

**no limits**

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This document is Nokia's Business Review 1999. Together with Nokia's financial statements it forms Nokia's Annual Report 1999. If not accompanied by this document, the financial statements can be ordered from Nokia Corporate Communications, tel. +358 9 1807 379.

Please see the information regarding certain forward looking statements on page 52 of this review.

# Nokia highlights 1999

- operating profit up 57% to EUR 3.9 billion
- sales increased by 48% to EUR 19.8 billion
- dividend EUR 0.80, up 67%
- market capitalization EUR 209.4 billion

## no limits to the future

There are no limits to the human imagination.  
There are no limits to our capacity for change.  
There are no limits to our capability to improve.  
There are no limits to our willingness to achieve.  
There are no limits to our dedication to serve.  
There are no limits except those we set ourselves.  
There are no limits.



A surf before breakfast, Half Moon Bay, California, USA

Freedom isn't a word we normally associate with work is it? But then this isn't work as we know it. Because our mobile information exchange technology is enabling millions of people to choose how they work and where they work every day. Suddenly any place from the beach to the coffee shop can be an office with everything we need to do business at our fingertips.

**"For the first time in my life I can run  
a company without it running me."**



Nokia's Global IP Mobility strategy recognizes our changing world and builds on the new opportunities it offers. The Internet has changed our perception of distance. Mobile communications has changed our perception of place. Together they are changing the way we live helping us to do almost anything we want, anytime and anywhere.

# Strategic intent

Nokia's strategic intent is to take a leading, brand-recognized role in creating the Mobile Information Society by

- ⌚ combining mobility and the Internet
- ⌚ stimulating the creation of new services

# Key data

Nokia	1999, EURm	1998, EURm	Change, %
Net sales	19 772	13 326	48
Operating profit	3 908	2 489	57
Profit before taxes	3 845	2 456	57
Profit from continuing operations	2 577	1 680	53
Research and development	1 755	1 150	53
Capital expenditure	1 358	761	78
Market capitalization	209 371	59 796	250
	1999, %	1998, %	
Return on capital employed	55.7	50.2	
Net debt to equity (gearing), %	-41	-36	
	1999, EUR	1998, EUR	Change, %
Earnings per share from continuing operations, basic, split adjusted	2.24	1.48	51
Dividend per share, split adjusted	0.80*	0.48	67
Average number of shares (1 000 shares), split adjusted	1 148 440	1 138 341	
Business Groups	1999, EURm	1998, EURm	Change, %
Nokia Networks			
Net sales	5 673	4 390	29
Operating profit	1 082	960	13
Research and development	777	564	38
Nokia Mobile Phones			
Net sales	13 182	8 070	63
Operating profit	3 099	1 540	101
Research and development	835	522	60
Other Operations			
Net sales	995	1 014	-2
Operating profit	-273	-11	
Research and development	143	64	123
Personnel, Dec. 31	1999	1998	Change, %
Nokia Networks	23 718	20 638	15
Nokia Mobile Phones	23 775	18 627	28
Other Operations	7 767	5 278	47
Nokia Group	55 260	44 543	24
10 Major markets, net sales	1999, EURm	1998, EURm	
USA	3 360	1 996	
China	2 332	1 753	
UK	1 855	1 205	
Germany	1 679	1 135	
Italy	968	752	
France	951	776	
Brazil	600	250	
Netherlands	544	269	
Finland	479	465	
Australia	437	293	

\*Board's proposal

The key data is based on financial statements according to International Accounting Standards, IAS.

Main currencies,  
rates at the end  
of 1999

1 EUR

USD	1.008
GBP	0.628
SEK	8.599
JPY	103.07

# Letter to our shareholders

**This is the third consecutive year in which we have exceeded our overall growth and profitability targets. In part, we can thank this success to our ability to have continued to develop our sound competitive position, comprehensive product portfolio, innovative solutions, appealing brand and efficient global operations. But there is another increasingly important factor.**

In 1999, we have again been able to substantially increase our profits, sales and earnings per share, and comfortably exceed our targets for the year. Our operating profits grew by 57% to 3 908 million on net sales up 48% at 19 772 million euros.

Our operating margin was also once again well above the industry average at 19.8% and our earnings per share increased by 51% to 2.24 euros. As a result of this excellent performance, the Board of Directors has been able to propose a record dividend of 0.80 euros per share, up by 67% over 1998.

## New era

We are at the beginning of something very significant. Not just for our company. Not just for our industry. But for everyone. And for all aspects of our lives. We are using the twin drivers of the Internet and mobility to break through the limits of time and place. These are very powerful forces. And at this stage no one can say precisely where they will lead us to. But we are sure that it will be a very special time.

A time when people can connect with each other no matter where they may be. When distance becomes increasingly irrelevant. When we can gain access to the facilities and services we need whenever we need them, not just when they happen to be available. When our activities no longer limit us to a particular place. When the links that bind our various communities are strengthened. When new links create new communities. And when nature is served by enterprise, not destroyed by it.

This is what we mean by the Mobile Information Society. It is a concept which is evolving and gaining in magnitude all of the time. It is our intent to play a leading role in developing the potential of the Mobile Information Society.

## Putting people in control

Today, when most people talk about information they think in terms of the information of which they are conscious – watching a movie, reading a book, browsing the Web or buying or selling on-line. But there is also a completely different kind of information. Information we don't necessarily see, but from which we still benefit.

The kind of information that allows us to master the technology and control our environment. Information that enhances our security. Information that means that when you approach your car, that it not only recognizes you to let you in, but also sets up the seat and car controls to suit your preferences. And then goes on to do everything else possible to make your journey more efficient, safer and more comfortable. Or it could be a camera with built-in communications that would let you share your experiences with family and friends.



An intelligent wallet could make sure you don't spend beyond your means – or at least arrange credit when needed.

What the Mobile Information Society really achieves for us is that it helps us increase our quality of life by making the most of our limited supply of time. It helps to boost our efficiency. It allows us to do more. To achieve more. It empowers us to make more of ourselves. Shopping becomes more fun because shopping out of necessity is automated, leaving us more time to do the more interesting stuff. We are put in greater control of our leisure time. Entertainment is what we want when we want it. Our variety of choice is increased.



The Mobile Information Society is giving us the opportunities to really improve our lives. To make many aspects of our lives more convenient and more flexible. To make many tasks more secure, private and reliable. To establish new trusted relationships and further enhance some old ones. The services and products we use can be made more personal, more comfortable and more closely tailored to our precise needs.

### Real benefits

It is all about making technology work for us – seamlessly and effectively, and often invisibly – to create real benefits which we all crave. At the end of the day people don't care about the technology. They want their lives to be richer, more pleasurable and more effective.

We are the ones who want to make all this happen. That is why we try as hard as we do. Why we realize we have to constantly re-evaluate ourselves, check our course and change it if necessary. It is why we place such importance on understanding the needs of our customers.

It is also why we strive for excellence in everything we do. Why we feel we have to focus so much on the value added aspects of our markets. And why we cannot compromise on the operational efficiency which gives us our flexibility and creates our strong positive cash flow.

### The will to succeed

We believe we have what it takes to break through many of the remaining limits that constrain us. We have the global presence, the key core competences in mobility and other enabling technologies to make it happen. We have the culture to cope with the scale of change this will require. A culture which tolerates mistakes and allows people to learn and develop. An accepting culture. A no fears culture. And we have the vision to point us in the right direction.

Our culture and our vision have taken us this far. But this is only the beginning. We recognize that there is still a long way to go. We believe that we are well positioned to meet the challenges. To meet what others may see as confusion and uncertainty with confidence and leadership. To adapt and evolve as required. And to bring the benefits of change to all of our lives.

Life is about to change forever. And we want to be a driving force in that change. We know that there are no limits to what can be achieved with will, vision and determination. And we have all three in abundance.

Jorma Ollila  
Chairman and CEO

Pekka Ala-Pietilä  
President

**"And we thought we wouldn't get to see Jane, Bob and the baby this Christmas."**



Christmas morning, Papamoa Beach, Tauranga, NEW ZEALAND

Communication enriches our lives. We already take television, the mobile phone and the Internet for granted. They make our lives more interesting and give us greater freedom and flexibility. But this is just the beginning. There are many new ideas to be explored. Take Nokia's Mediascreen concept, for example. It combines a television, an Internet connection and



two-way wireless communications into a single portable unit. The result is a testbed for exploring new possibilities – whether in entertainment, communications or electronic commerce. The Mediascreen may never see the light of day as a product. But the ideas it has helped us to develop will.

# Nokia in brief

**Nokia comprises three business groups: Nokia Networks, Nokia Mobile Phones and Nokia Communications Products. In addition, Nokia includes a separate Nokia Ventures Organization and the corporate research unit, Nokia Research Center.**

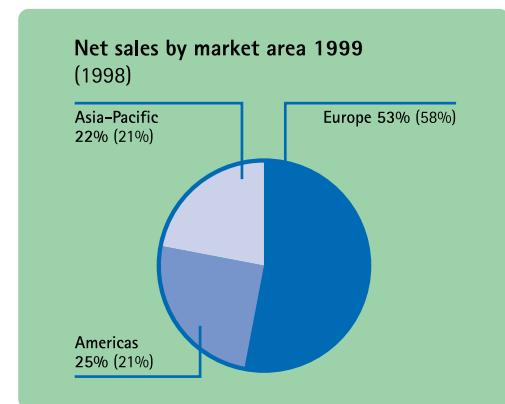
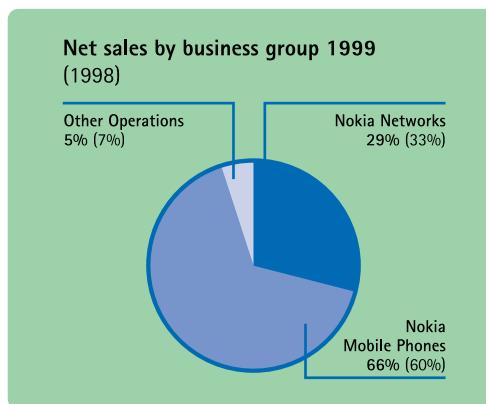
At the end of 1999, Nokia had sales to over 130 countries, research and development in 14 countries, production in 10 countries and a global network of distribution, sales, customer services and other operational units. Headquartered in Finland, Nokia is listed on the New York, Helsinki, Stockholm, London, Frankfurt and Paris stock exchanges and employs more than 55 000 people.

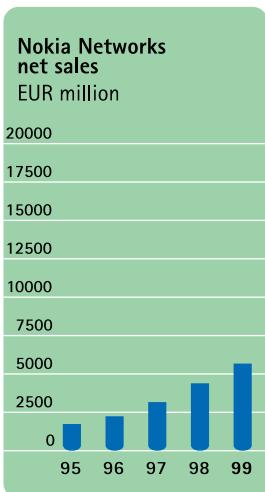
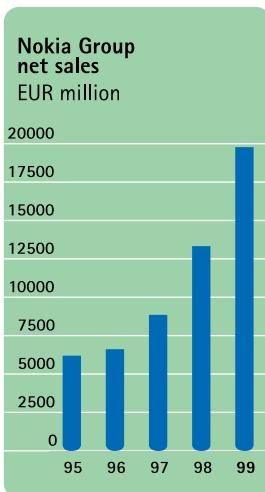
## ① Nokia Networks

is a leading supplier of data, video and voice network solutions for the Mobile Information Society, meeting the needs of operator customers and Internet Service Providers. In addition, Nokia Networks is a world-leading supplier of mobile and fixed access solutions, and broadband and IP network solutions. Nokia Networks also provides service creation, network management, systems integration and customer services.

## ② Nokia Mobile Phones

is the world's largest mobile phone manufacturer. With its comprehensive product portfolio covering all consumer segments and standards, Nokia is in a strong position to lead the development towards the Mobile Information Society. Our mission is to enable people to connect with one another and to information regardless of time or place. Nokia's technology and applications are designed for human needs and are based on solutions that function seamlessly and effectively together.





## ④Nokia Communications Products

comprises Nokia Multimedia Terminals, a pioneer in digital multimedia terminals for digital TV and interactive services via satellite, cable or terrestrial networks.

## ④Nokia Ventures Organization

explores new business areas facilitating future growth and boosting Nokia's product and long term business development. Nokia Internet Communications offers Enterprises and Managed Internet Service Providers strategic IP oriented products and solutions. Nokia Home Communications develops digital platforms and communications solutions for the home environment and Nokia Mobile Display Appliances focuses on new mobile devices for Internet-based, visually rich communications. Nokia Ventures Fund focuses on start-up businesses and technologies which are not in the natural scope of Nokia's current business units and has a global investment scope.

## ④Nokia Research Center

interacts closely with all Nokia business units to enhance the company's technological competitiveness. The center covers the full range of activities from exploration of new technologies and concepts to their exploitation in actual product development undertaken in the business units.

To keep up to date with the latest technological developments and to influence them, the center maintains strong global contacts. It actively participates in the work of standardization bodies and various international research and development projects in cooperation with universities, research institutes and other telecommunications companies.

# Moving life in to digital space

**Never before has the environment in which we operate been so stimulating. Never before have there been so many things coming together. Never before have there been such opportunities. This is an exciting time for the information and communications industry. We really have the chance to change life for the better.**

People will look back on this period and say it was the time the Mobile Information Society was created just as they look back on the 18<sup>th</sup> century and see it as the time of the creation of the Industrial Society. This, they will say, is the period when life moved into digital space.

Digital technologies are fundamentally changing the way we live. Keeping in touch is easier than ever before. Distance and time no longer pose the barriers they once did. Correspondence cycles that used to take weeks can now be sorted out in days thanks to e-mail and other messaging services. Mobile phones keep us in contact with friends and family, work colleagues or business associates, wherever we may be. And portable information tools such as laptop computers keep us productive in a world where we are spending increasing amounts of time on the move.

## Breaking through

Convergence, the Internet, pervasive computing and mobile communications are shrinking our world. They are removing our limitations.

The effects of this change go well beyond information and communications technology to affect many aspects of our lives. Increasingly, we live and work in a single global knowledge based economy. In this new world investment capital no longer simply means money. In a world where everybody carries the means of production around in their heads, the best investment capital could be learning.

