

## Summary

# Executive summary

Covering the five Northern European countries Denmark, Finland, Iceland, Norway and Sweden, the Nordic region has more than 24 million inhabitants and roughly the same amount of mobile subscribers. The value of the Nordic mobile communications market was approximately € 8,200 million in 2004. While the market for mobile services is not expected to show substantial growth within the immediate future, the composition of revenues will gradually change as voice revenues decline and new services emerge.

### **Service providers – new actors challenge the industry structure**

During the last decade, the competitive environment in the region has been fundamentally altered due to market deregulation activities allowing for an entirely new type of actor to evolve – the service provider. Deploying new business models, service providers leverage the benefits of variable infrastructure costs by exploiting the low marginal cost of network traffic. Besides implementing new operational models, service providers redefined the consumer-offering itself by focusing strongly on core services such as voice calls and SMS supplied at transparent flat rates. Despite attractive offerings, however, the total market share of service providers is still relatively small. Mainly, this is a consequence of Nordic incumbents having retaliated by offering similar offerings. Nevertheless, increasing the pressure on the industry's current business structure and forcing incumbents to reassess their own business strategies, service providers have served an important role in the development of the Nordic market.

### **The market is saturated despite strong fixed to mobile substitution**

Throughout the entire region, mobile penetration rates are very high and likely close to saturation levels. However, mobile traffic is increasing at the expense of fixed-line traffic in all Nordic countries. The migration of voice traffic from fixed lines to mobile phones has been going on for several years, and mobile revenues are about to surpass those from fixed-line traffic in all the countries. Concerning the number of SMS sent – Denmark and Norway form a group of their own. Within this group, Denmark holds the pole position with an estimated 110

SMS per subscription and month in 2004. The use of MMS in the region is rapidly increasing, however, from very low levels. Norwegian subscribers on average sent an estimated 15 MMS in 2004 whereas the Nordic average is only 4.6.

#### **Market integration – the Nordic region becomes increasingly integrated**

Within many industries, the domestic markets in the Nordic region are gradually becoming more and more integrated. This development fosters a growing number of corporations with a pan-Nordic presence. In order to efficiently provide integrated services to these multinational corporations, operators too strive towards a pan-Nordic presence. In essence, the operators aim at one brand, joint service production and one single product platform across borders.

Telenor, the largest telecommunications provider in Norway, has recently reorganized its organisation and formed a new Nordic business area incorporating both fixed and mobile services within the Nordic subsidiaries. Similarly, TeliaSonera utilises its size to offer pan-Nordic solutions to multinational corporations. The company is the largest telecommunications operator in the Nordic region. Elisa Corporation, the largest fixed-line operator and second largest mobile operator in Finland, make use of a different approach to reach the same goal. The company forms strategic partnerships with companies offering complementing products in neighbouring countries. TDC is the largest telecommunications operator in Denmark. TDC recently acquired pan-Nordic fixed network communication service provider Song Networks in an effort to position the company as the leading communication solutions provider for the corporate market. Despite presence in all Nordic countries except Iceland, Tele2 has not been able to accomplish a successful pan-Nordic service portfolio. However, the company is highly successful in the consumer market and the leading alternative telecommunications operator in Europe.

#### **Complementing technologies – new networks targeting rural areas**

A few operators in the Nordic region still operate first generation analogue NMT networks. Although the subscriber base is very limited compared to that of the GSM technology, and even to the newly introduced 3G UMTS technology, the superior coverage is still essential for many users. However, Nordisk Mobiltelefon has been awarded licenses in the 450 MHz band

in both Norway and Sweden. The company is also a contender in a beauty contest for a similar license in Finland. The network deployed primarily targets people in rural areas and is based on CDMA450 technology. The coverage will be in line with the former NMT networks and performance will be comparable to UMTS networks.

### **3G deployment – subscriber growth lacking adoption of new services**

3G licenses have been awarded in all Nordic countries except Iceland and the two autonomous regions the Faeroe Islands and Greenland. Practically all operators with 3G licenses have chosen the UMTS technology. In March 2005, all operators, except Hi3G Access in Norway and Ålands Mobiltelefon, had begun deployment or have already launched their networks. Initially, video telephony was supposed to be the service that was to attract consumers to the new networks. Gradually, however, low cost voice telephony has evolved into the primary weapon to attract customers, especially for the new 3G-only operators such as 3. Still, however, the new 3G services are perceived as the primary long term source of income and new services are continuously launched.

### **Pricing of 3G services – value based pricing schemes show the most promise**

No operator has yet developed a successful pricing policy for 3G services. However, value based pricing schemes with evident trial elements shows the most promise. With these models, users are not charged by minutes or megabytes but on value delivered. The models are effective when the cost of an individual transaction can be kept low and a habitual pattern of usage can be established. This pattern is best formed when consumers are allowed to try out the new service free of charge for an adequate period of time.

### **Fixed to mobile substitution – significant differences between the Nordic countries**

Fixed to mobile substitution is a development where an increasing volume of voice calls are carried by mobile networks instead of fixed lines. In 2004, the mobile originated traffic share of total voice traffic in the Nordic area amounted to 26 percent. Nevertheless, notable differences between the countries in the region exist. In Finland, the mobile traffic share of total traffic in 2004 reached 42 percent, and about 39 percent of the households have adopted mobile telephones as the only device for voice calling.

**Technology convergence creates new service opportunities**

New functions previously not found in telephones, such as cameras and media players, are increasingly being integrated into handsets. While the changes for operators to profit directly from such convergence are small, the development opens a new large market for complementary services. For instance, while photography itself does not generate revenues, it creates a demand for imagery related services.

**Customised handsets may prove vital to operators' success**

In order to control the end-user experience and content provisioning, operators vigorously strive to obtain command over the handset user interface. While some operators use the control to restrain user flexibility and handset functionality, a different approach would provide greater benefits. Leveraging the control to enable the user to easily access services in a simplistic manner, the operator would gain important accessibility advantages. Given such advantages, the operator would be the preferred content provider unless the price differences are significant.

**The mobile operator – a facilitator of micro payments**

Besides packaging and formatting of services, telephone companies may emerge as a major force in micro payments. Unlike banks and credit card vendors, who normally handle relatively high volume transactions, telecom operators in general charge for small amounts by the minute or second. In addition, operators have experience of itemising units of very small value, customer identification, and keeping track of usage patterns. This, combined with their wide user base, makes them perfectly placed to offer micro payment services.

**The Nordic region – a window into the future**

The Nordic region holds a pole position in the evolution of ICT and most research institutes consecutively rank the five Nordic countries among the top ten IT-nations of the world. Importantly, the prominent position is clearly mirrored in the region's industry structure, with both Ericsson and Nokia, two of the world's largest manufacturers of handsets and telecom network equipment, having their headquarters located in the Nordic region. Furthermore, several international mobile operators, such as Tele2, Telenor and TeliaSonera, are also

Nordic companies. Benefiting from the Nordic countries' global leadership in wireless, IT and electronics these companies use the region's early adopters and advanced customer base to try out new products and services. This, in combination with a mature and deregulated telecom market, positions the region as an interesting window into the future for actors on other markets.

