# Nokia Corporate Responsibility Review 2008



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## 1. About the report

This is Nokia's 6th Corporate Responsibility (CR) Report, covering the calendar year 2008. The report highlights Nokia's performance in the areas where business practices most affect society and the environment. It covers the key ethical, socio-economic and environmental areas we believe are most relevant to our business and our stakeholders.

This report is available only online. The official Nokia Corporate Responsibility Report is incorporated in the annual report on Form 20-F. Those pages can be found also in the summary of this report. Details about Nokia's financial performance are published in quarterly results releases, the annual report on Form 20-F, and Nokia's annual accounts. All these can also be viewed on the corporate website.

Further details, background information on our approach and a history of Nokia's CR activities can be found on the corporate pages of Nokia's website. More detailed country information on specific activities relevant to corporate responsibility is included in Nokia's CR map.

Previous CR reports can be found on the company's CR website. We welcome your views on our activities and our performance. Please contact the Nokia CSR team at csr.feedback@nokia.com.

## 2. Summary (CR Review 2008)

## Customers

The following discussion includes description of the corporate responsibility activities of our Devices & Services and Nokia Siemens Networks segments only, unless otherwise indicated. In the following discussion, "Nokia" refers to Nokia excluding NAVTEQ and Nokia Siemens Network.

PricewaterhouseCoopers Oy has provided independent assurance over certain information presented herein. See their assurance report.

Accessibility of Nokia devices

Accessibility is about making Nokia devices and services usable and accessible to the greatest possible number of people, including customers with disabilities. We have been working on accessibility concerns for more than ten years, and by the end of 2008 we continued to offer more than 60 device features or applications aimed at providing greater accessibility for people with limitations in hearing, speech, vision, mobility and cognition. We work together with representatives from disability organizations, regulators and academia to discuss accessibility priorities and development. During 2008, we offered new functionality for accessibility, including:

- A wireless bluetooth loopset LPS5, for connecting a mobile phone or other audio device with t-coil equipped hearing aids;
- Improved video call functionality to support online calls using sign language; and
- Support for Hands Free Adapter with a mobility switch that allows users to activate all the voice activate features of a Nokia device.

Nokia Forum third-party developers have also introduced voice feedback, optical scanning and supportive services to the mobile devices that complement the Nokia offering addressing sensorial and physical challenges in mobile communications.

## Employees

The following discussion includes description of the corporate responsibility activities of our Devices & Services and Nokia Siemens Networks segments only, unless otherwise indicated. In the following discussion, "Nokia" refers to Nokia excluding NAVTEQ and Nokia Siemens Network.

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#### Values

We have a set of values developed by our employees around the world that reflects and supports our business and changing environment. The values act as a foundation for our evolving business culture and form the basis of how we operate: achieving together, to reflect how we reach out to others, encouraging them to work together with us and share risks, responsibilities and successes; very human, to reflect how we do business and work with each other; engaging you, to reflect how we engage our customers, our suppliers, and our own employees in what Nokia stands for; and passion for innovation, to reflect our curiosity about the world around us and our desire to improve people's lives through innovation in technology.

We also encourage open discussion and debate within the business. An annual global employee survey is conducted as a way of getting feedback from our employees on a range of important issues, and we act on this feedback when designing our people policies and practices. It is also possible for employees to ask questions about our business, even anonymously, through the company Intranet— our internal Internet pages—and receive a prompt and openly published response.

Nokia Siemens Networks also has a set of values that reflects and supports its business and the changing environment. The values form the basis of how Nokia Siemens Networks operates: focus on our customer, to reflect the importance of helping customers succeed in their business; communicate openly, to reflect the importance of speedy, factbased and transparent communications; inspire, to reflect the importance of building excitement within the business, especially about the needs of customers; innovate, to reflect the focus on innovation to succeed; and win together, to reflect how trust, respect, honesty and openness form the workplace.

#### **Code of Conduct**

Efforts at expanding the knowledge among employees of Nokia's Code of Conduct continued in 2008. By the end of the year, approximately 86% of Nokia employees had completed the Nokia Code of Conduct training provided by the company. Upon the completion of our acquisition of NAVTEQ, we have also communicated our Code of Conduct to all NAVTEQ employees to make them aware of our values, ethics and responsibilities both as a business and as individual employees. Information on the Nokia Code of Conduct is available in 34 languages, and a web training tool and online test for employees are used to ensure they understand the issues covered in the Nokia Code of Conduct. Since the beginning of 2009, Nokia has had an Ethics Office, whose role is to support all employees in matters relating to the Code of Conduct.

On January 1, 2009, Nokia Siemens Networks published a revised Code of Conduct which is identical with that of Nokia. See Item 4B. "Business Overview—Nokia Siemens Networks—Compliance Program" of Nokia's Form 20-F.

#### Labor conditions at manufacturing facilities

At December 31, 2008, we had 25 576 employees working directly in production, including manufacturing, packaging and shipping, at our ten mobile device manufacturing facilities. During 2008, the injury and illness rate amongst all our employees at our production facilities was 0.6. In 2008, all nine of our main device manufacturing facilities were assessed against our assessment framework which is based on International Labour Organization conventions and the human rights declarations of the United Nations. The assessments were conducted by a professional external assessment company, STRCSCC.

Results showed these factories have successfully implemented the framework into employment processes, although some areas for improvement related to overtime control and occupational safety, mainly related to fire safety, were detected. All findings have an action plan in place and those facilities with an action plan will receive a reassessment during first half 2009 to ensure full compliance with the framework.

To support the implementation of the framework all manufacturing facility employees undertake training on the principles of the framework as part of their induction.

At December 31, 2008, Nokia Siemens Networks had 2 012 employees working directly in production—including manufacturing, packaging and shipping—at its production facilities. During 2008, Nokia Siemens Networks started to develop a framework for managing labor conditions. The first step was to define a standard, which is based on International Labour Organization conventions and standardized Industry Code of Conduct, benchmarked against international labor laws and standards. This standard will be integrated into Nokia Siemens Networks global employment policies and guidelines, providing information and guidance. Using the standard as performance indicators, Nokia Siemens Networks is also building an effective management system to monitor and assess labor conditions, starting first with manufacturing operations.

#### Training

We provide a variety of mandatory and voluntary inhouse and external training opportunities for our employees to help them develop a broad range of skills for the workplace as well as the competencies specific to their role. For example, in 2008, Nokia's training expenses for employees working elsewhere than in production amounted to EUR 55 million, equating to expenditure of EUR 1 721 for each such employee.

#### Promoting diversity in the workplace

Nokia and Nokia Siemens Networks are committed to both promoting diversity and inclusion in the workplace and providing rewarding career development opportunities for all employees. In 2008, on average, 13.7% of senior management positions within Nokia were held by women, while 47.4% of senior management positions were held by people of non-Finnish nationality. At December 31, 2008, 22.7% of senior management positions within Nokia Siemens Networks were held by women. Senior management positions are defined differently in Nokia and Nokia Siemens Networks, and accordingly their related data is not directly comparable.

#### **Voluntary attrition**

During 2008, the rate of voluntary attrition was 9.3% at Nokia and 6.2% at Nokia Siemens Networks.

## **Suppliers**

The following discussion includes description of the corporate responsibility activities of our Devices & Services and Nokia Siemens Networks segments only, unless otherwise indicated. In the following discussion, "Nokia" refers to Nokia excluding NAVTEQ and Nokia Siemens Network.

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#### Nokia

During 2008, we continued to promote environmental and social responsibility in the supply chain. From the environmental perspective, we increased the visibility of suppliers' environmental performance and target setting, focusing on four key areas: energy consumption, carbon dioxide (CO2) emissions, water consumption and waste generation. Of our suppliers that together account for 69% of our overall hardware expenditure, 82% have reduction targets for energy, CO2, water and waste in place and monitored. This monitoring is continuing in 2009 as part of our ongoing cooperation with suppliers.

We also monitored our suppliers' site certification to Environmental Management System ISO14001. At December 31, 2008, 91% of our direct suppliers' sites serving Nokia were ISO14001 certified. These certified suppliers account for at least 98% of our hardware purchasing expenditure.

Regarding EU REACH, or the European Union Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals, we have been actively surveying and cooperating with all our direct suppliers to generate awareness and ensure that necessary actions are in place.

From a social and environmental perspective we have continued to promote compliance against our requirements. We conducted 62 Nokia Supplier Requirements assessments and eight in-depth labor, health and safety and environmental assessments in 2008. Five of the indepth assessments were conducted by internal Nokia assessors and three by external third-party assessors, as part of the Global eSustainability Initiative (GeSI) and Electronic Industry Citizenship Coalition (EICC) industry joint audit pilot.

Nokia conducts an annual Supplier Satisfaction Survey. In 2008, the overall satisfaction survey result was 78%, on a scale where 0% represents an unacceptable level and 100% represents an excellent level. Overall satisfaction reflects how Nokia performs on areas such as planning, relationship management and whether other business expectations force suppliers to compromise on their environmental and ethical level of compliance. The overall satisfaction level of suppliers to Nokia's Corporate Responsibility was 90%.

In addition to our own work we have continued to participate at an industry level through the GeSI and World Resources Institute's Greenhouse Gas (GHG) Protocol, and we actively participate in workgroups focusing on learning and capability building, extractives and joint industry audits.

#### **Nokia Siemens Networks**

All Nokia Siemens Networks suppliers must meet Nokia Siemens Networks' global supplier requirements, which set standards for the management of ethical, environmental and social issues. This commitment is part of the contractual agreements with the suppliers.

To monitor our suppliers, Nokia Siemens Networks conducts regular audits to identify risks, monitor compliance and raise awareness of its requirements, and shares best practice on CR management. In 2008, Nokia Siemens Networks carried out 103 system audits to assess compliance with its supplier requirements. Nokia Siemens Networks also conducted in-depth labor conditions audits of seven suppliers in China, India and the UK.

The annual Nokia Siemens Networks supplier satisfaction survey was conducted with 290 key suppliers. This survey showed 'business ethics and environment' as the area on which Nokia Siemens Networks scored best, obtaining an overall score of 8.3 (scale 110). Based on the feedback of this survey, Nokia Siemens Networks considers that the basic requirements are understood well by the majority of its suppliers, and that suppliers find the requirements to be strict.

In early 2008, Nokia Siemens Networks also conducted a survey on the compliance to its requirement on Environmental Management System (EMS) among its direct suppliers. The survey showed that 91% of suppliers' sites had a documented EMS in place, and the majority of these were also certified. Nokia Siemens Networks also continues to work in collaboration with others in our industry to improve standards in the ICT supply chain through groups such as the GeSI.

## Society

The following discussion includes description of the corporate responsibility activities of our Devices & Services and Nokia Siemens Networks segments only, unless otherwise indicated. In the following discussion, "Nokia" refers to Nokia excluding NAVTEQ and Nokia Siemens Network.

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#### Nokia

In 2008, Nokia continued to develop mobile data-gathering technology, aimed at helping organizations to collect field data without the use of paper forms. Intended primarily to assist nonprofit organizations and government departments, this approach increases the speed of response time, increases efficiency and can reduce costs. In September 2008, the Nokia Data Gathering solution was launched in conjunction with its adoption by the Amazonas State Health Department in Brazil. In that case, the software is being used to monitor outbreaks of disease and the effectiveness of prevention programs in the city of Manaus.

During 2008, we continued to support a variety of youth development initiatives around the world, with activities underway in 57 countries. These projects are tailored to the needs of local communities and address issues such as education, employability and health, and encourage young people to contribute to their local communities. Nokia employees continued to give their time to community projects through the Nokia Helping Hands employee volunteering program. In 2008, more than 5 400 employees in 25 countries volunteered more than 34 000 hours of service.

In March 2008, the success of the Bridgeit youth education project in the Philippines was reflected in its renewal and expansion. Originally launched in 2003, Bridgeit uses mobile networks to bring interactive multimedia learning materials to schools that lack fixed internet connections or ready access to the latest educational materials. Through this partnership with International Youth Foundation, Pearson and the United Nations Development Programme, Nokia estimates that approximately one million elementary school children have benefited from the program to date.

During the year, Nokia continued to provide assistance to people affected by natural disasters. This assistance included the donation of funds and mobile phones to assist relief efforts following an earthquake in the Sichuan province of China and the donation of funds to assist relief efforts in the wake of Cyclone Nargis in Myanmar. Our support for cyclone victims in Myanmar has included a substantial sum raised through a UNICEF greetings card campaign. We have also committed to support the long-term reconstruction of the affected areas in both Myanmar and Sichuan province.

Additionally, in 2008 we donated funds to assist relief efforts following floods in Ghana and drought in Ethiopia; we donated funds and mobile phones to assist relief efforts following floods in Itajai Valley in Brazil; and we donated funds to support earthquake recovery programs in Chile and Pakistan.

#### Nokia Siemens Networks

During 2008, Nokia Siemens Networks provided assistance to people affected by natural disasters, actively participating in the relief efforts and restoration of communications systems in the wake of the earthquake in the prov-

ince of Sichuan in China, and donating funds to international relief organizations.

In 2008, Nokia Siemens Networks launched several educational initiatives for underprivileged children in Ethiopia, Afghanistan, South Africa, China and India as well as initiatives to promote telecommunications skills and the role of women in technology in Indonesia and India. In Germany, Nokia Siemens Networks worked with a special needs center to build a communications network to help promote communication amongst its residents.

Nokia Siemens Network continues developing solutions supporting sustainable development in emerging markets. For example, during 2008 the Nokia Siemens Networks Village Connection was rolled out in India, with trials in Africa, the Asia-Pacific region and Latin America. By the end of the year, some 50 villages were covered by this innovative, cost-efficient solution that enables operators to extend their reach to remote villages and bypass the technology that typically would be required.

In 2008, Nokia Siemens Networks also launched Internet Kiosk, an extension to the Village Connection program that lowers Internet costs by sharing access. In 2008, Nokia Siemens Networks continued its collaboration with London Business School and University of Calgary. The 'Connectivity Scorecard' assesses performance against approximately 30 indicators of connectivity—including broadband, fixedline, mobile and computing technologies—that contribute to a country's social and economic prosperity. The study carried out across 25 countries analyzes not only a nation's ICT infrastructure but how well it is being used, and ranks each country's performance on a Connectivity Scorecard.

## Environment

The following discussion includes description of the corporate responsibility activities of our Devices & Services and Nokia Siemens Networks segments only, unless otherwise indicated. In the following discussion, "Nokia" refers to Nokia excluding NAVTEQ and Nokia Siemens Network.

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#### Nokia

In 2008, we continued to look for possibilities to reduce the environmental impact of our devices and operations at each stage of the product life cycle. Focus areas include materials used, energy efficiency, the manufacturing process and recycling. We also introduced several new mobile services advocating sustainable lifestyles.

#### **Recycling Nokia devices**

Between 65% and 80% of a Nokia mobile device can be recycled. We participate in collective recycling schemes with other equipment manufacturers in Europe and Australia; have our own collection points for recycling used mobile devices and accessories in approximately 85 countries; and engage in local recycling awareness drives with retailers, operators, other manufacturers and authorities around the world. These drives aim at increasing consumer awareness of recycling and their responsibility for bringing back their used devices for responsible recycling. Additionally, we work with qualified recyclers around the world to ensure proper end-of-life treatment for obsolete devices.

During 2008, Nokia executed voluntary local recycling drivers to raise awareness in 30 countries. One of our most successful voluntary cooperative recycling initiatives is the Green Box campaign in China, which was initiated with China Mobile and Motorola in 2006. During 2008, collection volumes from the Green Box campaign exceeded 42 tons of waste, which equals to approximately 470 000 devices.

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In 2008, Nokia continued to participate in financing the collection and treatment of electronic waste in different

EU countries in accordance with requirements as set by National Implementation of the European Union WEEE directive, or directive on Waste Electrical and Electronic Equipment. There are now national collection networks in operation to collect and treat all electronic waste from households. During 2008, the EU Directive 2006/66/EC on Batteries initiated national setup of similar collection networks for portable batteries. In addition, Nokia has during 2008 increased communication on recycling on local country level with the introduction of localized recycling information on Nokia Internet pages.

#### **Energy saving in Nokia devices**

Over the last decade, we have reduced the average no-load energy consumption of our chargers by over 80%, and our best-in-class chargers by over 95%. We are making good progress in reaching the target of reducing no-load power used by our chargers by 50% from the 2006 level by the end of 2010.

Nokia was the first mobile manufacturer to put alerts into devices encouraging people to unplug their chargers, and we are rolling these alerts out across our device range. Based on a voluntary agreement, namely EU IPP, or the EU pilot project on Integrated Product Policy, Nokia together with other manufacturers created and took into use a Mobile Device Charger Energy rating. The 0-5 star rating is based on the charger's no-load power consumption and is shown as a specific label that raises awareness and encourages the use of more energy-efficient chargers. All new Nokia chargers are specified to meet the criteria of voluntary agreements such as the EU Code of Conduct and US Environmental Protection Agency's Energy Star and the highest four and five star criteria of EU IPP.

#### Materials in Nokia devices and packaging

All Nokia mobile devices worldwide are fully compliant with EU RoHS, or the EU directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment. We have also phased out PVC from all Nokia's mobile devices and enhancements. We are currently phasing out the use of brominated and chlorinated flame retardants and Antimony Trioxide. The first device leading this phaseout, the Nokia 7100 Supernova, was launched in November 2008.

In early 2008, we started shipping Nokia 3110 Evolve, the first mobile device whose biocovers use 50% renewable materials, thus reducing the amount of fossil fuels used to manufacture it. Nokia's high efficiency charger AC-8 was launched with the Nokia 3110 Evolve, and is now shipping in volumes with many of our devices. The packaging for the Nokia 3110 Evolve contained 60% recycled materials, doubling the amount of recycled content typically used. Furthermore, due to the smaller size of the overall sales package, substantially less cardboard is used.

We continue to improve our packaging solutions. The use of renewable, paper-based materials has been increased to over 95% of total packaging materials. From August 2008, the sales packages of all new devices have been smaller than their earlier equivalents. From February 2006 to the end of 2008 we reduced the weight of packaging materials and user guides of our most affordable devices by over 60%, which amounts to some 100 000 tons of saved paper. Smaller and lighter packaging has also reduced the need for transportation. The improvements in our packaging solutions have also translated into significant monetary savings.

#### Promoting sustainability through Nokia services and software

Eco services have been developed to help people to make sustainable choices and to consider environment in everyday life. A variety of eco services are freely downloadable in Nokia devices.

In December 2008, we introduced the betaversion of Green Explorer, a free service designed to promote sustainable travel. The service is a combination of travel guide information and tips about sustainable travel shared by the users themselves.

We also launched Eco Catalogue, later known as Eco zone as part of the Nokia Download! offering. This service can already be used with 200 million Nokia devices. The Nokia Eco zone is a mobile destination that enables owners of

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Nokia devices to view and download a range of eco content varying from wallpapers and applications to links. During 2008, we also introduced we:offset, the world's first CO2 emission offsetting tool for mobile devices.

#### Nokia facilities: energy, emissions and environmental certifications

Nokia facilities consumed in 2008 69 GWh of direct and 592 GWh of indirect energy. This energy consumption caused 14 700 tons of direct and 218 000 tons of indirect greenhouse gas (CO2e) emissions. Direct energy means usage of gas and oil and indirect energy usage of electricity, district heating and district cooling in Nokia facilities. In addition to CO2e emissions caused by energy usage, direct greenhouse gas emissions include greenhouse gas warming potential caused by HFCrefrigerants. In 2008 we purchased 25 % of our electricity from renewables by buying renewable electricity certificates in Finland (RES-E Guarantee of Origin) and Americas (Green-e wind). Without Nokia's purchase of certified green energy, the above mentioned indirect emissions would have been greater by 46 700 tons.

Nokia's target for energy savings in its facilities from 2007 through 2012 is minimum 354000 MWh, which is 6% compared to consumption in 2006 (on the average 5900 MWh new savings every year). In 2008 we achieved around 7 800 MWh new savings in our facilities, by which level we are well under way of achieving the year 2012 target.

Nokia has the corporate level ISO 14001 certificate in place for all manufacturing sites. Nokia Devices & Services supply chain related environmental issues are discussed in the Suppliers section.

#### **Nokia Siemens Networks**

Nokia Siemens Networks environmental strategy is to achieve a net positive impact on environment. It intends to achieve this through:

- Minimizing its environmental footprint.
- Combining environmental and business benefits for a sustainable solution.
- Maximizing the positive impact of telecommunications on other industries.

Nokia Siemens Networks has set concrete and ambitious targets for improving the environmental performance of its products and its facilities. In June 2008, Nokia Siemens Networks joined the WWF Climate Savers program and committed to improve the energy efficiency of its base station products so that as a result their total annual CO2 footprint is targeted to be decreased by 28% by 2012, compared to 2007 best product performance, and to reduce energy consumption of its buildings by 6% by 2012. The emissions avoided by these actions would amount to approximately 2 million tons of CO2 annually.

Nokia Siemens Networks supports the move by the World Health Organization to harmonize global regulations on electromagnetic fields based on the widely recognized guidelines issued by the International Commission on NonIonizing Radiation Protection (ICNIRP). Nokia Siemens Networks engages with its customers, including mobile network operators, to make them aware of electromagnetic field issues and provides detailed instructions to ensure they operate equipment appropriately to keep local exposure within safe limits. This includes offering support and training where necessary for customers who need support in this area, particularly in emerging markets. Furthermore, an important part of Nokia Siemens Networks' responsibility in this area is to engage openly in the global public debate and monitor the latest scientific studies on radio waves and health. Nokia Siemens Networks' electromagnetic field specialists are members of scientific organizations including the Bioelectromagnetics Society and the European Bioelectromagnetics Association, and participate in relevant scientific events. Nokia Siemens Networks announced in 2008 that renewable energy will be the first choice for installed remote base station sites by 2011. In 2008, Nokia Siemens Networks participated in SMART 2020, the world's first comprehensive global study of the ICT sector's growing potential to reduce the CO2 emissions of many other industries.

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All of Nokia Siemens Networks production sites are included in the scope of the ISO 14001 certification.

#### To the Management of Nokia Corporation

We have been engaged by the Management of Nokia Corporation to perform a limited assurance engagement on selected information (hereinafter the "Selected CR information") in Nokia Corporation's Corporate Responsibility Information of 2008 for the year ending December 31, 2008, which consists of CR overview and Environmental Report 2008 as disclosed on the Nokia Corporation's website.

The Selected CR information consists of the following performance indicators in the areas of Environment, HR and Supply Chain. Unless otherwise stated below, the scope of the Selected CR information covers Nokia Group, excluding NAVTEQ Group (hereinafter: Nokia Group).

- Environmental performance indicators for 2008
- Facility related direct and indirect energy consumption and related greenhouse gas emissions.
- Energy savings in 2008 and 2008 year-end current status against the cumulative minimum savings target by 2012 (Nokia Group excluding Nokia Siemens Networks Group and NAVTEQ Group). Energy consumption in base year 2006 and energy savings in 2007 have been assured by Ecofys Germany GmbH, and we have relied on their assurance work, and hence no assurance procedures have been performed by Pricewater houseCoopers Oy on these amounts.
- Green electrical energy portion of total electricity consumption (Nokia Group excluding Nokia Siemens Networks Group and NAVTEQ Group).
- ROHS compliance of products.
- New chargers' compliance with EU CoC/Energy Star.
- No-load energy consumption of chargers including also progress in reaching the target of reducing the average charger's no load energy consumption by 50 % from the 2006 level by the end of 2010. The charers' average energy consumption in base year 2006 and consumption reductions in 2007 have been assured by Ecofys Germany GmbH, and we have relied on their assurance work, and hence no assurance procedures have been performed by PricewaterhouseCoopers Oy on these amounts.
- Status of ISO 14001 certifications for Nokia sites.
- HR performance indicators for 2008
- Employees in production.
- Total training cost.
- Training cost / employee.
- Injury/illness rate in production.
- Women in senior management.
- Non-Finnish nationalities in senior management.
- Voluntary attrition.
- Supply Chain performance indicators for 2008
- Percentage of suppliers having Environmental Management System (EMS) in place for sites serving Nokia.
- Percentage of suppliers having reduction targets for energy, CO2, water, and waste in place and monitored.
- Suppliers' compliance with Nokia Supplier Requirements.
- Supplier Satisfaction Survey procedures and results.

#### Management's Responsibility

The Management of Nokia Corporation is responsible for preparing the Selected CR information in accordance with the Reporting criteria as set out in Nokia Corporation's reporting guidelines and for facility related direct and indirect energy consumption and related greenhouse gas emissions in Global Reporting Initiative's G3 Guidelines.

#### Practitioner's Responsibility

Our responsibility is to express a conclusion on the Selected CR information based on our work performed. Our assurance report has been made in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Nokia Corporation for our work, for this report, or for the conclusions that we have reached.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 'Assurance Engagements Other than Audits or Reviews of Historical Financial Information'. This Standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance whether any matters come to our attention that causes us to believe that the Selected CR information has not been prepared, in all material respects, in accordance with the Reporting criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgment, including an assessment of the risks of material misstatement of the Selected CR information. Our work consisted of, amongst others, the following procedures:

Making inquiries of relevant management of Nokia Corporation and Nokia Siemens Networks Group. Assessing how Nokia Group employees apply Nokia Corporation's reporting guidelines and procedures. Visiting Nokia Corporation's and Nokia Siemens Networks Group's Head Offices as well as a sample of six manufacturing sites in Finland, China, Germany and India.

Interviewing employees responsible for collection and reporting of the Selected CR information at Nokia Group and at Nokia Siemens Networks Group level and at the different manufacturing sites where our visits took place. Inspection of relevant documents and systems for gathering, analyzing and aggregating the Selected CR information as well as tests on a sample basis.

Assessing the data consolidation process of the Selected CR information at Nokia Group level and at Nokia Siemens Networks Group level.

#### Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the Selected CR information has not been prepared, in all material respects, in accordance with the Reporting criteria. Our assurance report should be read in conjunction with the inherent limitations of accuracy and completeness for corporate responsibility information. This independent assurance report should not be used on its own as a basis for interpreting Nokia Corporation's performance in relation to its principles of corporate responsibility.

Espoo, June 23, 2009

#### PricewaterhouseCoopers Oy

Merja Lindh Authorised Public Accountant Sirpa Juutinen Director, Sustainable Business Solutions

## 3. CR overview

## Our vision

Our vision is a world where everyone is connected. With mobile subscriptions about to reach four billion, we are closer to our vision than anyone could have imagined just a few years ago. Our business benefits people, communities and the environment in new and exciting ways.

As our business expands, so do our responsibilities. This sense of corporate responsibility (CR) is a fundamental part of who we are. Considering the wider impact of our actions is embedded in the Nokia Values, which guide our behavior, and in the Nokia Code of Conduct, which gives guidance to our everyday work.

Global challenges such as climate change and poverty concern us all. As a business that affects the lives of billions around the world, Nokia is in a key position to offer solutions to these challenges. We bring the benefits of mobile technology to more people in ways that reflect our values and our responsibilities.

#### **Our impacts**

Nokia is the world's number one manufacturer of mobile devices by market share and a leader in the converging Internet and communications industries.

We make a wide range of devices for all major consumer segments and offer Internet services that enable people to experience music, maps, media, messaging and games. We also provide comprehensive digital map information through NAVTEQ and equipment, solutions and services for communications networks through Nokia Siemens Networks.

In 2008, Nokia's net sales were EUR 50.7 billion and operating profit was EUR 5.0 billion. At the end of 2008, we employed more than 128,445 people; had production facilities for mobile devices and network infrastructure around the world; sales in more than 150 countries; and a global network of sales, customer service and other operational units.

#### **Corporate responsibility**

Corporate responsibility is a fundamental element in Nokia's business, brand and culture. Nokia aims to set the standards for the industry through initiatives that not only make a positive impact, but also make good business sense. The Nokia Code of Conduct commits us to uphold high ethical principles in everything we do. We respect the principles set in Universal Declaration of Human Rights and by the International Labor Organization and the United Nations Global Compact.

Communications is a relatively "clean' industry. It is not a high energy user, does not generate substantial pollution, and does not endanger people or communities. But a responsible business needs to address its impacts and aim to make a positive contribution wherever possible.

Environmental issues are our main priority. Climate change is a serious threat which requires everyone to contribute to building a low carbon economy. We believe that strong, early action is necessary and that we have an opportunity to make a contribution to tackling climate change beyond the impact of our operations and our products.

Our environmental strategy sees Nokia among the world's leading companies for all aspects of environmental performance. We have three priorities: energy efficiency, managing substances in our products, and take-back and

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recycling. We are also focusing on developing mobile services to promote more sustainable lifestyles. Reflecting this prioritisiation, our environmental data can be found in its own section here.

We have also set high ethical standards for our supply chain and our own factories. We seek to provide consumers with accessible high quality products that meet their needs and to trade with our customers responsibly. Above all, we aim to make a positive contribution to society at the local and global level.

Please refer to our key Issues for information on how we identify our most important impacts.

#### **Our values**

The Nokia Way and Values

A flat, networked organization and speed and flexibility in decision-making characterize the Nokia Way of working. Equal opportunities and openness towards people and new ideas are also key elements we want to nourish.

Nokia is straightforward when dealing with customers and suppliers, and we always looks for innovative ways of creating and introducing products and solutions to the market. We provide individuals with a platform for personal growth in a challenging environment with a clear vision, goals and shared management principles - the Nokia Way. The Nokia Way brings together talented individuals who share these principles, and therefore share success.

