



E-business Nordic.com 2003

Strategies and spreading of e-business
in Nordic enterprises

1. Summary and way forward

Over 4,300 enterprises – with at least 10 employees – in Denmark, Finland, Norway and Sweden have participated in this survey of E-business Nordic.com 2003.

E-business covers all business applications of internet technology, the purpose of which is to improve, change or promote efficiency in, the enterprise and organisation. E-business therefore includes all communication via the internet; internally in the enterprise via an intranet and externally via an extranet with customers, suppliers and partners.

For some enterprises, e-business has meant a root-and-branch change to their business concept, organisation, and interplay with suppliers and customers; for others, it has been much less dramatic, for example, a supplementary marketing channel in the form of an electronic business card on their website.

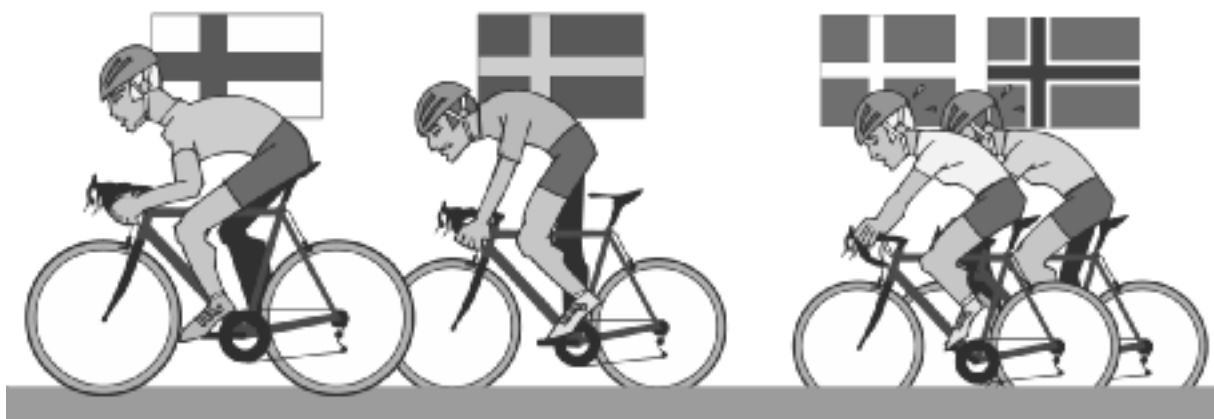
In the Nordic survey we employ a wide definition of e-business, so that e-business is relevant for the majority of enterprises with at least 10 employees. This was intentional, not to dilute the term, but to show that e-business is much more than just e-commerce. When e-business and e-commerce are equated in the public debate this is a misunderstanding and underestimation of the potential of e-business. E-commerce can be defined as the receipt and transmission of orders via a computer based network, and in a number of analyses thereby also includes Electronic Data Interchange (EDI). EDI means the transmission of form-type business documents etc. directly from one computer system to another. *E-business* as a term means however, both harder efficiency drivers, for example, in the form of digital supplier communication and personalised, automated customer communication, and softer elements, in the form of digital marketing and digital staff recruitment.

With this broad perception of e-business it becomes relevant for all departments and sections in an enterprise. From purchasing and production to sales and marketing. E-business even becomes very relevant to an enterprise's staff functions – economy and finance, HRM, and service or callcentre. Each department has a mission in the e-business of the future – and a mission moreover, which must be spread within a coherent strategy which integrates each department's services/products. This report deals precisely with how enterprises in the Nordic region are tackling e-business – and how widespread e-business is, both in relation to concrete functions and webservices.

By way of introduction, it should be emphasised that the focus of the survey on the enterprises of the four Nordic countries enables benchmarking of the enterprises na-

tionally. We do not thus put forward a special Danish or Swedish view in the report but try to make comparisons across national sectors and size of enterprise. Typically, it is the case that Finnish and Swedish enterprises, in such a comparison, are farther ahead than Danish and Norwegian enterprises. By analogy with the Tour de France's focus on winners and waterbearers, the general picture can be expressed thus; Finnish enterprises are wearing the yellow jersey, Swedish enterprises are in the breakaway group, while many Danish and Norwegian enterprises sit waiting at the rear of the pack.