There will be many ways of making a success from the new opportunities. And there will be many successful companies. But one thing they all share in common is that they understand that this new world brings not only new opportunities, but also new challenges. Only those individuals and organizations with the flexibility of mind and body to change and adapt to the challenges have a chance of profiting by them.

## Understanding

We believe we are in a good position to benefit from this trend. We believe we understand the needs of users. We understand services and how they are created. We appreciate the value of diversity. And we have a unique way of viewing new challenges: to us uncertainties are the greatest opportunities of all. As the world changes faster and faster, this attitude becomes more important.

We believe we understand the Internet. 1999 saw Nokia's long held view of the emergence of a mobile Internet being adopted by the industry in general. At Nokia, the Internet is not the property of any one part of the organization. It is ubiquitous throughout all parts of the organization.

## Strategic Cornerstones

Human  
Technology

Seamless  
Solutions

Virtual  
Presence



**Kent Elliott**  
Senior Vice President and  
General Manager  
Nokia Internet Communications

Internet Protocol or IP is just a computer communication protocol. But it is changing the world we live in. It has become the ubiquitous protocol for all types of data transmission whether from my desktop PC to one across the hall, or around the globe.

The impact of the Internet can hardly be overstated. It provides us with a global and universal platform to create major new applications and services of real benefit to people. Combined with mobility, we believe it will be especially powerful. Mobility brings the power of the Internet to wherever it is needed.

For the benefits of the mobile Internet to be truly realized, we must make sure that services – no matter how complex or feature rich – are available to end users in a familiar way wherever they may be. Our experiences in mobile telephony have shown that it is possible to create worldwide seamless services. Global roaming and network interoperability for both voice communications and text messaging are already standard features of GSM, for example.

**It is IP that allows me, when in a hotel room and I happen to see on the TV that a stock I own is moving very quickly, to do something about it. It lets me work closely with my colleagues, no matter where I – or they – may be. And soon it may even allow me to see my son score a goal at the school football game I couldn't attend.**

**Work is no longer a place; it is where I am. Home is no longer a place; it is where I am. My community is no longer a place; it is where I am. Communications is helping me break through the limits to my life. And that's largely thanks to IP, a humble computer communication protocol.**

### Global IP Mobility

Global IP Mobility is our strategy for achieving our aims of facilitating a proliferation of innovative applications and allowing ubiquitous service availability. Its objective is to facilitate very large scale delivery of WWW and IP based applications and services over a wide range of wireless and wireline connections including broadband and narrowband medias.

We believe that the products and services that we develop, based on our Global IP Mobility strategy, will create the applications platform of choice for a wide range of communications, mobile commerce and entertainment services.

To date, technology has been driving much of the growth. Every new technology market is initially driven by the technology itself. But soon we will enter a new phase. Applications will drive growth. Eventually, applications will become independent of the technologies. We are moving from a technology centric approach to a user centric view of the world.



The mobile phone has already had a profound impact on many areas of our lives. But new technologies such as Third Generation cellular radio, offering wider bandwidths and equally adept at handling voice and non-voice communications, will change the way we do things still further. More and more of life will move into digital space. And the mobile phone will be at the center of this revolution.

driven by the technology itself. But soon we will enter a new phase. Applications will drive growth. Eventually, applications will become independent of the technologies. We are moving from a technology centric approach to a user centric view of the world.

### Usefulness

Satisfying the needs of consumers is what at the end of the day drives any market. The Internet provides us with a wealth of tools to create applications. If they are to be successful, however, they will have to be created with their usefulness to people in mind. With the right approach, the combination of mobility and the Internet promises to provide a fertile base for creating the kinds of applications and services people will want.

This is only the beginning. Global IP Mobility will change our world a lot more yet. We have only just begun to move into digital space. We have only just begun to push the limits. More and more services will go digital. They will become more available to more people. And in a greater variety of situations. The new ways of doing things will become the norm and not the exception. Many activities will be transformed. Buying and selling will be increasingly via e-commerce or m-commerce. At Nokia we believe there are no limits.



School class, Yangshou, CHINA

The volume of human knowledge is doubling every five years. And the Internet is doubling in size every six months. Increasingly the two are coming together. The net is becoming the repository for what we know and what we need to know. But how do we get to that information when we really need it? Nokia's Wireless Application Protocol (WAP) Server is

**"The biggest kite ever flown? Interesting question – I'll check it right now."**



opening up the world of the Internet to mobile phone users everywhere. It is turning the mobile phone into the information terminal in our pockets. Information placed on a Nokia WAP Server will be available to everyone with a WAP compatible phone, whenever they and wherever they need it.

# The invisible links that make life better

**In today's communications business it is not technologies but end-user needs that drive the market. People want to communicate. But they do not want to care about the technologies behind the links. They do, however, expect their communications, information and services to follow them wherever they go.**

Our challenge is to provide people with invisible infrastructure and seamless connectivity, wherever they want it, whenever they want it and for whatever reason they want it. And to do it in a way that makes the most of the investments by carriers and service providers, both financially and in terms of offering the highest standards and flexibility and variety of services to their customers.

## Profound change

The telecommunications business is experiencing profound change. Communications is not just about covering great distances. It can be across a room or even across a desk just as easily as across a city or across the globe. And it can be between people or between machines or between people and machines.

Data, graphics and video are continuing to claim an ever greater share of traffic. Increasingly communications sessions combine more than one of these. We believe that this will become even more prevalent as people demand that their electronic communications become more similar to the way they communicate in person.

The ways of creating connections are changing. Circuit switching – where the information is routed over individual and physical links – is giving way to packet switching – where physical links are shared and the information is routed according to address. The Internet Protocol or IP is playing a key role in creating this new communications world.

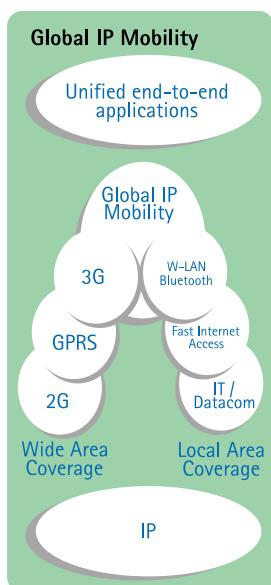
The role of network operators is changing. And as a consequence, so is our service to them. Operators are having to concentrate more and more of their efforts on marketing and customer care. At the same time networks are getting more complicated so that they can address user needs more precisely. The result is a growing need for systems integration.

Renaming Nokia Telecommunications as Nokia Networks reflects our recognition of these trends. So does our Global IP Mobility strategy.

## Net effect

The trend in people's usage of communications is towards higher bandwidth applications. This requires additional capacity in the networks. This is making itself felt on the demand for our products. In particular we are witnessing the take-off of broadband systems in the fixed network and the increase of data and multimedia services in wireless networks.

Nokia is playing leading roles in both arenas. On the fixed network side we are deploying Digital Subscriber Line (DSL) technology. DSL supports fast access to the Internet and the delivery of a range of information and entertainment services over fixed networks for both homes and



**Pekka Pohjakallio**  
Director, Mobile Internet

Today's mobile communications is all about adding value. The whole business is changing from one dominated by technology to one where applications and content count more. I suspect that one day – perhaps not too far away – the added value components of their services will be worth more to operators than their basic bearer services.

offices. This helps pave the way for a whole new generation of feature rich mass market Internet services. By the end of 1999 we had already gained orders for three million DSL lines.

On the wireless side we have taken major steps towards Third Generation cellular radio systems and the support of mobile multimedia services. Nokia is leading the way in bringing the Internet Protocol to mobile networks through its General Packet Radio Service (GPRS) offerings. GPRS offers mobile phone users the same kind of data rates and "always-on" simplicity previously only enjoyed by the users of private networks. 1999 was a significant year for GPRS. A year in which Nokia was able to demonstrate its leadership in GPRS, with 16 announced core GPRS deals. We believe our success in GPRS positions us well for future success in Third Generation.

**It is not surprising therefore that people have been busy searching for new killer applications that will drive this market. Personally, I'm not sure they will ever find any. Because we are already surrounded by them. They are already out there on the Internet. What we have to do is see what further value mobility can add.**

**I think that the services that will have the best likelihood of success will be those most carefully tailored to an individual's needs at a given time and place. They must be Here – in other words take the location of the user into account, Now – current and up to date, and For Me – personalized to my tastes and preferences. Then they will provide real added value to end-users.**

a range of e-commerce, entertainment and information services with the potential to really change the way we live our lives and conduct our business.

During 1999, we also established for the first time an organization focusing on the system integration needs of the Mobile Internet. Before the end of the year it had achieved its first customer contracts.

## **Lead in 3G and IP**

We are a leader in the development of Enhanced Data Rates for Global Evolution (EDGE). EDGE offers users data rates of up to ten times those available on today's fixed networks. We are also a leader in the development of Third Generation cellular radio systems based on Wideband Code Division Multiple Access (WCDMA).

In September 1999, we introduced our first Third Generation product, the triple mode Nokia UltraSite base station and site solution. It offers operators a smooth migration from today's Second Generation cellular radio systems to tomorrow's Third Generation networks based on technologies such as EDGE and WCDMA. It also offers those operators who do not introduce Third Generation services, greatly enhanced GSM capabilities.

IP is becoming increasingly important in all our products and services. During the year we have had significant advances in its implementations. This is a time of great opportunity. We want to welcome the world to the Mobile Information Society.



Making sure you have sufficient network capacity is a key factor in keeping end-users of mobile phone networks satisfied. The usage in dense metropolitan areas is so high that microcellular networks are required. Nokia's MetroSite is a complete site and system solution offering ten-fold capacity of a conventional macrocellular network and this at only half the cost.

## **Mobile Internet**

In 1999, we saw a distinct quickening of the pace of development of the mobile Internet. Voice has gone wireless. Data is very clearly going wireless. During the coming years, we at Nokia believe the Internet will go wireless. We are making rapid progress in many key areas that will make the Internet experience even more compelling.

1999 saw the introduction of the first mobile Internet services based on Wireless Application Protocol or WAP. We launched both a WAP phone and a WAP server during the year. WAP greatly simplifies the creation and raises the desirability of mobile Internet applications. It draws on the wealth of information and services already on the Internet. We expect WAP to become the launch platform for

# Making more of life with the mobile phone

**The way we interact and communicate is entering a new era of exciting possibilities and opportunities. We are entering the era of the Mobile Information Society. An era of anything, anytime, anywhere. An era of unprecedented freedom. And the mobile phone is at the center of this revolution.**

The Mobile Information Society is having a dramatic impact on our lives. It removes many of the limits we currently face. It helps us make the most of our time. It allows us to do things quickly and with less effort than before. It allows us to do completely new things that we had difficulties even to imagine before. It gives us much needed flexibility in a world that moves faster with each day.

## Human dimension

The technologies on which the Mobile Information Society is being built are advancing rapidly. Nokia is a leader in their development. But these technologies have no value in themselves. They only attain value in the context of fulfilling human needs. People must gain real benefits from them. That is what our challenge is all about: understanding peoples' needs and using our technology competences to come up with applications that make their lives better.

Most of the new services, features and functions will be based on software – and much of it user-configurable. Software will play an increasingly important role in the coming years. That's why we are taking a leading role in the development of software platforms – like Symbian's EPOC operating system – for future mobile devices.

During 1999, we developed a number of joint initiatives launched in 1998. In particular, we started to deliver the world's first WAP 1.1 compliant media phone, the Nokia 7110. WAP, the Wireless Application Protocol, is creating a really important shift in speeding up developments in mobile data. It has also helped to ensure that in 1999 our vision of the Mobile Information Society has penetrated more deeply not only in to our own but in to other industries.

## Mobile Internet

Nothing exemplifies our commitment to the Mobile Information Society more than our activities in creating the mobile Internet. It's about wireless, it's about the Internet, and it's about the synergies from combining the two. But most of all it's about giving people what they want, when and where they need it. We believe the mobile phone is the natural vehicle for putting the Internet into everybody's pocket.

We believe that the mobile phone will be at the heart of the Mobile Information Society. There are three simple reasons to support this claim: first, most people will have a mobile phone. Second, they were designed specifically for connectivity. And thirdly, they are personal.

The number of mobile phone users continues to grow significantly. By the end of 1999 there were about 480 million mobile phone users worldwide, over 50% higher than in the previous



**Frank Nuovo**  
Vice President  
Chief Designer, Nokia Mobile Phones

**The mobile phone is still in its relatively early formation stages. This has been and continues to be an exciting environment in which to be a designer.**

**At Nokia, we have a very good idea of where things are going. We have a strong vision of the future. But much can change by the time the future arrives. So it's important for us to**

year when there were 310 million. By the end of 2002 we expect there to be over a billion – more than double the number of today in only three years.

From the outset, mobile phones were created with information transmission in mind – be it in the form of voice, text, data, images or multimedia. For other wireless electronic devices connectivity comes as an add-on. In our view it is less challenging to add different kinds of personal information management functionalities to a device built to support communications features than the other way around.

Connectivity is the single key factor that sets the mobile phone apart from all other electronic devices. It adds value and quality to the lives of its users by allowing them to connect to other people and to various sources of information, entertainment and services – when and where they want it.

**continually question and update our thinking.**

**That's why it's important to be a part of a team. Teamwork gives birth to new ideas.**

**You cannot fall in love with your first idea. You have to be able to explore openly and accept input from lots of people. It is very important to be flexible.**

**There are many influences to our work, but we do not follow trends at Nokia. We try to set them.**

**So where does the inspiration for inspired designs come from? It can be anything from a beautiful tree to a motor car or a building. But the most inspiration comes from working in a good creative team with plenty of interaction.**



During 1999 we launched 18 new mobile phone models. These ranged from feature-rich and data centric devices such as the Nokia 7110 media phone (in the picture) launched in February, to exceptionally designed mobile phones and statements of style, such as the Nokia 3210 launched in March or the Nokia 8210 launched in October.

### **It's personal**

The third and final argument placing the mobile phone at the heart of Mobile Information Society is the fact that it is amongst the most personal accessories that we carry around with us these days.

Already today we can choose between various models that match our changing usage needs, differing lifestyles and individual preferences.

A mobile phone also contains a lot of our most important personal information: contact lists, calendar bookings, notes, messages. In the not-too-distant future it might be possible to integrate credit cards, social security data, health records, ID numbers, keys etc., transforming mobile phones into Personal Trusted Devices.