The values of our company make us different. They provide a sense of direction for consistent behaviour as employees and citizens of the world, and in our quest to become more of an internet company. Through extensive employee engagement, we have renewed our values to reflect our business and changing environment. They act as a foundation for our evolving culture and are the basis of our operational mode. Living up to our values every day is our shared philosophy.

#### **Engaging you**

For us, 'engaging you' incorporates the 'customer satisfaction' value and deals with engaging all our stakeholders, including employees, in what Nokia stands for in the world.

#### **Achieving together**

'Achieving together' is more than collaboration and partnership. As well as trust, it involves sharing, having the right mind-set and working in formal and informal networks.

#### **Passion for innovation**

'Passion for innovation' is based on a desire we have to live our dreams, to find courage and make the leap into the future through innovation in technology, ways of working and through understanding the world around us.

#### **Very human**

Being 'very human' encompasses what we offer customers, how we do business and the impact of our actions and behavior on people and the environment. It is about being very human in the world - making things simple, respecting and caring. In short, our desire is to be a very human company.

For more information on the Nokia Way and Nokia Values, go to Nokia as an employer within careers.

### Our commitment

As approximately one in three phones in use is a Nokia phone, it's safe to say our products influence the lives of hundreds of millions of people. Maximizing the benefits of mobile communication and minimizing potentially negative effects requires commitment from governments, civil society, and the business sector. However, we recognize that as a market leader with global operations, our potential impact, and therefore our responsibility, is great.

From a social growth and economic development perspective, we acknowledge our impact and responsibilities throughout our value chain: in our sourcing, product design, manufacturing, employee well-being, business partnerships, recycling, community involvement, and communications. Through our product lifecycle we respond to various environmental needs. Through employee relations, supply-chain management, and consumer offerings we aim to have a positive social influence.

Our overall response to our stakeholders is to produce high-quality, safe products while upholding the law, protecting the environment, and following sound best practices. It is an expectation we strive to meet.

#### **CR** governance

We believe that corporate responsibility extends to all areas of our operations, with all Nokia employees playing a part.

Corporate responsibility has played a role within Nokia since our foundation. Fredrik Idestam, the founder of Nokia, provided employee health care, education and accommodation from the mid-1800s. During World War II, the Finnish Rubber Works, which later became a major part of Nokia, provided financial aid for veterans and shelter for children affected by the war. As time has progressed we have continued to engage in traditional philanthropic efforts, but we also see the value of incorporating our business knowledge and skills into development programming that's progressive, cost effective, and most importantly, self-sustainable.

Corporate responsibility is everyone's responsibility in the Nokia community. Esko Aho, Executive Vice President, Corporate Relations and Responsibility, drives corporate responsibility at the Executive Board level. He is supported by the Corporate Responsibility Steering Group, which identifies and oversees industry and Nokia-specific issues related to CR. This cluster of management members supports company-wide work as well as driving open communication and cooperation internally and externally at all levels.

Our approach stems from the belief that real progress is made only when policies and programs are implemented throughout the company. Acting responsibly is one of the cornerstones of our ability to be competitive and has helped shape our company culture into what it is today.

Members of the current CR Steering Group include representatives from devices, services, legal, Nokia Siemens Networks, sourcing, research, quality, communications, environment and strategy functions.

## Our approach

Over the years we have developed our position by creating an outline for our corporate culture and setting clear guidelines for how we conduct our business. This is presented to our employees and external stakeholders through the Code of Conduct and the Nokia Values. These are supported by more detailed policies on specific issues, such as our Environmental Policy, our Employment Policy and the Nokia Supplier Requirements.

It is the responsibility of every employee to live the Nokia Values in all their business activities.

For more information about Nokia's Values go to the Nokia Way and Values.

#### **CR strategy**

Mobile communications have the potential to bring enormous social and economic benefits, boosting economic development and improving quality of life. This also means that on many occasions environmental impacts can be reduced. Our vision is to further unleash the potential of mobility by extending access to mobile communications.

We aim to act responsibly in every aspect of our business activities. Our CR strategy is aligned with our core business goals. We believe the two are mutually dependent – acting responsibly is good for business, and a profitable business is essential for good citizenship. We have embedded corporate responsibility into every aspect of our business.

For us, responsibility is business as usual. Our products are used throughout the world, and our brand is among the world's best-known. There is simply no other way for us to conduct our business but in a way that is acceptable both to our customers and other stakeholders.

#### Managing CR

Esko Aho, Executive Vice President, Corporate Relations and Responsibility, leads Nokia's corporate responsibility activities at the Executive Board level. Esko oversees the work of the Corporate Responsibility Steering Group.

The steering group is responsible for supporting environmental and CSR initiatives across the business and encouraging open communication and cooperation, both internally and externally. It is made up of managers from across the company and supports our corporate structures to help integrate responsibility into our core business.

Our CR and environment teams support the steering group. These teams drive CR initiatives within the business and monitor performance across our operations.

Each key function within the business has people responsible for building and implementing processes to achieve our environmental and social targets.

Our CR Framework provides guidelines on embedding our CR strategy within our operational planning across the business.

#### **Code of Conduct**

Our aspiration to be the world's most loved and admired brand can only be achieved by considering not just what we do but how we do it. It requires us to strictly adhere to laws and regulations and to go beyond this, by setting our goals much higher. We want to be the leader in ethical business conduct.

The Nokia Code of Conduct sets our approach to ethical business practice. It outlines our commitment to respect and promote human rights and fair workplace practices, equal opportunities, environmentally sustainable business, and our zero-tolerance policy on bribery and corruption. The Nokia Code of Conduct, which was first introduced in 1997, has had its latest renewal in 2009.

We apply the Code of Conduct globally in our own operations and require the same standards from our suppliers. All Nokia employees must understand and comply with the Code of Conduct.

#### **Risk management**

Our approach to risk management is based on identifying key risks which might prevent Nokia from reaching its business objectives. This covers all risk areas: strategic, operational, financial, hazard and fraud risks. It includes political, social, human rights, and environmental risks, which are considered along with other aspects of risk rather

than being seen as a separate strand.

We approach risk management in a systematic and pro-active way to analyze, review, and manage opportunities as well as threats, rather than solely eliminating risks.

The principles set out in Nokia's Risk Policy and approved by the Board's Audit Committee require risk management to be integrated into business processes. One of the main principles is that the business or function manager, rather than risk specialists, is responsible for the risks. However, it is everyone's responsibility at Nokia to identify risks.

#### **Key issues**

Identifying the CR issues that are most relevant to our business enables us to prioritize our activities to manage them effectively. We identify these issues by:

- Assessing potential opportunities and risks for our business. See managing risk for more information.
- Engaging with stakeholders to identify the issues that are most important to them. See stakeholder en gagement for more information.
- Tracking public debate and media interest in CR issues

#### Accessibility

Improving access to communications presents a huge opportunity for our business to bring benefits to society. We have been developing accessibility features and applications for over ten years aimed at people with limitations in hearing, speech, vision, mobility and cognition.

See accessibility within the customers section for more information.

#### Environment

We manage environmental issues based on a life-cycle approach, covering the whole product life span from cradle to cradle. This means aiming to minimize the impact of our products and operations on the environment by taking environmental considerations into account in everything we do.

Management of environmental issues is fully integrated in our business operations – this is everyone's responsibility at Nokia. The main focus areas in our environmental work are:

- Materials and substance management,
- Energy efficiency both in our operations and in our products,
- Take-back and recycling of used devices
- Developing mobile services to promote more sustainable lifestyles

See our 2008 environmental report for more information.

#### Supply chain

Effective management of our supply chain is one of the key competitive advantages of Nokia. Environmental and social issues are part of the way we interact with our suppliers and are systematically monitored. We require all suppliers to set their own ethical and environmental targets through the Nokia Supplier Requirements, and expect that also from their suppliers.

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Various corporate responsibility issues in the electronics industry supply chain have also been highlighted by several NGOs. We are engaging with stakeholders and working with the industry, as well as continuing our supplier assessment and development programs based on the Nokia Supplier Requirements.

See supply chain for more information.

#### **Human rights**

For Nokia, promoting human rights helps realize new opportunities and effectively manage risks, as well as meet essential global standards. Nokia's responsibilities as an employer with respect to human rights are based on the UN Declaration on Human Rights, ILO standards, and UN Global Compact principles.

The typical human rights challenges for Nokia include workplace safety and labor practices in our own operations and those of our suppliers. Over the years stakeholders have placed increasing pressure on businesses to actively influence issues involving human rights that exist within the workplace. Although states have the primary duty to protect against human rights violations, companies and other organizations are expected to respect and promote human rights in their every day operations.

In 2008, we continued identifying human rights issues and explored their potential impacts in our business. We have started a systematic process to monitor human rights issues surrounding our operations worldwide. Nokia has internal policies to provide more concrete guidance for employees who deal directly with issues and questions relating to human rights.

We continue to follow the ongoing debate on business and human rights, driven by the work of John Ruggie, Special Representative of the UN Secretary General on Business and Human Rights. Nokia anticipates that the issue of human rights and businesses will be further clarified as the international standard on social responsibility (ISO 26000) develops, something that we are actively working towards.

If you believe there is an important issue we should be tackling, we would like to hear from you. Get in touch at Have your say.

## Our customers

We aim to provide innovative, high-quality products and services which help people connect. We want to meet the needs of all users, including people with physical, sensory or cognitive limitations. Product and service development takes account of social and environmental issues, including privacy concerns associated with the convergence of mobile and internet technology.

We sell the vast majority of products through distributors, network operators and Nokia branded stores which are owned and operated by our retail partners. These businesses are our main customers, together with a small number of independent retailers who we sell to directly.

Some sales are made direct to users through Nokia Online. We are also creating a chain of flagship stores in the world's premier shopping locations which offer Nokia products and services in a fashionable, interactive environment and with highly-trained staff.

Research among customers and consumers continues to show high levels of satisfaction. Trade customer satisfaction levels in 2008 remained high despite increasing competition.

See customer satisfaction for more information.

#### Sustainable design

We take a human approach to designing mobile devices, with the goal of creating stylish products that work just the way people like them to. This ethos is central to our design work and brand.

Our design process is influenced by people and their behavior. We have a multi-disciplinary team of around 324 designers, representing 35 different nationalities, working around the globe. The team includes industrial designers, user interface designers, graphic designers, color and material designers, psychologists, researchers and anthropologists.

Based in China, Europe, the US the team travels around the globe conducting in-depth research and analysis of consumer trends and behavior, as well as studying new technologies, materials, shapes and styles.

Raising awareness of sustainable thinking within our design teams has been a target for many years. The design team consider the environment in all of the devices they make, and are working on future thinking research investigating ever more sustainable approaches that could be used in the years to come.

Find out more about a concept from our design team that explores how recycled materials could be used to make mobiles in the future.

#### **Customer satisfaction**

Nokia aims to provide products and services which meet the needs of trade customers and consumers. We research the views of both groups to understand where we are succeeding and how we can do better.

#### Trade customers

We research trade customers' views on Nokia through the Listening to Trade Customers survey. An independent research company carries out the survey each year. It reaches executive and operational contacts in a sample of customers that accounts for around 80% of Nokia's revenue each year.

In 2008 about 1,000 contacts from 300 customer companies in 90 countries took part in our trade customer satisfaction survey.

The responses showed satisfaction with Nokia had remained very high despite increasing competition. Comparison with others in our industry placed us in the top 10% of telecommunications companies globally and ahead of all key mobile competitors.

The research revealed the following Nokia strengths driving customer satisfaction:

- Diversity of product range
- Ease of use of products
- Relationships with our account teams
- Logistics

The consolidated feedback is used to understand where systematic improvements are needed.

Nokia Account Managers discuss initial survey results with their teams and customers, and take action relevant to individual accounts. Customers are informed of the key local actions relevant to their account and receive a response letter highlighting the overall key findings and improvements planned by Nokia.

#### Consumers

Nokia Care provides support services to consumers through online, email and call center services, supported by a network of authorized service centers. The support includes basic product information, guides and demonstrations, discussion boards, software updates, advice on specific issues, and warranty repairs. It also helps consumers to find out where to recycle their old products.

We aim at getting a wide picture of consumer experience by using different consumer feedback channels, and respond with targeted improvement actions. The main feedback channels include consumer satisfaction surveys, feedback through independent market research companies and Nokia Care contacts.

#### **Operators**

Nokia continues to receive enquiries and assessment requests about social and environmental performance from our operator customers. We respond to those requests through our normal customer account management interface.

#### **Privacy and security**

Respect for privacy is part of our commitment to observe high standards of integrity and ethical conduct in all our operations. We aim to adhere to strict privacy standards when we store or process personal data, and when we develop new products and services.

User privacy has become more important for Nokia as we have developed new services to take advantage of the convergence of internet and mobile technologies. Our goal is to develop services users want in ways that ensure their privacy, that minimize the amount of sensitive information that is handled, and when sensitive information is shared, to treat it appropriately.

#### **Personal data**

We aim to store and process personal data (including photographs and voice recordings) in ways which protect people's private lives, in accordance with these principles we:

- Inform users about privacy and their choices about data in clear ways that guide users toward choices that match their intent
- Get the consent of the data subject in advance
- Only collect and keep relevant data
- Ensure appropriate security of files
- Take special care when transferring data to third parties or across borders
- Respect the right of people, when using data for marketing purposes, to opt out of such communications and the need to comply with legal requirements in some countries for people to consent to the use of data for unsolicited communications

#### Security

Mobile internet use can expose users to some of the security risks associated with malicious software (known as malware) on personal computers.

Nokia's security implementation is targeted to protect end-user devices from any malicious attack coming outside by maintaining full control for end-user decision.

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We take all security issues seriously and are developing security controls and preventive measures to counteract

threats. We warn users to protect their mobile device against harmful applications by exercising caution when accepting applications sent via Bluetooth or opening MMS attachments as they may include software harmful to their phones or PCs.

#### Accessibility

Almost one in five of the world's population lives with some kind of recognized disability, including those related to ageing. Nokia is committed to providing accessibility for everyone. We believe this is an important aspect of bridging the digital divide. It also presents business opportunities – extending access to more people increases our customer base.

Users' age is becoming an increasingly important consideration, especially with an ageing population. Sooner or later everyone will develop at least some limitations in vision, hearing, dexterity or learning. By 2015, most elderly people will have been using mobile communications for years and will expect to continue doing so. Meeting their needs presents a significant business opportunity.

We support a universal access policy, which is backed by support from mobile phone manufacturers and providers in order to decrease recurring costs of ownership. This is an ongoing target, as we firmly believe that accessibility in telecommunications is useless if it is not affordable.

We have worked on accessibility for over 10 years and now offer a multitude of accessibility features and applications for people with limitations in hearing, speech, vision, mobility and cognition. Nokia was the first company (in 1997) to introduce the loopset, an accessory that looks like a headset and lets people with T-coil hearing aids use a wireless device without interference with their hearing aid.

In 2009, we are bringing to the market the Nokia Wireless Loopset LPS-5. It provides T-coil equipped hearing aid users with the possibility of a wireless handsfree connection to their Bluetooth-enabled mobile phone or other audio device.

#### Other initiatives include:

- Factory-installed text-to-speech application to provide audible feedback for users with vision loss
- Features which improve the interface and usability, such as vibrating and flashing alerts, audible battery and signal strength, adjustable fonts on high contrast color screens, voice dialling and activation and mes saging
- Compatibility of digital phones with assistive devices and software such as mobile magnifiers and audible text

We are developing new functions, such as real-time text, that will allow people to see the other person typing and can interject, as in a voice conversation.

For full details see www.nokiaaccessibility.com.

## Our products

We take a proactive approach when considering the impact of our different activities, taking CR issues such as the environment and accessibility into account at every stage of our products' life cycles.

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We are working to continuously improve the sustainability of all our products. Rather than introducing one-off "green" devices, we see this as a staircase of innovations that are then gradually rolled out across our entire prod-

uct range, making it easier for people to live sustainable lifestyles.

See creating our products in the environment section for more information.

#### **Product safety**

For Nokia, product EMF safety is a key consideration. All Nokia products, including mobile devices and base stations, operate below relevant international exposure guidelines and limits that are set by public health authorities such as International Commission on Non-Ionizing Protection (ICNIRP).

Nokia is committed to making information, such as device SAR values, available transparently for consumers. Our website at www.nokia.com/emf contains information and links to other sources.

#### **Responsible product and service use**

Mobile technology brings many benefits for users but can be misused in ways which can harm or endanger users, especially children. Nokia's ongoing development of mobile and internet services means we have more responsibility for protecting users than in the past, when mobile operators were considered mainly responsible.

Nokia provides access to a growing range of services and connections through our Ovi portal (www.ovi.com). Our vision is that combining the internet and mobility will let people access content, communities and contacts from a single place, either directly from a compatible Nokia device or from a computer.

These services will allow people to use mobile phones in valuable new ways but some content and services may be considered inappropriate by some users and may raise concerns regarding their privacy.

Nokia is committed to protecting privacy and helping users avoid inappropriate content. We believe the decision about suitability is a very personal one and varies widely within and between countries. It is important that users (and parents) are aware of the risks they (or their children) are exposed to and how they can respond to those risks – for example, using access controls and content filters.

#### **Product development**

Nokia has been studying environmental aspects of design for more than a decade and sustainability is one of the design team's key focus areas. We are developing products and services which not only meet customers' immediate usability needs but help them to make more sustainable choices through the innovative use of materials, technologies and concepts.

The range of ideas covers accessibility as well as the environment. For example, we consider phones which stress simplicity of use for those who do not want multiple functions and phones which can easily be used by people who are illiterate.

See www.nokiaaccessibility.com for more information.

An advanced design team within Nokia has been researching and developing new ideas and concepts specifically based on sustainability. Their work focuses on futuristic ideas and protyping new approaches in materials, technologies, ecological, and ethical approaches.

Early in 2008, this team unveiled one of its concepts, called Remade, which aims to reduce environmental impacts by using no new materials. It uses recycled plastic bottles and cans for the chassis and covers, while its rubber keymat and gaskets are produced from old car tires. The design addresses energy use as well as the phone components with graphics that are designed to save energy.

#### **Obsolescence**

The rapid development of technology means that users often want to replace their phone long before it is technically obsolete. Nokia's development of software updates can help to extend product lifespan. Users can update their phone's operating system (sometimes known as firmware) over the air or through a personal computer. This can provide extra or improved functions and performance.

When people do replace their phones, our designs aim to make them as easy as possible to recycle. Read more about recycling in our environmental report 2008.

## Reporting

#### Nokia and Nokia Siemens Networks Corporate Responsibility Reporting 2008

From reporting year 2008 onwards, Nokia has decided to incorporate its corporate responsibility reporting within Nokia's official annual report filed to the Securities and Exchange Commission in the United States, known as the Form 20F.

This change was made because we felt that corporate responsibility issues are not separate from other key corporate information, such as financial data, and because the data provided in the Form 20F go through a stringent verification and auditing process.

For the first time, selected key corporate responsibility indicators have also been assured by an independent third party, PricewaterhouseCoopers Oy (Nokia's statutory auditor).

For quick reference, this page contains links to the most important sources of corporate responsibility information by Nokia and Nokia Siemens Networks:

The Nokia Form 20F 2008

The 3rd party assurance report by PriceWaterhouseCoopers Oy

The Corporate Responsibility report 2008 of Nokia Siemens Networks

We have reported on corporate responsibility since 2002, growing each year in terms of transparency and coverage. Our website now forms the main source of all information relating to CR, navigated by our primary areas of focus; the strategy and management of CR (CR Overview), employees, community and supply chain.

Information regarding the environment can be found in its own section of the Nokia website and also in the 2008 20F Form. This highlights the importance we place on working together to protect our world. Our environmental strategy sees Nokia among the world's leading companies for all aspects of environmental performance, with these key areas: energy efficiency, managing substances in our products, take-back and recycling, and promoting sustainability through services and software.

For 2008 we have also produced a separate environmental report that is lailable on our website. See the Environmental report 2008 for more information.

If you would like any further information about our CR program or would like to comment please go to Have your say.

#### Indexes

Nokia provides two separate indexes:

- Global Reporting Initiative (GRI) Guidelines Nokia's CR report within the GRI framework to ease compatibil ity with other organizations
- Ten principles of the United Nations Global Compact Nokia's continued commitment to the UN Global Compact

#### **Global Reporting Initiative**

Nokia's 2008 reporting criteria have been selected based on their relevance to our business, the overall impact of our operations, and feedback from our stakeholders.

Nokia has not attempted full compliance with the Global Reporting Initiative (G3 Sustainability Reporting Guidelines) and GRI Telecommunications Sector Supplement (July 2003), although in many instances, we have either fully or partially taken into consideration GRI indicators when creating content for our reporting materials.

#### **Strategy and analysis**

1.1 CEO statement

1.2 Key impacts, risks and opportunities

#### **Organizational profile**

2.1-2.9 Form 20-F

#### **Report parameters**

- 3.1-3.4 Report profile 20F and Independent assurance report
- 3.5-3.11 Report scope and boundary Reporting, Independent assurance report, 20-F
- 3.12 GRI Content Index
- 3.13 Assurance

#### Governance, commitments, and engagement

- 4.1-4.10 Governance CR Governance, Corporate responsibility, 20-F
- 4.11-4.13 Commitments to external initiatives Stakeholder engagement, Risk management
- 4.14-4.17 Stakeholder engagement Stakeholder engagement, 20-F

#### Economic performance indicators

(GRInumber, GRIindicator, Where to find more)

#### DMA Disclosure of management approach

Economic performance

EC1 Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments. 20-F

EC3 Coverage of the organization's defined benefit plan obligations. 20-F

#### **Environmental Performance Indicators**

DMA for environmental performance

Energy

EN3 Direct energy consumption by primary energy source. Environmental report

EN4 Indirect energy consumption by primary source. Environmental report

Water

EN8 Total water withdrawal by source. Key data 2008

Emissions, effluents, and waste

EN16 Total direct and indirect greenhouse gas emissions by weight. Key data 2008

EN17 Other relevant indirect GHG emissions by weight Key data 2008

EN19 Emissions of ozone-depleting substances by weight. Key data 2008

EN20 NO, SO, and other significant air emissions by type and weight. Key data 2008

EN21 Total water discharge by quality and destination. Key data 2008

EN22 Total weight of waste by type and disposal method. Key data 2008

Products and services

EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. Goals

EN27 Percentage of products sold and their packaging materials that are reclaimed by category Effective operations

#### Social performance indicators

DMA for labor-related performance

Employment

LA1 Total workforce by employment type, employment contract, and region. Personnel

Labor/management relations

LA4 Percentage of employees covered by collective bargaining agreements. Labor practices

LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region. Health and safety

Diversity and equal opportunity

LA14 Ratio of basic salary of men to women by employee category. Inclusion

#### Human rights performance indicators

DMA to human rights performance

Investment and procurement practices

HR1 Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening. HR

HR2 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken. HR

HR3 Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained. Code of Conduct

Freedom of association and collective bargaining

HR5 Operations identified in which the right to exercise freedom of association and collective bargaining may be at

significant risk, and actions taken to support these rights. Code of Conduct

Child labor

HR6 Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor. Code of Conduct, Supply chain

Forced and compulsory labor

HR7 Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor. Code of Conduct, Supply chain

#### Society performance indicators

DMA for social performance, Society, Ethics

Community

SO1 Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting. Society

#### Corruption

SO3 Percentage of employees trained in organization's anti-corruption policies and procedures. Code of Conduct

Public policy

SO5 Public policy positions and participation in public policy development and lobbying. Stakeholder engagement

#### Product responsibility performance indicators

DMA approach for product performance

Customer health and safety

PR1 Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures. Products

Product and service labeling

PR3 Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements. Product information

PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction. Have your say

PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship. Code of Conduct

#### **United Nations Global Compact**

#### Nokia's continued support

Nokia is committed to the principles of the United Nations Global Compact and has been a signatory and active member since The Global Compact's inception.

In our annual report Form 20F for 2008 and on this corporate responsibility website, we have sought to review progress on our activities and programs that support the ten principles of the Compact in the area of human rights, labor standards, the environment, and working against corruption.

Esko Aho, Executive Vice President, Corporate Relations and Corporate Responsibility

#### Global compact – 10 principles

Human rights

- Businesses should support and respect the protection of internationally proclaimed human rights
- Businesses should make sure that they are not complicit in human rights abuses

Labor standards

- Businesses should uphold the freedom of association and the effective recognition of the right to collec tive bargaining
- Businesses should uphold the elimination of all forms of forced and compulsory labor
- Businesses should uphold the effective abolition of child labor

• Businesses should uphold the elimination of discrimination in respect of employment and occupation

Environment

- Businesses should support a precautionary approach to environmental challenges
- Businesses should undertake initiatives to promote greater environmental responsibility
- Businesses should encourage the development and diffusion of environmentally friendly technologies

Anti-corruption

• Businesses should work against corruption in all its forms, including extortion and bribery

## Performance

Our performance information is now located within the CR Review 2008. This information has been created as part of the Form 20F process for 2008.

We consistently strive to improve our performance year on year and set ourselves challenging targets to meet. We would welcome your feedback about our performance so if you'd like to comment please go to Have your say.

#### NOKIA CORPORATE RESPONSIBILITY KEY PERFORMANCE INDICATORS NOKIA GROUP (INCL NOKIA SIEMENS NETWORKS – NSN - FIGURES SINCE APRIL 2007)

ECONOMIC	<b>2008</b> <sup>1</sup>	<b>2007</b> <sup>2</sup>	2006	2005
Net sales, EUR million	50 710	51 058	41 121	34 191
Operating profit, EUR million	4 966	7 985	5 488	4 639
Earnings/share diluted, EUR	1.05	1.83	1.05	0.83
Market capitalization at year-end, EUR million	41 0 46	101 995	61 390	64 463
Research & development, EUR million	5 968	5 636	3 897	3 825
Total tax, EUR million	1081	1522	1357	1281
Liquid assets at year-end, EUR million	6 820	11 753	8 537	9 910
Total liabilities at year-end, EUR million	23 072	20 261	10 557	9 938
Retained earnings at year-end, EUR million	11 692	13 870	11 123	13 308
Total number of employees at year-end	125 829	112 262	68 483	58 874
Total payroll & benefits, EUR million	5 615	4 664	3 457	3127
Pension expenses net, EUR million	478	420	310	252
<b>ENVIRONMENT</b> <sup>3</sup>	2008	2007	2006	2005
Energy consumption, GWh	1,270 (609)	1,165 (462)	892	873
Indirect CO2e from facilities energy consumption,	427,100	411,000	334,200	307,300

tonnes	(209,100)	(174,500)		
Direct CO2e from facilities, tonnes	22,500 (7,800)	16,500 (3,600)	19,200	16,600
CO2 avoided due renewable energy, tonnes	62,200 (15,500)	39,000 (9,200)	1,800	0
Water consumption, thousand m3	2,281 (883)	2,151 (841)	1,547	1,354
ENVIRONMENT <sup>3</sup>	2008	2007	2006	2005
Total waste, tonnes	54,730 (6480)	60,810 (5120)	51,900	36,880
Total waste utilisation, %	88% (88%)	88% (86%)	83%	82%
Emissions of ODS, kg of CFC-11 equivalent 4	42 (0.1)	108 (3)	326	101
Countries with Nokia take-back points 5	85	85	85	NA
NOKIA (WITHOUT NSN) ETHICS <sup>6</sup>	2008	2007	2006	2005
Employee Code of Conduct awareness, %	86	98	81	75
Languages of the Code of Conduct	34	32	31	25
EMPLOYEES <sup>6</sup>	2008	2007	2006	2005
Total number of permanent employees, average for year	56 512	49 560	62 851	50 839
Employees in production	25 576	28 096	33 031	25 437
Total employee training cost, EUR million	55	70	125	103
Average cost of training per employee, EUR	1721	<b>N/A</b> 7	1908	1850
Injury/illness rate within production, IIR 8	0.6	0.73	0.82	1.08
Women in senior management, %	13.7	14.3	12.5	12
Non-Finnish nationalities in senior management, %	47.4	44.1	45.1	41
Voluntary attrition, %	9.3	8.5	6.2	4.8
SUPPLY CHAIN <sup>6</sup>	2008	2007	2006	2005
Total purchases of goods and services <sup>9</sup> , EUR billion	34.6	36.4	29.5	24.2
Number of assessments <sup>10</sup>	70	90	120	137
Persons trained under new Nokia Supplier requirements	79	47	9211	100 11

SOCIETY <sup>6</sup>	2008	2007	2006	2005
Countries with community involvement programs	57	45	37	35
Countries with volunteer efforts	25	32	35	29
Employee volunteer hours	34 000	32 099 12	25 000	17 700

- 1. Figures include combined Nokia, Nokia Siemens Networks and NAVTEQ data.
- 2. As of April 1, 2007, Nokia financial data includes that of Nokia Siemens Networks on a fully consolidated basis. Accordingly, Nokia financial data for 2007 is not directly comparable to the data of 2006 and 2005.
- 3. Environmental total figure includes combined Nokia and Nokia Siemens Networks data, but not NAVTEQ. Nokia Siemens Networks data share of total data are shown in parenthesis.
- 4. Nokia uses no ODS (Ozone Depleting Substances) in its products or production. The reported ODS figures are due to ODS contained cooling systems in facilities. ODP (Ozone Depleting Potential) = emission in kg of CFC-11 equivalent.
- 5. Many countries have multiple take-back locations.
- 6. Does not include Nokia Siemens Networks and NAVTEQ.
- 7. The average number is impacted by the departure of Nokia Siemens Networks as of April 1, 2007.
- 8. IIR = Number of occupational injuries and illnesses per total hours worked by all employees during calen dar year multiplied by 200 000 (the number of hours theoretically worked by 100 full time employees in a year).
- 9. Includes all external purchases.
- 10. Includes system and in-depth assessments.
- 11. Supply chain ethics and environmental training.
- 12. Contributions of the employees of Nokia's former Networks Business Group included until the formation of Nokia Siemens Networks, April 1, 2007.

