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Business Use of Internet in The Netherlands

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Abstract

In this article we present results of a research we have done on the business use of Internet in The Netherlands during the period of January-October 1996. We have studied three industries: Banks & insurance, Tourism and Consultancy organizations. We have looked at the following three aspects: Internet presence, business use of Internet, and the process of setting up Internet activity. The Results of our research suggest that much of the Internet activity of companies setting up a Web site in The Netherlands, is in the category of information / presence Web sites. We have found that, by large, senior management was the initiator of setting up Internet activities. About half of the companies reviewed, did not have a defined Internet strategy or implementation plan. In the companies that did have a defined Internet strategy, it was developed by management. As to the future, many companies are now working on their 'second generation' sites that are being designed as transaction sites, to enable business via their Web.

Key words: Internet, World Wide Web

1. Introduction

Internet research, and business use of it in particular tends to be done in a global context [1,5]. Learning the growth, and business use of the Internet as a global phenomena, provides general information that may change at country level. With Internet being indeed a global phenomenon, it is interesting to study it at a lower granularity level than a global phenomenon -- at a country level. The technological infrastructure of a country which determines the availability of the Internet , cultural differences, corporate and customer behavior may differ between countries so that findings from global study of the phenomena will be too general a basis. In our research we have tried to separate the media hype from the current reality as far as business use of Internet in The Netherlands. We have defined business use of Internet, as sites that contribute to revenue generation via the Web they have established. In such a site, which is set up as a transaction Web [1], it should be possible to estimate the revenue generated by products and services sold visits (hits in Internet terminology) to that Web.

2. The State of the Internet in The Netherlands

Internet in The Netherlands, like elsewhere in the world, is a hot topic. One finds articles not only in computer related and professional publications, but in daily news papers and general magazines [7,8]. Wealth of seminars that are dedicated to the business use of Internet . Terms like Web, **Home Page** and Browser gained acceptance with the general public. In the following sections we provide quantitative information about the state of the Internet in The Netherlands.

2.1. Access providers

There are 75 Internet access providers in The Netherlands. They have between few hundreds for the small providers, up to 40,000 clients for the large ones. Because of competition, and in an effort to capture large market share some of the large providers are currently negotiating mergers and cooperation. The table below presents a profile of providers in The Netherlands:

| Provider # | No of users | Users - % Private /Organization | Additional services |
|-------------------|--------------------|--|-------------------------------|
| 1 | 700 | 85 / 15 | Hardware, software , training |
| 2 | 200 | 0 / 100 | Training |
| 3 | 1000 | 40 / 60 | Consultancy |
| 4 | 40,000 | 60 / 40 | Software, Hardware |
| 5 | 700 | 55 / 45 | Consultancy, training |
| 6 | 700 | 90/10 | Hardware, software, |
| 7 | 2000 | 95 / 5 | Server |
| 8 | 960 | 80 / 20 | |
| 9 | 30,000 | N/A | WWW site, comm |
| 10 | 40,000 | N/A | Web sites, software |
| 11 | 20,000 | N/A | Comm, Web pages |

Table 1 - Profile of Service providers

2.2. *Internet users*

There is no agreement on the number of Internet users in The Netherlands. The estimates are based on the number of host computers, and market reviews'. It is estimated that there are about 500,000 users. Of them 150,000-250,000 are active users - using the Internet on a regular basis. It is estimated that a total of 700,000 have accessed Internet at least once.