In the near future this trend towards more numerous personalization possibilities will multiply – not just in terms of design but increasingly in terms of services, features and functionality.

That's why we are constantly deepening our understanding of consumer segmentation, developing new product categories and definitive new products for the segments.

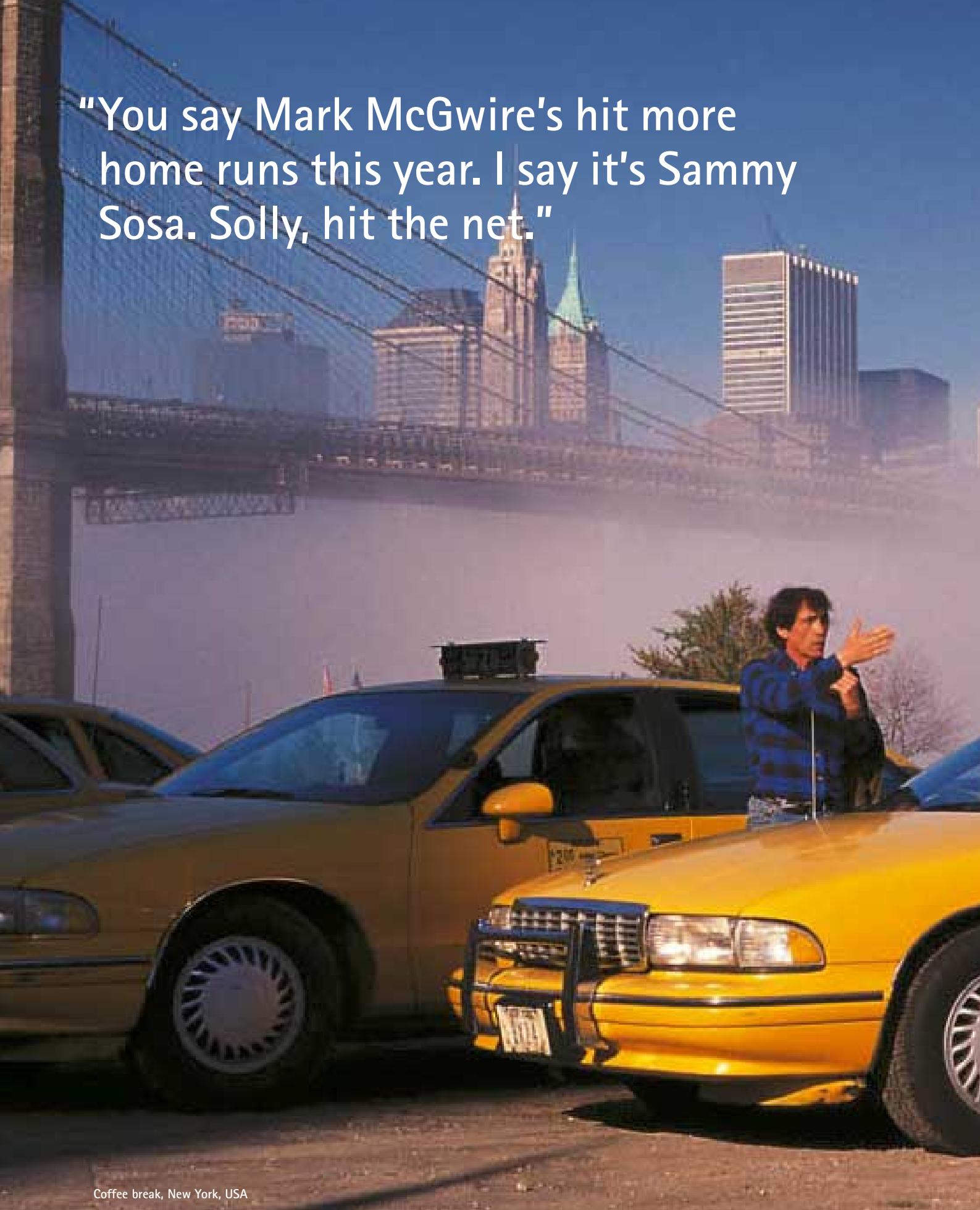
### **Enhanced leadership**

In 1998, we became the world's largest supplier of mobile phones. During 1999, we were able to continue to strengthen our global market position. The mobile phone market grew by over 60% during 1999. We estimate that about 275 million mobile phones were sold worldwide during the year, compared to about 168 million in the previous year. Nokia's sales volume growth exceeded that of the market with sales during 1999 of 78.5 million units, up 92% on the previous year's 40.8 million.

As the market develops its dynamics are also changing. As well as an increasing number of people buying their first phone, there is also a growing upgrade market. A third evolving market is that for multiple handset ownership. We estimate that upgrades accounted for some 40% of unit sales in 1999. This share is likely to rise to about 50% in 2000 and to around 70–80% in the next few years.

It is hard to imagine an industry that will be more exciting than ours in the next few years. The mobile phone will become the device which people will carry with them everywhere. It makes lives easier. It makes choices possible. It removes the limits.

**"You say Mark McGwire's hit more  
home runs this year. I say it's Sammy  
Sosa. Solly, hit the net."**



Coffee break, New York, USA

Information is the stuff of the modern world. From grocery lists and train timetables to stock prices and scientific papers. But it's only really valuable where and when you need it. Otherwise, it's just noise. The Nokia 7100 series' Wireless Application Protocol (WAP) compatible media phone sorts the information from the noise. It puts the Internet in your pocket,



ready to access whatever you want whenever you want. It opens up a whole new world of opportunities. Not just for information access but for interactive services such as e-commerce, games playing and text communications. And it does it all from a package no larger than a conventional mobile phone.

# Pushing beyond the limits of current business

**To push the limits of Nokia's growth beyond the scope of current businesses, it is important to introduce and develop new business ideas. This is the mission of Nokia Ventures Organization. It is a place where new business ideas both inside of and outside Nokia can be discovered and developed.**

At the end of 1999, Nokia Ventures Organization consisted of five main parts: Nokia Internet Communications, Nokia Home Communications, Nokia Mobile Display Appliances, the Nokia Ventures Fund and the Venturing Unit.

Nokia Internet Communications, Nokia Home Communications and Nokia Mobile Display Appliances are all designed to take advantage of the opportunities offered by the emerging Mobile Information Society. Here the worlds of wide area mobile communications and local area computing are merging to create a new realm of innovative types of high speed, mobile, multimedia and seamless services, at work, at home, wherever.

## Home focus

In the office a combination of wireless and wired networks will link a variety of computer and computer-based devices. The idea of networked devices will also gradually take hold at home. Even while travelling away from our fixed bases we expect access to the information, resources and services we have grown to rely on. The unifying aspect of all this will be the Internet. The Internet will link all of these networks and its protocols will eventually become the dominant protocols over all networks.

Nokia Internet Communication's strategic target is the Enterprise and Managed Internet Service Provider markets. Created in October 1999, it combines a number of developments already taking place throughout Nokia. Nokia Internet Communications' target is to build a powerful channel to the enterprise market through offering world class Internet Virtual Private Networks and e-business products and solutions. These market segments will be key to delivering the new connectivity infrastructure required to enable secure, reliable, and scalable solutions for the enterprise.

Despite its short time in operation, the company already has a number of successes to its credit. It is already a leading player in secure Virtual Private Networks, for example. Its combined IP Network appliance VPN/firewall offering has proven particularly popular – especially with larger, more security conscious customers, such as banks and airlines. The new company's heritage also includes Internet Protocol or IP telephony products and know-how.

Nokia Internet Communications is also emerging as an early leader in creating the platforms for Wireless Application Protocol or WAP applications. WAP is allowing companies to offer existing and new Internet or Intranet based services to their own employees and to their customers. By the end of 1999, over 10 000 software developers and companies were piloting services with the Nokia WAP server. In December, Nokia announced availability of the Nokia



**Helmut Stein**  
Chief Technical Officer  
Nokia Multimedia Terminals

We've been talking about convergence for years. Now we're really doing it. That's very exciting.

Convergence allows us to bring together different media to create completely new services and products. Not just once, but over and over again.

## Nokia Internet Communications

Security solutions  
IP network appliances

Mobility management

IP telephony infrastructure,  
terminals and applications

Unified messaging

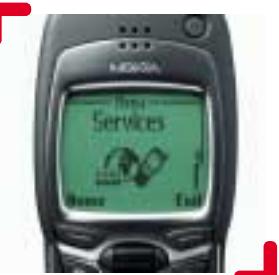
WAP client/server software

IP Clustering

WAP Server 1.0, a product which allows business to leverage securely the Internet in mobile environments and empower employees on the move.

Nokia Home Communications was created in November 1999. Its brief is to develop digital home platforms and communications solutions for the home environment, in particular IP residential gateways for homes supporting not just Internet access but also access to broadcasting and other entertainment services. The unit combines Nokia's strong expertise in technologies such as Wireless Local Area Networks, Internet Protocol and digital broadcasting.

Nokia Mobile Display Appliances focuses on the development of mobile display devices that will enable Internet-based visually rich communications. The unit aims at exploiting Nokia's know-how in high performance displays, Internet Protocol technologies and mobility to offer customers completely new communications solutions.



The Nokia WAP Server 1.0 allows businesses to fully leverage the power and functionality of existing and new service offerings in a mobile environment. It is an open server platform for mobile applications that lets companies maintain control over end-to-end security of access to data and customer traffic between the wireless network and the Internet or their own internal networks.

In the past many good services have not been developed simply because of the artificial limits we set ourselves. That's entertainment, this is information and that over there is communications. It is now clear that we can break through those limits. All we have to do is allow our minds to grasp the opportunities.

Why not communicate via our TV. Or watch TV on our communicator. Or access information from either.

It's quite a challenge. We're used to thinking about ourselves as being in TV, in telecoms or in computing. We have to rethink those roles. We can no longer afford to let ourselves be trapped by our histories.

## Venturing

Nokia Venturing Unit's mission is to see what the world will look like in three to five years time. It explores new business areas for Nokia. If the business case stands up, the company creates a new venture.

The Venturing Unit provides a greenhouse for new business ideas. At first, one or two people are asked to investigate a new idea. If the idea has merit, a larger team could be assembled to turn it into a business. Nokia Venturing Unit also runs pilots and other early stage venturing, often together with one or more partners.

The Nokia Ventures Fund, based in Menlo Park, California, has the mission to invest in interesting start-ups. With an initial capital allocation of \$100 million, it is constantly on the lookout for disruptive technologies and new emerging business models: ones which will enable significant new market opportunities. Investments are not dependent on strategic relationships with Nokia. The knowledge gained of interesting new technologies and markets is more important.

## Investments so far

Examples of Nokia Venture Capital Fund investments so far include eVoice, Pogo.com, Confinity, FusionOne and Informativ. EVoice is an IP telephony company dedicated to providing convenient messaging solutions via the Internet. Pogo.com is the first service to target the emerging market of family Internet game players. Confinity is concentrating on meeting the rapidly growing demand for strong cryptography on hand-held computers and other small devices. FusionOne is developing Internet synchronization software and services that make information access seamless across multiple communications and computing device. Informativ is the leading provider of web-based, real-time information solutions.

But none of this is rigid. The whole idea of Nokia Ventures Organization is to promote Nokia's development. The main thing is that the best use is made of the company's know-how in different technologies, its competences and its capabilities.

**"Structural density isn't my strong point.  
Let's set up a virtual meeting with Sam  
and the Atlanta team to help us  
sort this one out."**



Aircraft hangar, Dallas, USA

Increasingly in today's world, knowledge resides on the net – whether the Internet, intranet or local area network or whether in databases or within the people that can be contacted via the net. A network connection is now taken for granted on the desktops of most office workers. But what about those other parts of the organization that have so far



proved harder to reach? Nokia's Wireless LAN technology is designed to extend the reach of the net to penetrate further and deeper into the organization, bringing the best teams and resources together no matter where they may be. And to anywhere where they may be needed.

# The machinery of knowledge creation

We are moving swiftly towards a knowledge-based economy in which growth can be explosive and the key raw material – the human imagination – is infinite. Harnessing the power of the imagination is what Nokia's research and development activities are all about.

It is an exhilarating experience to be at the forefront of these developments. But change creates uncertainty as well as new opportunities. We believe the best way to master the uncertainty and make the most of new opportunities is to possess the top expertise. That is why we have put research and development and continuous company-wide learning at the core of our strategy.

## Integrated approach

1999 was a landmark year in Nokia's research and development activities. Over the year we invested over 1 750 million euros into research and development, up by 53% over the previous year. By the end of 1999, about one third of Nokia's workforce of over 55 000 worked in research and development activities. And of that group of more than 17 000 research and development experts, just over 1 000 worked at the Nokia Research Center, the corporate research center with sites in 6 countries.

At Nokia we place great emphasis in ensuring that research and development is not an isolated function but is integrated into the whole corporate process. Research and development work takes place both within the individual business units and at the Nokia Research Center. And all research and development sites interact on a daily basis, not only with each other, but with all other parts of the company, including the various strategic planning, production, sales and marketing functions.

## Nokia's Research and Development

- More than 17 000 employees within R&D
- 52 R&D centers in 14 countries
  - Australia
  - Canada
  - China
  - Denmark
  - Finland
  - Germany
  - Hungary
  - Italy
  - Japan
  - Malaysia
  - Rep. of Korea
  - Sweden
  - UK
  - USA



**Juhani Kuusi**  
Senior Vice President,  
Nokia Research Center

How do you ensure that your research and development remains focussed on the needs of the real world while at the same time staying ahead of the competition in such a fast changing environment? That's the big question facing today's hi-tech companies.

## Research and Technologies

Different parts of the company may approach research and development in different ways, but in ways most suited to their business processes and business objectives. For example, in some parts of the company the research and development process chain starts with what we call Research and Technologies. This allows research on a more generic level than pure product development. The researchers are given a considerable amount of freedom.

The next step in this approach is Technology and Platforms. Here we have focussed projects with defined goals which look beyond the requirements of immediate product development. Things developed here may well be incorporated into several product designs of the future. The actual product development takes place in a phase we call Concurrent Engineering. Here all the effort is focussed into creating products which fulfil customer needs.

