Some of the companies decide not to publish prices. In this case the buyer must ask for a quotation. Others have a list price, which is available to all the buyers registered at the site. [www.neoforma.com](http://www.neoforma.com)



## **11 Checklist: Decision Maker's Cost / Benefit Analysis Guide**

**How should a supplier or purchaser structure his decision to join an eMarket versus an alternative e-solution?**

**The company needs to ask itself:**

- What do I wish to achieve or improve about my business?
- What are the alternative ways of achieving my objectives?
- What are the Business Case and (or) Strategic Case for each of the alternatives?

It is important to recognise clearly what you want to achieve, decide whether / how this can be measured and compare the alternative costs and benefits of achieving the objective. It is important to remember that an eBusiness solution will not necessarily be the only way to achieve a particular objective. Some problems can be solved easily and cheaply with simple process changes.

### **What is a Strategic Case and a Business Case?**

**A Strategic Case** focuses on expectations about the future, that are often difficult to quantify in economical terms but that nevertheless may be critical to a company's future survival. It may include many of the aspects covered in a SWOT analysis.

**A Business Case** by contrast normally focuses on a short timeframe and on known and quantifiable facts about the past and future. A Business Case will focus more on cost comparisons and revenue flows. It must be measurable or it is not a Business Case.

**"Will this eMarket become a more valuable way for me to do my marketing and PR in the future?"** could be answered in the following ways:

- Business Case: Yes, because I will be able to reduce my current marketing expenditure by \$X, because my existing customers use the eMarket and a large number of my potential customers are there or will join. I will be able to reduce the following (...) current marketing activities and instead focus on using the eMarket.
- Strategic Case: Yes, because I believe this eMarket is going to become the dominant eMarket in my industry. My existing and potential customers are likely to join the eMarket. That will make it easier for me to find and communicate with new and existing customers.

**"How will using the eMarket affect the competition between my suppliers?"** could also be answered in the following ways:

**Business Case:** Based on the experience of our competitor A, it will increase the competition and we can expect cost savings of X%

**Strategic Case:** We believe it will increase transparency of offers between our suppliers and give us greater choice and bargaining power.

**Questions Strategic Case:**

- Will important customers require me to use this eMarket in the future?
- Will important customers create their own private exchanges instead?
- Is the eMarket likely to attract in the future the types of companies that I want to do business with?
- Am I likely to learn some important lessons or new skills from joining this eMarket that will position me well for the future? That is, I can treat it partly as an investment in training and knowledge acquisition?
- Should I join one or several eMarkets? Should I work with one and help them develop the extra functionality that I need, which they don't yet have, or should I join several eMarkets who together offer me the full functionality I require?

**Questions Business Case:**

- What is my current operational cost of sending a Purchase Order to my suppliers and by how much (X%) will it decrease by using an eMarket, due to economies of scale?
- What is my current cost for negotiation and by what percentage will it decrease (X%) if I join the eMarket due to the fact that my suppliers are already on that eMarket doing negotiations?
- What will it cost me up-front to join an eMarket compared with the set-up cost of my own Extranet solution? How much will I save (\$X)?
- By how much (X%) will I be able to reduce my sales staff if I join an eMarket and present the sales-order information directly to my customers there, instead of my customers having to make contact with my sales staff?
- Assuming my transaction turnaround time decreases by X%, by how much will my inventory turnover increase? By how much will my cost of working capital decrease?

**In evaluating the Business and Strategic cases of different solutions, what should a company consider?**

- Where is your business "now" compared with what the alternative solutions offer you?

Some companies make the mistake of comparing the extreme limits. For example they may compare a complete eMarket package or a self-built solution with a fully manual business operation. But few companies have a

completely manual business operation. You need to look at the incremental benefits and incremental costs.

- Is your company e-enabled?

A company that is not already e-enabled may gain more (cost savings, efficiency gains and other benefits) by joining an eMarket than a company who has already a system for creating / sending purchase orders and invoices, and is using EDI to do so. On the other hand, an e-enabled company may gain much, even by a small cost saving per transaction due to a higher transaction volume.

- Do you have an ERP-system? Are your software systems standardised?

Several companies may discover that before it is worthwhile joining an eMarket they need to standardise their disparate software systems so that these systems are able to communicate with each other. They must bear this cost in mind. Or they may decide that it is enough to just connect one of their systems to the eMarket and continue a bit longer with their other systems working as before.

- Which are the cost and which are the potential benefits of the eMarket trading tools?

It is important to know what an eMarket is offering you for the price you pay - eg in membership fees, catalogue listing fees, software licensing fees, and transaction fees - and compare this with what your requirements are, based on the solutions you already have.

For example, if you are a small supplier, you may want to use the eMarket as an application service provider (ASP) because you feel it is more worthwhile to pay a license fee for the use of certain software solutions rather than buy and maintain them yourself. By leveraging the economies of scale that the eMarket has, you may get access to a greater array and depth of functionality than you could afford if you were yourself to purchase, install and maintain software, set up and staff a help desk, monitor servers, and analyse communication / transaction metrics.

Alternatively if you're a big purchaser, all you may really need is a communication hub to make your communication with your suppliers more cost effective (as you may already have the systems you need in-house).

An eMarket that offers different price and service level options is attractive because it allows different buyers and suppliers to pay for what they need.

### **How do I rank my requirements?**

- Identify your short list of essential requirements
- Rank your requirements into "essential" and "non-essential".
- This will help you narrow your list of alternatives. For example, you may decide that a communication security solution must be of a minimum quality and thereby disregard the other alternatives.
- Once you've and eliminated the alternatives that do not comply with these, you can then rate the short list based on how they compare on the non-essential requirements and the alternative costs.
- How well does each of the alternative solutions fit in with your company's strategic direction or corporate vision?

If your choice contradicts any parts of your vision, you should be prepared to justify this or reject the choice. For example, your company may have decided that one of your future objectives is to reduce the number of links in your supply chain. Joining an eMarket may actually include adding a link in your supply chain, but on the other hand it may allow you to publish information to all your suppliers in parallel rather than serially. Consider the tradeoffs.

The biggest challenge is to:

- clarify your objectives
- sort out the strategic and business components of your decision,
- identify what you are going to measure
- find realistic ways to measure these and then follow-up to measure the transformation