## **Business benefits**

#### We see our efforts to build universal access as more than just a goal.

Shaping corporate culture, minimizing risk, enhancing efficiency, and building reputation are all aspects of CR which give it a significant position when setting agendas to increase our business value. We have long understood that this added value is the result of taking responsible corporate actions. Our goal is to establish proactive, integrated programs within our core business which always keep sustainability in mind.

#### Transparency

Consistent communication with respect to our CR efforts, both internally and externally, builds trust and helps to develop our reputation. We understand how important it is to communicate clearly and accurately to the outside world the ways in which our business affects society. There is an increasing demand from our stakeholders for this information which we accommodate through our reporting, corporate website, and other external information sources.

#### **Driving internal efficiency**

What works externally also has benefits within the company. While it is sometimes challenging to quantify cause and effect, we have seen that:

- waste management programs reduce manufacturing costs
- diversity training enhances project management
- eco-efficiency measures reduce costs
- volunteering increases employee satisfaction

Thinking ahead enables us to be less reactionary and more forward thinking.

#### New growth markets

We have been working closely with the UNICT task force and a range of industry, government, and non-governmental organizations on the theme of universal access. The number of new mobile phone users in high-growth markets is growing dramatically and we aim to play a leading role in boosting this growth. As a market leader, we estimate that there will be available and affordable mobile communications for half the world's population by 2015.

#### An effective tool for managing risk

Responsible business practices improve risk management and ease the task of establishing legal compliance. Through engagement with governments and authorities we can avoid legislation that is counter-productive for society or anti-competitive.

Our supply-chain management reduces risks to the categories of quality and productivity. Our quick and effective management of conflicts of interest encourages employee satisfaction and protect our brand image.

#### **CR enriches our brand reputation**

Our behavior towards and relationship with society is part of our brand personality. CR has a significant impact on our brand reputation and the value which our stakeholders place on it.

Our brand responsibility means building positive value into every stage of the customer experience, developing more sustainable products and services, and effectively communicating such developments to our customers. Consumers increasingly demand 'higher order' image attributes from a brand and in doing so look towards a company's CR track record. The public increasingly expects more transparency about the way a business operates within society, seeking a demonstration of its good corporate citizenship. Expectations go beyond simply meeting legal requirements, but to creating a more caring business order.

Our innovative use of technology, with a focus on improving people's lives, raises the brand promise of "very human technology" to a new level. Our various community activities help people feel close to each other and to their communities.

#### Good CR

#### Corporate responsibility goes hand-in-hand with good business sense

For Nokia, CR isn't only about risk management or being "do-gooders," but about actively seeking business benefits by embedding our corporate responsibility principles within all contexts of our work.

Here are some examples of what we mean:

#### **Building social networks**

Personal communication is perhaps the most obvious benefit of mobile communication, with the mobile phone being used to build and maintain relationships in increasingly diverse ways: between friends, children and parents, for people seeking help, and for communities which have not previously had widespread access to telephony. The mobile phone gives people a voice.

#### Making access to information easier

Mobile devices link people to a wealth of information, conveying news constantly, not statically, as it happens, both at home and abroad. These devices combine a variety of information sources, providing larger, richer images at the push of a button.

#### **Stimulating economies**

Healthy companies, which effectively communicate, engage, and respond to information, promote healthy economies. Mobile communication assists the overall efficiency of companies, both large and small. Many new service concepts have risen around mobility in both the public and private sectors, such as those based on SMS.

#### **Responsibility towards nature**

Minimizing the use of raw materials and energy not only in our day to day operations but also as a lifestyle concept is a key element of our environmental plan.

#### **Responsible reporting**

Ongoing, accurate documentation is essential for understanding how far we've come and also in gauging our future path. Documentation provides an opportunity to benchmark not only ourselves but also others within the mobile communications field. We have taken up the challenge by promoting our CR efforts through various reporting channels and encouraging public discussion.

#### **Acting transparently**

Communicating our actions clearly, accurately, and in a timely manner builds trust and a reputation that goes far beyond the financial community. We understand the value of responding to increasing demands from our stakeholder groups to disclose our work in an environmental and social context. It is important for our stakeholders to know what we are doing and how we are doing it.

## Stakeholder engagement

# Understanding what stakeholders expect from us as a company is just as important as understanding our customers' expectations for our products.

Listening to employees and external parties and translating their expectations into business value is an ongoing process here at Nokia. We constantly strive to activate new channels concerning the ways in which we meet our existing expectations, while at the same time we continue to identify new trends down the road. This window into the future is an important part of our ongoing success.

#### **Internal stakeholders**

#### How does Nokia engage its employees?

It is important to create a working environment with opportunities for communication and feedback. We regularly involve employees in discussions about issues such as corporate values, career development, performance management, diversity and work-life balance.

Some of the channels for discussions with employees include individual IIP (Investing In People) performance management and career development discussions, internal online forms, surveys and exit interviews. These discussions help us translate ideas into everyday actions.

We highlight corporate responsibility issues and initiatives on our internal communications channels and through various internal communication campaigns. We also include information about the Nokia Code of Conduct and corporate responsibility in employee inductions and training programs.

#### Investors

We engage with investors through our investor relations service and investor website, our annual report on Form 20F, other financial reporting and meetings with groups of or individual investors.

See our investors website for more information.

Nokia recognizes the growing importance of ethical business practices to both mainstream and socially responsible institutional investors.

#### Socially Responsible Investors (SRI)

In 2008, Nokia engaged with the socially responsible investor (SRI) community by conducting road shows and by holding Nokia's Corporate Responsibility Stakeholder Days. The subjects most frequently raised by socially responsible investors include supply-chain management, environmental impact, corporate governance and Nokia's contribution to society.

We also continue to participate in third-party evaluations of Nokia's CR performance. In 2008, Nokia was again selected for inclusion in the Dow Jones Sustainability World Indexes (DJSI World) and was also added to the Dow Jones EURO STOXX Sustainability Indexes (DJSI STOXX). Nokia maintained its status in the FTSE4Good social responsibility investment index.

#### Customers

The key issues for both trade customers and consumers are product quality, satisfaction with our products and customer service. We survey our trade customers twice a year to gauge satisfaction levels. We engage with consumers through our Nokia Care support service both online and via call centers.

See customers for more information.

We increasingly engage with customers on other issues related to sustainability. Network operators – our biggest customers – expect us to meet high standards of corporate responsibility in our own operations and increasingly in our supply chain. We engage with individual network operators on how we manage sustainability issues as part of their assessments of their own supply chain.

Consumer interest in sustainability issues is also growing. We encourage consumers to consider the environment by unplugging chargers once handsets are fully charged and returning handsets they no longer use for recycling.

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We also develop and promote the use of mobile services for more sustainable lifestyles. See the environment website for more information.

We recognize that some consumers are concerned about potential health issues related to mobile phones and base stations. Both Nokia and NSN provide information on the latest research and links to independent sources online.

See mobile communications and health for more information on handsets and health.

See the Nokia Siemens Networks website for more information on base stations and health.

#### Non-governmental organizations

#### **Environment**

We believe we can maximize our environmental contribution by working with others in our industry and beyond. In 2008, we continued our global cooperation with World Wide Fund for Nature (WWF) focusing on environmental awareness building for Nokia's employees.

With WWF we also organized a stakeholder seminar on environmental issues and competitive advantage in China. Participants included local authorities, NGOs, corporations and academics. WWF has also provided environmental content for Nokia devices.

In March 2008 Nokia and WWF, together with International Union for the Conservation of Nature (IUCN), launched an environmental online community targeted at young people – connect2earth.org. Through the community, people can share their ideas on solutions for environmental challenges through images, videos and text. The best content uploads were rewarded, and the winner presented her idea in IUCN's World Conservation Congress in Barcelona.

See environmental report 2008 for more information.

#### Accessibility

We work with a number of disability organizations worldwide, such as the Royal National Institute of Blind People (RNIB), Spanish National Organisation for the Blind (ONCE), Hearing Loss Association of America, Finnish Federation of the Visually Impaired (FFVI), and European Older People's Platform (AGE)

See accessibility for more information.

#### Society

#### **Data gathering**

In 2008, Nokia continued to develop mobile data-gathering technology aimed at enabling organizations such as government departments to replace paper forms, reduce costs and improve efficiency. In September 2008, and as part of our efforts in this area, we launched Nokia Data Gathering, a software solution that enables data collection on mobile devices and the transmission of the results for near real-time analysis. The solution has been deployed by the Amazonas State Health Department in Brazil to monitor outbreaks of disease and the effectiveness of prevention programs in the city of Manaus.

See mobile technology for development for more information.

#### **Youth Development**

During 2008, we continued with our efforts in youth development and in assisting with community projects. In youth development, we had activities underway in 57 countries by the end of the year. These projects address

important local issues, such as education, employability and health, and encourage young people to contribute to their local communities.

See youth development for more information.

#### **Employee volunteering**

Nokia employees continued to give their time to community projects they care about through the Nokia Helping Hands employee volunteering program. In 2008, more than 5,400 employees in some 25 countries volunteered more than 34,000 hours of service.

See employee volunteering for more information.

#### **Natural disasters**

During the year, Nokia continued to provide assistance, via several aid organizations, to people affected by natural disasters. This assistance included the donation of funds and mobile phones to assist relief efforts following an earthquake in the Sichuan province of China and the donation of funds to assist relief efforts in the wake of Cyclone Nargis in Myanmar. Our support for cyclone victims in Myanmar has included a substantial sum raised through a UNICEF greetings card campaign. We are committed to supporting the long-term reconstruction of the affected areas in both Myanmar and Sichuan province.

Additionally, in 2008 we donated funds to assist relief efforts following floods in Ghana and drought in Ethiopia; we donated funds and mobile phones to assist relief efforts following floods in Itajai Valley in Brazil; and we donated funds to support earthquake recovery programs in Chile and Pakistan. We remain committed to the long-term reconstruction of areas affected by the Tsunami of late 2004.

See Corporate Giving for more information.

#### **Supply chain**

Several non-governmental organizations have recently published reports on supply chain issues in the ICT sector. Their focus rests on labour conditions and environmental protection at our suppliers' facilities and at the mining/ extraction of raw materials.

We have engaged in dialogue with the NGOs and carefully examined allegations made against some of our suppliers. Most allegations have been found inaccurate, but in some cases there have been areas of improvement, which we have taken up with our suppliers and will monitor in our regular supplier assessments.

Please see the supply chain section for more information In addition to engaging with NGO's directly, we also engage through GeSI SCWG and the work groups in which we participate.

#### Governments

Our Code of Conduct first created in 1997 was revised in January 2009. It sets out how Nokia will behave in all our business activities, including our engagement with governments.

The principle we follow in our public policy consultation is to engage with government organizations only on issues where Nokia has a credible contribution to make.

We engage with governments all over the world on a wide range of issues relevant to our business.

#### **Political contributions**

As clearly stated in the Nokia Code of Conduct, Nokia does not provide financial support to political parties or other
political groups.

#### Environment

Nokia believes it is important to participate in the development of fair and reasonable regulation that provides a framework for environmental requirements and creates incentives for voluntary environmental improvements.

An example of how Nokia has participated in the development of environmental regulations, we have been part of the Integrated Product Policy (IPP) pilot project on mobile phones, which was conducted together with several relevant stakeholders including the EU Commission. Nokia and other mobile phone manufacturers have agreed on common practices regarding providing information on the stand-by energy efficiency of mobile phone chargers.

Energy ratings of Nokia chargers are available on the environment website.

Nokia has also provided data and suggestions in order to help draft demanding yet realistic implementation measures for categories such as external power supplies that are of relevance for Nokia products in the EU Framework Directive on the Ecodesign of Energy Using Products.

Nokia continues to be a member of the Sustainable Energy Europe Campaign to raise public awareness and promote sustainable energy production across Europe. Nokia is also participating in other initiatives globally that aim at better energy efficiency and smarter use of ICT.

#### Accessibility

We continued to be active in the European Commission's 'eInclusion' and 'eAccessibility' programs. Nokia participated in the consortium, responding to the Call for Proposals for European Commission's Total Conversation pilot program for ICT eInclusion. The 3-year pilot program is to start in 2009 and the participants will be selected early 2009.

Nokia took part to the second consecutive Ministerial Meeting on European eInclusion Policy in Vienna in 2008. The meeting discussed how mobile telecommunication helps in improving inclusivity and how continued innovation and a multi-stakeholder approach are the building blocks to make this happen. We highlighted the following key areas:

- The depth and breath of mobile technologies of GSM for Availability
- Affordability focus on total cost of ownership: to buy and use a service including the handset prices and any attached taxes and tariffs.
- Transition that is happening to some future technology scenarios
- The importance of Accessibility fighting slowness in response and frustration in making onself clear.
- Encougraging multi-stakeholder dialogue to effectively tackle the challenges of eInclusion.

EU and African states have unanimously agreed, and have expressed their opinion through the European eInclusion process, that information and communications technologies are key enablers for poverty reduction, growth and socio-economic development.

#### **Industry organizations**

We believe collaboration with others can be the most effective way to approach certain issues. Nokia works in collaboration with other companies on key issues through a number of industry organizations. Examples include:

- The Electronics Industry Citizenship Coalition (EICC): The EICC collaborates with the GeSI Supply Chain Work ing Group on a number of different supply chain activities
- The Global Compact Nordic Network: We participated in the work of the UN Global Compact through its Nordic Network, sharing best practices and supporting development in the Nordic region
- The Global eSustainability Initiative (GeSI): We participate in the Supply Chain Working Group, e-Waste

Working Group and Climate Change Working Group

Other affiliations with global and regional organizations:

- EU CSR Alliance
- European Information & Communications Technology Industry Association (EICTA)
- GSM Association (GSMA)
- International Chamber of Commerce (ICC)
- Open Mobile Alliance (OMA)
- World Business Council for Sustainable Development (WBCSD)

National industry and trade associations:

- Brazilian Electrical and Electronics Industry Association (ABINEE)
- Canadian Wireless Telecommunications Association (CWTA)
- Communications and Information Network Association of Japan (CIAJ)
- Confederation of Finnish Industries (EK)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- German Association for Information Technology, Telecommunications and New Media (BITCOM)
- Intellect
- Technology Industries Finland
- US Consumer Electronics Association (CEA)
- US Information Technology Industry Council Environmental Council (ITIC EC)

#### Universities

Nokia is currently sponsoring more than 100 research collaborations with over 100 combined industrial and academic partners. Our goal is to strengthen co-operation between our researchers and academics, for example, through shared facilities at Stanford and MIT in the US.

The Nokia education policy function is engaging in a dialogue with governments and educational institutions to help them shape and modernize education systems and course content. Our education function also works with Nokia business units to identify capability requirements and help them find education partners in employee training.

In 2007, we joined an EU-wide effort to reverse the growing trend away from ICT careers, particularly among young women. Nokia, among other ICT companies, is inviting schoolgirls to shadow a successful female executive on a typical work day to encourage them to consider careers in ICT. The EU Commissioner for Information Society and Media, Viviane Reding, invited ICT companies all over Europe to participate in the initiative. In 2008, we continued the shadowing program.

Also in 2008 we started a program to enhance mathematics learning using mobile phones in South Africa together with Nokia Siemens Networks, the South African President's office, the Vice President's office and South African Department of Education.

## 4. Employees

#### **Overview**

Our success depends on the talent and commitment of all of our employees. We strive to create an inclusive workplace that welcomes men and women of different cultural or ethnic backgrounds, skills and abilities, lifestyles, generations and perspectives. We provide excellent opportunities for career development, and are strongly committed to the highest standards of ethical conduct towards everyone who works with us. This has helped us to build the diverse and robust community that is Nokia today.

## Who we are

#### Never before has Nokia been as diverse of a community.

We strive to ensure our company culture acts as a world-class example of an inclusive working environment. Our goal is to enable men and women of different cultural or ethnic backgrounds, skills and abilities, lifestyles, generations and perspectives to contribute their best to our success. This has helped us to build the diverse and robust community that is Nokia today.

As the company has grown so have the dimensions of our work force. During 2006, our employee number grew to approximately 68,000 persons coming from 120 nationalities.

Within our workplace profile, women account for 34 percent of all employees, with 12.5 percent holding senior management positions. The average employee age is 35 years, with 5.1 percent of our employees over 50 years. Of the 120 different nationalities working at Nokia, 45 percent of them are represented in senior management as coming from a non-Finnish ethnicity.

#### How does our Code of Conduct link with diversity?

We are operating in more markets than ever before, which has impacted the cultural fabric of our workforce and ways of working. With a global reach, our actions have the potential to greatly impact economies throughout the world and we try to ensure that work methods correlate into ethical business practices. Nokia's Code of Conduct is there to offer every one of us guidance on how to behave in business situations.

The strong message we want to send across every level and geographical area of our organization is: We take our responsibilities seriously, and we support each other in achieving our ethical goals through our Code of Conduct.

By the end of 2006, 81% of all employees had participated in our Code of Conduct awareness campaign.

The campaign was awarded first prize in the Federation of European Business Communicators Association's Grand Prix 2006 in the category of Business Strategy Communications.

## Our commitment

How we look after our employees is an important element to Nokia's responsible business practices.

#### LiveLife

Our LiveLife program provides a common easily recognized umbrella for all our work-life balance related offerings and services. It aims to energize and lift the spirit at the work place. LiveLife promotes our employees' needs and well-being providing various activities in three areas: Health, Leisure and financial planning.

#### Nokia Helping Hands

Our mission as employees is to make meaningful contributions to communities in the various countries where we operate. This is not a global one-fits-all policy, but rather an umbrella for locally relevant volunteering activities. Connecting people is our central theme as well as fostering our values through concrete actions at the local level. Our initiatives influence Nokia's overall corporate culture in a sustainable way.

**Environmental activities** 

We have developed a wide range of tools and solutions to raise awareness and mobilize our employees on environmental issues which affect both business and personal life. Increasing our employee awareness and understanding of environmental matters are at the heart of the partnership with the global conservation organization WWF. Examples of joint activities include the internal web-based learning platform Connect to Protect, management training workshops on business cases with an environmental focus, and seminars covering relevant and topical environmental issues.

Internal global and regional environmental forums are organized throughout the year as well as interactive environmental road shows at Nokia sites aimed at promoting both general and local environmental issues.

## Our approach

#### **Employee communications**

Open communication is part of the Nokia way of operating. Our people have different channels for finding out information about the company, expressing their opinions and concerns, and driving positive change in the organization.

#### On the intranet

- Nokia News Hub our global intranet news service, giving employees a chance to rate and comment on stories covering a wide range of topics relevant to Nokia business.
- Blogs, Wikis, Videos, and Discussion Forums employees can discuss, interact, network, and collaborate with each other through posting and commenting on these platforms, some of which are run by senior managers to have an open dialogue with employees while others are run by topical experts to share ideas or gather feedback.
- Prime Time Live Chat discussion from Nokia leaders with a large group of employees.
- Ask HR a general employee forum where questions relating to HR issues can be posted anonymously.
- Jazz Café a lively forum on the internal website where people can discuss topics anonymously.
- Ethics Office the Nokia Ethics Office has been established to support all employees in questions relating to the Nokia Code of Conduct and questions of business ethics.

#### Email

- Environmental e-magazine this email bulletin raises awareness of environmental issues among employ ees as well as keeping them up-to-date on our latest targets, initiatives and progress.
- A mail or email address available for all employees to reach the Board of Directors to express concerns and give feedback anonymously.

#### Unions, forums and surveys

- Unions and collective agreements Nokia recognizes the right of employees to join unions and enter col lective agreements. For example, In Finland, Nokia has several employee representative bodies in accord ance with legislation.
- Nokia EuroForum employee representatives from EU countries meet with management twice a year through the forum to discuss Nokia business issues affecting employees. Up-to-date reports about the EuroForum and its activity are available to employees through our intranet.
- Listening to You an annual engagement survey (held since 1994) to gather opinions from all employees about Nokia's business practices.

Find out how we engage with our external stakeholders.

#### **Embedding our values**

The Nokia Way defines our core values. We recently reviewed and refined these values to engage employees and reflect changes to our business and the way we work. We asked employees to explain what was most important to them to help us create a new set of values that define our company.

Over 2 500 employees from around the world took part in 16 regional events to help us come up with the key themes for our new values. Involving employees at every stage of the process helped us embed a strong values culture throughout the business.

The new values are an evolution of the previous Nokia values, reflecting the evolution of our business. They are:

- Achieving together expands our old value of "achievement", reflecting that we increasingly work in networks.
- Very Human builds on our previous value of "respect".
- Engaging You includes all our stakeholders, not just customers.
- Passion for Innovation is more vigorous than our previous value of "renewal".

To learn more about the values go to: Nokia values.

We are now communicating these values to all our employees, through videos and other information on our intranet, and as part of our communications on company strategy.

In May 2007, around 13,000 employees registered in the Nokia Way Jam, a 72-hour online discussion to decide on our values and debate our future business strategy. Our business is increasingly focused on the internet and we want the new values to support a more web-based work culture. The collaborative nature of the Jam was itself an expression of Nokia's culture and the value we place on achieving together. Around 77,000 comments were posted during the event.

We analyzed the results of the Jam and identified several key corporate initiatives to be included in our future plans and several initiatives within our business groups. The Jam has prompted new activity and changed some of our business priorities.

#### **Employee communications**

Open communication is part of the Nokia way of operating. We gain commitment from our employees and employee representatives through ongoing dialogue, employee feedback and participation. Our people have several different channels for expressing their opinions and concerns as well as for driving positive change in our organization, principles and policies:

- Listening to You our annual survey for all employees
- 'Ask HR' general employee question forum
- 'Jazz Café' a lively discussion forum on the internal website
- a mail or email address to reach the Board of Directors is available for all employees to express their con cerns and give feedback anonymously.
- employee/employer unions open discussion and cooperation are ongoing with all relevant unions where we do business.

We continue to undertake a number of information sharing initiatives on our labor practices with broader stakeholder groups including governmental and non-governmental organizations, labor unions, socially responsible investors and our customers.

We also conduct regular internal labor condition assessments to ensure high labor standards and continuous improvement.

#### **Consultation and communication**

Employees are a vital stakeholder group. We value their feedback on how we run our business. It is equally important that we keep them informed and consult them about changes that affect them.

#### **Employee survey**

In 2008, over 50,000 employees in more than 50 countries participated in our annual employment survey, "Listening to You". In total, 85% of the workforce took part in the survey. The results show our employees are increasingly passionate about working for Nokia and the opportunities Nokia offers for their competencies and careers.

Some highlights from the 2008 survey include:

- 71% of those surveyed said they are proud to work for Nokia
- 81% of employees see a clear link between their work and Nokia's objectives
- Around 79% of employees say that Nokia's is committed to environmentally sustainable products and services
- 72% of employees feel they are 'treated as individuals', up 1% from 2007 and two percentage points ahead of the external benchmark for this category

From 2007 (and earlier), we have focused on sharing our strategy with employees with successful results. From being behind the competition, we are now ahead of external benchmarks and for 2008 our strategy-sharing index is stabilizing, following a big increase from 2006 to 2007.

A new focus area is how employees can do their best work, creating those conditions that inspire creativity and well-being. Our results are improving year-on-year, but we are behind our external benchmark. Employee responses to questions on specific CR issues – such as inclusion and development opportunities – are included in the relevant sections of this report.

#### **Internal communications**

We communicate with employees through several channels. These include:

#### Nokia News Hub:

The News Hub is Nokia's global intranet news service. It aims to encourage open dialogue with employees by bringing people together to discuss a wide range of topics relevant to Nokia, such as strategy, product and service launches, company values, environmental topics, organizational updates, or financial results. Readers can rate the stories and post comments, without any prior monitoring or selection. The News Hub is accessed around 150,000 times every month, with some articles being accessed over 20,000 times. The News Hub won the award for best navigation/usability for intranet in the 2007 British Association of Communicators in Business Awards.

We also engage with employees through blogs and interactive forums on our intranet. These include:

- Jazz Café portal: a popular internal discussion site where people can discuss different topics anonymously
- AskHR: Our online employee assistance service continually responds to employee enquiries. Questions can be posted anonymously under categories such as employment, development and career, and people man agement.
- Many management blogs, wikis, and a video hub where anyone can contribute
- A "know your business" channel, where our leaders share stories and key business updates everyday

#### **Employee forums and collective bargaining**

Nokia recognizes the right of employees to join unions and enter collective bargaining agreements.

In Finland, statutory legislation stipulates the issues on which employees or employee representatives must be informed or consulted. In Finland, Nokia has several different employee representative bodies in accordance to applicable legislation. These bodies are informed or consulted in their respective areas on the development or changes of the business.

The Nokia EuroForum aims to strengthen dialogue with employees. Employee representatives from EU countries meet with management twice a year through the forum to discuss business issues affecting employees.

On February 26th and 27th 2008, employee representatives from many EU countries attended a EuroForum meeting. The forum focused on issues such as the Nokia's business strategy and its people strategy. The Euroforum representatives selected three members from their teams to take their inputs directly to the various people strategy owners.

Additionally, On October 1st and 2nd 2008, 24 representatives from six European countries gathered in Helsinki for the second EuroForum meeting. The topics focused on the Ovi brand, compensation & benefits philosophy, and labor conditions in Nokia factories.

Information on the EuroForum and its activity is available to employees through our intranet. **Labor practices** 

It is extremely important to Nokia that labor conditions at all our production sites meet recognized international standards. Each of our sites must comply with our global employment guidelines. We assess their performance regularly and those of our suppliers.

#### **Employment guidelines**

Our global employment guidelines determine how we handle employment issues at each site. They cover:

- Compensation
- Working time and location
- Employee wellbeing
- Equal opportunities
- Confidentiality and privacy issues
- Guidance on external assignments
- Conflicts of interest
- Efficient communications
- Freedom of association, including collective bargaining rights

#### Labor conditions standard

On top of this and to improve management of working conditions at factories, we developed the Nokia Labor Conditions Standard in 2006. It is based on International Labor Organization and UN Human Rights conventions, and has been benchmarked against international labor laws and standards.

The standard provides information and guidelines on how to address the following issues in everyday working life:

- Discrimination
- Forced labor
- Child labor
- Freedom of association
- Occupational safety
- Occupational health
- Disciplinary practices
- Working hours
- Compensation
- Management systems

This standard provides a framework to monitor and assess labor conditions in a consistent manner across the business, and improves our communication with external stakeholders on these issues. It makes it easier to follow up after assessments to ensure factory managers implement recommendations in line with the standard. We began to implement it in 2007 and have rolled it out to all Nokia factories during 2008.

We have developed a classroom-based interactive training package to improve awareness of the labor conditions standard among our factory employees. Training will be available online for employees at other sites.

#### External temporary labor in production

External temporary labor is hired through agencies on a temporary basis (for applicable maximum time, normally 12 months). The percentage of external temporary labor in our total production workforce fluctuates throughout the year to help us meet demand in peak production periods and provide cover when our permanent employees are absent.

Our global policy on direct external labor in factories determines how our sites manage external labor. When selecting agencies, we ensure that our suppliers and external temporary labor providers have compliant labor practices.

#### **Factory assessments**

We monitor labor conditions in all our factories to check they comply with our employment guidelines and labor conditions standard. Sites are assessed regularly and plans are developed to address any issues identified. We check these changes have been implemented through self-assessments by the sites.

Labor condition assessments are conducted every second year at all production sites. The most recent assessments took place in 2008. Previously internal auditors have conducted audits but in 2008 a third part auditor verified each site's compliance with Nokia's labor conditions standard.

Results from 2008 factory assessments showed that factories have implemented well the Labor Condition Standard into employment processes, although some areas were highlighted for further improvements.

#### **External awards**

In 2007, our factory in Manaus, Brazil, was awarded the Quality of Work Environment Award by Sesi Amazones, the Brazilian Social Service of Industry program. The factory was named one of the five best companies in the large company category, out of 2,700 participating organizations.

The award recognizes excellence in labor conditions and social responsibility. It is based on the Nokia's policies and programs on labor conditions, a survey of randomly selected employees at the site and a factory inspection by the Sesi committee.

Our factory in Chennai, India, achieved certification for two important international standards in 2007 – the environmental management system standard ISO 14001 and the occupational health and safety standard OHSAS 18001. These were awarded as a result of an independent audit carried out by the Norwegian consultancy, Det Norske Veritas.

See health, safety and wellbeing for more information.

See environment for more information.

See the Factory Labor Conditions for more information

#### Inclusion

We believe that diversity and inclusion in the workplace brings competitive advantage. Employees from diverse cultures and backgrounds bring insights into our customer base around the world, adding value to our business. Nokia is committed to equal opportunities and does not condone discrimination of any kind. This commitment is embedded in our Code of Conduct.

In 2008, 72% of employees participating in our annual employee survey felt that all employees of Nokia are treated as individuals regardless of age, race, gender or physical capabilities – an increase of 1% from 2007. We also conducted a survey in 2007 to find out how our policies on inclusion affect our employees' work lives. We are implementing an action plan on diversity across all business units.

Inclusion is managed within each business unit to emphasize its importance as a business issue, and help us understand and tackle local challenges better. In 2008, we appointed a global diversity and inclusion director – reporting to the Vice President of Human Resources – to oversee the management of these issues.

We are integrating diversity targets into our global people management processes. For example, we ask our leaders how they create an inclusive environment as part of a self-assessment questionnaire evaluating their general Page 45

performance. Their responses are used to identify areas for improvement and share best practice across the business.