In other parts of the company, however, the separation between the ideas generation and product development stages is not as pronounced. Work is based on programs aimed at making the various product families.

Also, depending on a particular product, research and development team members can be from all of the business units of Nokia or from one or more.

The activities of the Nokia Research Center are closely aligned with those of the business units. In fact, around 70% of the Research Center's funding comes from the business units in the form of contracted research and development projects.

I believe the answer lies in collaboration, internally and with the outside world. And in not allowing research to become some sort of isolated activity. At Nokia, research and development work takes place in a number of different places. And there is continuous personnel exchange and interaction between all of them as well as with other functions of the business.

This all helps us to keep fresh and receptive to new ideas and influences. It is part of our continuous self-renewal process. Of course, there is always a need for industrial basic research. And we conduct plenty of it both internally and with external organizations. But at the end of the day, there always has to be some worthwhile benefit to our customers. They are, after all, the ones who pay our salaries.

global research and development structure. As well as applying the latest technology to products and solutions for local markets, the units cooperate with the general research and development communities in their home countries and globally. And, of course, by developing our local facilities we are enriching and adding value to our research and development activities worldwide.

## Investment in the future

Knowledge is fast becoming the driving force of economic growth, social development and employment and also the primary source of competitiveness in the world market. Research and development is all about investing in the future. By improving our knowledge we push the envelope that restrains us. When it comes to our desire for knowledge, there are no limits.

Nokia Research Center personnel are actively involved with business unit projects – not just over the longer term but also in cases when their skills may be needed more acutely. And we encourage the rotation of personnel between research and development and other functions.

## Global operations

To date, we have research and development centres in 14 countries. These facilities allow us to adapt our products to meet local market requirements. But far more valuable in our rapidly changing world is that we really do our research and development from start to finish at all sites in parallel. This way we have access to the best talent the world has to offer, and to share the latest knowledge from around the world.

In 1999, we decided to expand significantly our research and development activities around the world. In China, Denmark, Hungary, Japan and the USA, for example, we raised our investment in research and development personnel by between 50% and 200%. And we set up or acquired new research and development units in Canada, Italy and Korea and started activities in Spain.

All of these are an integral part of Nokia's



Nokia Research Center's new main building in Helsinki was opened on June 1, 1999. The 24,400 square meter building has been designed with maximizing the contact and information exchange between its inhabitants in mind. Its town center location and proximity to major universities should also help to provide a stimulating environment.

# Cooperation eases the path to the future

**The keys to success in research and development are to be early, experiment, learn fast, correct direction whenever necessary and execute with excellence. And in an industry which is moving as fast as ours, it does not make sense to do it all alone.**

Cooperation and collaboration are playing increasingly important roles in research and development, both within our organisation but also with others. Only in this way can we ensure the timely creation of not only new telecommunications standards but of the fast paced de facto standards of the Internet age.

## Internet gateway

On the terminals side, for example, the Wireless Application Protocol or WAP effectively allows every mobile phone to become a mobile information terminal by offering a gateway between the Internet and mobile phones. The first WAP compatible terminals began to emerge in 1999, as did the first WAP software development kits.

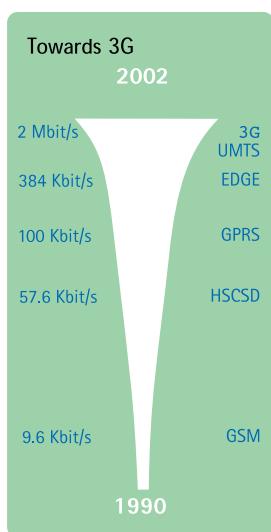
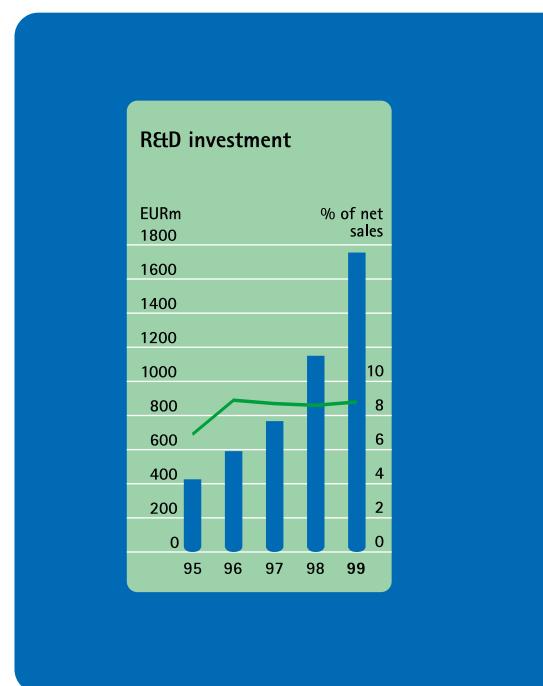
WAP will be a real driver for the development of value added services for mobile devices. With WAP everyone can download the specification from the Internet and simply start building applications and services for mobile terminal users. If an application can be put on the Internet, the chances are that it can be made available to mobile terminal users through WAP.

Bluetooth helps the mobile phone continue its evolution from a communications device to a personal trusted device. It defines a device-to-device interface which will significantly extend the usefulness of terminals by allowing them to invoke actions in other devices, such as printers or scanners, as required by applications. Links are set up as needed by applications without any need for human involvement. And because it is small, low cost and low power it is perfect for mobile devices from intelligent wristwatches to laptop computers. More than a thousand companies are now committed to making their applications compatible with Bluetooth.

## Inspiration to create

Symbian provides an operating system which can be common to a whole range of portable handheld devices ranging from mobile phones to personal digital assistants. By creating a high degree of conformance developers of software and hardware should be inspired to create new and innovative products and functions, and, at the same time, consumers should be given the confidence to use the new generations of devices.

The General Packet Radio Service or GPRS supports peak data rates similar to those of dial-up connections over fixed networks. Its always open packet switched communications channels allow almost instant access to data services, making the data experience more rewarding and less frustrating. Because of its completely transparent support of the Internet Protocol or IP, GPRS effectively gives the mobile terminal the same status as IP hosts on a fixed network. In other words each GPRS compatible phone will become another node on the net.



There are, however, still applications where circuit switched data retains an advantage over packet switched data. Examples include real-time applications that demand a constant bit rate – such as mobile video telephony or time-critical wireless imaging. Circuit switched data is also much more suited to supporting mobile access to the large installed base of circuit switched fixed network telephone modems and ISDN terminals. High Speed Circuit Switched Data or HSCSD is an important development in this arena. It raises circuit switched data rates from 9.6 Kbit/s to 57.6 Kbit/s.

#### Investments in R&D

- ⌚ EUR 1 755 million in 1999
- ⌚ EUR 1 150 million in 1998
- ⌚ Increase of 53%
- ⌚ 8.9% of net sales in 1999 compared with 8.6% in 1998

#### Personal multimedia

Enhanced Data Rates for Global Evolution or EDGE offers a foretaste of Third Generation but over today's Second Generation cellular networks. The data rates supported by EDGE will allow a whole host of advanced personal multimedia services to be offered using still and moving images, sounds and text as well as voice.

EDGE also has the effect of conserving network capacity. A particularly attractive aspect of EDGE is that it does not require new network infrastructure. It is merely a modification of existing systems. The major change is a new modulation system, known as 8PSK (Phase Shift Keying). This co-exists with the existing modulation. And it also offers the prospect of merging the evolution of the European originated GSM and US originated Time Division Multiple Access (TDMA) Second Generation digital cellular radio standards.

All of these initiatives, both on the terminals and systems side, are in anticipation of Third Generation cellular radio which is expected to come into service from 2002 onwards. Nokia's WCDMA radio technology, with its combined packet-switched and high-capacity circuit-switched functionality, will support the entire range of value-added services on the horizon. This technology provides cost-efficient, wide area coverage with data rates up to 384 Kbit/s and localized data rates up to 2 Mbit/s.

Nokia started the development of a WCDMA test bed in 1992 and demonstrated the viability of WCDMA for multimedia applications on that test bed in 1996. In September 1998, the first call using a Third Generation Nokia terminal was made on a test network in Japan. And in 1999, Nokia completed the first WCDMA full-system call over a public telephone network using a WCDMA terminal, WCDMA base station subsystem and GSM Mobile Switching Centres.

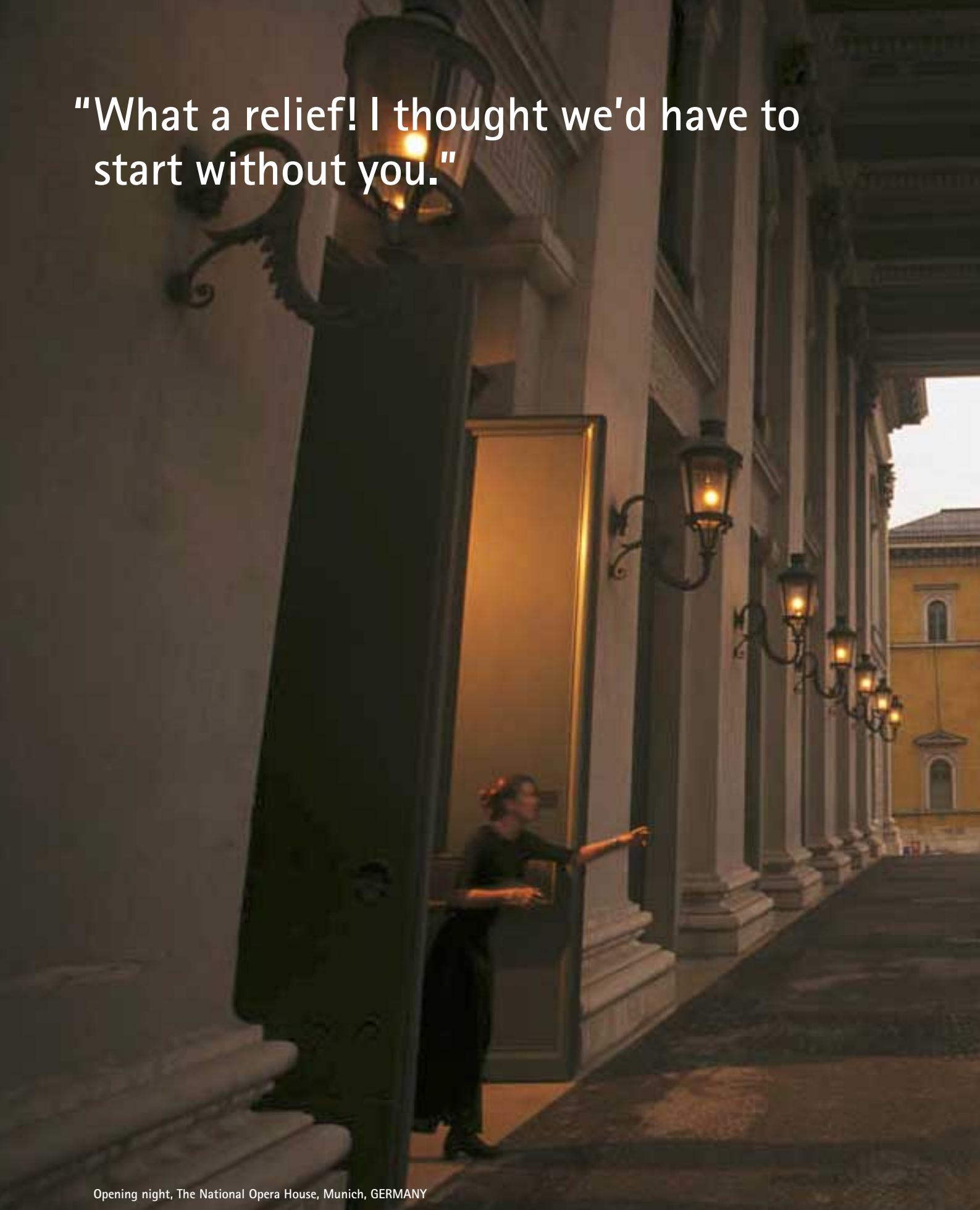
#### Enlightened management

The Mobile Information Society will not be built by any one organization alone. It requires extensive cooperation between entities which may also be competitors. Such complex collaborations must be managed in an intelligent and enlightened way to ensure that the benefits outweigh the drawbacks. If successful, however, it will mean that together we will break through the limits that restrain progress much faster than we ever could alone.



Research and development at Nokia is truly integrated with the company's other functions. Every year around 10% of the staff at the Nokia Research Center migrate into other areas of the company. And there is on-going close communication between those with a research function – whether in the Research Center or within the business units – and those with other functions such as marketing, sales or production.

"What a relief! I thought we'd have to start without you."



Opening night, The National Opera House, Munich, GERMANY

There are times when you just cannot be late. But in today's congested cities being on time is becoming more and more difficult. What you need is a magic hand that will guide you around all of the problem spots and get you to your destination safely, most relaxedly and on time. That is why Nokia is developing its Smart Traffic line of products. They combine



GSM mobile communications with GPS (Global Positioning System) satellite positioning, database software, remote sensoring and display technologies to create a new generation of tools for cars and trucks that will not only help them be more punctual but safer, more secure and more efficient.

# Keeping the creativity flowing

In a knowledge intensive industry such as ours, success relies on attracting, developing and retaining the most talented people. We also need to provide an environment in which our employees can be creative and turn their ideas into collective actions.

These are the primary goals of all of our human resources activities at Nokia. And they are likely to take on even greater significance over the coming years as the competition for talented people gets even tougher.

Despite our growing size our culture remains that of an independent, innovative and creative start-up. We aim to maintain this culture no matter how large we may become. We believe that the best way to achieve this is less through traditional management and more through leadership.

## Values

Leadership starts with imparting Nokia's values to everyone in the organization: a drive to achieve customer satisfaction, respect for the individual, willingness to achieve and belief in continuous learning. It is also about encouraging sharing – shared information and shared responsibility – and openness – to each other and to new ideas.

At end of 1999, Nokia employed 55 260 people in 50 countries. That compares to 44 543 in 45 countries at the end of 1998. A third of Nokia people have been working at the company for less than two years. As the company continues its global and corporate expansion the workforce is becoming increasingly diverse. There are 30 nationalities working at the Nokia Research Center alone.