2.3. *WWW sites*

The total number of commercial Web sites in The Netherlands is estimated to be 4000. The average growth rate as measured for the period 22/1/96 to 13/3/ 96 is 32%, and within the financial industry the growth is much higher for the same period - 63%. These numbers seem high so the question is whether they represent growth in terms of new Web servers, or represent additions to the list of 'published' servers that are maintained at sites that keep such updates². Based on our reviews of such 'yellow pages' sites in The Netherlands we tend to think that the latter is the case. Of the 186 companies on the Amsterdam Stock Exchange, we have found that 24 have their Web site (13%). All of them are information providing sites, none is a transaction site. Nine of the 24 sites use it to also publish vacancies. Few of these

¹ Trendbox, Feb. 1996

² www.markt.nl, www.nic.surfnet.nl

sites are using 'attractions' on their site to increase the number of visits (i.e., info about a popular soccer team, investment game). The table below summarizes the characteristics of some of these sites:

| Industry | Company info | Product info | Vacancies | Other |
|-----------------------|---------------------|---------------------|------------------|------------------------------------|
| Bank | + | + | | Soccer team, students organization |
| Chemical | + | + | | |
| Manufacturing | + | + | | |
| Insurance | | + | | |
| Software | + | + | + | Software download |
| Management consultant | + | | + | Info on Internet |
| Software | + | + | + | |
| Insurance | + | + | + | |
| Bank | + | + | | Investment game |
| Telecom | + | | + | Movie clips |
| Electronics | + | + | + | |

Table 2 - Characteristics of Web sites

The table below provides a summary of the state of the Internet in The Netherlands.

| | |
|---|--|
| Service providers: | 75 |
| Number of users- | 500,000 (of which about 18,000 are companies) |
| Active users: | 150,000-250,000 |
| At least once: | 700,000 |
| Commercial Web sites- | |
| No of total: | 4000 |
| Companies on the stock exchange: | 24 (out of 186 -- 13%) |

Table 3 - Summary of Internet in The Netherlands

3. Initiative and planning for Internet

In addition to reviewing the state of Internet, we have looked at the planning and deployment process of the Web sites. We have tried to identify the initiator of the Internet activity, and whether the initiative was based on a defined Internet strategy and implementation plan -- similar to strategy and plan while implementing a new information technology. Our findings suggest that the initiative for setting up Internet presence came from senior management: of the four banks we examined, at three of them the decision to create Internet presence was made at the highest management level - board of directors or management team of the company. Only in one bank it was initiated at a department level (electronic banking), nevertheless the end responsibility also here was with the executive management.

The results of a review we have done, presented in the table below, show that this picture holds for the general markets we have reviewed. A questionnaire was emailed to 138 companies, and 34 (24.6%) were returned. In 84% of the companies the management was the initiator for Internet presence, and in 13% the initiative came from a business department.

| Internet initiative | Have Internet strategy | Strategy owner |
|----------------------------|-------------------------------|-----------------------|
| Management ▪ 84% | Yes - 43% | Management ▪ 75% |
| Department ▪ 13% | No - 50% | Department ▪ 10% |
| | | New dept - 3% |
| | | Project 4% |

Table 4 - Internet initiative & strategy

In a market review done by Hewlett-Packard [10], the following answers were given as the reasons for Internet presence:

| Reason | % |
|---------------------------------|----------|
| Improve public perception | 59% |
| Marketing, advertisement | 52% |
| Attract new customers | 39% |
| Because others (competition) do | 39% |
| Improve profit | 21% |

Table 5 - Reasons for Internet

The following is a typical example that demonstrates the nature and result of a 'first generation' Internet effort in The Netherlands.

3.1. The case of the insurance company

This case demonstrates the first cycle of business use of Internet. The company is a direct writer with more than half a million customers and about 10 insurance shops. The initiative to create Internet activity for business use came from the Marketing group, and was supported by management. The objectives were to provide added value to the clients in the form of a new way in which the client decided when, what, where and how he will purchase insurance, and to build up knowledge with this new technology. It was one of the first insurance companies with a Web site in The Netherlands. The site was up and running within relatively short time, and once the requests started coming in (in much less numbers than they have expected), it turned out that because of lack of coordination with their current business processes, practices and business users, the Internet requests (coming in as email) actually disturbed the current work process so that the service had to be stopped and the Web was available only as information site. The company is now working on their second generation Internet site based on the experience gained in the first project.