In 2008, 13.6% of senior managers were women, up from 12.5% in 2006. We offer a range of options that promote flexible working to help employees balance the demands of work and home life.

51.3% of our senior managers are Finnish, which is down from 54.6% in 2007. This continues our trend of becoming a more diverse company. Our policy is to employ local people wherever we work. Around 115 different nationalities work at Nokia.

#### **Training and development**

We want employees to be able to develop at Nokia, both personally and professionally. We offer an integrated package of classroom training, on-the-job learning, individual coaching, and mentoring. We encourage people to learn through active participation by trying new roles at Nokia.

In 2008, Nokia's training expenses for employees working elsewhere than in production amounted to EUR 55 million, equating to expenditure of EUR 1,721 for each such employee.

#### **Performance evaluation**

Open dialogue about performance and opportunities for development helps to motivate our employees. We encourage managers to coach employees continually as well as having at least one formal personal development discussion every year.

Our 2008 employee survey showed 63% of those surveyed indicated they re receive ongoing feedback to improve their performance. In addition, 69% indicated their manager inspired them to do their best work. Constructive feedback is a significant element of performance evaluation. In response to this feedback, we have introduced a new performance evaluation tool designed to help employees understand their assessment better and give them clear ideas about how to improve. It encourages managers to give specific examples of good performance, and explain clearly how areas for improvement are identified.

We understand that praise is an important motivator and want to create a culture where team members recognize achievement and help each other perform well. In 2007, 762 people at our factory in Dongguan, China, participated in a competition designed to encourage employees to take pride in their skills by performing a range of production tasks to a high standard in the shortest time.

#### Leadership

Strong leadership is vital for the continued success of our company. In 2007, we launched a new leadership model – True Nokia Leader – alongside our new strategy and values. The True Nokia Leader must bring our values to life and consistently ensure they form relationships based on trust and deliver extraordinary achievement, growth and development for individuals, teams and our business. The model will guide our leadership development activities and the performance evaluations of managers and leaders.

In 2007, Nokia was named number one company in Europe and number three in the world in a Top Companies for Leaders study conducted by human resources company Hewitt Associates, in partnership with Fortune magazine. The study examines how organizations identify and develop future leadership capability and analyzes the links between leadership practices and organizational performance.

#### **Rewarding performance**

Nokia rewards employees competitively through a global reward framework designed to recognize individual contribution and achievement. Levels of compensation are determined by local labor markets and take into account both individual and company performance.

In 2008, 34% of those participating in our annual employee survey felt their pay was competitive. This was a slight decrease from 2007.

#### Incentives

Our reward programs – including bonuses – recognize performance based on individual, team and company results.

Some employees raised concerns about the fairness of our bonus system in 2007. In response, we reviewed the way bonuses are structured to ensure transparency and consistency across the company. We held several focus groups with managers, human resources experts and employees, and reviewed the incentives offered by other companies.

We introduced changes to our incentive plans in the second half of 2007. The new plans are simpler, more consistent and will deliver equal or higher payouts if target performance or above is achieved. The key changes were communicated to employees through their managers, by email and in internal newsletters with supporting information on our intranet.

A wide number of employees are eligible to join our equity programs, based on rewarding performance and retaining top employees. Our broad-based equity compensation programs include stock options and performance shares. Both are linked to the company's performance over a number of years.

Incentive highlights include:

- Cash incentive/bonus plans 100% of professional employees participate in short-term incentive, R&D incentive, sales incentive production or short term bonus plans
- In August 2007, employee participants in the Nokia Connecting People Bonus plan were rewarded with a partial payout based on business performance over the first half of 2007. This plan has now been re placed to align with changes to other employee incentive plans
- A new Short Term Bonus Plan was introduced in the second half of 2007 for employees working in production factories, flagship stores and employees currently not eligible for any other incentives.
- An interim payout under our Performance Share Plan was delivered to participants in May 2007

We communicate with employees about the effect of business results on their incentives after each quarterly announcement, through articles and video messages on our intranet news channel, the News Hub. We also communicate through quarterly letters, blogs, webcasts and face-to-face meetings. In addition, information is available on the Know Your Business section of our intranet.

For more information regarding our methods of communications go to: Internal Communications

#### **Investing in People**

We aim to match the aspirations of our employees with the needs of our company. The Investing in People (IIP) process enables us to put this policy into practice.

Structured IIP discussions are held twice a year. During these discussions, objectives are set for a defined period. They form a clear link between the company's business strategy and the daily work of each employee. Competencies are evaluated annually and a personalized development plan is agreed. Longer term professional goals are also part of employee IIP discussions.

The development and renewal of our employees' skills and competencies is critical for Nokia to continue its growth. Our employees are encouraged to participate in a variety of educational experiences throughout the year to enhance not only their work potential but that of their team. During 2006, employees attended more than 280 000 days of training in a variety of areas related to the business. This translated into 125 Euro million invested by the company towards employee training activities.

#### **Factory labor conditions**

All Nokia factory workers have the right to work under safe and supportive labor conditions. Labor conditions at all our production sites must meet recognized international standards. This is not only the right thing to do, but makes good business sense too.

Nokia is a responsible company - a company whose responsibilities extend to the well-being of the people our operations have an impact on and the locations we operate in.

Nokia's responsibilities also include attracting competent and committed workforce and conducting our business in a way that satisfies our customers, consumers and investors and employees. This is why we want to provide good and ethical working conditions in all our production sites.

Compliance with local law is naturally the foundation for all our activities. In addition to that we aim at complying with global good practices that often go above and beyond the scope of the local legislation.

These global good practices are defined in the Nokia Labor Condition Standard. It is a framework based on Nokia's Code of Conduct, UN human rights declarations, ILO conventions, international ethical standards and international labor laws. It has also been benchmarked against SA8000 and EICC standards and we have emphasized our industry's requirements in it.

#### **Management system**

Ethical labor practices in Nokia factories are enabled by the management system. It outlines the commitment, required processes and communication practices that lead to active implementation of the criteria set in the Labor Condition Standard.

Our aim is that professional, straightforward assessments, clear measurement systems and well established follow-up process will make it easier for factory managers to implement changes. We also expect this to add value in various communications with external and internal stakeholders.

We acknowledge that putting our operations subject to independent validation is the best way to ensure ethical labor practices. In 2008, all nine Nokia factories were assessed against the Nokia Labor Condition Standard. The assessments were conducted by a professional social assessment company, STR-CSCC. Going forward, third party assessments will be carried out every second year.

#### Assessment process

During the assessment the assessors interview employees and management, observe the factory site and review documents related to employment practices. Employee interviews are a valuable source of information. They are highly confidential and conducted professionally.

Labor condition management at Nokia is a continuous development process. Corrective action plans are agreed to close any possible gaps found during the assessment. Factory management then commits to implement the needed changes, and improvements are followed-up regularly by global compliance manager and the factory itself.

#### Training

Training on the Nokia Labor Condition Standard and Code of Conduct is provided to all factory workers. Factory workers go through a face-to-face training session that focuses on the Nokia Labor Condition Standard and its implementation at factory level. An e-learning solution is also provided to all non-production Nokia employees.

#### **Results**

Results from 2008 factory assessments showed that factories have implemented the Labor Conditionrvtandard into employment processes well, although some areas were highlighted for further improvements.



#### **1. Working hours**

Shifts are built according to local laws and Nokia Labor Condition Standard.

However, sometimes during the peak production period some employees chose to work more than 60 hours per week and not to take their day off. Although overtime is voluntary, and in some countries the local law does not limit weekly working hours at all, it was recommended that factories improve their processes to be able to better monitor that one rest day after every six days of work is guaranteed and that no overtime leading to exceed total working hours of 60 per week is approved.

#### 2. Compensation

All factories pay above legal minimum wages for all employees and overtime is compensated at a premium. In addition to wages employees receive production-based bonuses and additional benefits, which have been defined by each factory to respond to local needs. Examples of such benefits are free meals and transportation, health services, dental care, food purchasing cupons for local stores and gyms. All these add up to the total compensation.

The only two findings in this area were related to termination pay and one incorrectly paid salary, which was due to a payroll system change. Recommendations were given to correct the errors and enhance the processes so that no errors like this would occur in the future.

#### 3. Discrimination

No evidence on discrimination was found in any of the factories.

The two recommendations were given to improve the documentation of the discrimination policy and eliminating age limits from job advertisements.

#### 4. Freedom of Association (FOA)

All factories respect the freedom of expression and right to join associations. Assessments found that employees in Nokia factories have a right to choose how they are represented. In factories were employees are not represented by labor unions, or where labor union is not democratically formed, employees have organized themselves in works councils. Employees freely elect employee-members in these councils. Works councils have both employee and management members. They meet regularly and are formed to discuss and solve any workplace related issues. Employee testimonials show that these councils are highly appreciated and are also efficient ways of communicating with management.

A recommendation was made in one factory to change the selection process of the employee representatives to make it more democratic; although the system complied with local laws and employees are able to volunteer to be candidates, the final selection from the volunteer list is not done by employees themselves. This change has already been implemented.

#### 5. Forced labor

No issues arose on use of prison or bonded labor. Most of Nokia factories have arranged bus transportation for their employees. The auditors found bus schedules to be well aligned with shift timings allowing enough time for changing clothes, but also not too long waiting time at the beginning/end of a shift.

An improvement area was detected in one factory related to compulsory overtime practice. The facility was instructed to cease the practice immediately and to develop an overtime policy ensuring that overtime is always voluntary. This has now been corrected.

#### 6. Child labor

Auditors did not find any evidence of child labor in Nokia factories. The minimum age of employment was verified to be 18 due to shift work requirements. Some factories are selected by local governments to partner with technical schools and universities in apprentice or trainee schemes, in order to support education and development, and ideally provide employment opportunities.

Although Nokia operates in an industry where child labor is highly uncommon, we have developed a remediation process in case a child under 15 years of age (or older if local law so defines) is found working in one of our factories. Remediation would cover, for example, education until the child is no longer a child.

#### 7. Disciplinary practices

No issues regarding disciplinary practices were found in the assessments. All Nokia factories have implemented a progressive warning procedure, and do not allow fining as a disciplinary measure.

#### 8. OHS

Issues found were related to personal protective equipment (PPE) use (mainly earplugs), first aid kit stocks and fire safety. Despite employees being required to use this equipment a small number were choosing not to do so. Factories were advised to increase employees' awareness of the benefits of using PPE, improve the process for filling first aid kits, and ensure adequate number of trained people with first aid and fire safety skills.

All findings have an action plan in place and those factories with an action plan have been scheduled for a reassessment during the first half of 2009 to ensure full compliance with the framework.

#### Nokia standards for factory labour conditions

Aim of this standard is to set clear requirements for labor conditions at Nokia factories. These are voluntary commitments made by Nokia to complement local legislation. These standards are based on Nokia's Code of Conduct, UN human rights declarations, ILO conventions, international ethical standards and international labor laws. They also have been benchmarked against SA8000 and EICC.

Below is a summary of the standard, listing the key requirements in each topic.

#### **1. Working hours**

It is the advantage of both the factory employees and the employer to control working hours so that employees' free time and well-being is ensured.

The regular working week in factory must be set according to local legislation, but not exceeding 48 hours even if local law allowed that. At least one rest day per any 7 day period must be guaranteed for every employee. Overtime work must be voluntarily accepted by the employee and must not cause the employee to work over 60 hours in a week. If a freely negotiated collective agreement exists between employer and employee organizations, employer can require overtime to cover a sudden, short-term business demand, if there is an agreement about such a case in the collective agreement.

#### 2. Compensation

Fair pay and transparent compensation practices.

Compensation must always be above legal minimum wages. Total compensation including wages and benefits must strive to cover the basic needs of employees. Relevant market and industry data must be studied when defining the salary levels. When collective agreement exists, and is negotiated with employees, salaries must be set according to it. The pay structure, pay slip and payment processes must be clear and understood by workers, and available in local or appropriate language.

#### 3. Non-Discrimination

Employment decisions shall only be made based on employee's ability to do the job.

Discrimination based on any personal attribute (such as age, gender, nationality, opinions, memeberships, religion, disabilities or race) must be strictly forbidden, as well as all kind of harrassment, whether sexual, physical or mental. Employees must be free of any discrimination and harassment in all employment practices, such as recruitment, promotions, access to training or setting pay levels. Factories must have grievance and disciplinary processes in place in order to support the development of a workplace free of any discrimination and harassment. Special attention must be put on recruitment practices. Testing for pregnancy or chronic disease e.g. HIV or Hepatitisis must not be used as a criteria for hiring.

#### 4. Freedom of Association

Employee representation and freedom of association encourage open and active dialogue between management and employees.

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Employees must be entitled to peaceful assembly, even if this freedom is restricted by law. In those countries the employees must have a right to select a representative/s to enable communication between the employees and the management. Employees must have a right to join associations of their own choice, and to select their representatives according to the local and international practices. The management must support, encourage and implement active communication and dialogue with employees and/or employee representatives.

#### 5. Forced labour

Forced labour is a serious violation of a fundamental human right and can not be tolerated.

All forms of forced labor must be forbidden. Nokia or Nokia's external labour providers or recruitment agencies must not be engaged in nor support the use of forced labour. Work contracts must be made and offered in written to all employees in local or appropriate language. Employees must not be required to place any deposits for gaining employment. Employer must not hold any identification papers of employees or limit the freedom of movement in any ways. The notice period must be reasonable and employees must not be fined for resigning.

#### 6. Child labour avoidance

Children don't have the physics, knowledge or experience of an adult, and therefore children enjoy distinct rights to protection.

Employment processes must be designed to strive that no children are working in factories. Age of the candidate must always be verified prior to recruitment. Young workers may be employed according to local legislation to support youth employment. Young worker refers to any person at least the age of 15 but under 18, or older if so specified in local legislation. However, young workers must not be exposed to any hazardous work, overtime work or nightshifts, as per ILO recommendations.

#### 7. Disciplinary practices

Organizations need disciplinary measures to maintain safe and effective operations. Disciplinary actions shall always respect worker's mental, emotional and physical well-being.

Physical punishment, or physical or mental coercion and verbal abuse are not tolerated. Factory must set up a progressive disciplinary process and share it to employees in local or appropriate language. Disciplinary salary reductions (e.g. fines) are not allowed from the basic wage. Employees must have a right to respond or internally appeal against the disciplinary decisions concerning themselves.

#### 8. Occupational Health and Safety

OHS provides employees with safe working environment and promote employee health.

Employer must provide information and training to all employees about occupational health and safety issues already at induction and repeat it regularly. First aid and other emergency training must be offered and promoted to ensure adequate amount of trained personnel. Occupational health services must be available to all employees regarding work related health issues, as well as programs promoting health and well-being. Occupational standard operating procedures must be in place and available to all employees. Health hazards must be prevented by systematic identification, assessment, control and documentation. Contingency plans must be in place, and fire and evacuation drills must be performed.

#### 9. Management systems

Management system provides tools for the management to monitor and develop processes and practices to enhance working conditions.

Factory management must own the responsibility for and commit themelves to ensuring compliance with the Nokia Labour Condition Criteria at the respective factory. Nokia Labor Condition Standard must be communicated internally and provided in the local language. Labour condition compliance in factories must be assessed every sec-

ond year by a 3rd party, i.e. professional social audit company. Employees must have a confidential channel to raise grievances and report misconducts of this standard. Cases of grievances must be followed-up by management on regular basis.

## Health, safety and wellbeing

The health, safety and wellbeing of our employees is vital to the success of our business. Our Occupational Health and Safety Policy sets out our commitment to provide safe and healthy working conditions for all our employees and promote wellbeing at work. We work with our contractors, suppliers and customers to continuously monitor health and safety issues and meet our commitments.

Health and safety at Nokia is managed by the Global Occupational Health and Safety (OHS) unit, part of our Human Resources department. The unit is responsible for developing our health and safety strategy, and annual action plans. The Global OHS team coordinates and facilitates health and safety arrangements in individual countries, each of which have their own health and safety services. The team also develops standard operating procedures to help us standardize procedures for hazard identification, risk assessment and incident reporting across our global operations.

We run a range of campaigns and training programs to raise awareness about health and safety issues. For example, in 2007 we ran a campaign to raise awareness about the risks and affects of dengue fever at our factory in Chennai, India. We also ran an event where people could learn about eye health. Our factory in Beijing, China, conducted a special program focusing on hearing protection. We also ran a safety induction program for employees at our flagship stores around the world.

#### Global operation injury and illness rate

In 2008, Nokia's global injury and illness rate was 0.6, which continues the downward trend from 0.73 in 2007 and 0.82 in 2006. There were no fatal injuries. There is no global industry average to compare against, but as an example of the range, our injury and illness rate in 2007 was lower than the United States Bureau of Labor Static's injury and illness rate, that was 1.0 for our industry in 2007.

In order to further improve our performance in production related occupational health and safety, a Global OHS Operations team has been formed. The focus of this new team will be to develop our OHS management systems and to elaborate global standard operating procedures.

Our factory in Chennai, India, received the Occupational Health and Safety Assessment (OHSAS 18001) certification in 2007. To achieve the standard, the factory conducted a series of internal audits and developed action plans to address any issues identified. An online system to track accidents was created to ensure swift reaction to minimize risks. The factory raised awareness of safety issues through training sessions, activities during safety week and a program encouraging employees to enter suggestions on how to improve health and safety at the site.

#### Wellbeing

The general wellbeing of employees makes a big difference to their engagement and productivity at work. In the 2007 employee survey, 64% of the respondents felt their manager really cares about their wellbeing. There has been a steady increase in the proportion of positive responses on wellbeing over the past three years, indicating an improvement in awareness and attitudes among Nokia managers regarding the importance of employee wellbeing.

Fitness was the theme for employees in Finland in 2007. More than 21,000 people took part in 147 events, including fitness guidance, tests, courses, theme days, and lectures. New fitness centers for employees were opened at our sites in Mexico and China in 2007.

Employees are more likely to feel committed to their work if they have a comfortable work–life balance. This is an important factor in employee wellbeing. Our 2008 employee survey showed that 61% of respondents think their manager supports their efforts to balance their work and personal lives. We are pleased that the majority of employees feel supported but recognize there is still room for improvement. We are encouraging managers to discuss with employees how work impacts wellbeing and to set wellbeing targets.

We encourage our employees to make use of Nokia products to increase their mobility and work from home where possible in accordance to practices and rules. We held a summit for employees to discuss new ways of working this year.

We do not discriminate against existing or potential employees with chronic health conditions that do not prevent them from working. However, where applicable, new recruits may be asked to complete a medical evaluation to ensure they are fit enough to do their work safely. See medical evaluations for more information.

#### **Medical evaluations**

It is Nokia's global policy not to discriminate against potential employees with chronic conditions that do not prevent them from working. Our global recruitment policy states that the objective of medical evaluations is to ensure that candidates will be able to cope with the demands of their work according to the following principles:

- The candidate should be able to successfully cope with the health and safety demands of the work
- The work or the working conditions should not constitute a risk to the candidate's health
- The candidate's health should not constitute a health or safety risk to co-workers

Disabilities, medical conditions or chronic illnesses that are not relevant when performing the planned work, or pregnancy, are not acceptable reasons for rejection.

Previous incidents at our local operations have brought to our attention some incidences where local laws and practices conflict with our global policy:

Hepatitis B testing in China: People who have hepatitis B can usually lead normal lives but are often discriminated against in China. In April 2007, a case was brought against Nokia by someone who claimed our operation in Dong-guan decided not to hire him after a medical evaluation ordered by the company revealed he had hepatitis B. Nokia investigated the case to establish whether the Dongguan unit was in breach of our global policy. After this incident we reviewed the whole blood testing procedure in China and stopped testing for hepatitis B as part of the pre-employment medical evaluation. Instead, we now offer awareness training that provides accurate information on the disease and its contagiousness to help end discrimination against people with hepatitis B. We also offer voluntary hepatitis B vaccinations to our employees in China.

Pregnancy tests in Mexico: According to the Mexican Labor Law, pregnant women are not allowed to work night shifts or overtime. To comply with this law, our site in Reynosa required pregnancy tests as part of the pre-employment medical evaluation. As this was a breach of our global policy not to screen potential employees for pregnancy, we stopped the practice as soon as the conflict with our policy was identified. Our new process relies on women reporting their pregnancy voluntarily so that appropriate changes in their shift structure can be made. We also have a health program for pregnant women and communicate the benefits we offer through a bulletin board. In addition, we invite women to update their medical records regularly.

As a result of these two incidents, we have reviewed our pre-employment medical evaluation practices at our operations around the world, to ensure compliance with local laws and international standards, as well as our own global policies. The medical evaluation practices only include tests that are directly related to work related risks or working ability.

## 5. Community

As a market leader with global operations, we accept the responsibility that comes with our position. Nokia is committed to enhancing the quality of life around the world, in particular the communities in which we operate. Our strategy focuses on two major areas: using mobile communications to stimulate social and economic development, and supporting young people.

We work on community projects internationally because our products and services reach billions of people around the world and can have an impact on a wide scale. But our approach is always adapted to be the most appropriate at the local level.

Nokia supports communities through partnerships and corporate giving. We have a clear set of values that we integrate into our business practices at every level. We also see the potential for using mobile technology as a platform for providing access to knowledge and therefore enabling richer and more fulfilling learning experiences.

#### **Our commitment**

As a market leader with global operations, we accept the responsibility that comes with our position. The best contribution Nokia can make to sustainable development is to carry out its business in a responsible way. This premise forms the basis of our commitment to creating ethically sound policies and principles and implementing corporate responsibility programs.

#### **Community support**

One aspect of our corporate responsibility is to connect with the communities we work in, so that we channel our presence into a positive societal contribution. Nokia is committed to supporting various communities through donations, sponsored programs, and partnerships. We have a clear set of values that we integrate into our business practices at every level. We have accordingly chosen to support organizations and projects which reflect these values.

#### **Youth focus**

Many of the programs that we are involved with specifically target young people. Supporting such programs also has a wider social impact, as they directly benefit teachers, parents, and other members of the community.

#### Access to knowledge

We also see the potential for using mobile technology as a platform for providing access to knowledge and therefore enabling richer and more fulfilling learning experiences. Our aim is to create a way in which educational content can be effectively delivered via a range of technological solutions to students in different parts of the world in a manner that respects their individual needs.

#### **Improving communication**

We are also committed to developing technology that can help bridge the communication gaps between various communities around the world. By working together with our global and local partners, we are able to fine-tune our efforts in order to bring new opportunities to people in the developing world. Nokia Life Tools is an example of one such model.

#### Access for disabled customers

Access to information is not only a concern in relation to emerging economies. Accessibility is also a companywide, global goal in terms of providing greater usability in design and services for our customers with disabilities. We have full-time staff dedicated to developing internal product design standards, initiating research projects to address specific needs, and training employees worldwide to service customers with unique wireless communication needs. Page 55

We are proud to respond to the diverse needs of a global marketplace. Throughout these pages you will find examples of Nokia's involvement with programs and partnerships specifically designed to help various societal groups. Our commitment to these projects demonstrates the significance we place on making a positive societal contribution.

## Mobile technology for development

Access to mobile and digital technology is an important driver of social and economic development, both in the developed and the developing world. Mobile phones offer far more than the ability to make calls. Billions of people in the developing world live in remote and rural communities without access to healthcare or education, transport and up to date news - let alone banking or financial services. Mobile phone networks have the potential to transform the delivery of these services and make them available to many more people.

Our business model enables us to reach billions of people, and we have the opportunity to create real change on a wide scale.

To understand which areas we could have most impact in, we commissioned the Centre for Knowledge Societies (CKS) to produce the Mobile Development Report, which studied the effect of mobile phones on economic and social life in rural areas. The study identified several service areas that could be transformed by mobile technology to improve people's quality of life. These include transport, micro-commerce, finance, healthcare, governance, education and infotainment.

We are currently developing services to address these areas and the CKS research supports our belief in the potential of the work we are undertaking. In 2007 we collaborated with the non-for profit research institute, Instituto Nokia de Tecnologia (INdT), in Brazil to set up research and development (R&D) teams in the Amazon to investigate technology applications. In 2008 we created R&D teams in India and Kenya to explore how mobile technology can serve people in these markets.

#### Nokia Data Gathering

Nokia Data Gathering is a new software solution to help public sector and non-governmental organizations (NGOs) quickly and accurately collect data on critical issues such as disease outbreaks or disaster relief via mobile devices. The Amazonas State Health Department in Brazil was the first to use the solution as part of its fight against dengue fever in the city of Manaus in Northern Brazil.

The Nokia Data Gathering software is available to public sector organizations and NGOs free of charge. It can be used to create tailored questionnaires and distribute them to multiple mobile phones using a normal mobile network. Field personnel surveying local conditions can quickly complete the questionnaires and immediately transmit their findings to a central database. The system also allows organizations to geo-tag data with GPS location information to build a more detailed picture of very local conditions.

Nokia and Instituto Nokia de Tecnologia (INdT), a non-profit research and development centre in Brazil developed the software. Nokia will be donating licenses for the Nokia Data Gathering software to public sector organizations and NGOs. More information can be found by visiting www.nokia.com/datagathering.

#### **Nokia Education Delivery**

Imagine a group of elementary school students in a rural village on the Philippine island of Mindanao, intently watching a colorful video on plant and animal life as part of their science class. Afterward, they talk about what they've learned, guided by their teacher, and then go outside to begin creating a terrarium.

This dramatically different learning experience is the result of Nokia Education Delivery, an innovative education program that brings interactive multi-media learning materials and enhanced teaching skills into the classrooms of schools in the developing world using mobile technology.

Access to a quality education is perhaps the most important factor determining the future of young people everywhere. Yet the vast majority of today's youth lack the educational opportunities they need to become productive members of society.

Find out more about Nokia Education Delivery at www.nokia.com/educationdelivery

#### Accessibility

Nokia believes that universal access to mobile communications is the most effective way to bridge the digital divide, especially for users with cognitive, sensory, or physical limitations. While our hallmark is intuitive design and usability for all customers, we also have accessibility features that are specifically designed for people with disabilities, who form an often-marginalized target group.

Some of our current accessibility targets include:

In 2009, we are bringing to the market the Nokia Wireless Loopset LPS-5. It provides T-coil equipped hearing aid users with the possibility of a wireless handsfree connection to their Bluetooth-enabled mobile phone or other audio device. Key features of the Nokia Wireless Loopset include a vibrating alert, user adjustable sidetone level for enhanced clarity and control of own voice, and optimized volume range and frequency response.

Voice feedback, camera and magnifier capabilities and other technologies are harnessed to sensor sensitive solutions. For example, text scanning from outside the device with voice feedback was introduced by a 3rd party. Video calling with dual cameras enables sign language calls. Also, development on text calling, i.e. synchronized texting was initiated in 2008.

Successful integration of features for accessibility is evident in Nokia devices making use of technologies available. Understanding disability-centric use cases, examining hearing, vision, speech, and mobility and cognition challenges are factored in to the ease of use.

We support a universal access policy, which is backed by financial support from mobile phone manufacturers and providers, in order to decrease recurring costs of ownership. This is an ongoing target, as we firmly believe that accessibility in telecommunications is useless if it is not affordable.

More information is available at www.nokiaaccessibility.com

#### Banking to the unbanked

Today, 40 percent of the world's population, around 2.5 billion people, are unbanked meaning they do not have access to financial services, even the most simple banking.

Looking at Africa only, it is estimated that only one fifth of the population have a bank account. The high cost of financial service infrastructures leaves the majority of people without access to banking. This means they have to rely on a cash-based economy that provides little security and which creates an informal labor market and a lower tax base for governments. Mobile phones have the potential to transform this situation by providing basic financial services to people on low incomes in way that is low cost.

#### Pre-paid mobile credit

In many developing countries people use pre-paid airtime as a virtual currency. For example, if bread costs one dollar, a customer may pay the baker by transferring pre-paid airtime worth one dollar when they buy the bread. This credit system could be improved by making it possible for people to withdraw cash in exchange for credits.

#### Microfinance to access mobile technology

The credit system could also help people access mobile phones by facilitating small loans. The cost of buying a phone is a significant expense for most people, though it is likely to be small in comparison to the running cost. If the barrier to access is cash flow rather than cost, issuing small loans through the phone credit system could help.

Nokia began a pilot project in July 2008 in the Indian state of Andhra Pradesh, with SKS Microfinance, one of the fastest growing microfinance institutions (MFI) in the country. Through this program, SKS customers are offered loans repayable on a weekly basis, thereby significantly reducing the cash barrier. Previously, to purchase a handset they would have pay the entire handset cost upfront in cash. For many, this cash would have been 30 to 50 percent of their monthly income. Early results of the pilot clearly demonstrate the viability and need for microfinance solutions.

#### **New technology**

Nokia provides NFC-enabled (Near Field Communications) phones, which can be used instead of a credit card or as a travel ticket. They could help to provide social security and banking services in areas where there are no computers or internet services.

These pilot studies in Africa and Asia have demonstrated the potential for mobiles to deliver basic financial services in developing countries. Nokia has partnered with Vodafone and Nokia Siemens Network to publish a report 'The Transformational Potential of M-Transactions'. The report encourages policy-makers to build a new regulatory framework to encourage financial transactions by mobile phones and increase access to banking services in the developing world.

#### Total cost of ownership is the key in bringing social inclusion

Mobile communications has the potential to lift some of the most vulnerable populations out of poverty and enable them to engage fully with the global digital community. Affordable mobile communications are now a reality in many countries. Serving lower-income consumers has not only proved to change lives and create wide socioeconomic benefits, it has also lead to profitable business. Success stems from the cooperation and contribution of all players involved: vendors, governments and service providers.