This, of course, presents a challenge to our corporate culture and our values based management system. We feel that it is therefore important to gain regular feedback from everyone at Nokia to make sure we are achieving our aims. We do this through our annual "Listening To You Survey", which is undertaken by an independent survey company.

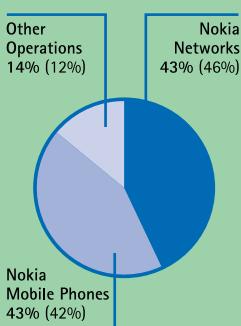
## Response

In 1999, overall response to the survey grew to 73%, compared to a typical response rate to surveys of this sort of 65%. The main areas of improvement were in staff perceptions of recognition, reward and organizational integrity. Training and development scores were also improved placing Nokia 12% above the norm for global high-tech companies.

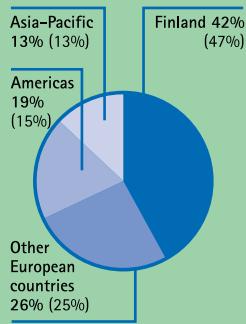
Belief in the company's commitment to customer satisfaction was 18% above the global high-tech norm. Other key areas which scored well above the high tech norm were employee motivation and involvement and satisfaction with career opportunities. The number of staff reporting that they were satisfied with Nokia as a company to work for grew by 5%.

Respect for the individual, one of Nokia's key values, was up 6% over the previous year. Scores for achievement remained high at 66% and continuous learning was up 5% to 63%.

Personnel by business group 1999 (1998)



Personnel by market area 1999 (1998)



Eri Kuwabara

Product Manager

– a Japanese national working in the UK

Nokia is a very open company. It does not matter who you are talking to, no matter how senior they may be, if you have any ideas, questions, concerns, comments, you can say them. When it comes to openness I have found that there really are no limits.

Wang Jing

Marketing Communications Assistant working in China

Nokia offers a very good working environment and facilities. There are plenty of training opportunities for me

In Nokia we believe in using the technology we create to encourage a more innovative way of working. Our corporate network reaches into all corners of the organization supporting open and frequent communication and promoting a mobile, flexible and strongly socially networked culture. Because of our emphasis on leadership rather than traditional management, we do not have to see everyone sitting at a desk to know that they are working.



**to improve myself. And I know that if I work hard and do well I will be recognised for my efforts.**

**Wayne Brittingham**  
Human Resources Director and former marine working in the USA

Nokia revels in its diversity. In just a very few years it has transformed itself into a global business. To many organizations this would have brought unbearable strains. But at Nokia there is broad recognition that melting different cultures together brings genuine business benefits.

Nokia has a well developed intranet. The vast majority of Nokia's workforce has a personal e-mail address. Internal publishing is increasingly taking place on the intranet. Company magazines such as Nokia People and Advance have intranet as well as printed versions. Some publications, such as The IP Edge and various special publications linked to major events, are intranet only. A lot of Human Resources material is made available over the intranet.

### Using the Web

Nokia is keen on exploiting the interactive nature of both the Internet and the intranet. Close to half (48%) of the responses to the 1999 internal "Listening To You Survey" came via the Web, for example. And a substantial number of job applications made during 1999 arrived at Nokia via the Web. Many of them via local Nokia job websites.

There are a number of advantages to using the Web for human resources purposes. It considerably boosts our efficiency and enables us to do new things. Nokia's Global Employment Management System (GEMS), for example, allows any manager looking for someone with particular skills to find them quickly. He or she simply puts the list of

attributes being looked for into GEMS and back comes a list of suitable candidates. And in our increasingly global business, the search area is not restricted to any one country or area of Nokia's operations but can be as narrow or wide as required.

### Managing change

Nokia has generally had very good relations with its people. Nevertheless 1999 saw a number of efforts to further improve our performance in this key area. For example, we further developed our performance management initiative, Investing In People (IIP), under which all staff have regular discussions with their managers to set objectives and review skills and development needs.

During 1999 we continued our general shift towards performance based compensation. The stock options scheme was extended from 2 000 to 5 000 individuals. And under the Nokia Connecting People Bonus Plan a total of 70 million euros will be paid out based on 1999 performance.

There are also various other incentive plans where incentives are linked to performance. These include the Individual Incentive Plan, the Program/Project Incentive Plan and the Team/Production Incentive Plan. There are also incentive plans for production personnel as well as research and development and other work teams. In addition there is a special Achievement Award given to individuals or teams in recognition of outstanding contributions, significant

achievements or exceptionally good performance. Some 90 million euros was paid out in 1999 under these schemes.

### Talent competition

Part of the company's effort to address this emerging challenge is its university program. Nokia maintains relationships with over 100 universities and higher learning establishments worldwide. These range from the sponsorship of research to the encouragement of Nokia employees to take on part-time teaching or other roles.

During 1999 we decided to increase significantly the number of places in our International Student Exchange Program and to mount a number of special events targetting the top technology universities worldwide.

Maintaining and improving the attractiveness of Nokia's working environment is becoming increasingly important as the competition for talent grows. This company is very mindful of the fact that it is the individual contributors who make the results. Nokia's goal is to be the employer of choice for the world's most talented people. Together, there are no limits to what we can achieve.

#### Number of employees by country

31 Dec.	1999	1998
Finland	23 267	21 093
United States	7 441	5 226
Germany	4 660	3 695
China	4 375	3 487
UK	2 822	2 417
Hungary	2 034	1 481
Mexico	1 392	936
Brazil	1 233	491
Denmark	1 110	747
South Korea	694	568

#### Efficient operations

	1999	1998
Net sales per person, EUR*	386 343	324 297
Operating profit per person, EUR*	76 357	60 573
Number of patent applications	over 1 000	over 700
Number of invention reports	nearly 3 000	nearly 2 000

\* calculated with average number of employees

# Building a sustainable future

**Success in today's globalizing economy is not just based on the efficient use of financial capital. It is also important to build, sustain and effectively develop human, social and natural capital.**

The communications and information business has the potential to transform man's impact on the environment. Many activities requiring large amounts of energy or raw materials, could be transferred into digital space where their negative environmental impact could be reduced. This potential opens up great opportunities. But it also brings responsibilities.

A commitment to environmental issues is integral to Nokia's corporate culture. It is our goal to develop advanced human technology, products and services that have no undue environmental impact, are efficient in their consumption of energy and natural resources, or even help to conserve them.

## Life cycles

Nokia focuses its environmental work on what it has identified as key phases of product life cycles. These include an environmentally sound supply chain, environmental management systems, environmentally conscious packaging and recycling and other end-of-life practices.

Environmental objectives and considerations are systematically integrated into the design of products, processes and services through Nokia's Design for Environment (DFE) program. The goal of DFE is to minimize the use of materials and energy and maximize reuse and recycling while maintaining or improving cost, performance and quality standards.

In 1999 Nokia Networks' Customer Services introduced recycling services for infrastructure products. Depending on customer needs, Nokia offers services covering disassembly, transportation, selection of an authorized recycler and contracts with the recycler.

Nokia Mobile Phones is also actively addressing the question of end-of-life management of its products. It has participated in the mobile phone takeback pilots organized by ECTEL, the body representing the European telecommunications equipment industry. And it actively assists in national and local programs for the recovery and disposal of batteries.

## Electromagnetic fields

One aspect of the environmental impact of information and communications equipment that has received a lot of press attention, is that of the possible health effects of electromagnetic fields.

A substantial amount of scientific research to date has indicated that radio signals, at levels within the limits prescribed by safety standards and recommendations around the world, present no adverse effect to human health. Nokia products meet all relevant standards. Nevertheless, in response to our customers' concerns, we at Nokia support the development of an even better scientific and public understanding of these issues and are contributing to a number of high quality re-

search programs taking place around the world.

## Standards

Nokia also actively supports the ISO 14001 international environmental management standard. At the end of 1999, 17 production sites in six countries had a certified or internally verified environmental system. A further seven had started the certification process.

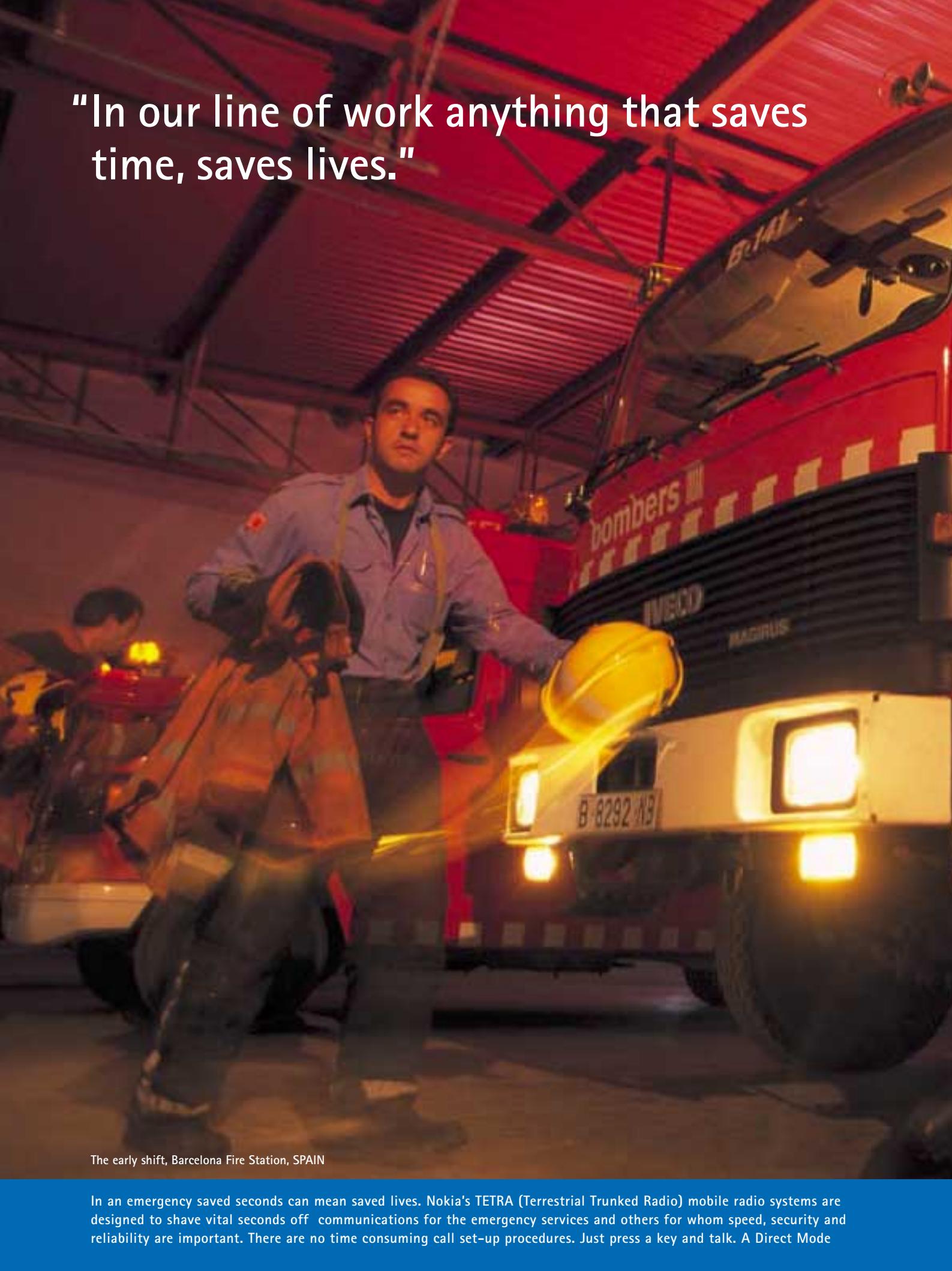


Nokia's Suzhou factory started trial operations in 1998, began deliveries in January 1999 and has already earned the ISO 9001 quality and ISO 14001 environmental certificates.

Nokia is also piloting an environmental management system for office-only sites. 40% of Nokia's sites are office facilities occupied mainly by research and development, sales, marketing and administration.

The choices of each individual will determine the links between the emerging Mobile Information Society and environmentally sustainable development. This is already the subject of public debate. Nokia is actively following the debate and intends to contribute to the development of an environmentally sustainable information society.

**"In our line of work anything that saves time, saves lives."**



The early shift, Barcelona Fire Station, SPAIN

In an emergency saved seconds can mean saved lives. Nokia's TETRA (Terrestrial Trunked Radio) mobile radio systems are designed to shave vital seconds off communications for the emergency services and others for whom speed, security and reliability are important. There are no time consuming call set-up procedures. Just press a key and talk. A Direct Mode



allows communications between terminals even without network radio coverage. At the same time TETRA puts the facilities, functions and services of the modern office into a mobile environment. Users can get hold of information where and when they need it, whether voice, data or image.

# Board of Directors February 1, 2000

## Chairman Jorma Ollila, 49

Chairman and CEO  
and Chairman of the Group Executive Board of Nokia Corporation.  
Member since 1995, Chairman since 1999.  
President and CEO, and Chairman of the Group Executive  
Board of Nokia Corporation 1992–1999, President of  
Nokia Mobile Phones 1990–1992, Senior Vice President,  
Finance of Nokia 1986–1989.

Member of the Board of Directors of Ford Motor Company,  
ICL plc, Otava Books and Magazines Group Ltd and UPM-  
Kymmene Corporation. Deputy Chairman of the Board of  
the Confederation of Finnish Industry and Employers and  
member of The European Round Table of Industrialists.  
Holdings in Nokia: 3 784 shares and stock options for  
1 252 000 shares.

## Vice Chairman Iiro Viinanen, 55

President and CEO of Pohjola Group Insurance Corporation.  
Member and Vice Chairman since 1996.  
Member of the Finnish Parliament 1983–1996, Finland's  
Minister of Finance 1991–1996.

Vice Chairman of the Board of Directors of UPM-Kymmene  
Corporation and member of the Board of Directors of Kone  
Corporation.  
Holdings in Nokia: 518 shares.

## Pirkko Alitalo, 50

Senior Executive Vice President of Pohjola Group Insurance  
Corporation, Investments.  
Member since 1992.

Member of the Board of Directors of Alma Media Corpora-  
tion and Skandia Insurance Company Ltd.  
Holdings in Nokia: 372 shares.

## Dr Edward Andersson, 66

Prof. emer.  
Member since 1973.