Status for Tour de France e-business 2003: Finnish enterprises bear the yellow jersey



The report focuses on seven main points:

- *Main point 1:* The potential in e-business has been far from exploited.
- *Main point 2:* Finnish enterprises are much farther forward with e-business than enterprises in the other Nordic countries. At the same time, e-business in all countries is the large enterprises' project.
- *Main point 3:* Many Small and Medium-sized Enterprises (SMEs) have not, typically for B2B sub-suppliers, developed or implemented e-business strategies despite the larger enterprises – in their position as the SME's customers – demanding a greater degree of digital supplier communications.
- *Main point 4:* The qualification profile of many enterprises (particularly SMEs) is not optimal for developing e-business. These enterprises hire an inadequate number of technology knowledge workers, for example, engineers and staff with short further educations in IT. This inoptimal qualification profile is reinforced by their

supplementary and further education for e-business being unsystematic and inadequate.

- *Main point 5:* Enterprises in Finland and Sweden are generally much farther ahead with e-business than enterprises in Norway and Denmark.
- *Main point 6:* IT security is high, but can be significantly improved.
- *Main point 7:* The greatest barrier to e-business, in enterprises' own assessment, is that enterprises generally allocate inadequate resources to finance planned e-business activities.

In the following, each of the seven main points will be elaborated:

Main point 1: The potential in e-business has been far from exploited.

In each of the four Nordic countries, around 10% of enterprises are e-business pioneers. In their respective business sectors they show how far e-business can be spread in every link of the enterprise. For the remainder of enterprises (around 90%), digitalised supplier and customer communication can be much more automated, personalised, and integrated with back-office processes. In this way, much greater efficiency is achieved in the enterprise's internal processes – and at the same time, customers and suppliers are served as individuals, thereby promoting loyalty.

The same potentials lie in digital marketing, from development of the enterprise's electronic business card to targetted, personalised internet-related sales via the enterprise's website and on-line net services.

Furthermore, there are significant potentials in digital shareholder communication, digital staff recruitment, and internally, in the enterprise, as IT supported knowledge sharing/knowledge management.