By 2015, 83 percent of the global population will live in emerging markets and 45 percent will be under 25 years old. These are the people who will reap the biggest benefits as the communications industry reaches out to the next billion consumers.

Furthermore, the benefits of mobile communications extend beyond individuals to deliver improved growth and development for entire economies. As studies confirm, an increase of 10 mobile phones per 100 people boosts GDP growth by 0.6 to 1.2 percentage points.

#### Knocking down the affordability barrier

For many people cost remains the main barrier to improving lives through mobile technology. Typically, people are willing to spend between 5 percent and 10 percent of their disposable income on mobility.

With 2.7 billion people earning less than two US dollars per day, a monthly cost of five US dollars or less is needed to enable the majority of the world's lower-income consumers to join the mobile community. As Nokia research shows, emerging market average total cost of ownership (TCO) is 10.88 US dollars, down from 13.16 US dollars in 2007. Although much remains to be done to lower TCO still further, this is a huge advance compared to the meager drop in TCO of just one percent from 2005 to 2007 and increases the potential to reach more and more consumers every day.

#### Nokia Life Tools

Timely and relevant information for smaller towns and rural areas directly to mobile phones

According to extensive Nokia consumer research, nearly half of emerging market customers state that they would rather connect to the Internet over a mobile phone than a computer. As a result, in 2008 Nokia introduced Nokia Life Tools, a service that enables people to make better informed decisions, find timely and relevant information, access learning opportunities and enjoy entertainment via their mobile.

#### Life tools for agriculture

Nokia conducted a limited-scale pilot in India during 2008. Agriculture employs more than 60 percent of all workers in India. Reuters Market Light (RML) is the content service provider collaborating with Nokia for agriculture services in the pilot, where accurate and regular information on weather, prices and availability of seeds, fertilizers, pesticides, and prevailing market prices for the produce are sent to the farmer.

The information is customized to the farmer's location and selection of crops, and is delivered directly to their Nokia mobile phone. By getting the latest information directly, farmers can overcome uncertainty and get the right information to grow and sell their crops. The pilot study results showed that the services had high appeal for livelihood and life improvement services.

Filling in the information gaps in agriculture and education with Nokia Life Tools, we strive to contribute towards empowering people with the right tools to help them make informed decisions in their daily lives.

#### Life tools for education

The education service of Nokia Life Tools aims to boost students' English language and local, national and international general knowledge. In a pilot developed with EnableM, language lessons, quizzes on English words and phrases, and general knowledge were delivered direct to students' mobile phones and were designed to give students an extra advantage in their education. In future, the education service will also come with information on higher education and career guidance and tips, exam preparation, quizzes and access to exam results.

Astrology services and ringtone downloads, with content from OnMobile during the pilot phase, bring the fun element to Nokia Life Tools.

#### Life tools for email

Another service aimed at the developing world is Ovi Mail, which has the potential to be the first digital identity for many people in emerging markets. Unlike most other email services, an Ovi Mail account can be created and used directly on a Nokia device without ever having to use a PC. Since the launch of the beta service in December 2008, around 90 per cent of the accounts have been created on a Nokia phone.

#### How it works

Nokia Life Tools services use an icon-based, graphically rich user interface that comes complete with tables and which can even display information simultaneously in two languages. Behind this rich interface, SMS is used to deliver the critical information to ensure that this service works wherever a mobile phone works, without the hassle of additional settings or the need for GPRS coverage.

#### **Mobile Learning for Mathematics**

#### What is it?

Technology in the field of education demands universal access. Mobile phones – now almost ubiquitous amongst secondary school pupils – are answering this need, providing new and exciting opportunities to support and develop learning.

Nokia and Nokia Siemens Networks began the Mobile Learning for Mathematics pilot in South Africa in October 2008, working in collaboration with the South African government, MXit, WebAlt, and the Meraka Institute. The project is an invaluable demonstration of the added value mobile communication can bring to education in a sustainable, scalable, and affordable way.

#### How does it work?

Mobile Learning for Mathematics focuses on active learning, delivering interactive study packages to students' mobile phones through a collaborative delivery channel. Content includes algorithmic exercises, step-by-step solutions, and audio-visual hints and tips to help students solve tasks for themselves. Pupils can then submit assignments as well as receive feedback, reminders and ad hoc tests from their teachers via SMS. Any problems that come up can be discussed with tutors in real time using Dr Maths, an online tutoring application. In the South African pilot the delivery channel was MXit – a mobile instant messaging service with 13 million subscribers, 48% of whom are aged between 14 and 18.

#### What were the results?

The service was very popular indeed, generating almost 50,000 visits in the first seven weeks. The initial results of the pilot showed that secondary school pupils really enjoyed using the solution and found it really helped them with their maths lessons. They found themselves doing many more exercises than they normally would, and studying maths a great deal more outside school hours. The solution also helped teachers to have a better knowledge of the competencies of their pupils and helped pupils realise just what they are capable of.

The project has raised a lot of interest internationally and has definitely succeeded in showing the huge potential for using mobile communications in formal learning. Now is the right time to develop such services: by reaching and engaging with pupils using their own tools and communication methods education can be brought out of the classroom and into the hands of students.

## Youth Development

Youth development is crucial for social and economic progress, especially in disadvantaged communities, and this is an important focus for Nokia's community involvement activities. Nokia has education, creative arts, employability and civic engagement programs in 57 countries.

Country projects, implemented by local non-governmental organizations, provide a means of achieving important youth development outcomes, such as improved performance in school, increased literacy, finding and maintaining employment, and active citizenship.

#### Partnerships

#### Partnership with the International Youth Foundation

The International Youth Foundation (IYF) is one of Nokia's main community involvement partners. IYF believes in the extraordinary potential of young people, investing in effective programs around the world that prepare today's youth to be healthy, productive, engaged citizens. In 2008, Nokia-supported projects directly benefited more than 43,000 young people, and indirectly influenced the lives of over 175,000 children, youth, teachers, social service providers, and community members. Cumulatively, over nine years, this global partnership has impacted the lives of more than 440,000 young people. Country programs, tailored to meet local needs, promote the spirit of youth volunteerism, harness the power of technology to improve education, and equip unemployed youth with valuable skills and access to jobs.

Nokia is the founding sponsor of the YouthActionNet®, a program that seeks to develop a new generation of socially conscious citizens who create positive change in their local and global communities. In 2008, we awarded 20 YouthActionNet® Global Fellowships to accomplished young leaders in 16 countries. The 2008 Fellows include 27-year-old Bright Simons from Accra, Ghana, who co-founded mPedigree, a mobile phone-based drug authentication system. Bright took action after learning about the growing threat of pharmaceutical fraud globally. Statistics from the World Health Organization suggested that a quarter of all medicines sold in the developing world were

fakes. Bright's solution is simple, sustainable, and socially significant. When consumers purchase a prescription drug it comes with a scratch panel on the packaging, that when scraped off reveals an eight-digit number. The purchaser creates an SMS containing the eight numbers and sends it to a fourdigit code (1393). Soon afterward, he/ she receives a message informing them if the prescription drug is genuine or a fake. The text message is free and paid for by the drug manufacturer. mPedigree was successfully tested with locally manufactured drugs in a 2008 pilot scheme in Ghana. Says Bright: "The initial evidence is that people are ready to jump on as long as the service is free." The next goal is to get international drug manufacturers involved.

Through YouthActionNet®, Fellows receive valuable training, recognition, and networking opportunities. Read more about Bright, and other inspiring young social entrepreneurs at http://www.nokia.com/NOKIA\_COM\_1/Corporate\_Responsibility/Sidebars\_new\_concept/Society/2008%20YAN%20Face%20Book.pdf.

#### YouthActionNet leadership program

Nokia is the founding sponsor of the YouthActionNet leadership program aimed at reaching young people who are leading societal change. In 2008 we awarded 20 fellowships in 17 countries.

The 2008 Fellows included 27-year-old Bright Simons from Accra, Ghana. He is looking to combat pharmaceutical fraud in Africa via a phone-based drug authentication system. He developed the system as a result of seeing shocking figures showing 80 percent of medicines sold in pharmacies in Lagos, Nigeria were fake. In addition the World Health Organization has suggested that a quarter of all medicines sold in the developing world are fake.

The drug authentication system is an SMS based service with an ingenious authentication element called mPedigree. The idea is simple, sustainable and socially significant. When you buy a prescription drug it comes with a scratch panel on the packaging that reveals an authentication code. The user sends the code by SMS and receives a reply SMS shortly after that tells whether the drug is genuine or fake.

The text message is free and paid for by the drug manufacturer. mPedigree was successfully tested in a pilot scheme with locally manufactured drugs in March 2008 with over 2,000 participants who were later interviewed. The next goal is to involve international drug manufacturers.

YouthActionNet runs training and networking events for the Fellows and connects them with each other through a networking website. Read more about Bright Simons and other stories of YouthActionNet

#### Partnership with PLAN

Nokia has partnered with the international child-centered development organization, Plan, to empower young people to communicate about issues that are important to them and to raise their awareness of rights and opportunities.

We believe that access to various media such as radio, music video, the internet, mobile devices and television helps to empower young people. Engaging young people helps them become active citizens and enables them to have a say in decisions that affect their lives. Plan and Nokia are running projects linked to child protection including Child Helplines in East Africa and have projects in Kenya, Uganda, Egypt and Senegal, as well as Benin, Burkina Faso, Cameroon, Ghana, Guinea, Liberia, Mali, Mozambique, Rwanda, Sierra Leone and Togo.

#### **Education**

In the 21st century, many educational thinkers recognize that something new is happening to education. All over the world, digital and mobile technologies are rapidly changing the way young people learn, show what they know, and share their ideas outside the classroom. Still, few students have the chance to apply the ways they learn and share ideas to their classroom learning. Even fewer teachers and school districts have the chance to incorporate the convergence of personal expression, networked learning, and mobile communication to their everyday classroom practice. Blogging, wikis, twittering and Facebook, the widespread use of mobile devices, are all challenging the fundamental assumptions of what an education must provide to its young people in order for them to succeed or even cope in this newly connected world. And Nokia is leading the way by providing new ways for students to engage in education and learning.

#### **Mobile Learning Institute**

The Mobile Learning Institute (MLI) makes use of the latest mobile and digital technologies to personalize learning and share the results. Two prominent projects that MLI has been involved in are the Earth Day Challenge and the Envision 2020 project.

Using mobile devices in new ways has always been a cornerstone of the Mobile Learning Institute. With the Envision 2020 project, students are invited to imagine the future using the key skills they'll need for success in the years ahead. In a rapidly changing world, with rapidly changing technology, it offers residencies that give middle school age youth training in 21st-century literacy skills. It does so in a way that encourages participants to think positively about their future and to examine their own life goals and aspirations.

This year, the Mobile Learning Institute Earth Day Challenge camps will give young people the opportunity to explore Nokia technology more fully through new, innovative projects. Select camps will include: community mapping using global positioning systems, data collection and analysis, and mobile ethnography. These new classroom activities, to be piloted during the 2009 summer program, will become part of the Mobile Learning Institute curriculum during the 2009–2010 school year and be used across the United States and around the world.

Last year the Earth Day Challenge gave young people the chance to share their views on Earth's future and everyone's role in combating climate change. It brought over 1,000 young people from around the world to express their thoughts, concerns, and solutions for our global environment in short films.

Check out last year's submissions and the winning entry 'The Earth is Warming' on ovi.com

The Mobile Learning Institute is implemented in partnership with The Pearson Foundation. The Pearson Foundation extends Pearson's commitment to education by partnering with leading nonprofit, civic, and business organizations to provide financial, organizational, and publishing assistance across the globe.

#### ImfundoYami ImfundoYethu

The most recent "Trends in International Mathematics and Science" study, which benchmarks academic performance on those subjects, ranked South Africa as one of the worst performing countries in the world. Worldwide, girls tend to not perform as well in those subjects either. Recognizing these disparities and the need for education for all globally, Nokia has devised a solution.

Recently, Nokia and Nokia Siemens Networks have partnered with a South African social network platform called MXit to provide a pilot for mobile mathematics learning. The partnership is in collaboration with the South African vice-president and president's offices. The project, called "ImfundoYami / ImfundoYethu", is built to enhance the traditional learning environment through a medium widely accessible and of considerable interest to students. Students in Gauteng, the North West and the Western Cape provinces will use their own handsets to access the mathematics content on MXit.

This project is a model of how personal mobile devices can be used free of charge for formal learning or other government services, and exemplifies Nokia's corporate responsibility goal to harness the power of mobile technology to improve learning and education amongst youth.

#### **M4Girls**

Another of Nokia's community involvement programs called "M4Girls" (Maths for Girls), which was implemented last year. Nokia worked to engage schoolgirls from cities in the North West Province of South Africa, in new ways to learn maths skills using Nokia's 6300 mobile devices.

The M4Girls project is a partnership between Nokia, Mindset Network, and the South African Department of Education to test the provision of educational content on a mobile phone platform to female students. The project aimed to empower students in the following ways:

- Access to mathematics (maths was used as a pilot subject area)
- Exposure to a complementary platform of curriculum-aligned Mathematics content from Mindset on mo bile phones
- Exposure to mobile technology.

The aim of these projects is to find sustainable, scalable and affordable solutions to learn maths via mobile devices. From the pilot, we have seen that using M4Girls has increased the girls' competency in mathematics. The students readily used the mobile technology, and communicated with their friends outside of the study group, indicating that it presents a viable platform for teaching.

See more of our community involvement projects at http://www.nokia.com/corporate-responsibility/nokias-cr-map.

#### Employability

Nokia supports the Entra21 initiative to help youth in Latin America and the Caribbean get employment training and job placement services, so they can increase their employability and improve their access to jobs.

#### Argentina

In Argentina, Fundación Pescar was selected to deliver the Entra 21 program through the creation of "Escuelas Pescar" Nokia. These are institutions where beneficiaries will receive specific education that will help them to access better quality jobs.

The program aims to support 500 young people between 16 and 24 years who are in vulnerable social situations. The beneficiaries will receive ongoing support and job seeking services during and after the program.

Nokia employees will have the opportunity to volunteer as mentors and lecturers depending on their professional experience.

#### Chile

In Chile, Nokia along with Fundación Chile and the Chilean Government Agency, National Training and Employment Service (SENCE), also launched Entra 21, to help develop effective models for youth training and job placement services.

The program supports the training and job placement of 5,000 disadvantaged youngsters, aged 18 to 29, who are unemployed, under-employed, and/or single mothers.

The project focuses on training, job counselling and building the capacity of Chilean training organizations in the area of job placement services. Entra 21 helps the participants in articulating and presenting their skills by creating a 'portfolio of evidence'. The participants can specialize in different areas such as administration, gastronomy, tourism, health, nutrition, and dietetics, among other areas.

We are expecting that 2,500 of the 5,000 young participants program will obtain a quality job when the program ends.

Nokia also funds and participates in similar youth employability programs in Venezuela, Columbia

#### **Other projects**

Beyond the Entra 21 focus, Nokia also supports Junior Achievement in Europe and the United States. This includes local country initiates as well as a global program called Enterprise Without Borders (EwB). EwB gives students running mini-companies the opportunity to create cross-international partnerships. This web-based program fosters international business development skills while creating global mentorship opportunities for Nokia employees with students from participating countries around the world.

See more of our community involvement projects at http://www.nokia.com/corporate-responsibility/nokias-cr-map.

#### **Creative Arts**

#### Dreams Workshop. Turkey

Since its launch in 2003, the Dreams Workshop program, run by the Educational Volunteers Foundation of Turkey (TEGV), has provided disadvantaged Turkish children with quality non-formal education, while training older youth to serve as volunteer mentors and teachers.

About to enter its second phase, the program aims to expand its reach through 10 new urban centers, as well as in more remote parts of the country. In 2008, there were 13,500 new participants, with a total of 30,720 children and youth benefiting from Dreams Workshop activities.

Through the Recycling Dreams exhibition, held at Istanbul Ataturk Airlines International Terminal in September and October 2008, participants learnt about the importance of environmental protection and recycling. The Recycling Dreams exhibition showcased two and three dimensional artwork, which the children made by re-using waste products.

#### **Going Further, Senegal**

Going Further project has three components, Music, radio and ICT. The music component, Tundu Joor, aims to promote youth rights using music as a channel. Tundu Joor involves artists and child rights professionals teaching young people how to produce music professionally (creating, producing songs and concerts) while raising awareness of children's rights.

Key messages aiming at improving communities and children's lives are incorporated into the songs produced by youth and professional artists. Prominent Senegalese and African artists are closely involved with the program, where issues that affect young people are identified and articulated in music, which is a mix of traditional Senegalese rhythms, and hip-hop, R&B and jazz.

The children involved perform in concerts attended by thousands of others, with the aim of raising mass awareness of the importance of children's rights. As part of Going Further, Radio Guneyi (RGY) in Senegal broadcasts hundreds of youth and reaches hundreds of thousands of people nationwide weekly

In 2008, approximately three million children and adults were exposed at least once to messages on rights of the child through children's radio broadcasts and musical events. Similar messages were delivered to around 43,000 adults and children who attended concerts and shows across Senegal.

Child participation was a key aspect of the project, with 1,008 children (including 504 girls) participating directly in presenting live radio programs and 611 school children producing radio broadcasts on child rights.

The Multimedia component of the project is aimed at setting up multimedia spaces in science and technology schools to increase the use of ICT in education. The project currently provides ICT learning resources to 143 teachers and 6,000 students.

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#### **BUMP Records, California**

This approach of tying music into meaningful youth development is also used for young people in the San Francisco/Oakland area of California in the U.S. The Bay Unity Music Project (BUMP) Records, a collaboration with the Bay Area Video Coalition, is a music performance and production program for Bay Area youth ages 14-19.

With the help of professional instructors, young people learn to compose music and lyrics, DJ, and produce and record original music using industry-standard technology. BUMP producers also get hands-on entrepreneurship training and experience in producing, branding and promoting albums. Participants have use of music production software and a professional-quality rehearsal and recording space free of charge.

#### Children's radio, Africa

The Kids Wave project, run by Plan, aims to increase the amount of quality programming for and involving children across Africa. Radio made for and with children can help with education and development. It gives children a platform to express themselves and take concrete actions to improve their lives and the lives of other children in their country. It can also help raise awareness on the rights of the child.

Kids Wave has been established in Senegal, Benin, Burkino Faso, Cameroon, Ghana, Guinea, Mali, Liberia, Sierra Leone and Togo. The program funds the production of radio shows and provides training for children and radio hosts. It also runs children's club activities, events and media projects.

See more of our community involvement projects at http://www.nokia.com/corporate-responsibility/nokias-cr-map.

#### **Civic engagement**

Fifteen years after Romania's transition to democracy, the social, economic and psychological imprints of communism continue to be seen in people's attitudes and behavior. The population remains somewhat distrustful of the civic and political involvement of youth.

Soon after setting up a production site in Cluj-Napoca, Nokia decided to support civic engagement of local youth through a partnership with Romanian organization The New Horizons Foundation (NHF).

The 'IMPACT: Connect to Community' program inspires young people aged 12-18 to develop their life, leadership and citizenship skills through service learning. Youth attend weekly IMPACT Club meetings in schools and organize three to four volunteer service projects during each school year.

In 2008 IMPACT clubs were established in 17 schools in the Cluj-Napoca area, involving 338 young people and training 100 coaches and facilitators. The youth clubs have worked on several community projects, for example the raising of US\$1,000 in donations to a local hospital.

See more of our community involvement projects at http://www.nokia.com/corporate-responsibility/nokias-cr-map.

## Nokia Helping Hands - Employee volunteering

#### Working together, making a difference

Employee volunteering is an important part of Nokia's global corporate responsibility approach. Thousands of our employees contribute their time and effort to worthy causes in their communities. In 2008, employees in 25 countries volunteered for over 34,000 hours of service, an increase of 5.9% from 32,000 hours the year before.

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North America leads the Nokia family around the world in terms of volunteering with almost 2,800 volunteers registering nearly 27,000 hours in the last two years. Nokia employees in the United States also support the local community financially through the Nokia Initiative for Charitable Employees (NICE). Annually Nokia employees in the U.S. give more than \$300,000 to local non-profit organizations which is matched dollar for dollar by Nokia to give a total of more the half a million dollars.

Nokia's mission is to make meaningful contributions to communities in the countries where we operate. However, we do not have a global one-size-fits-all policy. Our program is rather an umbrella for locally relevant volunteering activities. The program revolves around connecting people. We aim to engage our employees as well as influence Nokia's corporate culture in a sustainable way.

Through volunteering we are able to learn new skills and gain new perspectives. Volunteering also helps to create a balance between our personal convictions and professional lives. Caring for others and the environment, contributing to change, and witnessing how the world can be changed, one small step at a time - these are our rewards.

It is important to encourage and support employees who want to contribute. In recognition of this, Nokia employees can take 1-2 working days per year as a Nokia Helping Hands day. This enables our employees to go out into the community and contribute to a good cause that they care about.

#### **Recent projects**

Some examples of our voluntary activities include:

- Blood donations in many countries and sites, like Germany, Finland, India and Hong Kong.
- Fundraising for different important causes, including raising money for the physically disabled in Singa pore; for UNICEF vaccination programs through making and auctioning rag dolls in Finland; for a children's home winter camp in Poland; and for our partners, Plan, by taking part in a recycling scheme in Sweden.
- Drives for toiletries, for example in Vancouver for local shelters and in Mexico City for senior citizens homes.
- Drives for school materials, blankets or toys for example in the Czech Republic, Vietnam, Brazil and Christ mas Trees in Finland.
- Volunteering at children's hospitals for example in Venezuela and South Africa
- Renovating local schools and other places: Reynosa, Southwood, US.
- Nature clean-ups and other environmental activities, for example educating zoo visitors in Chennai, plant ing trees in Bangalore, cleaning a beach in Chennai.
- Giving students a close-up look at working life via job shadowing for example in Beijing.
- Arranging activities for underprivileged children, for example puppet theaters in Malaysia.

#### **Need volunteers?**

Nokia's global volunteering program, Nokia Helping Hands, is a program through which thousands of Nokia employees donate their time and talent to local community needs.

Perhaps we could help you and your organization? If you are interested in learning more about the Nokia employee volunteering program, please read on.

Running a volunteer program is like being a good matchmaker. You need to know each other's interests, skills, strengths, and limits - how they can fit and work together well. Before an appeal is made for Nokia volunteers, it's important to look at your program's activities and services to determine how Nokia volunteers can help you meet your goals. The following is a list of things which we would like you to plan and consider:

- Identify and describe the specific tasks that you would like Nokia volunteers to perform.
- Link volunteers to a goal or purpose. Let them know what they are working toward so that when they accomplish a task they can feel good about achieving.

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• Do Nokia volunteers need any special skills, personal traits, unique talents, or training to carry out any of the tasks? If so, what are they? Who will the volunteers work with while doing the tasks?

- How many volunteers are needed? Will the volunteers be working individually or in groups? Nokia employees can volunteer both as individuals and as teams. Try to match the work and the number of volunteers.
- When and where do the tasks need to be performed? How much time is needed? Are the hours or days flexible or set? Will volunteers be working on-site or off-site? Are there tasks that can be performed in the office or at home? Will Nokia volunteers be supervised or unsupervised? Identify risks or liabilities, if any. Who will volunteers report to and when?

As with paid program staff, it is important for Nokia volunteers to know what's expected of them and how they can succeed.

#### **Contact Nokia**

Once you have identified the tasks that you would like Nokia volunteers to perform, please email nokia.volunteer@nokia.com to introduce your organization and its policies and procedures. You will also need to provide details about the tasks you would like to be completed by our volunteers.

When providing information about the tasks, please include the following:

- An overview of the program and its mission, goals, objectives, and future directions
- The program's current activities and services
- An overview of the purpose of the assignment and its duties, responsibilities, and expected outcomes
- Attendance, absence, and notification policies
- Security, liability, and confidentiality policies

This could be the start of our cooperation!

## Corporate giving

Nokia's main objective when making corporate donations is to invest in projects that are preventive, bringing together expertise from all sectors - private, public and civil society.

Nokia makes charitable contributions to many countries around the world, targeting issues which directly involve children. These include supporting schools and kindergartens, donating hospital equipment, and providing charity for children with disabilities.

We support Unicef through their annual Seasons Greetings Cards campaign. In the US and Canada, Nokia is a major contributor to the United Way, a coalition of charitable organizations which identifies and builds on community strengths and assets. In addition, Nokia employees have initiated an employee giving campaign, which is held during the autumn each year. Nokia matches all employee contributions pledged during the campaign as well as employee charitable contributions made through the Employee Matching Gift program. Annually, more than US\$ 500,000 is raised from these initiatives.

#### **Disaster relief**

We contribute to disaster relief efforts in partnership with Nokia Siemens Networks (NSN). Nokia cooperates with the International Federation of Red Cross and Red Crescent Societies to provide financial assistance when disasters occur around the world, while NSN helps to rebuild communications infrastructure.

#### **Drought in Ethiopia**

In December 2008, Nokia and Nokia Siemens Networks announced their partnership with Save the Children Finland to help alleviate water access problems in Alaba Special Woreda in Northern Ethiopia. This area is highly dependent on rainfall and during the dry season people are forced to travel every day over 20km to fetch water.

This situation is made worse by the current drought in Alaba Woreda and has the most impact on children who do not have adequate drinking water and sanitation.

Through the project, six community-managed water points will be set up in Alaba Woreda leading to improved sanitation and health. Together with hygiene education and cash-for-work initiatives for parents, the project will ensure that children are able to stay in school through the drought. In total five basic education centres will be equipped not only with books but also with solar panels to provide electricity.

Furthermore the local community will be trained and equipped with the knowledge and capacity to properly manage and ensure the sustainability of water points within the area.

#### Sichuan Earthquake in China

Since May 2008 Nokia has donated RMB 54 million in cash and materials to disaster relief efforts in Sichuan, in two distinct but complementary phases.

Nokia's first phase of support focused on urgent needs in the areas most affected by the earthquake. A cooperation with Sichuan Mobile was established and Nokia also set up a volunteer team, sent its Care Vans into the affected regions to supply power and telecommunications, and sent a medical team to the stricken areas.

Nokia donated RMB 16 million in cash to the China Foundation for Poverty Alleviation (CFPA) for purchasing necessities, reconstruction of the Jinhua Primary School, Minle Village project, helping 440 orphans and supporting the reconstruction of the Shifang Longju primary school. The second phase is post-disaster reconstruction. Nokia has developed a wealth of knowledge and experience through working with communities, Government departments, and NGOs on what type of projects work best and deliver tangible benefits.

As the first initiative of our disaster reconstruction plan, Nokia joined forces with Youth Business China (YBC) to develop a 10 million RMB program designed to give young entrepreneurs in the disaster-stricken areas a head start in business.

Nokia also joined hands with Sichuan Mobile to advance the Sunshine Program. The initiative is a mobile, posttraumatic stress treatment program designed to help earthquake victims who are in need of emotional support.

#### **Cyclone Nargis in Myanmar**

In May 2008, in response to the devastation from the cyclone Nargis in Myanmar, Nokia donated 350,000 Euros to the Red Cross for relief efforts in the country. The cyclone killed over 20,000 people, and the dedicated relief effort was used to restore housing, sanitary conditions and access to food and clean water.

At the end of the year Nokia used its traditional season's greetings e-card campaign to raise awareness to the Myanmar disaster and donated an additional 250,000 Euros through UNICEF to build schools.

#### **Disaster Recovery**

#### Southeast Asian tsunami

Our response to the tragic Southeast Asian tsunami disaster in December 2004 was to make an immediate cash donation from Nokia global, via the Finnish Red Cross. Approximately 1,000 mobile phones were given to operators and rescue teams. Operator customer teams worked to restore and expand network capacity, as well as helping to monitor network stability and plan services.

Rapid and responsive employee volunteer efforts were organized through the Nokia volunteering program, either by working directly with aid organizations or participating in employee-giving campaigns. In numerous countries, Nokia matched employee collection campaigns with the same amount donated by employees.

As well as providing immediate aid, we play a role in the long-term reconstruction of communities affected by disasters. For example, we created the Tsunami Reconstruction Initiative in partnership with the International Youth Foundation (IYF) and the Grameen Foundation to help long-term recovery efforts in areas affected by the Tsunami.

The initiative is designed to help young people in affected areas of India, Indonesia, Sri Lanka, and Thailand to find jobs or set up small businesses – and creating long-term livelihoods. Over the three years following its launch in 2006, the €2.5 million program will provide more than 5,600 young people aged 16 to 29 with access to job and life skills training, apprenticeships, job placements, and loans.

#### **Earthquake in Pakistan**

In response to the Pakistan earthquake of 2005, Nokia has been funding rebuilding programs and projects over a three-year period. These efforts consist of donations to the Edhi Foundation, the President's Earthquake Relief Fund and Red Cross Finland for a temporary hospital in Muzzafarabad. Nokia also made a handset donation directly to the affected region.

#### **September 11, 2001**

In close cooperation with the International Youth Foundation (IYF), we established a Nokia Education Fund for children who lost a parent or parents in the September 11, 2001 tragedies in the United States. The fund assists in covering college education expenses. Since July 2002, the Fund has disbursed 260 scholarships to 175 dependent children of victims of the tragedy. The most popular degree programs are business, law, and education. About two-thirds of the recipients are undergraduate students. . In calendar year 2008, 59 scholarships were awarded to 41 new recipients and 16 previous recipients. The fund is available to affected children irrespective of their nationality or the location of their academic institution.

## 6. Supply chain

At Nokia, we work hard to anticipate risk, demonstrate company values, enhance our governance practices, increase employee satisfaction, and look after the environment and communities where we do business. We expect the companies in our supplier network to take a similar ethical business approach and to demonstrate progress and achievements in these areas as well as in educating and overseeing the practices of their own suppliers.