Chairman of the Board of Directors of Neomarkka plc,  
member of the Board of Directors of Suomi Mutual Life  
Assurance Company and MeritaNordbanken Plc.  
Holdings in Nokia: 84 000 shares.

## Paul J. Collins, 63

Vice Chairman of Citigroup Inc. and Director of Citicorp and  
Citibank N.A.  
Member since 1998.  
Vice Chairman and member of the Board of Directors of  
Citicorp and Citibank N.A. 1988–1998.

Director of Kimberly-Clark Corporation.  
Holdings in Nokia: 20 372 shares.

## Dr Bengt Holmström, 50

Paul A. Samuelson Professor of Economics at MIT, joint appointment  
at the MIT Sloan School of Management.  
Member since 1999.  
Edwin J. Beinecke Professor of Management Studies at Yale  
University 1985–1994.

Member of the Board of Directors of Kuusakoski Oy.  
Member of the American Academy of Arts and Sciences.  
Holdings in Nokia: 532 shares.

## Jouko K. Leskinen, 56

President and CEO of Sampo Group and member of the Board of  
Directors of Sampo Insurance Company plc.  
Member since 1994.  
Vice Chairman of the Board of Directors of Neste Oy  
1989–1992, member of the Board of Directors of Neste Oy  
1987–1989 and Senior Executive Director of Neste Oy  
1987–1992.

Vice Chairman of the Board of Directors of UPM-Kymmene  
Corporation and member of the Board of Directors of  
Finnlines Plc. Vice Chairman of the Board of Federation of  
Finnish Insurance Companies and member of the Board of  
Employers' Confederation of Service Industries.  
Holdings in Nokia: 372 shares.

## Robert F. W. van Oordt, 63

CEO of Rodamco Continental Europe N.V.  
Member since 1998.  
Chairman of the Supervisory Board of NKF Holding N.V.  
1986–1999, Chairman of the Executive Board of NV  
Koninklijke KNT BT 1993–1996, Chairman of the Execu-  
tive Board of Bührmann-Tetterode N.V. 1990–1993, Execu-  
tive Vice President and COO, and member of the Board of  
Directors of Hunter Douglas Group N.V. 1979–1989.

Member of the Board of Directors of Schering-Plough Inc.  
and N.V. Union Minière S.A. and member of the Supervi-  
sory Board of Draka Holding N.V. and Greenfield Capital  
Partners.  
Holdings in Nokia: 372 shares.

## Vesa Vainio, 57

Vice Chairman of the Board of Directors of MeritaNordbanken Plc,  
President and member of the Board of Directors of Merita Plc and  
Vice Chairman of the Board of Directors of Nordbanken Holding AB  
(publ). Member since 1993.  
Chairman of the Board of Management and CEO of Merita  
Bank Ltd and CEO of Merita Ltd 1992–1997, President of  
Kymmene Corporation 1991–1992.

Vice Chairman of the Board of Directors of Metra Corpora-  
tion and member of the Board of Directors of UPM-  
Kymmene Corporation. Chairman of the Board of The Central  
Chamber of Commerce of Finland.  
Holdings in Nokia: 2 672 shares.

## Secretary Ursula Ranin

General Counsel.

# Corporate Governance

## The Board of Directors

The Board decides on matters which in relation to the Group's activities are of significant nature. Such matters include confirmation of the strategic guidelines, approval of the periodic plans and decisions on major investments and divestments.

The Board appoints the CEO, the President, the Chairman and the members of the Group Executive Board of the company. The Board also determines their remuneration.

The roles of the Board, its Chairman and its subcommittees are defined in the Board's Rules of Procedure.

## Election and term of members of the Board of Directors

According to the Articles of Association the company has a Board of Directors composed of a minimum of seven and a maximum of ten members. In 1999, the Board was composed of nine members.

The members are elected at the Annual General Meeting convening annually in March–April. The term of the Board members is one year at a time.

The Board elects a Chairman and a Vice Chairman from among its members for one term at a time. In 1999, Casimir Ehrnrooth acted as the Chairman until the Annual General Meeting. After his resignation Jorma Ollila was elected to chair the Board. Iiro Viinanen acted as Vice Chairman of the Board throughout the year.

## Committees of the Board of Directors in 1999

The Personnel Committee monitors the personnel policy of the Group and oversees its implementation and development. The Committee also prepares matters concerning personnel issues, including the salaries and principles for the remuneration of top executives, prior to their submission to the Board. As of March 17, 1999, the Personnel Committee was composed of the following members of the Board: Iiro Viinanen (Chairman), Paul J. Collins, Bengt Holmström, Jorma Ollila and Vesa Vainio.

The Audit Committee consists of non-executive directors. Its responsibilities include the consideration of the financial statements and the internal control systems and the internal audit. The Committee meets in the presence of external auditors, the CFO and the Group Controller and, upon invitation, other senior executives. As of March 17, 1999, the Audit Committee was composed of the following members of the Board: Dr Edward Andersson (Chairman), Pirkko Alitalo, Jouko K. Leskinen and Robert F.W. van Oordt.

The Nomination Committee prepares proposals for the General Meeting concerning the composition of the Board and the remunerations and remuneration principles of the members of the Board. It further monitors issues and practises related to Corporate Governance and proposes necessary actions in respect thereof. The Nomination Committee was composed of the following members of the Board: Iiro Viinanen (Chairman), Paul J. Collins and Jouko K. Leskinen.

## Meetings of the Board of Directors

The Board met eight times in 1999. One of the meetings was held in a form of conference call.

## The CEO and the President

The Chairman of the Board Jorma Ollila acts as the Chief Executive Officer of the Group. He was the President and CEO until March 17, 1999 as of which date Pekka Ala-Pietilä has served as the President of the company.

## Remuneration

The Annual General Meeting on March 17, 1999 resolved that the annual retainers to the board members be 109 000 euros for the Chairman, 85 000 euros for the Vice Chairman and 61 000 euros for each of the members. It further resolved that the retainers be partly paid in company's stock to be acquired from the market. In line with this the Chairman received 664 shares, the Vice Chairman 518 shares and the members 372 shares each. The remainders of the annual retainers along with the meeting fees 420 euros per meeting were paid in cash.

In 1999, the remuneration paid to Jorma Ollila for his services as President and CEO was in aggregate 1 106 000 euros including a bonus for 1998 of 214 000 euros. The remuneration paid to Pekka Ala-Pietilä for his services as Deputy to the CEO and as President was in aggregate 607 000 euros including a bonus for 1998 of 111 000 euros.

## Insiders' Trading with Securities

The Board has established a Policy in respect of trading with securities. The Policy is in line with the Guidelines for Insiders issued by the Helsinki Exchanges.

# Management February 1, 2000

## Group Executive Board



### **Chairman Jorma Ollila, 49**

Chairman and CEO of Nokia Corporation.  
Group Executive Board member since 1986, Chairman since 1992.  
Joined Nokia 1985.  
President and CEO, and Chairman of the Group Executive Board of Nokia Corporation 1992–1999, President of Nokia Mobile Phones 1990–1992, Senior Vice President, Finance of Nokia 1986–1989.

Member of the Board of Directors of Ford Motor Company, ICL plc, Otava Books and Magazines Group Ltd and UPM-Kymmene Corporation. Deputy Chairman of the Board of the Confederation of Finnish Industry and Employers and member of The European Round Table of Industrialists.  
Holdings in Nokia: 3 784 shares and stock options for 1 252 000 shares.



### **Pekka Ala-Pietilä, 43**

President of Nokia Corporation,  
President of Nokia Communications Products.  
Member since 1992. Joined Nokia 1984.  
Executive Vice President and Deputy to the CEO of Nokia Corporation and President of Nokia Communications Products 1998–1999, President of Nokia Mobile Phones 1992–1998, Vice President, Product Marketing of Nokia Mobile Phones 1991–1992, Vice President, Strategic Planning of Nokia Mobile Phones 1990–1991.

Member of the Board of Directors of Alma Media Corporation. Member of the Board of Economic Information Bureau and Finnish-Japanese Chamber of Commerce.  
Holdings in Nokia: 2 400 shares and stock options for 556 000 shares.



### **Dr Matti Alahuhta, 47**

President of Nokia Mobile Phones.  
Member since 1993.  
Joined Nokia 1975–1982 and 1984.  
President of Nokia Telecommunications 1993–1998, Executive Vice President of Nokia Telecommunications 1992, Senior Vice President, Public Networks of Nokia Telecommunications 1990–1992.

Chairman of the Board of Federations of Finnish Electrical and Electronics Industry, Vice Chairman of the Board of the Federation of Finnish Metal, Engineering and Electrotechnical Industries and of the Technology Development Centre, Ministry of Trade and Industry, and member of the Board of The Central Chamber of Commerce of Finland and the Advisory Board of the International Institute for Management Development (IMD).  
Holdings in Nokia: Stock options for 476 000 shares.



### **Sari Baldauf, 44**

President of Nokia Networks.  
Member since 1994.  
Joined Nokia 1983.  
Executive Vice President of Nokia APAC 1997–1998, President, Cellular Systems of Nokia Telecommunications 1988–1996, Vice President, Business Development of Nokia Telecommunications 1987–1988.

Member of the Board of Technical Research Centre of Finland and Finland-China Trade Association, and member of the National Committee for the Information Society Issues.  
Holdings in Nokia: Stock options for 476 000 shares.



### **Mikko Heikkonen, 50**

Executive Vice President and General Manager, Customer Operations of Nokia Networks.  
Member since 1998.  
Joined Nokia 1975.  
President, Network Systems of Nokia Telecommunications 1997–1999, President, Network and Access Systems of Nokia Telecommunications 1995–1996, Senior Vice President, Area Management of Nokia Telecommunications 1993–1995, Senior Vice President, Cellular Systems of Nokia Telecommunications 1988–1992.

Holdings in Nokia: Stock options for 358 000 shares.

**Olli-Pekka Kallasvuo, 46**

Executive Vice President, CFO of Nokia Corporation.

Member since 1990.

Joined Nokia 1980.

Executive Vice President of Nokia Americas and President of Nokia Inc. 1997–1998, Executive Vice President, CFO of Nokia 1992–1996, Senior Vice President, Finance of Nokia 1990–1991.

Chairman of the Board of Directors of Nextrom Holding S.A. and Nokian Tyres plc, member of the Board of Directors of F-Secure Corporation and Finnish Broadcasting Company. Member of the Board of Telecommunications Industry Association (USA).

Holdings in Nokia: Stock options for 488 000 shares.

**Dr Yrjö Neuvo, 56**

Executive Vice President, CTO of Nokia Mobile Phones.

Member since 1993.

Joined Nokia 1993.

Senior Vice President, Technology of Nokia 1993–1994, National Research Professor of the Academy of Finland 1984–1992, Professor of Tampere University of Technology 1976–1992, Visiting Professor of University of California, Santa-Barbara 1981–1982.

Vice Chairman of the Board of Directors of Vaisala Corporation. Member of Finnish Academy of Technical Sciences, member of the Finnish Academy of Science and Letters and Academiae Europae, Foreign member of Royal Swedish Academy of Engineering Sciences, and Fellow of the Institute of Electrical and Electronics Engineers. Holdings in Nokia: 4 160 shares and stock options for 489 180 shares.

**Veli Sundbäck, 53**

Executive Vice President, Corporate Relations and Trade Policy of Nokia Corporation.

Member since 1996.

Joined Nokia 1996.

Secretary of State at the Ministry for Foreign Affairs 1993–1995, Under-Secretary of State for External Economic Relations at the Ministry for Foreign Affairs 1990–1993.

Chairman of the Board of Directors of Huhtamäki Van Leer Oyj and member of the Board of Directors of Nextrom Holding S.A. Vice Chairman of the Board of the International Chamber of Commerce, Finnish Section, and Chairman of the Trade Policy Committee of the Confederation of Finnish Industry and Employers.

Holdings in Nokia: 400 shares and stock options for 436 000 shares.

**Anssi Vanjoki, 43**

Executive Vice President, Europe & Africa of Nokia Mobile Phones.

Member since 1998.

Joined Nokia 1991.

Vice President, Sales of Nokia Mobile Phones 1991–1994, Suomen 3M Oy 1980–1990.

Holdings in Nokia: 8 000 shares and stock options for 294 000 shares.



Of Nokia's strategic countries, Matti Alahuhta is responsible for Nokia's operations in Japan, Sari Baldauf in China and Olli-Pekka Kallasvuo in the U.S.

As of December 31, 1999, only some of the stock options mentioned above were exercisable. In addition, the subscription price had not been determined to all of them.

**Auditors****Eric Haglund, 65**

Authorized Public Accountant (KPMG)

**Lars Blomquist, 56**

Authorized Public Accountant (PricewaterhouseCoopers)

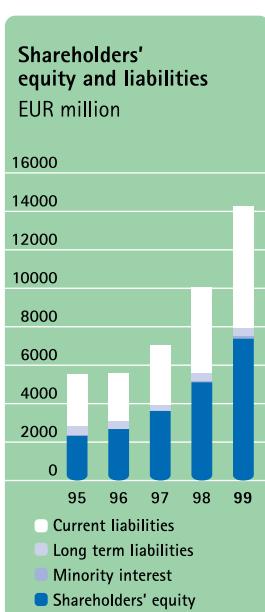
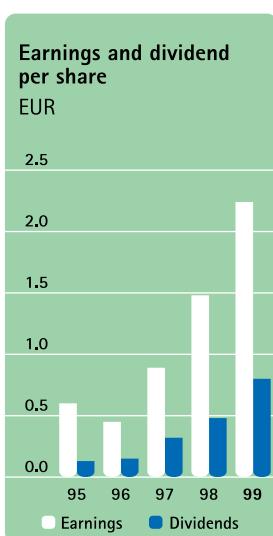
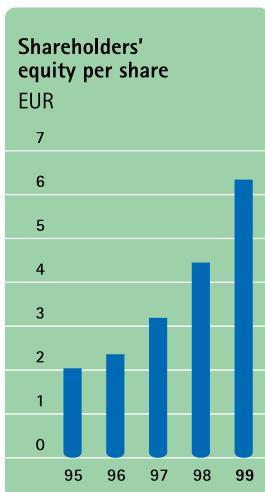
**Deputies****KPMG Wideri Oy Ab**

Authorized Public Accountant (Deputy to Eric Haglund)

**SVH PricewaterhouseCoopers Oy**

Authorized Public Accountant (Deputy to Lars Blomquist)

# Nokia shares



## Shares and voting rights

At the Annual General Meeting held on March 17, 1999 Nokia shareholders resolved to consolidate the two classes of shares, A shares and K shares, into one class of shares. The consolidation of the classes of shares is effective as of April 9, 1999 whereafter Nokia has one class of shares only.<sup>1</sup> Each share entitles to one (1) vote at General Meetings of Nokia, and to a fixed annual dividend amounting to 10 per cent of the nominal value of the share. Should it be impossible in any year to distribute such dividend, the shares are entitled to the remainder in the following year.<sup>2</sup>

At the Annual General Meeting held on March 17, 1999 Nokia shareholders resolved to convert the share capital and the nominal value of the share into euros, to split the nominal value of the share on a two-for-one basis, and to increase the share capital through a bonus issue by rounding up the nominal value of each share to an appropriate two decimal number. With effect from April 9, 1999 the nominal value of the share is EUR 0.24.