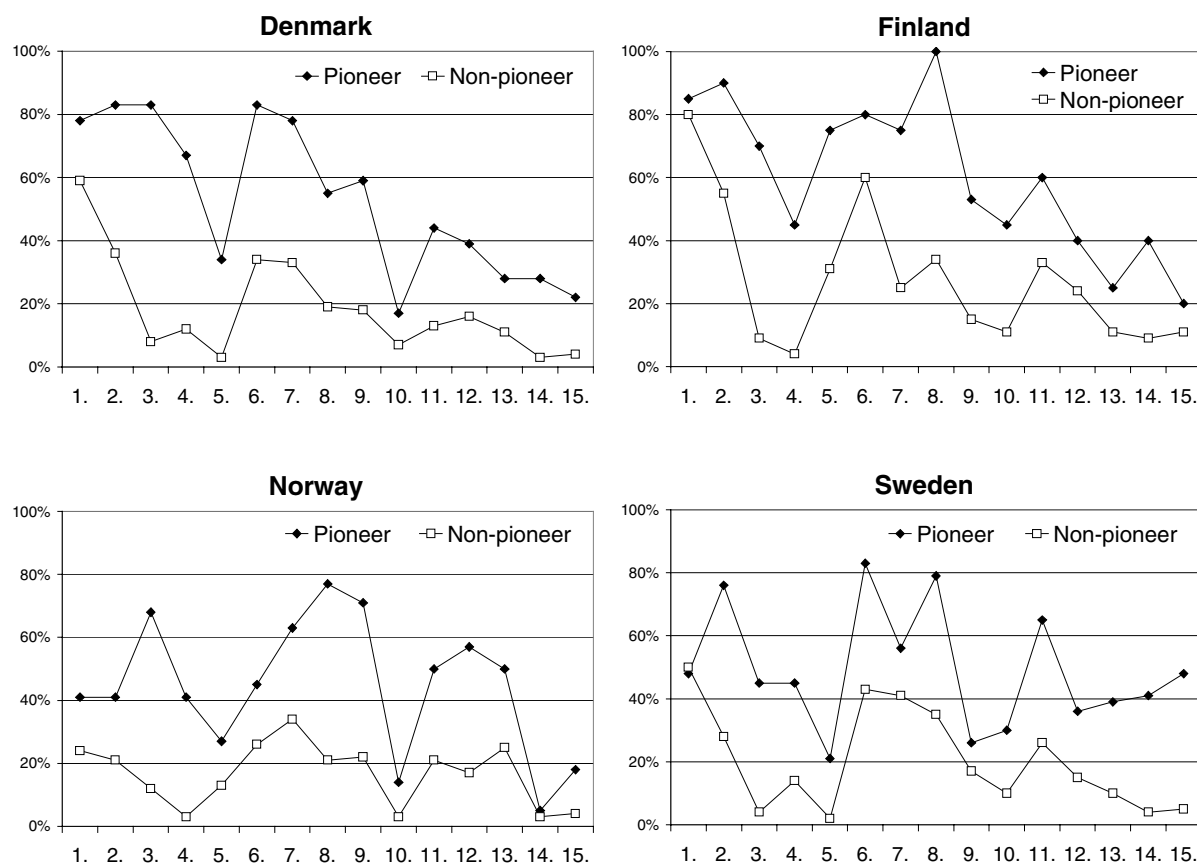
In the figure the potential of e-business is revealed by comparing industrial e-pioneers with remaining industrial enterprises in each of the four countries. It is remarkable that in all the countries there is a considerable divergence between industrial e-pioneers and the remaining industrial enterprises. Industrial e-pioneers are way ahead on all the central parameters compared with the remaining industrial enterprises.

Moreover, industrial e-pioneers in Finland underline that for digital marketing, high business integration of the whole value chain, and digital efficiency improvements (including digital supplier communication) for example, they are much farther down the

road – both the e-pioneers and the rest of the Finnish industrial enterprises – compared to the other Nordic countries.

POTENTIAL FOR E-BUSINESS IN NORDIC INDUSTRIAL ENTERPRISES

Comparison between industrial e-pioneers and remaining industrial enterprises in Denmark, Finland, Norway and Sweden



1. Basic website as electronic business card
2. Automatic order intake
3. Digitalised supplier communication
4. Logistics and improvements to flow-of-goods
5. High business integration in the whole value chain
6. Digitalised marketing
7. High degree of integration in all IT systems
8. IT supported knowledge sharing (knowledge management)
9. Systematic analysis of customer behaviour and preferences
10. Supplementary/further education and courses in e-business
11. Substantial investments in competence development
12. Focus on engineers as central to e-business
13. Focus on employees with short further education in IT
14. e-marketplace for procurement
15. e-marketplace for sales

Main point 2: Finnish enterprises are much farther forward with e-business than enterprises in the other Nordic countries. At the same time, e-business in all countries is the large enterprises' project.

Finnish enterprises prioritise e-business very highly, compared with enterprises in the other Nordic countries. This applies both when comparing identical sectors and for enterprises with the same number of employees. The Finnish lead can also be seen when focusing on strategy, on extending webservices, and in the majority of all the e-business functional areas. Moreover, Finnish enterprises focus much more offensively on competence development, supplementary and further education and training, and on the number of employees with a high qualification, technology knowledge base. The qualification profile in Finnish enterprises is more technology based than in the other countries.

In all the countries the large enterprises are farther ahead with implementing e-business. Also strategically, these enterprises have their eye on the ball regarding e-business.

Main point 3: Many Small and Medium-sized Enterprises (SMEs) have not, typically for B2B sub-suppliers, developed or implemented e-business strategies despite the larger enterprises – in their position as the SME's customers – demanding a greater degree of digital supplier communications.