Our aim is to ensure that environmental, ethical, and health and safety issues, as well as labor practices, are not separate add-on features, but are embedded within all our sourcing processes, including supplier selection and relationship development. This section provides information on our requirements, supplier performance and support we provide.

#### Mining of metals from the Democratic Republic of Congo

Even though Nokia does not source or buy metals directly, we are very concerned about poor practices at some mine operations around the world. We require high ethical standards in our own operations and our supply chain. If we find that standards are not being met we do not walk away but work with that supplier to address the issues and in so doing help to raise overall standards. Mining activities that fuel conflict or benefit militant groups are unacceptable.

Nokia became aware of the potential link between mining of Coltan and financing of the conflict in the Democatic Republic of Congo (DRC) in 2001 and took action immediately. Coltan in an ore that contains Tantalum, which is a material used in many consumer electronics products. Based on written statements we require from our suppliers and ongoing discussions, our products do not include Tantalum derived from illegally mined Coltan.

Despite the complexity and the fact that there are typically 4-8 supplier layers between Nokia and any mining activities, we are actively working to tackle these issues. We are committed to continuing our efforts in solving issues around mineral sourcing and health, safety, environmental, and labor standards. For many years now, we have been driving action and awareness of ethical standards with our own suppliers and within the wider electronics industry. For example, we have rigorous health and safety, environmental and labor standards that all of our suppliers must meet, and we require them to apply the same to their own suppliers.

# Simplified supply chain illustration from mines to consumer electronics



Before agreeing to work with a supplier we ensure that these standards are met, and we visit a number of suppliers on an ongoing basis to review standards. We work with suppliers on training and support to help them implement and improve standards. We are also working to improve transparency and support verification of the supply chain of metals.

Making progress requires commitment at a company level but also requires industry-level action amongst electronic companies, the mining industry and other industries that trade and use metals. Nokia has been actively involved in the work within the Global e-Sustainability Initiative (GeSI) and the Electronic Industry Citizenship Coalition (EICC). These groups have conducted extensive research into the key challenges surrounding the supply of metals, the ability to trace and track the sources of metal used in electronic products and the industry's ability to influence conditions.

The results of these studies have been shared with various organizations and NGOs who were consulted on the next steps for the industry. Further action is now being taken to try and trace the supply of Tantalum as well as Cobalt and Tin, back to their original source. This will include the mining industry and other experts. The results will help inform further discussions on the obstacles of tracing metals and how this can be improved.

#### Tantalum

Tantalum is a material used in many consumer electronics products. The mobile phone industry uses a very small

amount of the world's total supply of Tantalum. DRC is one of the places where Tantalum, or rather Coltan, one of the ores that it comes from is naturally found and mined. The country only accounts for a very small amount of the world's supply of this material, but it can be found in the east of the country where there is conflict, leading to concerns that this Tantalum may be mined under conditions breaching human rights or sold to fund war and illegal activity.

As soon as we became aware of this issue we began requiring suppliers of capacitors used in our mobile phones to confirm they do not source this material from the conflict areas of DRC. This is checked on an ongoing basis. The DRC provides a tiny amount of the world's source of Tantalum. The vast majority of it is mined in other places around the world including Australia, Brazil, Canada, Russia, China and a number of other countries in Central Africa.

#### **Other materials**

More recently the company has been working with suppliers of other minerals, such as Cobalt and Tin, to improve transparency of the supply chain and understand how standards can be promoted.

For example, DRC supplies 40% of the world supply of Cobalt, a material used in batteries. This substance is found in the south of the country, away from the conflict zone and is mined legally by many large, well established companies.

## Our commitment and approach

#### At Nokia we feel that sound environmental and social principles are an important part of sustaining a successful and responsible business

Nokia sources components, materials and services from suppliers all over the world. Our sourcing activities can be divided into two categories:

- Direct sourcing taking care of the material supply for Nokia products, such as components, parts, packag ing, software development and research and development.
- Indirect sourcing covering equipment such as office furniture and computers. It also includes services like catering, IT consultancy, and marketing which purchase for our own use.

We at Nokia feel that sound ethical and environmental principles are an important part of a sustainable business. Our commitment towards promoting environmental and social responsibility in our supply chain is defined in the Nokia Code of Conduct.

Nokia requires its business partners, subcontractors, or suppliers to comply with applicable laws and regulations. Nokia encourages its partners, subcontractors, or suppliers to strive beyond legal compliance in areas such as governance, human rights and the environment. Nokia incorporates ethical, social and environmental criteria in its procurement agreements and commits to monitoring the performance of its partners and to taking immediate and thorough remedial steps in cases where the ethical performance of its business partners comes into question.

To realize this commitment in practice, our sourcing effort focuses on:

- Supplier social & environmental operational performance
- Environmental product performance

The principles that underline our approach are:

• Integrating CR practices into our business - Our aim is to ensure that environmental, ethical, and health and safety issues, as well as labor practices, are not separate add-on features. They are embedded within

all our sourcing processes, including supplier selection and relationship development. We expect those companies in our supplier network to take a similar approach.

- Close cooperation One of our core development principles is to work closely with customers and sup pliers. It allows end-to-end efficiency and speed key success factors for the entire supply chain. In addition to customers and suppliers, we also engage with other stakeholders such as non-governmental organizations, governmental organizations and industry associations.
- Continuous improvement We continually strive to improve our way of working as we learn how to be more effective and efficient. As a result, the requirements, tools, methods and processes described in these pages will develop over time.

#### Locations

#### As we have grown, so have our connections.

As a global company we have suppliers located all around the world.

The dots on the map below indicate our suppliers' locations, and can represent many facilities in the same area. Our own manufacturing sites are marked in blue and our suppliers' sites with red. Our indirect suppliers are not highlighted on this diagram but are located in each country where Nokia has offices.

The main countries and regions for our supplier locations are:

- Austria
- Belgium
- Brazil
- Canada
- China
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Hungary
- India
- Ireland
- Israel
- Italy
- Japan
- Malaysia
- Mexico

## Nokia Supplier Requirements

## An essential part of our work is to define clear expectations for our suppliers wherever they are located.

We have developed a comprehensive set of global Nokia Supplier Requirements (NSR), which include specified environmental and social requirements. NSR's environmental and social requirements are based on international standards ISO 14001, SA 8000, OHSAS18001, PCMM and ILO, and UN conventions.

We recognize that there are other standards and management systems in use and accept those which are equivalent to or exceed our own requirements. These requirements are updated according to business and stakeholder

- Morocco
- Netherlands
- Philippines
- Poland
- Portugal
- Singapore
- Slovakia
- S Korea
- Spain
- Sweden
- Switzerland
- Taiwan
- Thailand
- Ukraine
- UK
- USA
- Vietnam

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needs.

We have also developed environmental requirements for the products, components and parts that we source. New suppliers (like our existing suppliers) must commit to meeting our requirements (e.g. NSR and environmental product requirements) as part of the contractual agreement. Excerpts from the global Nokia Supplier Requirements can be found within this section.

# Management

The following excerpt is from Nokia Supplier Requirements and details the ethical, environmental and labor related policies that our suppliers must have in place within their own company and towards their own suppliers.

# Company values and business conduct

Supplier shall have an ethical conduct policy, such as a code of conduct, defining how Supplier understands and manages the ethical impacts of its business operations and reflecting its company values and culture. The policy shall reflect respect for human rights and demonstrate commitment to them, ethical business conduct and to continuous improvement.

Management shall ensure all relevant personnel is trained in and aware of the ethical conduct policy and related practices and risks and shall be able to provide evidence of employee awareness. Records of training shall be kept.

# Environment

Supplier shall have an environmental policy, defining how Supplier manages environmental issues related to its business. The policy shall state a commitment to environmental protection, pollution prevention, compliance with environmental legislation and continuous improvement. Management shall be able to provide evidence of employee awareness.

#### Human resources

Supplier shall have a Human Resources (HR) policy(ies), defining how Supplier manages its employees. The policy shall be applicable locally and globally, as relevant, and ensure employees are treated with respect and dignity and in compliance with local labor law and recognized international labor standards (i.e. ILO and relevant UN conventions). The policy(ies) shall cover, for example, recruitment and exit, occupational health and safety and equal opportunity. Where applicable, it shall cover also temporary labor and employees working outside Supplier's premises (e.g., at Nokia's premises). Management shall ensure that the associated HR processes are communicated and understood by HR personnel.

# Programs for improving environmental and ethical performance

Supplier shall set environmental and labor condition requirements (e.g., occupational health and safety, ethical conduct) for its sub-suppliers, including waste handling/recycling sub-suppliers. Evaluate their performance and set improvement targets. The requirements shall be aligned with Nokia requirements. If a sub-supplier is used for waste disposal, Supplier shall ensure it is appropriately authorized and licensed.

# Human resources

The following excerpt is from Nokia Supplier Requirements, defining our expectations for Human Resources.

# Workforce planning and recruiting

Supplier shall have a system to ensure the availability of workforce for current and future business needs, in a sustainable and ethical manner, at both organizational and unit level.

# **Resource** planning

Resources need to be available to meet both current and future business needs according to company strategy.

Resource planning shall be conducted at both organizational / global and unit / local levels. In particular, underage workers or false apprenticeship schemes must not be used.

# **Recruiting and exit procedures**

Supplier shall ensure that competent and eligible individuals are recruited and appointed to open positions, according to competence, with equal opportunity and on a voluntary basis. Supplier shall check the eligibility of candidates and that they exceed the minimum legal age of employment.

Upon employment, individuals shall be provided with a work contract /agreement /offer letter, basic induction training and not be required to give financial deposits or original identity documents. Forced labor must not be used. Employees shall be free to leave the company after giving reasonable notice. Supplier shall ensure that exit procedures are compliant with local legislation, international labor standards and applicable collective agreements.

# Non-disclosure and confidentiality agreements

Supplier shall ensure that employees working with Nokia products or projects or having access to Nokia specific knowledge, information or data, or to Nokia facilities, have signed a Non-Disclosure Agreement (NDA). Supplier shall ensure that the employees fully understand its practical implications.

# Occupational health and safety protection

Supplier shall ensure that physical and mental working conditions allow employees to perform their tasks safely and efficiently. Supplier shall have procedures for identifying, minimizing and preventing hazards. They shall be implemented as, for example, safety instructions, work procedures, preventive maintenance, employee training, identification of potential hazards and appropriate safety devices, personal protective equipment and clothing, hearing protectors, chemical control or machine safeguarding.

Supplier shall nominate and train persons responsible for the occupational health of employees. Supplier shall have specific procedures in place for employees under the age of 18 (young workers).

Supplier shall assume responsibility for the occupational health of employees working off-site (e.g., at customer premises).

# Occupational health and safety response

Supplier shall have occupational health and safety procedures to prepare for and respond to emergency situations involving occupational health and safety risks. Supplier shall record and investigate emergency situations. Management shall encourage employees to report accidents and take action upon these records and reports.

# **Employee amenities**

Supplier shall ensure that employees are provided with access to potable water and clean toilet facilities. Canteen facilities and food preparation areas shall be clean and safe, and food shall be provided at reasonable cost. Employee dormitories shall be clean, safe (equipped with, e.g., fire extinguishers and exits), adequately ventilated and/or heated, shall provide reasonable personal space and shall be provided at reasonable cost.

# **Competence** analysis

Supplier should periodically conduct competence analyses to identify the knowledge and skills/competences required to perform the organization's business activities according to short- and long-term strategic goals.

# **Competence development**

Supplier shall ensure that employees, at all levels and with equal opportunity, have the education, training and competence they need for their positions and tasks. Supplier shall develop training plans based on competence analyses and implement them to enhance and develop workforce capabilities. Supplier shall maintain a training register, detailing the training employees have received.

# Nokia specific training and certification

Supplier shall ensure, on request, that personnel allocated to Nokia work have the necessary training on Nokia policies, products, processes and guidelines and, if needed, have necessary licenses and certificates. Supplier shall ensure such licenses and certificates are valid in terms of time and scope. Supplier, providing services at Nokia facilities, including (Nokia's) customer sites, shall ensure that its personnel act in accordance with Nokia values and Code of Conduct.

# Working time and time off

Supplier shall ensure that employees can perform assigned tasks efficiently without exceeding the maximum working hours as defined by local labor laws or applicable collective agreements. Supplier shall ensure that employees have at least one day off per seven-day week, and that overtime work is voluntary. Holidays (e.g., public holidays) and leaves of absence (e.g., medical or parental) shall comply with local labor laws or applicable collective agreements.

# **Compensation and benefits**

Supplier shall provide all employees (permanent, temporary, apprentices and contract workers) with fair compensation (wages /salaries) meeting or exceeding local legal and industry minimum standards, for regular as well as overtime work. Supplier shall also provide employees with benefits to reward contributions, skills and behavior considered vital to success. Compensation and benefits shall be aligned with relevant company policies.

#### Fair treatment

Supplier shall ensure that employees at its facilities are treated with respect and dignity, equal opportunity and are safe from abuse, harassment or bullying of any kind (e.g., physical, verbal, mental, sexual, racial, cultural, age or disability related). Supplier shall ensure company rules / guidelines are communicated to employees. Supplier shall ensure that disciplinary procedures prohibit physical punishment and do not support financial deductions, or the threat thereof.

#### **Performance management**

Supplier should have a system to manage employee performance. Supplier should ensure individual objectives are derived from company strategy and policies. Supplier should ensure performance is evaluated fairly and objective-ly, against defined criteria and on a periodic basis, to identify ways to improve performance.

# **Communication and coordination**

Supplier shall ensure that information relevant to employees (about, e.g., business activities, changes and results) is communicated across the organization. Supplier shall ensure employees can share such information fast enough to be able to align their activities efficiently. Supplier shall respect the right of all employees to form and join trade unions of their choice and to bargain collectively, and in cases this is restricted by law, facilitate parallel means to ensure that individuals or groups are able to raise concerns to the attention of the management.

# **Employee satisfaction**

Supplier should have the means to evaluate and improve employee satisfaction. A company of substantial size (i.e. headcount exceeding 100) should have an employee satisfaction program based on employee opinion surveys and should take action based on the results of the program.

# Feedback and complaint channels

Supplier shall have a system through which employees can give feedback or complain about unethical conduct, unfair treatment or practices, violation of company values, policies and procedures, or improvement ideas and suggestions. Management shall, when appropriate, act upon this feedback and handle it confidentially and anonymously. Management shall ensure that there are no adverse consequences as a result of giving feedback.

The following excerpt is from Nokia Supplier Requirements, defining our expectations for environmental management.

#### **Environmental Management System**

Supplier shall have an Environmental Management System (EMS) ensuring effective planning, operation and control of environmental aspects. The EMS shall satisfy the requirements of ISO14001 or other internationally recognized standards. Supplier shall be well-informed about environmental legislation and applicable regulations and be able to provide evidence of compliance. The EMS shall include a continuous improvement program.

# **EMS certification**

Supplier's EMS shall be certified as compliant with ISO14001 or Eco-Management and Audit Scheme (EMAS).

#### Raw material content data management

Supplier shall comply with material restrictions, set by applicable law and Nokia, and continuously maintain records of full raw material content data (materials, substances and compounds) of products supplied to Nokia or of materials used in implementing the services provided to Nokia. These records (including any updates) shall be provided to Nokia in a format specified by Nokia.

#### Waste management

Supplier shall manage any waste generated from its operations or from products or customer's assets in its possession, or reaching end-of-life or being classified as waste according to legal requirements and good environmental practices. Supplier shall establish and maintain procedures ensuring compliance with its waste management obligations. Supplier shall primarily investigate ways to reduce waste generation and secondarily ways to promote reuse (of non-Nokia-proprietary material) and recycling. Nokia proprietary material must not be reused without prior consent from Nokia.

Supplier shall record information about waste management (i.e. how much and where waste is reused, recycled, energy recovered, sent to landfill etc) and provide this information to Nokia on request.

# Programs for improving environmental performance

Supplier shall identify and measure the environmental consequences and impacts of its operations and products/ services and run continuous improvement programs to address these impacts. These programs shall promote efficient use of energy and materials, avoid use of hazardous materials, promote waste minimization and improve treatment and control of waste emissions affecting air, water and soil. Supplier shall be able to provide supporting evidence.

# **Design for Environment**

Supplier shall consider environmental aspects in all phases of product development, using, for example, specific Design-for-Environment (DfE) tools or checklists. Supplier shall comply with Nokia product environmental requirements (e.g., Nokia Substance List, Environmental Requirements for Nokia products). Choices made during these product development phases shall, whenever possible, reduce or eliminate negative environmental impacts. All reasonable attempts shall be made to reduce or eliminate hazardous constituents from the product, to promote efficient use of materials (i.e., to reduce waste), to improve energy efficiency of the product and to promote recycling.

See Environmental Management System for more information on our own system.

# Our Progress and Targets

Issue	Progress in 2007	Progress in 2008	Target 2009
Nokia Supplier Requirements	Updated NSR communicated with all direct supplier assessors trained	Action:continue to commu- nicate and implement NSR to suppliers as part	Action: Continue to commu- nicate and implement NSR to suppliers as part of supply base management practices of sup- ply base management practices
		Achieved: NSR communicated toi new suppliers	
# Supplier on-site assessments	Conducted 80 system assess- ments and six Nokia in-depth assesments. Participated in pilot of joint industry assessments	Action: Conduct at least five in-depth assessments of key suppliers	Action: Conduct at least five in-depth assessments of key suppliers. Action: ETASC SAQ rolled out for new suppliers
		Achieved: Conducted 53 NSR assessments and 8 in-depth E&E assessments by internal asses- sors and as part of joint industry assessment pilot	
Learning & capability	Development programs set up with several key suppliers Sup- ported capability pilot in China through industry projectWork- ing through GeSI to develop training materials MetricsRe- viewed	Action: Conduct training for supplier assessors	Action: Update E&E induction training material for sourcing personnel and suppliers. Con- duct supplier assessor training
		Achieved: Supplier assessor training postponed to 2009. Development programs continued with key suppliers. Supported capability building pilot projects, development of e-learning materials.	
Substance management	Supported the rollout of "Marking for Control of Pol- lution Caused by Electronic Information Products" ? the China Restriction of Hazardous Substances (RoHS)	Action: Support rollout of fur- ther material restrictions (NSL v2008)	Action: Support rollout of NSL v2009 Action: Follow up discussion on SVHC candidate list and REACH impacts on supply chain
		Achieved: NSL 2008 communi- cated	
		Action: Continue rollout of EU REACH regulation within supply base	
		Achieved: Provided REACH info- sessions to sourcing personnel. Communicated REACH require- ments with all material, compo- nent, part and product suppli- ers, discussions to understand potential risks and impacts	
Metrics	Reviewed current metrics and working to establish new metrics	Action: Identify key Supply Chain SER metrics for 20-F	Action: Social metric defined and tracking initiated
		Achieved: Environmental metrics defined, verified and reported in 20-F	

Issue	Progress in 2007	Progress in 2008	Target 2009
	NA for 2007 (previously re- ported in 2005)	Action: Update IS014001 cover- age in 1st tier HW suppliers	Action: Update IS014001 cover- age in 1st tier HW suppliers
ISO14001 coverage (20F)		Achieved: 90.9% of suppliers (representing 98% of business value in 2008 for HW suppliers) have implemented cerified EMS (ISO14001) for all sites serving Nokia (link to 20-F). Of those companies without certified EMS, 10% are planning for certifi- cation in the next 2 years and 10% have internally verified EMS	
Supplier environmental performance (20F)	NA	Action: Set energy efficiency and CO2 emission reduction targets for key suppliers Achieved: 82% of suppliers (representing 69% of business value in 2008 for HW suppliers) have reduction targets for en- ergy/CO2/water/waste in place and monitored (link to 20-F)	Action: Increase % of suppliers have reduction targets in place for energy/CO2?waste/water consumption
Industry partnership	Continued to participate in GeSI Supply Chain Working Group as Nokia and Nokia Siemens Networks	Action: Evaluate use of industry tools such as joint supplier as- sessments as part of assessment toolbox Achieved: Decision to start using Self Assessment Questionnaire in E-TASC to replacing existing SER self assessment	Action: Maintain active participation within GeSI/EICC work groups

# Supplier Performance

Openness and trust are important aspects when working together with suppliers and driving compliance and performance improvements. We find that some suppliers have well-developed corporate responsibility programs, while others need more support.

Supplier assessments (self and on-site) are used to understand a supplier's performance level and compliance to our requirements. Trained Nokia assessors conduct the majority of our supplier assessments so that we are involved first hand. We believe it is important for Nokia assessors to see the factories for themselves, to understand the problems and to work directly with suppliers to drive improvements. This hands-on approach means that both Nokia and its suppliers take their performance very seriously.

Occasionally, we work with third parties for specific expertise or investigations, or as part of joint industry assessments. This is part of our aim for continuous improvement although we would not completely outsource this work or rely only on third party assessments. We do, however, invite our suppliers to use NGOs or similar parties to assure the effectiveness of their own labor standards and environmental practices.

Assessments are useful because they highlight a supplier's best practices as well as risks and opportunities for improvement. However, they typically provide a "snap shot" of a situation and used alone, they do not always provide the right solution.

To drive sustainable change we often need to combine assessments with other tools and approaches including face-to-face meetings, performance metrics and targets, development programs, trainings and supplier-focused events.

We are often asked how far our responsibility reaches down the supply chain. See Sourcing materials to learn more.

### Self assessments

Supplier self-assessments are used as part of a new supplier phase-in and as a complementary tool to our on-site supplier assessments. Completing a self assessment helps raise a supplier's awareness of the topics and issues we are interested in and enables them to provide us with information about how they are managing these issues.

In 2009 we started to use the Self-Assessment Questionnaire (SAQ) delivered through the on-line tool E-TASC (Electronic Tool for Accountable Supply Chains) to replace our previous SER self assessments. E-TASC is a web-based information management system that provides companies with a platform to collect, manage, and analyze social and environmental data provided voluntarily by their suppliers.

#### **On-site assessments**

Although every Nokia employee visiting a supplier facility has an opportunity to spot issues of concern, from an environmental and social responsibility perspective we have two formal types of on-site assessments:

#### **System**

We monitor compliance with the Nokia Supplier Requirements (NSR) through regular assessments called "System Assessments". These involve a review of the supplier's complete processes and management system against NSR.

All new suppliers must undergo a system assessment, together with suppliers who have undergone significant organizational changes and those considered to be at highest risk of non-compliance or with a strong need for development. Key suppliers are generally assessed every two years.

For information regarding how many assessments we conduct please refer to Progress and targets for our latest information. Trained Nokia assessors carry out system assessments according to our planned assessment program. These assessments typically last two days and the results are communicated to the supplier and agreed by both parties during the closing meeting. All assessments are documented in Nokia's internal supplier database in order to avoid overlapping assessments.

If we find a supplier is not meeting Nokia's expectations, we compel them to commit to and implement corrective actions, and help them to do this. This is the best solution for the supplier, Nokia, the workers and the environment. In practice, our suppliers have generally reacted positively and seen this as a way to improve their business. However, if a supplier were to refuse to address any of these issues we would need to reconsider our business relationship.

Suppliers are required to submit corrective action plans within 30 days and provide evidence of implementation. This can be in the form of photographic evidence for smaller recommendations, or may involve a further site visit if significant changes are required. The assessment is closed when we have received confirmation that all non-conformances have been addressed.

See Training & building capability for more information on how we support suppliers.

### In-depth

As stakeholder expectations and Nokia requirements have evolved, so have our methodologies and tools. In-depth assessments of labor conditions and environmental assessments are examples of this development. In 2003, we piloted an in-depth labor conditions assessment at supplier sites throughout China and used the results to help define and improve our overall global assessment methods.

In-depth assessments provide an opportunity for a more insight into how a supplier is managing and performing against the ethics, environment, labor and health & safety requirements defined in NSR. Whereas system assessment focus on all NSR topics, in-depth assessments focus only on the ethics, environmental, labor and health & safety requirements in NSR.

Suppliers undergo in-depth assessments if they are new and strategically important, identified as having significant/potential risks (from. risk assessments, system assessments, feedback from sourcing personnel or 3rd parties), or if they are located in a new country where we have little knowledge of potential issues of concern.

Our aim is to carry out 5-10 in-depth assessments per year. For information regarding how many assessments we conduct please refer to our Progress and targets for the latest information. In-depth assessments are carried out by Nokia trained assessors, however we also participate in joint industry assessments which are conducted by 3rd party assessors.

# Methodology

An in-depth labor conditions and environmental assessment covers the following:

- factory site tour (covering all facilities including production, dormitory, canteen, waste and chemical stor age)
- interviews with relevant management
- interviews with workers
- review of relevant documentation (e.g. payroll records, working hours)

The interviews with workers are conducted in complete confidence by local interviewers and in the worker's native language.

The process for reporting and following up is the same as in the system assessments detailed above.

# Experiences

The level of non-conformance we have found is in line with the experience of other companies in the electronics industry. Typical challenges that arise in these assessments include:

- disciplinary practices
- freedom of association (where it is legally restricted)
- health and safety requirements
- overtime hours
- pay structure
- sub-supplier monitoring system
- waste management

See Training & building capability for more information on how we support suppliers.

# **Environmental performance data**

If you consider the life cycle of a Nokia product, it is possible to identify environmental impacts associated with each stage from raw material extraction through to end-of-life disposal. In sourcing, our aim is to reduce the environmental impact of the "supply chain" part of the life cycle. In addition to driving performance improvements through our requirements and assessments, we are also working to drive improvements through environmental performance metrics and target setting. This provides a more continuous understanding of how suppliers are performing in this area and enables us to quantify the life cycle impacts and improvements.



Nokia strives to reduce the possible harmfull environmental impact of its products, services, and operations over the entire product life cycle.

At the end of 2007 we started to work with our suppliers of components and contract manufacturers to increase visibility of environmental performance and target setting. Our initial focus is on four key environmental areas:

- energy consumption at supplier sites and improvement targets
- CO2 emissions from supplier sites and improvement targets
- water consumption at supplier sites and improvement targets
- waste generation at suppliers sites and improvement targets

For information on how far we have progressed see Our progress & targets.

For information on how we are driving improvements in our own manufacturing facilities and logistics please see Operations.

# Training & building capability

Building capabilities within our own organization and our suppliers' is important for sustainable improvements

We help suppliers improve their management of corporate responsibility (CR) issues by meeting with them and providing training, sharing examples of best practice from Nokia's own operations or from other case studies. We help suppliers develop their own internal CR organization and embed CR within their business starting with a commitment from the top. We also work with Tier One suppliers to help them manage their own supply chains.

It is becoming increasingly apparent that training and capacity building amongst companies in the supply chain are important for driving sustainable improvements to support monitoring programs. Therefore, as part of the

Global e-Sustainability Initiative (GeSI) Supply Chain Working Group (SCWG), we actively participate in the Learning & Capability Building sub work group.

See Industry Collaboration for more information about our work with GeSI. For more information on our supplier training see Training.

# Training

### **Internal training**

Before our suppliers can be expected to meet our requirements, it is first important that own sourcing personnel are familiar with the requirements and commitments so that they can support implementation and ensure consistent messaging.

Internal training is provided to new sourcing personnel and existing personnel receive training and information sessions on new requirements.

For information on conducted internal training sessions see Progress and targets

# **Supplier training**

Supplier training helps:

- New suppliers to understand our expectations (e.g. NSR, Environmental Requirements for Nokia products)
- Existing suppliers to understand and implement new requirements (e.g. new material restrictions, updates to NSR), and
- Existing suppliers to build competences to meet existing requirements (e.g. address non-conformances from on-site assessments).

Our trainings focus on the Nokia Supplier Requirements, labor conditions, health and safety in the work place, design for the environment, and substance management. For the latest information on supplier training sessions see Progress and targets.

# Supplier cooperation & development programs

n order for any company to systematically drive social and environmental improvements, it is necessary to have both management support and an effective management system in place. One of the ways in which we help to build suppliers' Social and Environmental Responsibility (SER) capabilities, is to work with them to develop their own internal Corporate Responsibility (CR) organization and embed CR within their business starting with a commitment from the top. We do this by meeting on a regular basis, helping to get management support and sharing examples of best practice from Nokia's own operations or from other case studies.

In 2007 we initiated a cross-commodity development program with Foxconn (See A supplier's view), a global contract manufacturer and component supplier based in Taiwan. We helped the company set up a corporate CR structure connected to business units, and to define a corporate CR commitment. Nokia has been working with Foxconn for a number of years, meeting regularly to share best practice.

Since 2007 we have expanded this work and for the latest information please refer to Progress and targets. Although the suppliers are at different levels in their CR journey and organized in different ways, the objectives have been similar; to ensure they commit to and implement effective CR programs, targets, monitoring practices and reporting.

# A Supplier's view

"In 2007, Foxconn was advised by our customer to adopt industry best practice and set up an internal Global Social and Environmental Committee. That advice has helped us plan and manage social and environmental issues in a systematic, responsive and effective manner similar to the business value propositions we deliver to customers with our products and services.

The Committee holds regular meetings to bring in new improvement agendas. For example, new initiatives in 2007 included energy efficiency, air quality control and power saving. Through the guidance of our customer and our internal organizational change, Foxconn has made progress in social and environmental responsibility, developing a Code of Conduct in 2007, improving employee benefits, and ensuring cleaner, safer and more enjoyable working conditions. We have renovated existing buildings and set up new facilities offering employees after-work activities focused on entertainment, learning and health.

Foxconn embarked on its journey of corporate social and environmental responsibility (SER) in 2004, but without Nokia's help this 'quantum leap' and significant progress wouldn't have been possible. This is genuinely a realization of supply chain collaboration and partnered actions."