This example demonstrates the organizational aspects of implementing Internet for business use. The impact of Internet on business process has to be carefully reviewed and taken into consideration when planning business use of Internet. The impact on business processes may be a limiting factor for business use of Internet. Those organizations that have gone through major business process reengineering programs in the past few years, may be reluctant in repeating such restructuring efforts and so will establish information Web sites that have no impact on their business processes. The finance industry, i.e. banking, is the one expected to be best positioned to take advantage of business use of Internet when considering their infrastructure and experience with home-banking and tele-banking . None of the banks reviewed in our research have provided these services via their Internet site.

In a review of transaction sites in the banking industry during the period January 1995 until September 1996 [10], only one 'Internet' bank was operational at the end of 1995. Additional five banks offered transactions via Internet about a year later, as presented in the table below:

| | Transaction sites | Information sites |
|-----------------------|---|--------------------------|
| <i>January 1995</i> | - | 13 |
| <i>October 1995</i> | 1 ³ | 140 |
| <i>September 1996</i> | 6 (and more than 200 under development) | >700 |

Table 7 - Type of banking Web sites

4. Conclusions

Our research suggests that much of the Internet activities of companies establishing their Web sites are preliminary, and not planned efforts. Most of the Internet activities are in the category of establishing Internet presence, and providing company and product information. In the majority of the Dutch companies Internet activity was initiated by senior level management. This implies that Internet is perceived as a business opportunity rather than a technology therefore one would expect to see business use of Internet at these companies. The results of our research suggest that this is not the case. The first cycle of Internet activities can be characterized as unstructured implementation as demonstrated by the example of the insurance company - no concrete strategy or plan and no alignment with business strategy and business processes. Nevertheless, not only are there no drop-outs because of not achieving business benefits of their Web sites, there is an increase in the number of companies establishing their Internet site, and companies working on their 'second generation' Web sites in which business, i.e. transaction sites are taking off. The table below provides a profile of second wave Web sites in The Netherlands. Though providing information remains an important part of companies' sites, business generation via the Web is becoming an important component of the second generation sites.

| Feature | % |
|--|----------|
| More, better information | 65 % |
| More service | 53 % |
| On-line transactions | 49 % |
| Support current activities (products/services) | 27% |
| Replace current business processes | 10% |

³ Security First Network Bank. [Http://www.sfnb.com](http://www.sfnb.com)

Table 6 • Future use of Web sites

When considering the implementation and deployment of the Internet as yet another example of implementing new information technology, i.e. implementing client/server computing, or implementation of CASE [14], we identify a pattern similar to what we have seen in implementing Internet for business use: the first cycle of implementations is unstructured without really gaining the business benefits of the technology. The end of this cycle is the recognition that a structured approach that combines business and technology perspectives should be the basis for implementation strategy and implementation plan. In our research we have concluded that this is indeed the case with the 'second generation' of implementing the companies own Web sites. An important difference between Internet implementation and implementation of other new information technology is twofold:

1. Internet is driven / pushed by senior management
2. Considerable part of the market are early adopters of Internet, which is not the case with other information technology.

These would be supporting factors for successful implementation one might think, but as we have seen in our research, this is not the case for the first generation of Internet implementation for business use. Companies implementing their second generation sites are indeed defining a Internet strategy aligned with their business strategy as the basis for their current Internet effort. Companies that went through business process reengineering (BPR) should take into consideration that implementing business use of Internet may require them going through such an effort again. Not aligning the deployment of Internet with business processes may result in both failure in the deployment of Internet and disturbing the current business processes.

With the rapid growth of the Internet community, technological development • mainly security and band width, and the mature nature of the strategy companies are defining for their 'second generation' Internet sites, business use of Internet will take off and indeed companies in The Netherlands that are working on their 'second generation' business Web sites tare taking advantage of it.

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