In other words, a picture is appearing of a strategic gap between SMEs and the large enterprises in the e-business area. The result for the SMEs, as sub-suppliers, is that in the future they face a higher risk of significant problems with competitiveness, in line with B2B customers continuing to develop their e-business strategy – particularly if these customers already operate in an international competition environment. The more international the competition environment is for enterprises the more pronounced and ambitious are their e-business strategies.

Specifically, SMEs lag in the following areas:

- SMEs have many fewer webservices (e.g. product catalogue, quotations, ordering, inquiries, and information, marketing and recruitment).
- SMEs are not putting their e-business competence development on the agenda. Neither strategically nor in practice, is education or internal training highly prioritised compared with the large enterprises. Furthermore, in contrast to the e-business pioneers, the majority of SMEs are failing to employ highly qualified staff.

- The SMEs acknowledge that they allocate inadequate resources to undertake planned e-business activities. Despite this self-acknowledgment, they do not give e-business activities a higher priority when allocating resources.

Main point 4: The qualification profile of many enterprises (particularly SMEs) is not optimal for developing e-business. These enterprises hire an inadequate number of technology knowledge workers, for example, engineers and staff with short further educations in IT. This inoptimal qualification profile is reinforced by their supplementary and further education for e-business being un-systematic and inadequate.

The survey shows that employing technology knowledge workers, for example, engineers, strengthens the combined implementation capacity of enterprises in e-business with consequent improvements in competitiveness.

By inoptimal qualification profile is meant that enterprises fail to employ enough staff with e-business further training/education (e.g. engineers, business school graduates and IT staff) to ensure an effective implementation of e-business. Instead they employ staff that have the same qualification profile as the employees they already have.

Many enterprises (particularly SMEs) have an inappropriate qualification profile for developing and implementing e-business. This is shown by those enterprises where the staff qualification profile is heavy in technology knowledge workers. And e-business pioneers, regardless of sector, widely employ their own highly qualified staff to give a lift to the e-business strategy.

The question of whether enterprises have the right qualification profile is reinforced by the fact that they also provide much too little supplementary and further education in e-business for their staff.

Staff IT competencies, in enterprises' own assessment, is generally inadequate. Between 23 and 32% of enterprises in the four countries consider their IT competencies to be inadequate. And 5-12% intend to completely outsource e-business tasks to external partners.

Enterprises primarily employ mentoring and short term courses to provide training in their e-business competence development. More complex organisational forms of training (posting, internship, job rotation) are employed to a surprisingly minor extent.

Main point 5: Enterprises in Finland and Sweden are generally much farther ahead with e-business than enterprises in Norway and Denmark.

Finnish enterprises in particular, stand out through a marked concentration on e-business, regardless of whether they are large enterprises or SMEs. Finnish enterprises have fewer competence gaps, are more active in setting out a forward thinking competence development strategy, and provide much more supplementary and further education than enterprises in the other three countries.

Danish industrial enterprises – apart from the significant exceptions of the large industrial enterprises – are relatively speaking, a long way behind in their strategic focus on e-business.

Main point 6: IT security is high, but can be significantly improved.

IT security in the Nordic region is basically high, as the majority of enterprises have a firewall, emergency power (UPS), limitation of access to IT systems, and systematic backup procedures. There is however still room for improvement as 1) many enterprises have still not carried out an overall strategic assessment of their IT security (also enterprises where it is very important to have an uptime of 100%), 2) a number of enterprises do not have proven procedures for providing complete security for electronic payment, and 3) encryption of communication and data and the use of digital signature are only common in a minority of enterprises.

Main point 7: The greatest barrier to e-business, in enterprises' own assessment, is that enterprises generally allocate inadequate resources to finance planned e-business activities.

Surprisingly many enterprises state that few resources are allocated to carrying through their e-business plans. The reason seems to be tied up with the other barriers which enterprises list in their self-evaluation. In this respect, the most frequently mentioned internal barriers are 1) enterprise only wants limited and/or controlled growth, 2) a lack of strategic clarity at management level, and 3) enterprise lacks capital to finance e-business.