Executive Director of Foxconn Global Social & Environmental Responsibility Committee

# Sourcing materials

# In addition to our suppliers' operations we also need to consider the materials they provide.

Nokia is an industry leader in substance management. Our main objective is that we know all the materials in our products, not just those that raise concerns, and that they are safe for people and the environment when used in the proper way. Our sourcing organization and suppliers play a key role in ensuring our components and parts are safe and compliant with the Nokia Substance List (NSL).

The NSL identifies substances that Nokia has banned, restricted, or targeted for reduction with the aim of phasing out their use in Nokia products. We also require suppliers to have a record of the raw material content of products supplied to us and, if needed, to provide end-of-life treatment recommendations.

Learn more about Substance management in our Environment section.

# **EU REACH Regulation**

In June 2007, the EU regulations on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) came into force. According to this regulation, companies have obligations to ensure that the chemical substances they manufacture, import or found in articles considered as "substances of very high concern", are registered, authorized or notified according to legal requirements.

To support our suppliers we provided information to them and have ongoing discussions to ensure they are aware of the REACH regulations, understand the requirements and are taking responsibility for compliance to ensure uninterrupted supply.

# **Origin of raw materials**

In addition to knowing what is in our products, we try to establish where the materials in our products have come from and whether they been extracted or produced in an environmentally and socially responsible manner. Although Nokia does not buy raw materials directly, we recognize that we have an environmental and social respon-

sibility to ensure these are responsibly sourced by our suppliers.

# How far does our responsibility go down the supply chain?

Nokia's primary focus is on those suppliers with whom we contract and work with directly. Our suppliers are required to meet Nokia Supplier Requirements and product environmental requirements that define expectations for our suppliers, the components, parts and services they supply. Nokia Supplier Requirements request that our suppliers in turn set environmental, labor and health & safety requirements, and monitor the performance of their suppliers. We believe each tier of the supply chain must take responsibility for managing its own suppliers to achieve positive, sustainable improvements throughout the entire supply chain.

If concerns arise regarding the performance of 2nd/3rd tier suppliers, Nokia works deeper down the supply chain to investigate and address any concerns.

For certain materials of concern or alternative new materials, Nokia works with suppliers to evaluate and promote environmental and social improvements further down the supply chain. This work involves increasing the transparency of the supply chains of these materials, understanding the commitments of each tier, working at an industry level and with stakeholders. Our efforts with Tantalum are one example of work to tackle materials of concern, and biomaterials is an example of alternative new material.

# Industry collaboration

As well as working with our own suppliers, it is important that we also look at supply chain issues from an industry perspective.

# Global e-Sustainability Initiative (GeSI)

Nokia became a full member of the Global e-Sustainability Initiative (GeSI ) in 2007. We have been a member of the GeSI Supply Chain Working Group (SCWG) since 2004. This Group works closely with the Electronics Industry Citizenship Coalition (EICC). The main aims of this collaborative effort are to promote good conduct and to develop and deploy a consistent set of tools and processes to measure, monitor and improve CR performance across the ICT sector supply chain.

As part of our membership of the GeSI SCWG, we actively participate in the Learning and Capability Building, Shared Auditing and Extractives sub-groups working together with EICC.

# **Shared Audits**

Our industry shares many of the same suppliers and our networked supply chain means that many of us are customers and suppliers of each other. As a result, one focus of the GeSI SCWG has been to develop a shared auditing process together with the EICC, which means a single audit of a supplier facility can be shared across customers. In doing so, the work group aims to reduce the burden of duplicate audits on suppliers and allow them to focus resources on addressing issues and improving conditions

During 2008 Nokia participated within the shared audit work group, helping to develop the shared auditing process and in the actual audit pilots. For the latest information on supplier assessments please refer to Progress and targets section

# Learning & Capability Building

Recognizing that simply assessing suppliers for compliance does not create sustainable change, GeSI SCWG and EICC formed the Learning & Capability building work group, to which Nokia is an active member. During 2008, this work group hosted a supplier forum in China, concluded the pilot studies that emerged from the multi-stakeholder capability-building project for the ICT sector in China (in collaboration with BSR and the Foreign Investment Advisory Service (FIAS)) and, began developing a series of web-based e-learning modules.

# Extractives

GeSI and EICC formed the Extractives Workgroup to enhance members' understanding of social and environmental conditions at the mine level and to determine if and how we could act collectively or individually to improve these conditions. With this aim, the Workgroup commissioned an industry research project to understand:

- How six key metals (aluminum, cobalt, copper, gold, palladium, and tin) are mined, recycled, purchased and used within the electronics industry,
- How members of the GeSI and EICC can effectively influence social and environmental issues associated with the mining of metals used in electronics products. The research, published in June 2008, helped raise awareness of the key facts and challenges surrounding the supply of metals, the ability to trace the sources of metal used in electronic products and the industry's ability to include conditions. After this research the work group coordinated stakeholder forums to gather feedback and define the groups priorities mov ing forward. For more information visit the GeSI website.

# RosettaNet

RosettaNet is a voluntary initiative of over 500 major information technology and electronics manufacturers that is committed to developing solutions for the standardized exchange of information.

As part of its supplier cooperation development, Nokia is using the web-based RosettaNet information exchange solution in its product information exchange with suppliers, including information on material content.

For more information visit the RosettaNet site.

# Supplier diversity

Supplier diversity is highest on the corporate responsibility agenda in the US. We recognize that our spending with suppliers there can have a significant impact on economic development.

Our Supplier Diversity initiative encourages the creation, growth, and expansion of small, minority, and womenowned businesses within our supplier network. Our goal is to continually increase the ratio of minority and women-owned businesses in our supply chain, and monitor our spending with these groups.

# 7. Environmental Report 2008

Nokia made good progress in environmental initiatives in 2008 and we were recognised for our work in several different forums. Our commitment to sustainable products and operations remains strong and continues to be an important element in our strategy, despite the challenging economic environment.

We reached several major milestones in 2008: launching new products with improved environmental features, which will be rolled out across our product offering; driving a new energy rating for chargers in our industry, piloting the sale of phones without a charger in the sales package, reducing the energy consumption in our facilities, receiving the LEED Gold Certification for the new Nokia campus in Beijing, and expanding our global take-back programme.

We continued to look at new ways in which mobile technology can contribute to sustainable development, and introduced new environmental services inviting consumers to the journey towards sustainability, such as we:offset and Nokia Green Explorer. This is what we call the "Power of We" - engaging our user community in making environmentally friendly choices, starting from simple things like minimising your phone's no-load consumption. It

may seem as if one person can't do much alone, but together the over one billion people using Nokia devices can make a real difference.

Kirsi Sormunen, Vice President Nokia Environmental Affairs

# 2008 in short

In 2008, we continued to look for possibilities to reduce the environmental impact of our devices and operations at each stage of the product life cycle. Our focus areas are materials used, energy efficiency, the manufacturing process and recycling. We also introduced several new mobile services advocating sustainable lifestyle.

# **Energy saving in devices**

Over the last decade, we have reduced the average no-load power consumption of our chargers by over 80%, and over 95% in our best-in-class chargers. We are making good progress in reaching our target of reducing the noload power used by our chargers by 50% from the 2006 level by the end of year 2010.

Nokia was the first mobile manufacturer to put alerts into devices encouraging people to unplug their chargers, and we are rolling these alerts out across our device range. Based on a voluntary agreement under the EU's pilot project on Integrated Product Policy (IPP), Nokia together with other manufacturers created and took into use a Mobile Device Charger Energy rating. This 0–5 star rating is based on the charger's no-load power consumption and is shown on a label on the product, with the aim of informing consumers about more energy-efficient chargers and encouraging the use of more energy-efficient models. All new Nokia chargers meet the criteria of voluntary agreements such as the EU Code of Conduct and the US Environmental Protection Agency's Energy Star, as well as the highest four- and five-star criteria of the EU IPP rating.

# Materials in Nokia devices and packaging

All Nokia mobile devices worldwide are fully compliant with the EU's RoHS directive (Restriction of the use of certain hazardous substances in electrical and electronic equipment). We have also phased out PVC from all Nokia's mobile devices and enhancements. We are currently phasing out the use of brominated and chlorinated flame retardants and Antimony Trioxide. The device leading this phase-out, the Nokia 7100 Supernova, was launched in November 2008.

In early 2008 we started shipping the Nokia 3110 Evolve, the first mobile device whose bio-covers use 50% renewable materials, thus reducing the amount of fossil fuels used to manufacture it. Nokia's high-efficiency charger, the AC-8, was launched with the Nokia 3110 Evolve, and is now shipping in volumes with many of our devices. The packaging for the Nokia 3110 Evolve contains 60% recycled materials, doubling the amount of recycled content typically used, and due to its smaller size also consumes substantially less cardboard.

We continue to improve our packaging solutions. The use of renewable paper-based materials has been increased to over 95% of total packaging materials. From August 2008 the sales packages of all new devices have been smaller than their earlier equivalents. From February 2006 to the end of 2008, we reduced the weight of packaging materials and user guides used for our most affordable devices by over 60%, which adds up to 100,000 tons of paper saved. Smaller and lighter packaging has also reduced the need for transportation. What's more, all of these environmental savings have translated into significant monetary savings.

#### Promoting sustainability through services and software

We have developed eco services for our phones to help people to make sustainable choices and consider the environment in their everyday lives. A variety of eco services are freely downloadable in Nokia devices.

In December 2008, we introduced the beta version of Green Explorer, a free service designed to promote sustain-

able travel. The service is a combination of travel guide content and tips about sustainable travel shared by the users themselves.

We also launched the Eco Catalogue, later known as the Eco zone, as part of the Nokia Download! offering. This service can already be used with 200 million Nokia devices. The Nokia Eco zone is a mobile destination where owners of Nokia devices can view and download a range of eco content, from wallpapers and links to interactive applications. In 2008, we also introduced as part of our offering the we:offset, the world's first mobile application for offsetting CO2 emissions from air travel.

#### **Recycling Nokia devices**

Between 65% and 80% of a Nokia mobile device can be recycled. To utilise this potential for reduced environmental impact, we participate in collective recycling schemes with other equipment manufacturers in Europe and Australia; we have our own collection points for recycling used mobile devices and accessories in approximately 85 countries; and we engage in local recycling awareness drives with retailers, operators, other manufacturers and authorities around the world. These drives aim at increasing consumer awareness of recycling and their responsibility for bringing back their used devices for responsible recycling. Additionally, we work with qualified recyclers around the world to ensure proper end-of-life treatment for obsolete devices.

During 2008 Nokia executed voluntary local recycling drives to raise awareness in 30 countries. One of our most successful voluntary co-operative recycling initiatives is the Green Box campaign in China, which was initiated with China Mobile and Motorola in 2006. During 2008, the collection volumes from the Green Box campaign exceeded 42 tons, which equals to approximately 470,000 devices.

In 2008, Nokia continued to participate in financing the collection and treatment of electronic waste in different EU countries, in accordance with the requirements set by National Implementation of the European Union's WEEE directive (Waste Electrical and Electronic Equipment). There are now national collection networks in operation to collect and treat all electronic waste from households. During 2008, the EU's directive 2006/66/EC on batteries initiated the national set-up of similar collection networks for portable batteries. In addition, Nokia has during 2008 increased communication on recycling on the country level with the introduction of localised recycling information on Nokia's Internet pages.

#### Nokia facilities: energy, emissions and environmental certifications

In 2008, Nokia's facilities consumed 69 GWh of direct energy and 592 GWh of indirect energy. Direct energy refers to the usage of gas and oil in Nokia's facilities, while indirect energy usage is composed by the consumption of electricity, district heating and district cooling. This energy consumption caused 14,700 tonnes of direct and 218,000 tonnes of indirect greenhouse gas (CO2-e) emissions. In addition to the CO2-e emissions caused by energy usage, direct greenhouse gas emissions include the global warming potential caused by HFC-refrigerants expressed in terms of CO2-e. Without Nokia's purchase of certified green energy, the indirect emissions would have been 46,700 tonnes bigger.

Nokia has a corporate-level ISO 14001 certificate in place for all manufacturing sites.

#### **Suppliers**

During 2008, we continued to promote environmental and social responsibility in the supply chain.

From the environmental perspective, we increased the visibility of suppliers' environmental performance and target setting, focusing on four key areas: energy consumption, carbon dioxide (CO2) emissions, water consumption and waste generation. Of our suppliers that together account for 69% of our overall hardware expenditure, 82% have reduction targets for energy, CO2, water and waste in place and monitored. This monitoring is continuing in 2009 as part of our ongoing cooperation with suppliers.

At December 31, 2008, 91% of our direct suppliers' sites serving Nokia were ISO14001 certified. These certified suppliers account for at least 98% of our hardware purchasing expenditure.

Regarding EU REACH, or the European Union Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals, we have been actively surveying and cooperating with all our direct suppliers to generate awareness and ensure that necessary actions are in place.

From a social and environmental perspective we have continued to promote compliance against our requirements. We conducted 62 Nokia Supplier Requirements assessments and eight indepth labor, health and safety and environmental assessments in 2008. Five of the indepth assessments were conducted by internal Nokia assessors and three by external thirdparty assessors, as part of the Global eSustainability Initiative (GeSI) and Electronic Industry Citizenship Coalition (EICC) industry joint audit pilot.

#### **External Recognition**

During year 2008 our extensive environmental work was recognised in several forums.

Nokia achieved the industry leader position (1st out of 23) in the Communication Technology category in the 2008 annual review for the Dow Jones Sustainability and Dow Jones STOXX Sustainability (European technology) indexes. The Dow Jones Sustainability Indexes, launched in 1999, are the first global indexes tracking the financial performance of the leading sustainability-driven companies worldwide. Following a best-in-class approach, they include sustainability leaders from each industry on a global and regional level respectively.

Nokia was listed as one of the companies (3rd out of 73) with best climate risk management approaches in the new Carbon Disclosure Project ranking. Nokia's rating puts it among the best companies as regards climate risk management, seizing business opportunities arising from climate change, and performance in measuring and reporting greenhouse gas emissions. This good result also earned Nokia a place in one of Carbon Disclosure Leadership Indexes, which list the highest-scoring companies.

Nokia was also included in the FSTE4Good index and ranked as a leading company (1st out of 39) among technology hardware companies in the categories of environmental performance, social performance and overall performance in a global technology hardware analysis by Goldman Sachs.

Nokia won the Green Awards competition in the Best Green Internal Communications category with the Power of we campaign. The entry also won the Green Awards Grand Prix.

During 2008 Nokia scored 3 top positions and one second position in Greenpeace's greener electronics quarterly ranking.

# Products

At Nokia, our approach is to continuously improve the environmental sustainability of all our products. On our ongoing environmental journey, rather than introducing one-off "eco" devices, we aim to roll out our environmental innovations across our product range. When designing our products, we focus on sustainability throughout the product life cycle: in the materials we use, in energy efficiency, in packaging, and in the software and services that enable people to make more sustainable choices in their daily lives.

Our focus areas for improving energy efficiency are in operations and manufacturing. For improving energy efficiency in the use phase of our devices, we have developed energy efficient chargers which use less energy in the no-load mode. In May 2007, Nokia became the first mobile phone manufacturer to introduce alerts in its devices that remind the users about unplugging the charger once the battery is full. Today, the alert is included in most of our new devices.

Our work on materials has resulted in achieving new milestones in restricting the use of substances of concern. In 2008, we introduced our first two devices which are fully free of brominated compounds, antimony trioxide and chlorinated flame retardants: the Nokia 7100 Supernova and the Nokia 6260 Slide. Beyond this, we've introduced innovative materials with environmental advantages. In the beginning of 2008, we started shipments of the Nokia 3110 Evolve, a device using bioplastics made from renewable sources instead of traditional plastic made of fossil fuels.

In 2008, Nokia also introduced the Remade concept phone. The idea behind the concept was to see if it was possible to create a device made from nothing new. Remade has been designed using recycled materials that reduce the need for virgin resources, reduce the amount of waste ending up at landfill, and allow for more energy-efficient production. It is made out of metals from upcycled aluminum cans, plastics from bottles form its chassis, and its rubber key mats are provided by old car tyres. Inside the phone there are new, more environmentally friendly technologies, such as printed electronics, and the graphics used on the display save energy without compromising on style. Remade is a concept that explores potential new ideas for the future, and is part of our ongoing work looking at how it can help people to make more sustainable choices. It is designed to help inspire and stimulate discussion on how mobile devices might be made in the future.

Furthermore, our devices can have a positive impact by helping people to make sustainable choices. During 2008, we've introduced in our devices the we:offset application for offsetting the CO2 from any flights people must take, the Eco zone for environmental tips, links and content, an environmental footprint calculator from WWF, and environmentally themed wallpapers and ringtones. Our devices also provide the opportunity for shifting consumption from material products to digital services, for example by downloading music files instead of buying CDs. Devices with features such as navigation, camera, music player, or video recorder can replace the need for separate equipment. These features bring along additional environmental benefits through savings in materials, energy, and transport need.

# **Energy efficiency**

With a billion Nokia phones in use around the world, even small individual improvements can add up to a substantial energy saving. During the use phase of the phone, in general, two thirds of the total power consumed can be wasted when the battery is full but the charger remains plugged into the mains – we call this the "no-load" mode. We estimate that if all Nokia users unplugged their chargers when their phones are fully charged, it would save enough energy to power 100,000 average-size European homes.

We are tackling this challenge in two main ways:

# Reducing the no-load energy consumption of all Nokia chargers by introducing new, more effective charger models in volumes.

Over the last decade, we have reduced the average no-load power consumption of our chargers by over 80% and by over 95% for our best-in-class chargers. Our target is to halve the no-load consumption from 2006 to 2010, and we are well under way to reach this target. The high-efficiency charger introduced with the Nokia 3110 Evolve, the AC-8, uses just 0.03 W in the no-load mode.

During 2008 we began rolling out the AC-8 as the default charger for many of our product categories. By shipping devices with AC-8 instead of the older charger models that had up to tenfold no-load consumption (0.3 W), the amount of energy we've saved during 2008 only could power 125.000 energy saving light bulbs for a year.

# Alerting users when their phones are fully charged.

During 2008 we've implemented alerts in most of our devices telling users when their phone batteries are fully charged so that they should unplug the charger to conserve energy.

To reduce the power consumption of the mobile device itself, Nokia has several energy saving settings in place. These are combined in a new Power Save feature, which we introduced last year. It saves energy by adjusting the display lights intensity, contrast and and time out by both manually activating the Power Save and with the support of ambient light sensor in the device. During 2008 this feature has been implemented in new S60 devices.

We have also contributed to the European Union's Integrated Product Policy (IPP) project, leading a pilot study applying the life cycle approach of IPP to mobile phones. In November 2008, this resulted in a voluntary commitment by the leading mobile manufacturers. In order to guide consumers and encourage the use of more energy efficient chargers, Nokia in collaboration with other mobile manufacturers introduced the Mobile Device Charger Energy Rating. This 0–5 star rating is based on the charger's no-load power consumption and is shown on a label on the product, with a maximum of 5 stars being awarded for the most energy efficient chargers. Since November 2008, we have spread awareness about this rating on nokia.com and in points of sales. The star rating will be visible in the charger sales packs.

All new Nokia chargers are specified to meet the criteria of voluntary agreements such as the EU Code of Conduct and the US Environmental Protection Agency's Energy Star, as well as the highest four- and five-star criteria of EU IPP.

# **Materials**

Our main objective is that we know all the substances that go into our products, not just those that raise concerns and are thus monitored or restricted. The substances used must be safe for people and for the environment when used in the proper way. Nokia is proud to be the only manufacturer that, in close cooperation with its suppliers, has full material declarations for our mobile devices. This means we can respond swiftly should any new concerns or regulations arise regarding the substances in use today.

The chart below shows the typical composition of a Nokia mobile phone:



# **Innovative materials**

We continually review the potential of new materials to reduce the environmental impact of our products. In 2008 we started shipments of the Nokia 3110 Evolve, a device that has plastic covers that contain 50% bio-based raw material.

We are actively studying the possibility of using recycled materials in specific parts of our devices. We have even looked into the possibility of creating a device that could be made entirely from recycled materials, avoiding the use of virgin materials and diverting waste from landfill. Our design team created the Remade concept device which recycled materials from, for example, metal cans, plastic bottles, and car tires. The concept was launched in early 2008 to inspire and stimulate further thinking on how mobile devices might be made in the future.

# **External requirements**

Several countries are introducing measures similar to the European Union legislation on the Restriction on Certain Hazardous Substances (RoHS), which became effective in 2006. All our terminal products comply with RoHS worldwide.

The European Union Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) aims to evaluate and register tens of thousands of chemicals, and to replace those considered most dangerous. It will be introduced in phases. The pre-registration of substances and the registration of new substances took place during 2008. The next step is the publication of a "Candidate List" of substances of very high concern.

During 2008 we ensured that Nokia's European suppliers, and those importing into the EU, understand and are ready to respond to the REACH requirements. We provide our suppliers with information about Nokia's specific uses of their materials to help them register substances. We are also gathering information from our suppliers to identify any potential impacts on the availability of materials and to ensure their commitment to fulfilling the REACH requirements. This process has been made easier by our practice of having full substance knowledge for all our products.

#### Substances of concern

Our approach to substances is based on the precautionary principle. This means we will not wait for full scientific certainty where we have reasonable grounds for concern about the possibility of severe or irreversible damage to health or the environment. In those cases we will voluntarily drive the substitution of substances for suitable and technically viable alternatives.

We apply the same standards all over the world, which means all our products globally comply with requirements such as the European Union's legislation on Restrictions on Certain Hazardous Substances (RoHS) Directive.

#### **Nokia Substance List**

The Nokia Substance List (NSL), first released in 2001, shows the timeline of when a particular substance is to be phased out. The NSL identifies substances that Nokia has banned, restricted, or targeted for reduction with the aim of eventually removing them from our products. The list is divided into two sections, Restriction in Force and Monitored Substances. We work together with our suppliers in investigating alternative materials and solutions that will help us fully eliminate restricted or monitored substances from our entire product line. In addition, we will give interim updates on individual substance phase-outs as needed.

In 2008 we published a plan to phase out chlorinated and brominated compounds and antimony trioxide in our new devices in the coming years.

The NSL is updated annually. The latest version was released in January 2009 and is publicly available on our website In addition, we keep our suppliers up to date on updates to the NSL.

# Packaging

We continue to improve our packaging solutions. The use of renewable paper-based materials has been increased to over 95% of total packaging materials. From August 2008 the sales packages of all new devices have been smaller than their earlier equivalents. From February 2006 to the end of 2008, we reduced the weight of packaging materials and user guides used for our most affordable devices by over 60%, which adds up to 100,000 tons of paper saved. Smaller and lighter packaging has also reduced the need for transportation by omitting 12.000 trucks from the roads. What's more, this has generated 474 million euro savings.

# Services

We have developed eco services for our phones to help people to make sustainable choices and consider the environment in their everyday lives. A collection of free eco services is freely downloadable in Nokia devices. These services help people to do their bit for the environment, allow them join a community of like-minded people, So far, Nokia's eco services have reached millions of people around the world.

# **Green Explorer**

In December 2008, we introduced a beta version of Green Explorer, a free service designed to promote sustainable travel. The service is a combination of travel guide information from Lonely Planet and WWF and tips about sustainable travel shared by the users themselves.

Green Explorer is a community based travel service with high quality partner content. The service includes a web site, a mobile site and a widget which all help travelers to explore green corners of the world in a sustainable way directly from their mobile devices.

Through Green Explorer people can share information, give guidance and communicate to their peers about ecofriendly traveling as well as rank destinations for a more enhanced and meaningful travel experience. In addition, map features include images to visualise destinations and points of interest.

In addition to user generated content, strong content partners, WWF and Lonely Planet were chosen to enrich service experience. The service has environmental information and eco tips from WWF covering 30 different countries plus eco travel information from Lonely Planet for almost 3000 locations worldwide. The service helps to select the most sustainable way to get to your destinationbased on mode of transport, cost, time to destination, and CO2 emissions. To explore new cities, service provides green city guides, currently available of 10 locations as well as green travel news.

# We:offset

In April 2008 we introduced the we:offset - world's first mobile CO2 emission offsetting tool for flights. The free application is available in 46 languages.

By detecting your location, we:offset knows automatically when a flight has been taken and suggest offsetting the CO2 emissions. The payment can be made directly from the mobile device.

We are co-operating with Climate care, who invests the funds. The payments will help fund a balanced portfolio of Gold standard projects around the world that focus on renewable energy and energy efficiency.

#### Eco zone

Eco catalogue, later known as Eco zone was launched as part of Nokia Download! in October, 2007. It is a mobile destination that enables owners of Nokia devices to view and download a range of eco content varying from wall-

papers and applications to links.

With access to Eco zone on Nokia mobile device, you'll have well chosen information about environmental organisations, communities, applications and movements at your fingertips. At Nokia, we support organisations that we believe in and, in many cases, help to mobilise their world changing influence

Eco content gives help and inspiration in leading a more sustainable lifestyle. Eco zone is an example of content illustrating of the importance of mobile devices in inspiring environmental change and supporting a greener way of living.

# Take-back and recycling

Take back and recycling are focus areas in Nokia's environmental work. They cover three different aspects in our activities: the recycling of the materials used in Nokia's operations and facilities, designing products for recycling, and the take back and recycling of obsolete products. The aim is to increase awareness of recycling and impact people's behavior to make sure that phones are returned for recycling at the end of their useful lives.

Small individual actions can add up to a big difference. If all mobile phone owners today – in other words, three billion people globally – brought back one unused device, we could save 240,000 tonnes of raw materials and reduce greenhouse gas emissions to the same effect as taking 4 million cars off the road. And most of us have not just one, but several unused phones lying around in our drawers.

Nokia supports individual producer responsibility. In order for us to carry out our own responsibilities we also need the help of others in the value chain, like consumers and retailers, and their commitment to bringing back obsolete mobile devices for responsible recycling. This co-operation eventually leads to a situation where environmentally optimised product design enables easier recycling. When these practices become commonplace they bring further benefits for consumers, producers, and the environment.

### The life cycle approach

Nokia's aim is the vast return of majority of the materials used in our products back into circulation, in accordance with cradle-to-cradle thinking. This helps to minimise the energy consumption and the amount of chemicals that would be used in manufacturing. By making conscious choices in the design and by driving best practices in recycling, we can reduce our environmental impact.

Nokia is working hard to ensure that production scrap and invalid components, as well as the used mobile devices and old IT equipment of our employees, are all recycled. Our goal is to reduce all waste to a minimum. In addition, we have recycling requirements for our component suppliers.

The graph below shows how the material flow in manufacturing mobile phones is managed through the whole life cycle, from product design to the moment when you drop off your phone for recycling.



#### The recycling process

It is important that the materials that have been used for your phone can be safely recycled when the phone is no longer needed. We choose eco-efficient third party recycling companies to take care of the recycling of our products. 65-80% of the materials in a Nokia mobile phone can be recycled and given a second life. Best practices can recover 100% of the materials, partly as energy. To help recycling the cover parts of our phones are clearly marked as recyclable.

Efficient recycling starts by getting the products back and consolidating, sorting, and pre-treating them. We put a lot of effort in take-back and recycling supplier selection to ensure efficiency and the highest environmental benefit, following relevant health and safety standards. We have a network of recycling vendors worldwide who operate in accordance with our standards. The network consists of close to 80 recycling facilities globally.

#### The environmental impacts of recycling

A study by Nokia has shown that the energy consumption and the resulting CO2 emissions in the last phase of the product's life cycle are relatively low. The average amount of CO2 emissions from WEEE-standard recycling of 100 tonnes of electronic waste is 20 metric tonnes. In comparison, the US EPA calculates that the average US household produces 7.5 tonnes of CO2 equivalent emissions every year.

The refinement of recycled materials uses up to 85% less energy than the processing of a corresponding amount of virgin materials. As a result of avoided manufacturing phases, it can be estimated that the recycling of materials reduces CO2 emissions in the manufacturing phase by 20 %.

On the average, the downstream transport accounts for 30% of the CO2 emissions of recycling, pre-treatment for 15% and transport from the consolidation point to recycler for 55%. When the collection phase (end user activities, i.e. the user bringing the phone to the recycling point) is included, it dominates the CO2 emissions of the end-of-life phase, leaving less than 3% to the recycling operations and logistics. This result is based on a rather modest assumption where 50% of users drive 5 km to the take back point – in reality, the figures may be higher. This is why take-back locations need to be close to consumers, and bringing used products to take-back points should be made easy.

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The CO2 emissions at end-of-life can be minimised by optimising transport in both inbound and outbound logis-

tics. This effort should not sacrifice the use of state-of-the-art recycling to keep the environmental impact of these processes in control.

# Global consumer survey on recycling

Nokia conducted a global consumer survey in 2008 to learn more about consumers' attitudes and behaviors towards recycling. Nokia also needs this information to develop its take-back programs and for its efforts to increase recycling rates. The survey was based on interviews with 6,500 people in 13 countries, including Finland, Germany, Italy, Russia, Sweden, UK, United Arab Emirates, USA, Nigeria, India, China, Indonesia and Brazil.

The average mobile phone user has owned five phones. According to the survey, only 3% of people recycle their old mobile phones. Three out of four respondents stated that they don't even think about recycling a phone and nearly a half were not even aware of the possibility.

Yet very few old phones, 4%, are being thrown into landfill, Instead the majority, 44%, are simply being kept at homes and never used. Many people give their phones another life in different ways: 25% of the respondents have passed their old phone to friends or family, and 16% have re-sold their used devices. Re-selling is common particularly in emerging markets.