Upon resolution by Nokia shareholders at the Annual General Meeting held on March 17, 1999, the minimum share capital stipulated in the Articles of Association is EUR 170 million and the maximum share capital EUR 680 million. The share capital may be increased or reduced within these limits without amending the Articles of Association. On December 31, 1999, the share capital was EUR 279 243 831.84 and the total number of votes 1 163 515 966.

## Authorizations

At the Annual General Meeting held on March 17, 1999 Nokia shareholders authorized the Board of Directors to issue a maximum of 120 million shares to finance business acquisitions or corresponding arrangements. A total of 529 530 shares were issued in 1999 under the authorization. The authorization is valid until March 17, 2000.

At the Extraordinary General Meeting held on December 13, 1999 Nokia shareholders authorized the Board of Directors to repurchase a maximum of 56 million Nokia shares and to resolve on disposal of such shares. No shares were repurchased or disposed in 1999 under the authorizations. These authorizations are valid until December 13, 2000.

## Changes to be proposed to Annual General Meeting 2000

The Board of Directors proposes to the Annual General Meeting on March 22, 2000, that the nominal value of the share be split on a four-for-one basis and amended to EUR 0.06, the number of auditors be reduced to one ordinary auditor the term of which is the fiscal year, and the authorizations held by the Board to issue new shares, repurchase Nokia shares and dispose Nokia shares, be renewed until March 22, 2001, at the latest.

## Attending and voting at General Meeting

The shares of Nokia are registered in the Finnish book-entry system. By December 31, 1999, a total number of 99.9 per cent of Nokia shares had been transferred to this system.<sup>3</sup>

If an international depositary receipt (e.g. ADR) has been issued for a book-entry share or the share is owned by a foreign person or legal entity, the custodian commissioned to administer the book-entry shares may be entered as a nominee in the register of shareholders. The custodian may be e.g. a Finnish book-entry register or a corresponding foreign organization approved by Finnish Central Securities Depository Ltd to act as a custodian.

<sup>1</sup> Before the consolidation, the Articles of Association contained a provision permitting a conversion of K shares to an equivalent number of A shares, within the limits set for the minimum and maximum numbers of shares in each class of shares. By March 17, 1999, a total of 63.5% of all the K shares had been converted into A shares and only 154 120 shares could still have been converted.

<sup>2</sup> The rights presently related to all Nokia shares correspond to the rights of the previous class A shares. The rights of the previous class K shares entitled to ten (10) votes at General Meetings but no fixed annual dividend.

<sup>3</sup> At the Extraordinary General Meeting held on December 13, 1999, Nokia shareholders resolved to sell the shares that have not been transferred into the book-entry system to the benefit of holders of such shares. The resolution concerned 416 672 shares corresponding to 0.01% of all the shares. These shares were not sold by December 31, 1999.

## Share capital and shares, Dec 31<sup>1</sup>

	1999	1998	1997	1996	1995
<b>Share capital, EURm</b>					
K (common)	*)	54	66	84	92
A (preferred)		201	186	168	160
Total	<b>279</b>	255	252	252	252
<b>Shares</b>					
(1 000, nominal value EUR 0.24)					
K (common)	*)	254 061	314 750	398 851	437 508
A (preferred)		957 132	884 659	799 349	760 692
Total	<b>1 163 516</b>	1 211 193	1 199 409	1 198 200	1 198 200
Shares owned by the Group at the year end (1 000)	<b>346</b>	64 322	64 322	65 122	60 722
Number of shares excl. shares owned by the Group at the year end (1 000)	<b>1 163 170</b>	1 146 871	1 135 087	1 133 078	1 137 478
Average number of shares excl. shares owned by the Group during the year (1 000)	<b>1 148 440</b>	1 138 341	1 133 128	1 134 244	1 138 268
Number of registered shareholders <sup>2</sup>	<b>48 771</b>	30 339	28 596	26 160	27 466

\*) As of April 9, 1999, only one class of shares.

## Key Ratios Dec. 31, IAS

	1999	1998	1997	1996	1995
<b>Earnings per share from continuing operations, basic, EUR</b>					
	<b>2.24</b>	1.48	0.89	0.45	0.61
<b>P/E Ratio</b>					
K (common)	*)	35.3	18.4	24.8	12.0
A (preferred)	<b>80.4</b>	35.3	18.3	24.9	11.9
(Nominal) dividend per share, EUR	<b>0.80<sup>3</sup></b>	0.48	0.31	0.15	0.13
Total dividends paid, EURm	<b>931<sup>3</sup></b>	586	378	176	151
Payout ratio	<b>0.36</b>	0.33	0.35	0.33	0.21
<b>Dividend yield, %</b>					
K (common)	*)	0.9	1.9	1.3	1.7
A (preferred)	<b>0.4</b>	0.9	1.9	1.3	1.8
Shareholders' equity per share, EUR	<b>6.34</b>	4.45	3.19	2.36	2.04
Market capitalization, EURm <sup>4</sup>	<b>209 371</b>	59 796	18 503	12 706	8 195

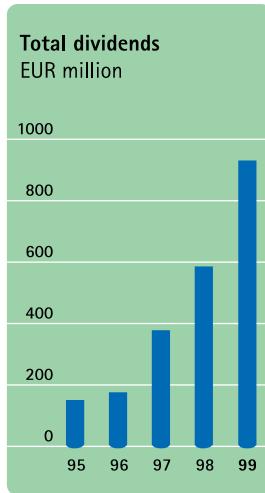
\*) As of April 9, 1999, only one class of shares.

<sup>1</sup> Figures have been recalculated to correspond the nominal value of EUR 0.24 of the shares.

<sup>2</sup> Each nominee register is included in the figure as only one registered shareholder.

<sup>3</sup> Proposed by the Board of Directors.

<sup>4</sup> Shares owned by the Group are excluded.



On December 31, 1999, Nokia shares registered in the name of a nominee accounted for 85.6 per cent of the total number of shares and voting rights.

To attend and vote at a General Meeting, a shareholder must be registered in the register of shareholders. Voting rights at a General Meeting may not be exercised by a shareholder if his shares are registered in the name of a nominee. This is the case also when the holding consists of ADRs. In order to attend and vote at a General Meeting, a beneficial owner of shares registered in the name of a nominee (including a beneficial owner of ADRs) must arrange to have his name entered in the register of shareholders as of the record date of the Meeting until the day of the Meeting.

### Dividend policy

Dividends are paid by Nokia within the limits set by the Finnish Companies Act. The amount of dividend is based upon and calculated in relation to the level of Nokia's annual profit. There is, however, no formula according to which the amount of dividend is determined.

The intention of Nokia is that the dividend paid should, over the long term, reflect the development of the Group's earnings per share.

### Effect of imputation system

The imputation system (avoir fiscal) will apply to the 1999 dividends payable by Nokia. Any Finnish company, when paying dividends to its shareholders, is required to pay tax amounting to a minimum of 7/18 of the dividend. A resident of Finland, receiving dividends from a Finnish company, is entitled to tax credit amounting to 7/18 of the dividend. As the dividend for 1999 is proposed by the Board of Directors to be EUR 0.80 per share, the tax credit thus amounts to EUR 0.31 thereby increasing the shareholder's profit to EUR 1.11 taxable at 29 per cent.

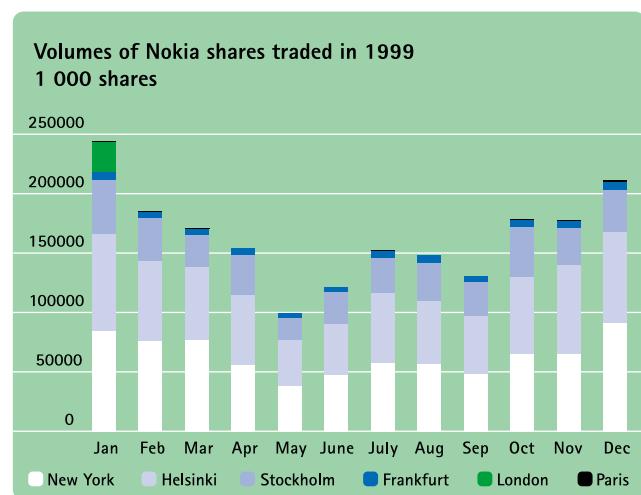
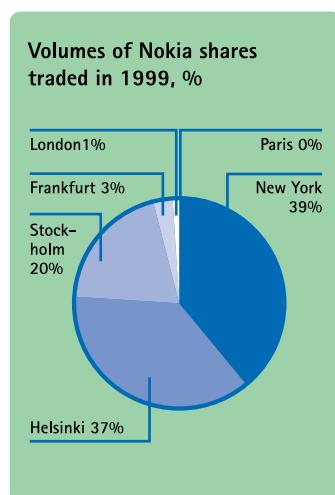
The credit is granted to non-resident shareholders only when an existing tax treaty between Finland and the shareholder's resident country specifically includes a provision of the credit. According to a tax treaty, a resident of the Republic of Ireland is entitled to a partial tax credit.

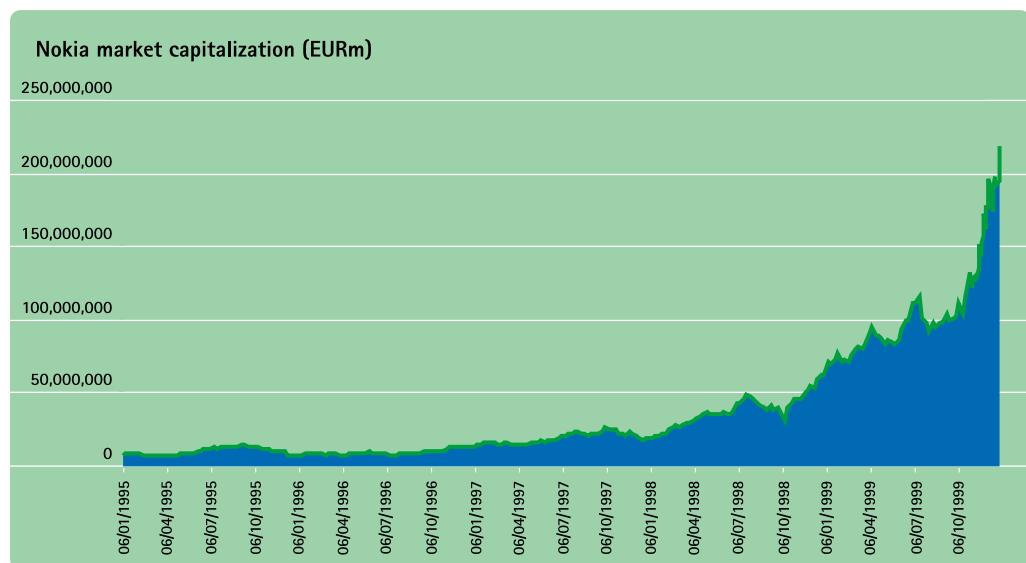
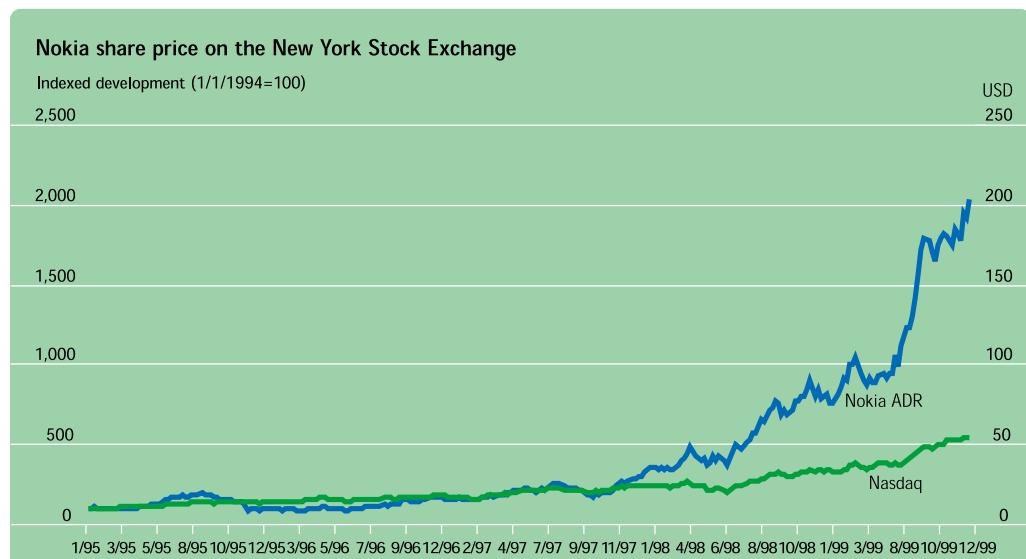
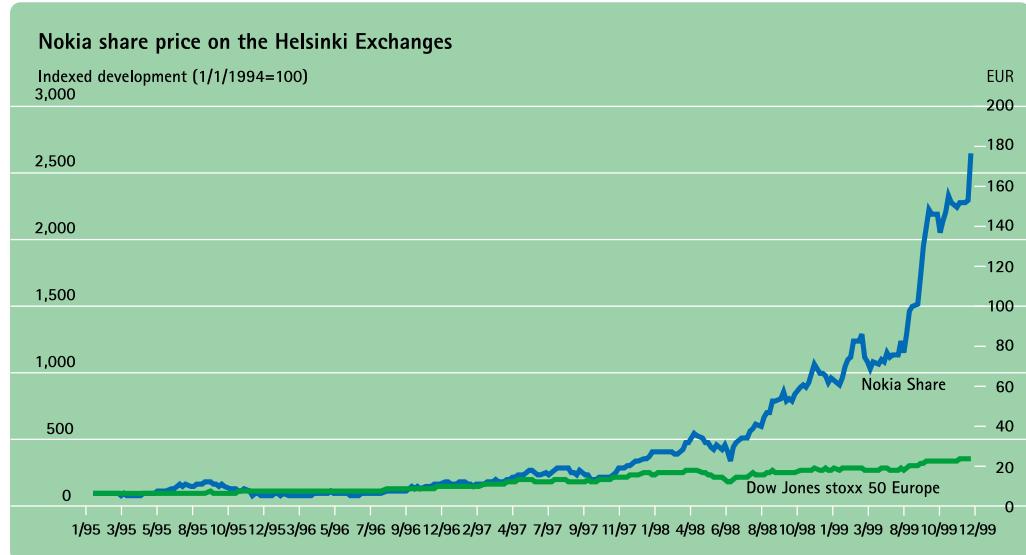
### Listing and turnover on stock exchanges