The three most frequently listed external barriers are principally in the B2C market: 1) consumer buying behaviour baulks at shopping on the net, 2) the market size of internet commerce is too small, and 3) there is a lack of consumer confidence in buying on the net.

The individual sections in the report illustrate, each with its own perspective, aspects of these seven main points.

Benchmarking tool eBarometer.dk

In section 10 it is shown how some of the survey's data are available in a benchmarking tool, www.eBarometer.dk, which PLS RAMBØLL Management operates, together with Dansk IT and FDIH in Denmark and SND in Norway.

Enterprises which provide their verification number are given the possibility of benchmarking their e-readiness against a reference group of 4,000 enterprises in all.

Enterprises can freely define their reference group by enterprise size, branch, internationalisation and extent of internet related revenues. Currently 2,500 enterprises have a password to the benchmarking tool, which is available in three languages: English, Norwegian, and Danish.

In order to ensure credible data, the existing data are being validated before new responses are recorded in the accumulated database.

The three e-business challenges – A primary task for the management team

A central survey result is that e-business is a general management issue, regardless of the position the manager occupies in the enterprise. The survey indicates three challenges to individual managers:

Management/owner

- Take on responsibility for the enterprise's overall e-business strategy: Is the customer centrally placed in relation to increasing the efficiency of all the processes in the enterprise?
- Allocate adequate financial resources to support planned e-business activities so that goal and resources cohere.
- Undertake competitor surveillance – nationally and internationally. Special focus on whether competitors are increasingly integrating with customers on the B2B market.

Marketing manager

- Ensure that the enterprise website provides personalised, automated and focused webservices to present and potential customers. Focus on one-to-one communication and dialogue marketing.
- Enter into alliances with partners in the whole value chain, including search engines and portals, to ensure that the enterprise's brand, products and services have maximum visibility on the net.

- Analyse customer behaviour and preferences to target the enterprise's marketing activities and to strengthen the quality of leads to the sales department.

Sales and Marketing manager

- Ensure personalised access to information for customers on specific products/ services (purchase status, delivery and other services).
- Provide product catalogue online (containing product data, prices and pictures).
- Provide customer services for online quotations and possibility of customising the product (individualisation).

Logistics manager

- Ensure electronic communication with suppliers in all planning processes (demand, distribution, transport, scheduling etc.).
- Ensure electronic supplier communication in all actions (automatic ordering, production data and conditions, distribution and payment).
- Ensure that electronic supplier communication establishes, in the long term, a full business integration of the whole supply chain, including establishing a connection to digital marketplaces for purchasing.

IT manager

- Develop the supporting IT strategy to realise the business concept of the e-business strategy.
- Ensure integration in a coherent IT system, so that all data can be extracted from one system (e.g. resource planning, finance, and other customer and supplier data). Special focus on integration between administrative and financial systems.
- Ensure maximum IT security (from basic IT security facilities to undertaking an overall security assessment).

HR manager

- Ensure that all employees have uncomplicated electronic access to all relevant enterprise information.
- Ensure that employees have the right qualification profile to undertake e-business activities. This includes ensuring that employees have the required IT competencies to handle all problems relating to planned e-business activities.
- Recruit digitally.

Information manager

- Develop the enterprise website as an electronic business card which supports the enterprise brand. Provide general and specific content.
- Provide coherent communication on the intranet, internet and extranet. Focus on various forms of access to shared knowledge both internally and externally, assessed on criteria such as relevance and confidentiality.
- Utilise the net as a communication channel with partners, the media and potential employees.

E-business Nordic.com focuses on a representative cross-section of enterprises in Finland, Norway, Sweden and Denmark, with a minimum of 10 employees. In total, 4,300 enterprises have been interviewed.

We have focused on trade and commerce Nordic.com 2003 – for e-business strategies, competencies, and for the spreading of e-business activities in every part of individual enterprises.

In addition to the focus of the report on potentials and barriers in a comparative perspective, the survey contains a presentation of a benchmarking tool, so that interactively, enterprises can determine their e-readiness. The benchmarking tool, which utilises the survey's extensive data – data which continues to be accumulated and updated – can be found at www.eBarometer.dk



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