Nokia shares are listed on the Helsinki Exchanges since 1915. The shares are also listed in Stockholm (since 1983), London (since 1987), Paris (since 1988), Frankfurt am Main (since 1988) and New York (since 1994)<sup>1</sup>. Nokia shares are traded on the New York Stock Exchange (NYSE) in the form of American Depository Shares (ADSs) and evidenced by American Depository Receipts (ADRs). The ADRs are issued by Citibank, N.A., acting as the Depositary Bank, upon deposit of shares or evidence of rights to receive shares with the Depositary. Each ADS represents one share.<sup>2</sup>

1 As a result of the consolidation of the classes of shares resolved by Nokia shareholders at the Annual General Meeting held on March 17, 1999, all Nokia shares are listed on each of these stock exchanges. Before the consolidation, the class K shares were listed on the Helsinki Exchanges only.

2 Before the consolidation of the classes of shares resolved by Nokia shareholders at the Annual General Meeting held on March 17, 1999, only Nokia A shares were traded on NYSE in the form of ADSs, each ADS representing one A share.





## Nokia Dividend Reinvestment and Direct Purchase Plan

A Dividend Reinvestment and Direct Purchase Plan (the Plan) for ADSs of Nokia was implemented in December 1997. The Plan is designed to provide owners of ADSs and other interested investors who participate in the Plan a convenient way to accumulate and increase their investment in ADSs and to reinvest all or a portion of their cash dividends or optional cash investments in additional ADSs. The Plan is not available to persons located outside the United States.

The Plan is sponsored and administrated by the Depositary Bank, Citibank, N.A. Nokia has consented to the establishment of the Plan by the Depositary Bank, but does not, and should not be deemed to, sponsor or administer the Plan. Nokia assumes no obligation or liability for the operation of the Plan.

## Nokia Stock Option Plans

As part of its incentive schemes to the management and key personnel at the end of 1999 Nokia had four global stock option plans.

In 1994 the Annual General Meeting approved an issue of bonds with warrants to certain members of the Nokia management (Nokia Stock Option Plan 1994). Each warrant attached to the bonds is exercisable at FIM 374 for sixteen shares from December 1, 1998 to January 31, 2000. The Nokia Stock Option Plan 1994 was offered to approximately 50 persons.

In 1995 the Annual General Meeting approved an issue of bonds with A and B warrants to certain members of the management of the Nokia Group (Nokia Stock Option Plan 1995). Each warrant attached to the bonds is exercisable at FIM 168 for four shares during certain periods of time between December 1, 1997 and January 31, 2001. Nokia Stock Option Plan 1995 covers approximately 350 persons. The B warrants are listed on the Helsinki Exchanges as of December 1, 1999.

In 1997 the Annual General Meeting approved an issue of bonds with A, B and C warrants to key personnel of the Nokia Group (Nokia Stock Option Plan 1997). Each warrant attached to the bonds is exercisable at FIM 307 for four shares during certain periods of time between December 1, 1997 and January 31, 2003. Nokia Stock Option Plan 1997 covers approximately 2 000 persons. The A and B warrants are listed as one security on the Helsinki Exchanges as of November 1, 1999.

In 1999 the Annual General Meeting approved an issue of A, B and C stock options to key personnel of the Nokia Group (Nokia Stock Option Plan 1999). Each stock option A is exercisable at EUR 67.55 for one share. The subscription prices for stock options B and C will be determined in 2000 and 2001. The exercise periods will be during certain periods of time between April 1, 2001 and December 31, 2004. Nokia Stock Option Plan 1999 presently covers approximately 5 000 persons.

By December 31, 1999 the exercise of 6 680 576 warrants in aggregate under the Stock Option Plans resulted in the issue of 29 067 200 new shares in aggregate and increase of Nokia share capital with EUR 6 976 128 in aggregate.

In addition to the global stock option plans, Nokia introduced in 1999 a complementary stock option plan for employees in the US and Canada (The Nokia Holding Inc. 1999 Stock Option Plan). An exercise of stock options under this plan does not result in increase of Nokia share capital but the participants are entitled to purchase upon exercise of each stock option one Nokia ADS on a predetermined price. The plan presently covers approximately 600 persons.

## Further information

Please see section Nokia shares and shareholders in Nokia's Financial Statement on pages 30–34 for further details.

### Dividends paid on Nokia shares

Year of payment	Amount (FIM)*	Amount (EUR)*
1990	0.175	0.03
1991	0.175	0.03
1992	0.125	0.02
1993	0.125	0.02
1994	0.175	0.03
1995	0.625	0.11
1996	0.750	0.13
1997	0.875	0.15
1998	1.875	0.31
1999	2.875	0.48
2000	-	0.80 **

Split adjusted\*

Proposed by the Board\*\*

## Share issues and bonus issues 1995 – 1999<sup>1</sup>

Type of issue	Subscription date	Subscription price or amount of bonus issue EUR	Number of new shares	Date of payment	Net proceeds EURm	New share capital EURm
Nokia Stock Option						
Plan 1994	1998	3.93	67 008	1998	0.26	0.01
	<b>1999</b>	<b>3.93</b>	<b>3 059 520</b>	<b>1999</b>	<b>12.03</b>	<b>0.73</b>
Nokia Stock Option						
Plan 1995	1997	7.06	581 600	1997	4.11	0.12
	1998	7.06	7 576 000	1998	53.52	1.59
	<b>1999</b>	<b>7.06</b>	<b>4 650 380</b>	<b>1999</b>	<b>32.85</b>	<b>1.12</b>
Nokia Stock Option						
Plan 1997	1997	12.91	627 104	1997	8.09	0.13
	1998	12.91	4 141 496	1998	53.46	0.87
	<b>1999</b>	<b>12.91</b>	<b>8 364 092</b>	<b>1999</b>	<b>107.97</b>	<b>2.01</b>
Bonus issue	<b>1999</b>	<b>0.03</b>	<b>N/A</b>	<b>1999</b>	<b>36.05</b>	<b>36.05</b>
Share issue to stockholders of Rooftop Communications Corporation	<b>1999</b>	<b>80.17</b>	<b>529 530</b>	<b>1999</b>	<b>42.45</b>	<b>0.13</b>

## Reductions of the share capital 1995 – 1999

Type of reduction	Number of shares affected (1 000, nominal value EUR 0.24)	Amount of reduction of the share capital EURm	Amount of reduction of the restricted capital EURm	Amount of reduction of the retained earnings EURm	Date of reduction
Cancellation of shares	64 281	15.43	–	3 435.27	1999

## Splits of the nominal value of Nokia shares

	Nominal value before	Split ratio	Nominal value after	Effective date in public trading
1986	FIM 100 (EUR 16.82)	5:1	FIM 20 (EUR 3.36)	January 2, 1987
1995	FIM 20 (EUR 3.36)	4:1	FIM 5 (EUR 0.84)	April 24, 1995
1998	FIM 5 (EUR 0.84)	2:1	FIM 2.5 (EUR 0.42)	April 16, 1998
<b>1999</b>	<b>FIM 2.5 (EUR 0.42)</b>	<b>2:1</b>	<b>EUR 0.24</b>	<b>April 12, 1999</b>

<sup>1</sup> Prices and numbers of shares have been recalculated to correspond the nominal value of EUR 0.24 of the shares.

"A gyr falcon! The guys have got to see this right now! "



Bird watching, Ivalo, Lapland, FINLAND

The mobile phone has transformed our perception of communications. We now communicate to and from locations we would have thought impossible just a few years ago. And communications have become more personal. We now not only know to where we are calling but to whom. One thing that has not changed so far is the mode of communication. The mobile phone is



still a mainly voice communications oriented instrument. This too is about to change. The Nokia 9110 Communicator, for example, allows you to take a photograph with a digital camera and send it as an e-mail attachment to anyone with an Internet connection. Over the next few years we will see non-voice communications become just as important as voice communications.

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### **More about Nokia on the Internet**

[www.nokia.com](http://www.nokia.com)  
(main site)

[www.nokia.com/investor](http://www.nokia.com/investor)  
(Investor relations main page)

[www.nokia.com/environment](http://www.nokia.com/environment)  
(Nokia and the environment)

[www.nokia.com/safety](http://www.nokia.com/safety)  
(Health and mobile telephony)

[www.nokia.com/press](http://www.nokia.com/press)  
(Press releases and other news  
material)

### **Other sites of interest**

[www.bluetooth.com/](http://www.bluetooth.com/)  
(Information on the  
Bluetooth technology.)

[www.symbian.com/](http://www.symbian.com/)  
(The joint venture of the leading  
mobile communications products  
manufacturers and the  
developments of their EPOC  
technology.)

[www.wapforum.org/](http://www.wapforum.org/)  
(Information on the Wireless  
Application Protocol which is  
an open, global specification  
bringing Internet into mobile  
terminals.)

# Investor information

## Annual general meeting

Date: Wednesday, March 22, 2000, at 3 p.m.

Place: the Helsinki Fair Centre, Congress Hall C 1, Rautatieläisenkatu 3, Helsinki, Finland.

## Dividend

Dividend proposed by the Board of Directors for 1999 is EUR 0.80. The dividend record date is March 27, 2000 and the dividend will be paid after April 4, 2000.

## Stock exchanges

The shares of Nokia Corporation are quoted on the following stock exchanges:

	Symbol	Trading currency
Helsingin Pörssi (quoted since 1915)	NOK1V	EUR
Stockholms Fondbörs (1983)	NOKI	SEK
London Stock Exchange (1987)	NOKA	EUR
Frankfurter Wertpapierbörs (1988)	NOA3	EUR
Bourse de Paris (1988)	NOK	EUR
New York Stock Exchange (1994)	NOK	USD

## List of indices

NOK1V	NOKI	NOK
<b>HEX</b> HEX General Index	<b>OMX</b> Stockholm	<b>NYA</b> NYSE Composite
<b>HEXTELE</b> HEX Telecommunications Index	<b>GENX</b> Swedish General	<b>NNA</b> NYSE Utilities
<b>HEX20</b> HEX 20 Index	<b>GENX04</b> Swedish Engineer	<b>NN</b> NYSE Utilities
<b>BE500</b> Bloomberg Europe	<b>GENX16</b> Swedish SX 16 Index	<b>CTN</b> GSFO Technology
<b>BETECH</b> BBG Europe Technology		<b>MLO</b> Merrill Lynch 10
<b>SX5E</b> DJ Euro STOCXX 50		
<b>SX5P</b> DJ Europe STOXX		
<b>SX</b> Various Other DJ Indices		
<b>E300</b> FTSE Eurotop 300		

## Financial reporting

Nokia's quarterly interim reports in 2000 are due on April 27, July 27 and October 26. The 2000 results will be published in January/February 2001 and the Annual Report for 2000 in March 2001. The reports are published in English, Finnish and Swedish.

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## Information via the internet

Internet World Wide Web users can access Nokia's annual reports and quarterly reports, as well as other financial information and press releases on Nokia through [www.nokia.com/investor](http://www.nokia.com/investor)

## Abbreviations

**3G** Third Generation  
**DFE** Design for Environment  
**DSL** Digital Subscriber Line  
**EDGE** Enhanced Data Rates for Global Evolution  
**GPRS** General Packet Radio Service  
**HSCSD** High Speed Circuit Switched Data  
**GEMS** Global Employment Management System  
**GPS** Global Positioning System  
**IP** Internet Protocol  
**MIS** Mobile Information Society  
**LAN** Local Access Network  
**PSK** Phase Shift Keying  
**TETRA** Terrestrial Trunked Radio  
**TDMA** Time Division Multiple Access  
**VPN** Virtual Private Network  
**WAP** Wireless Application Protocol  
**WCDMA** Wideband Code Division Multiple Access

It should be noted that certain statements herein which are not historical facts, including, without limitation those regarding 1) the timing of product deliveries; 2) Nokia's ability to develop new products and technologies; 3) expectations regarding market growth and developments; 4) Nokia's positioning and ability to take advantage of market and technological development and trends; 5) Nokia's role in developing the Mobile Information Society; 6) expectations for growth and profitability; and 7) statements preceded by "believes", "expects", "anticipates", "foresees", or similar expressions, are forward-looking statements. Because such statements involve risks and uncertainties, actual results may differ materially from the results currently expected by the Company. Factors that could cause such differences include, but are not limited to 1) general economic conditions, such as the rate of economic growth in the Company's principal geographic markets or fluctuations in exchange rates; 2) industry conditions, such as the strength of product demand, the intensity of competition, pricing pressures, the acceptability of new product introductions, the introduction of new products by competitors, changes in technology or the ability of the Company to source components from third parties without interruption and at reasonable prices and the financial condition of the Company's customers; 3) operating factors, such as continued success of manufacturing activities and the achievement of efficiencies therein, continued success of products development or inventory risks due to shifts in market demand; as well as 4) the risk factors specified in the Company's Form 20-F for the years ended December 31, 1998 and 1999.



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