Globally, 74% of consumers said they don't even think about the possibility of recycling their phones, even though 72% thought that recycling makes a difference to the environment. The share of people who do not consider recycling their unwanted phones was consistent across many different countries: 88% in Indonesia, 84% in India, and 78% in Brazil, Sweden, Germany and Finland.

The survey revealed that one of the main reasons why so few people recycle their mobile phones is because they simply don't know that it is possible. In fact, up to 80% of any Nokia device is recyclable and its precious materials can be reused to make new products such as kitchen kettles, park benches, dental fillings or even saxophones. Globally, half of those surveyed didn't now phones could be recycled like this, with awareness lowest in India at 17% and Indonesia at 29%, and the highest in the UK at 80% and 66% in Finland and Sweden. **Take-back** 

Our responsibility is to make the return of obsolete products as easy as possible and to make sure a used device is treated responsibly at the end of its life. In many countries the Extended Producer Responsibility principle either has already influenced the waste legislation or is at present discussed in local initiatives when building national legislation. It means that producers will have to take responsibility of the waste their products cause.

Nokia offers free take-back in our service centres in 85 countries, with all of our close to 5000 service points. Nokia collects also obsolete products in our Flagship stores in Finland, UK, Russia, USA, China, Hong Kong, Mexico and Brazil and in all concept stores in India. Obsolete products are also collected in Nokia offices worldwide. Nokia also participates in collective collection schemes including the producer organisations in the EU-27 countries, the MobileMuster programme in Australia, and the Green Network in the state of California (USA). In these programmes consumer may either return all kind of electronic products (EU-27), or the collection is organised by all phone brands and focuses on phones (Australia).

#### Extending the product life-cycle

The design of the product and our repair network can extend the lifetime of the product and reduce waste. Nokia's repair service network covers close to a hundred countries. Evidently every product becomes obsolete in time. Common reasons for this are the fast development of technology (for example, new features and longer talk time) and fashion changes (for example, size and looks) that make the product no longer interesting for the user. The phone can also get broken beyond repair.

The following graph shows the age distribution of products collected for recycling.. Our research shows that 40% of products are being handed over to second user either by donating or selling them. The majority (over 90%) of

recycled products are older than 5 years In a recent Nokia study concerning Europe, only 0.5% of collected obsolete products were determined to be suitable for repair, the repair costs being too high when compared to the phone's value.

# Co-operation and projects in take-back in 2008

We have been running take-back campaigns since the late 1990s and we regularly work with environmental organizations or non-governmental organizations such as WWF and Plan to increase consumer awareness of recycling in different regions around the world. We also work with other companies in our industry to improve recycling standards.

Nokia participates in many projects to improve the performance in all steps of the recycling chain. One example is the Basel Convention Mobile Phone Partnership Initiative (MPPI), where global guidelines for environmentally sound handling of obsolete mobile phones have been drafted, covering design, collection, refurbishment, transboundary movement and recycling. We are also a member of the StEP initiative (Solving the e-waste problem), an industry-academia cooperation led by the UN University.

# E-waste in Africa

Managing electronic waste in Africa is a challenge. In 2008, Nokia commissioned a thesis from IIIEE (The International Institute of Industrial Environmental Economics) in Lund, Sweden, which explores the management of electrical and electronic waste (e-waste) in Kenya. Kenya imports large amounts of used electrical and electronic equipment (EEE), and also receives generous donations of EEE. There is a growing concern over waste from these products as well as from increased trans-boundary movement of e-waste from the developed countries to the developing countries. There are neither infrastructure nor regulations in place that could govern the environmentally sound management of e-waste.

The mobile phone was selected as the scope of the IIIEE study due to its global presence and its growing use in Kenya. The research confirms that in Kenya there is a need to develop waste management policies and regulations that are structured and guided by EPR (Extended Producer Responsibility) principles. It also identifies areas of concern for further research. The first area deals with the identification of the flows and quantities of e-waste generated in the country and the e-waste imported in to the country. The second research area looks into the adoption and integration of EPR into national legislations and what impact it would have on the various players and actors in the e-waste scene.

# Training staff on recycling

One of our environmental programmes in 2008 was to re-train the staff at the service points on recycling and to increase the visibility of the take-back service by placing out posters, stickers and collection boxes. Based on our consumer study we also found solutions to major obstacles that keep people from recycling. This material was used to prepare an e-learning solution for the training In 2008 Nokia has further strengthened the recycling infra-structure in different countries, for example in India with over 1300 new recycling locations, and in China, where 150 new take-back points were introduced.

# **Collection systems in Europe**

Nokia participates in national programs in each EU member state to manage the waste resulting from the sales of our products. There are initiatives for handling packaging materials, batteries and electronics waste in most member states. These systems can vary with regard to set-up, but they all support the collection of waste and/or used products from household users. Below are examples on such systems from Germany and Spain. They illustrate how different the national solutions can be even though they are based on the same EU directive (WEEE directive 2002/96/EC, on Waste Electrical and Electronic Equipment).

#### Germany:

The German e-waste collection network is based on the already existing infrastructure for collection of general waste from the households. This network is managed by municipalities. The collection sites have dedicated containers where households can return all electronic waste. The costs are then divided between all producers by the

national register (the EAR) to which Nokia reports every month the amount (in kilograms) of electronic products that we bring to the German market within each product category defined. Based on calculations of our total market volume share, we then get a notification from the register to collect a container from collection sites. We have a contract with a recycler that takes care of the actual recycling and reports back to us and the register.

#### Spain:

Nokia and the major mobile phone manufacturers set up a mobile phones collection plan called Tragamovil in Spain as early as in 2001. This was well before the entry into force of the WEEE directive that mandated all member states to set up household collection for all electronic waste by August 2005. This plan has developed during the years, and the 24 member companies now cover more than 90% of all mobile phones, accessories and telecommunications equipment put on the market in Spain. There are more than 1,000 collection points in stores, service centres, local and municipal sites, universities etc. The Tragamovil plan has its own logo, which helps in locating the recycling places and the branding in awareness campaigns and drives.

# Building Awareness – Take-back drives in 2008

Building consumer awareness is very important in getting users to return the products to collection. Nokia is driving awareness globally in many ways. Although we offer take-back services worldwide, most of the returned phones go through various retailers for resale or are returned for recycling through national or other commercial collection schemes. The combination of these different channels offers people many possibilities to return obsolete products to collection, and there is no need for any devices to end up in landfill.

In 2008, we started to increase the visibility of the recycling collection points by placing a recycling icon in the Nokia store locator. This icon helps to find the services available in a specific store. The enhanced Nokia store locator was piloted in South Africa, China, Russia, Turkey, Portugal, Ireland and Australia. We have also added recycling information and instructions on both the Nokia.com and the Nokia.mobi sites.

During 2008, we organised 45 different recycling awareness drives ranging from country-wide collection campaigns to co-operation with telecom operators and universities, as well as collection at Nokia's booth in industrial fairs – even in our general annual meeting. Recycling drives raise awareness of recycling, showing people that there is an environmentally sound option for disposing of obsolete phones.

### Examples of the awareness drives from 2008

#### North America: the power in communities

The America Recycles Day and Earth Day are great opportunities to address people to bring their obsolete phones and other electrical waste to recycling. Nokia is working together with communities to organise local recycling events on these dates.

Nokia's San Diego office organised a recycling event on Earth Day in fall 2008. This event marked the release of the we:recycle initiative into the US market and gave a free recycling offering to the greater San Diego Community. We collected over 9,979 kg of electronic scrap during the Earth Day. Events during the America Recycles Day collected 14 tonnes of electronics for recycling.

We have also learned that putting a return envelope in the sales box is not the most effective way to get people to recycle their old phones, Now we offer downloadable postage-paid return labels in our Internet pages. The USA Mailback program in Nokia.com helped us to collect 19,340 mobile phones in 2008.

#### Kenya and South Africa: the first recycling campaigns

The first-ever take-back and recycling campaign in Sub-Saharan Africa took place in Kenya in February 2008. Recycling boxes were placed in authorised Care Centres. Altogether 100 phones were collected.

Nokia organised a recycling awareness campaign in South Africa during November and December 2008, collecting obsolete products in the service centres and outlets. The campaign included promotional spots on five radio stations, a Media Roundtable discussion, and competitions with Nokia phones as prizes. During the campaign, 150 old

mobile phones were brought to recycling in Cape Town, Pretoria and Durban.

# Chile, Mexico and Peru; Movistar joint campaigns

Nokia and the telecom operator Movistar have a joint recycling campaign in Movistar's retailer shops in Chile, Mexico and Peru. This joint recycling venture started in 2008 and is still on-going. People can recycle their devices as well as other electrical waste in special recycling boxes in Movistar stores. Campaigns were launched in the national TV to raise environmental awareness.

In 2008 Nokia has collected 74,483 pieces of e-waste in Chile, totalling 12,799 kilograms, 8,060 pieces in Mexico, and 51,329 pieces in Peru, totalling 3,761 kg.

# Finland and Latvia: save the Baltic Sea

The protection of The Baltic Sea is one of the local environmental focus areas in Finland and the Baltic region. With this purpose, Nokia organised a recycling campaign together with WWF during April-July 2008. Nokia gave away pre-paid envelopes where consumers could send theirs old phones for recycling. For each sent envelope Nokia gave a donation of 2 euros to WWF's Baltic Sea campaign. Retailers were activated; 13 retail chains participated (representing 80% of cell phone sales). 13,730 cell phones were recycled during this campaign.

A similar Save the Baltic Sea - campaign was organised in Latvia with Tele2 between June and September 2008. For each returned device, both Nokia and Tele2 paid 2.5 euros (a total of 5 euros per device) to WWF. Customers also got a discount on a new phone for each phone returned. This campaign helped Nokia to collect 1,700 devices.

# Sweden: Children in a Changing Climate campaign

Nokia Sweden ran a campaign raising funds for Children in a Changing Climate together with Plan Sweden in January 2008. 650 stores and more than 50 big companies were committed to recycle phones for this project. The project gave 3 euros per each returned phone to the Children in Changing Climate program. Money collected will be used in projects to help children who suffer for problems as a result of climate change. More information here (in Swedish) www.mobilkomposten.se.

# France: the Loire project

In September 2008, Nokia France started a six-month take-back campaign with WWF France, called the Loire project. The Loire is the biggest wild river in France, and the Loire valley is a UNESCO World Heritage Site. For each returned phone, 5 euros are given to the project. Each such donation helps restoring 5 m<sup>2</sup> of rich mudflats or conserving 15 m<sup>2</sup> of alluvial forest on the edge of the river. By 22nd of December 2008, 1,600 devices have been collected.

# More information here (in French): http://www.nokia.fr/pointservice

# Malaysia: take-back kiosks

The Intergrated Nokia Kiosks (INK) concept was awarded with the Green Mobile Award in the GSMA (Global System for Mobile Communications Association) Asian Mobile Awards in Macau. These Kiosks combine recycling and care services and music downloads under one roof. The Kiosks are found in four locations in the Klang Valley. They provide a convenient, automated facility for customers to drop in phones for service and to leave old phones for recycling. For every phone returned, Nokia will give away a tree planted under the WWF NEWtrees Initiative. Consumers who participate in this recycling effort will receive a tree in their name. On December 2008, about 1,400 phones had been recycled through the INKs.

# Thailand: elephants in danger

Nokia Thailand collaborated with WWF on the protection and conservation of elephants from November 2008 to February 2009. Nokia will donate 50 baht to this conservation program for each phone returned for recycling. The campaign aims to raise awareness on the fragile situation of elephants in Thailand and to promote the co-existence of people and elephants. It also promotes sustainable agriculture for communities and providing alternatives for poaching.

### China: the Greenbox program

China's Greenbox program was expanded during 2008 with 150 new collection locations. The current coverage in China is 650 locations and we recycled 42,26 tons of electronics waste during 2008. We also organised two collection events for obsolete phones at the Tshinghua University and the Communication University of China, and expanded the collection to Xingwang Industrial Park where obsolete phones were collected from companies such as RFDM, Elcoteq, and Sanyo.

# Digital campaigning; 3 steps to recycle

Based on our consumer study on recycling, we came up with a concept to overcome the main obstacles for recycling. This concept is called "3 steps to recycle" and it was used as a digital campaign. The 3 steps are:

- 1. We don't talk anymore Get over your old phone
- 2. Spend the night together backup what needs saving
- 3. Set your old phone free recycle it

# Operations

In 2008 we had more than 400 facilities around the world, including 10 production sites. Energy consumption at these sites is the main environmental focus area. These locations, with a total surface of 1,437,000 square metres, collectively consumed 661 GWh of energy in 2008 and were responsible for 231,000 tonnes of carbon dioxide emissions from energy consumption.



Despite energy savings done, our total energy consumption has increased over the years due to our increased business. Both phone volumes and number of employees have been increasing from year to year, but not always needing additional space, due which energy per area has been changing over years (reduced in 2008). With green energy purchases we have been able to decrease brown electricity usage since 2006.



Facility greenhouse gas emissions are caused by the energy consumption in our buildings (offices and factories) and from minor part by refrigerants used in cooling systems. As electricity consumption is the main contributor for our CO2 emissions, in addition to amount of energy usage, the energy source of electricity generation plays a key role (fossil-based vs. renewable energy). The CO2e emissions per mobile device have been reduced in 2008.

# **Energy efficiency**

Our industry is not a major energy user – telecommunications accounts for less than 1% of the CO2 emissions in the world, but to be an environmental leader we must address energy use as broadly as we can. We are improving the energy efficiency of our operations and reducing the impact on climate by increasing the use of renewable energy. Our strategy includes changing workplace practices to reduce travel as well as improving the energy efficiency of our buildings. We have also carbon offset program for air travel.

Beginning in 2003, we have carried out new energy-saving projects in our offices and sites each year. The resulting cumulative energy savings between 2003 and 2006 were approximately 3.5 % (27,000 MWh) of 2005 consumption. Our target is to find a further 6% savings from 2007 to 2012, compared to the consumption in 2006. In 2008 we achieved around 7,800 MWh new savings in our facilities, by which level we are well on the way of achieving the year 2012 target of creating 6% of new energy savings in our technical building maintenance systems compared to 2006. In 2008, our total energy consumption increased somewhat compared to year 2007, but the energy consumption per square meter decreased.

In 2007 we created a global property strategy linked to the LEED (Leadership in Energy and Environmental Design) strategy. The LEED Green Building Rating System covers several aspects of environmental sustainability. We aim to achieve a LEED certification for all the new buildings which we own and will consider the same level of environmental performance for major renovations. In spring 2008 we achieved a LEED Gold certification for the first time for our new office and R&D building in Beijing, China.

# **Energy consumption**

We have continued energy improvements in our facilities by optimising technical systems both in factories and office buildings. Typically savings are achieved by adjustments to lighting, temperature and ventilation, but also by renewing and optimising server hardware.

For example, in 2008 we improved the energy efficiency in our Manaus factory in Brazil by lighting adjustments and by preventing cooled air from escape from the building: we installed presence sensors, adjusted lighting time controlling through building management system, installed air curtains and automatic doors as well as allowed increased temperature settings in warehouse, leading to a decreased need for cooling. These actions mean around 800 MWh of annual energy savings and were identified as part of a factory energy audit project in 2007 as lowinvestment cases. The Manaus factory still has potential for additional savings with reasonable payback times and investments, for example on front door improvements and further air conditioning system management actions have taken place in early 2009 – these will at least double the annual savings. Another example are compressor modifications, chiller efficiency improvements and office lighting optimisations in our Chennai site, which mean around 115 MWh of savings annually.

These initiatives are carried out in collaboration with our facilities service providers using various incentive models, for example a "Benefit sharing" model, which is already in use in some of our facilities. This model gives the technical collaborator an incentive to reduce the energy used in our buildings because it shares any resulting cost saving.

#### **Factory energy audits**

In 2008, we continued our factory energy audit project, initiated in 2007, in four of our factories. Based on the audits, during the first half of 2009 detailed energy saving plans will be created for the Komarom, Chennai, Dong-guan and Beijing factories, with a target saving level of 10%. During 2009, a metering solution for setting energy efficiency targets and for verifying the energy savings will also be implemented for these factories. Other factories will follow during the second half of 2009 and the first half of 2010. The overall target is to maintain the level of new annual energy savings at 1%.

#### **Renewable energy**

Our global target for renewable electricity is to start focusing renewable energy purchases into countries where our energy consumption is high and where the emission factors of energy production also are high. In practice, our decisions depend on where renewable electricity is available in the market. Through the renewable energy purchases and the energy efficiency measures, we aim to reduce our CO2 emissions by a minimum of 10% in 2009 and by a minimum of 18% in 2010, compared to the 2006 levels.

In 2008 we covered 25% of our electricity with renewables by buying renewable electricity certificates in Finland (RES-E Guarantee of Origin) and Americas (Green-e wind). With its purchase of 30,000 wind RECs in the USA, Nokia joined the US EPA's Green Power Partnership that honours voluntary renewable energy investments, and was included in the organization's Leadership Club for progressive action. Though not eligible for the programme's Fortune 500 challenge for companies headquartered in the USA, Nokia's purchase would have ranked the company 25th on the list of US companies for renewable energy use.

Altogether, the 132.5 MWh of renewable energy reduced our CO2 emissions by 46,700 tonnes. That is equivalent to the emissions from a petrol-driven car (consuming 7,5 l/100 km) driving more than 6,600 times round the globe.

We also purchased green electricity in the UK, but due to recent changes in the UK government's reporting guidelines, we can not claim the CO2 reduction from that purchase.

See the Key data 2008 page for full details of our energy use.

# **Buildings**

In accordance with our strategy decision in 2007, we aim to achieve a LEED (Leadership in Energy and Environmental Design) certification for new buildings which we own and will consider the same level of environmental sustainability performance for major renovations of existing buildings.

In 2008 we completed our first new construction project following the LEED green building rating system. This new office and R&D building in the Beijing Economic Technological Development Area (BDA) received a LEED Gold certification, being the first commercial new construction building in China to achieve that status.

Below are listed some concrete examples of the sustainable features implemented in BDA:

- 10% of parking space is reserved for "Car Pools & Green Cars"
- 49 campus bus lines are available for employee commuting
- A 37% overall reduction in water use by e.g. using centralised treated wastewater for landscaping, cleans ing and flushing operations and by applying water saving fittings to toilets and bathrooms
- 20% overall savings in energy consumption by e.g. constructing a double-skin facade on the east, west and north faces for insulation, and through implementation of air-to-air energy recovery system and cooling tower indirect free cooling system
- 78% of construction waste was diverted from landfill
- 12% of materials used were made of recycled raw materials and 27% were regionally sourced, i.e. extract ed, harvested or recovered, as well as manufactured, within 500 miles of the BDA campus
- 98% of the working area has outside view and 77% of the area benefits from natural daylight

The factory LEED New Construction project in Cluj, Romania and our first LEED Commercial Interiors project in Southwood, UK are almost complete.

#### **Environmental impact assessments**

Nokia has made the decision to conduct an internal Environmenal Impat Assesment (EIA) for our new factories even where it is not required by the local law. However, there were no new factory projects started in 2008. **Green logistics** 

In Nokia, we take responsibility for our environmental impacts and apply life cycle thinking as the framework of our environmental work. We measure the environmental impact from our logistics, including the transport of goods from factories to customers, transport of components from suppliers to our manufacturing sites, and the logistics related to take-back, recycling, and reuse of obsolete devices. Nokia has outsourced all the logistics activities to various logistics service providers.

Nokia is in a process of setting CO2 reduction targets for logistics providers resulting in reductions made by 2012. The actions taken so far relate to efficiency in sales packages, transport efficiency, network optimization, planning, research and usage of alternative transport methods and sales and transport packaging materials. We are going to develop these areas actively in the future.

Since 2006 we have been reducing the size of packaging which has enabled us to take at least 12,000 trucks off the roads. Development projects on transport materials are ongoing and new solutions are being piloted.

Successful pilots have been conducted in using alternative transportation instead of using air cargo and some transport volume has already been shifted to sea freight. Sea, road and even rail transport will replace air transport more and more in the future. We also have a capability to take CO2 into account in logistics network optimization, in addition to costs and customer service. We work closely with logistic service providers to implement green initiatives and we appreciate all green ideas and initiatives from the logistics industry. We can take these innovations further either within Nokia or by working together across industry sectors.

Nokia's logistic network is very extensive. We have focused efforts on developing our methodology and capability

to calculate the CO2 emissions generated by Nokia's logistics, to make it as accurate as possible. This enables us to track the impacts of improvement actions and to ensure that we achieve the reduction target. The CO2 calculation is based on the leg (route) based distance, the emission factor and the weight of products. The emission factor depends on transport mode, vehicle type, and load factor. We need accurate calculations and close co-operation with logistic service providers to get this data. Nokia also works towards a standardised calculation of the CO2 impact of logistics by participating in the GHG Protocol's standardisation working groups.

# **Demand-Supply Network**

Demand-supply network management contributes to achieving Nokia's environmental targets through efficiency in operations and logistics and environmentally friendly ways of working. We have worked in 2008 to gain deeper understanding of the opportunities to reduce the demand-supply network's impact on the environment. This is a cross-organizational effort involving teams consisting of e.g. representatives from all factories meeting on a frequent basis. The purpose of this EMS Core team is to follow up the status of development actions, to plan upcoming assessments and audits, and to share best practices and information to find opportunities that can be applied across the whole manufacturing network. Likewise, workgroups with representatives across several Nokia units are working to ensure that the objectives and actions are synchronised between the units. The focus is on reducing CO2 emissions, minimising waste, and ensuring full take-up capability. We have also applied new ways of working to reduce the amount of travel.

We are constantly looking for opportunities to increase efficiency in manufacturing and transport and thus reduce the environmental impact through lower CO2 emissions. In 2008, we have achieved an improved understanding on the key drivers for CO2 emissions and have been aligning operations and logistics targets to contribute to Nokia level targets. The demand-supply network is vast and complex, which sets high requirements for analysis capabilities to get a correct, fact-based understanding of the real impacts. We are now aware of the key drivers and are building the analysis and reporting capabilities to verify them. We will review our targets based on the findings of these analyses and apply refined objectives in our supply chain.

A good example of practical ways to reduce the environmental impact within the supply chain is the Nokia Quality Award -winning Plastic Tray Recycle Project, implemented in 2007. When the project started, more than 1,35 million of empty trays were scrapped every year after the components on them had been used in production. Upon project implementation the trays were reused for further packaging of plastic. Through introducing the Lean concept to the material supply process, we invented a solution and deployed it to all 7 tray suppliers. The practice was shared with suppliers, sourcing and other Nokia sites, which resulted in a wide implementation of the solution in Beijing and Chennai.

The enclosed table describes the calculated positive environmental impact of the project.

# Way of working

Nokia has made various efforts to reduce the energy usage and CO2 emissions related to the daily working of Nokia employees. The highlights of the year 2008 activities and results include:

# **Business travel**

During 2008 Nokia made various efforts to reduce unnecessary business travelling. Travel awareness campaigns together with more strict approach for business travel approvals and availability of 35 customized Halo suites and 130 high quality video conferencing facilities globally (at the end of 2008) have helped to reduce the annual air travel related CO2 emissions by about 22% from the 2007 level.



Nokia air travel related emissions reduced some 22% from year 2007. The data covers over 90% of Nokia air travel. Nokia Networks figures are included still in Q1 2007 data. Without Q1 data the emission reduction % would have been even higher. GHG Protocol emission factors have been applied in the calculations with conservative interpretation.

We also continued a voluntary carbon offset scheme for flights on Nokia business. After a trip, the traveler can pay to offset the associated CO2 emissions and the cost will be reimbursed by Nokia. The payments will help to fund a balanced portfolio of projects around the world that focus on renewable energy and energy efficiency.

#### **Leasing cars**

Nokia Finland introduced new environmentally friendly leasing car policy in January 2008. The policy promotes cars with CO2 emissions less than 180g/km. Percentage of such lower emitting cars taken into use in 2007 was 55% and increased clearly - to 93% during 2008 - after the new policy came into effect.

#### Commuting

Nokia Finland supports public transportation in employee commuting: already over 800 employees are using the benefit.

#### **Employee PCs**

Nokia continues on environmentally conscious track on employee PC standarditation and creating the Green PC concept. Due to better energy efficiency of the new selected PC and monitor models the energy consumption is estimated to be reduced by 2 500 000 kWh or 7% in 2008-2010 meaning energy cost savings and reduction of 1300 tons of CO2.

#### Canteens

In canteen & cafeteria services Nokia has set global requirements related to energy and water efficiency, waste, bottled water, materials & chemicals and ethical & ecological food

# **Mobile offices**

Nokia Head office change to mobility: the improved efficiency in space utilization in the first completed building – out of three - saves around 1500 m2 of office space and means reduction of around 42 tons of CO2 emissions annually.

# Other environmental impacts

While energy efficiency is the most significant area where we can improve the environmental performance of our operations, we also continue to manage other important issues. Our performance in these areas is shown on the Key data 2008 page.

#### Water use

Water at Nokia facilities is mainly used for sanitary and catering purposes, with only small volumes used in the production processes, e.g. in the cooling systems. Increased number of employees explains the increased total water consumption: consumption per employee has decreased. A total of 6% of water is withdrawn straight from ground water, the rest from municipal supply.

#### VOCs

Volatile organic compounds (VOC) arise from the use of solvents in the soldering and cleaning process.

#### **Ozone depleting substances (ODS)**

Ozone depleting substances are not used in our products or production. The reported ODS figures are due to refrigerants (HFC, HCFC and CFC types) contained in the cooling systems in facilities.

#### Waste

Our goal is to reduce all waste to a minimum, especially the waste destined to end up untreated in landfills. In 2008 we managed to decrease both the total waste amount and waste per device compared to previous year. The utilisation percentage on the other hand decreased from last year, one reason being inclusion of own waste water treatment plant sludge in reporting, but we constantly work to increase utilisation percentage. Utilised waste includes waste that has been either reused, recycled or energy of it has been utilised. Remaining waste has been either sent to landfill or incinerated without energy recovery.

Specific achievements during 2008 include:

#### **CHENNAI**

- The "Void" label on packaging was eliminated by combining two labels into one, resulting in savings of 270,000 euros and 18 tonnes of polyester film a year.
- Engine export packing consumables were reduced and reused, resulting in savings of 340,555 euros in packing and freight costs; in addition, 130 tonnes of paper and 80 tonnes of wood were saved.
- The consumption of plywood in export packing was reduced, saving 228,575 kg of plywood a year.
- The stretch film consumption in export and domestic packing was reduced, saving 33,588 kg of film a year.

#### DONGGUAN

- A plastic tray recycling process was established with suppliers. The quantity of scrap decreased from 1,35 million plastic trays a year to almost zero. The estimated yearly saving is more than 900,000 euros (RMB 7,000,000).
- Twin-track, triple-track, and quadruple-track reflow ovens were introduced.. The energy saving from using one reflow oven instead of two is 172,800 kWh a month, saving 140,000 euros a year.
- The 8960 tester was shut due to technology development. The estimated energy saving is 19,008 kWh a month, saving €32 000 a year

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# CLUJ

• The compressed air installation from the ATO area was reduced by 5% (without affecting the production

process)

- To optimise the energy consumption of heating, the heating level in the factory was adjusted and the heat from the recovery systems of the ventilation units was recovered
- The temporarily occupied areas (locker areas, ATO-extension area) are illuminated only when in use; in ad dition, only emergency light systems are used for the ATO extension area, technical areas, and some locker room areas
- using the illuminating systems for the parking area and exterior on manual mode (turning them off when not necessary)

These actions together resulted in a 30% reduction of lighting energy and a 12% reduction of ventilation energy.

### MANAUS

• Water consumption was reduced by introducing infra-red sensors, rational consumption of water to gar dening and educational campaigns. Estimated saving of 3 400 litres of water a year.

# **REYNOSA**

• Following the established recycling program in Mexico has saved 68,000 euros in the disposal and trans portation costs of mixed waste. 80% of the factory's plastic waste is used in Mexican companies as raw material, reducing the consumption of resources.

# Key data 2008

Nokia has been publishing environmental key data since year 2000. Please find here our key figures on energy, air emissions, water, waste and ozone depleting substances. In addition to data from our offices, R&D and production you can find statistics on CO2 emissions from air travel and e-waste collected outside our own facilities.

Some data is highlighted here as graphics, the full data from 2008 can be found from the attached pdf in this page.



Despite energy savings done, our total energy consumption has increased over the years due to our increased business. Both phone volumes and number of employees have been increasing from year to year, but not always needing additional space, due which energy per area has been changing over years (reduced in 2008). With green energy purchases we have been able to decrease brown electricity usage since 2006.

# FACILITY GREENHOUSE GAS EMISSIONS



Facility greenhouse gas emissions are caused by the energy consumption in our buildings (offices and factories) and from minor part by refrigerants used in cooling systems. As electricity consumption is the main contributor for our CO2 emissions, in addition to amount of energy usage, the energy source of electricity generation plays a key role (fossil-based vs. renewable energy). The CO2e emissions per mobile device have been reduced in 2008.



Nokia air travel related emissions reduced some 22% from year 2007. The data covers over 90% of Nokia air travel. Nokia Networks figures are included still in Q1 2007 data. Without Q1 data the emission reduction % would have been even higher. GHG Protocol emission factors have been applied in the calculations with conservative interpretation.



Water at Nokia facilities is mainly used for sanitary and catering purposes, with only small volumes used in the production processes, e.g. in the cooling systems. Increased number of employees explains the increased total water consumption: consumption per employee has decreased. 6% of water is withdrawn straight from ground water, the rest from municipal supply.



Our goal is to reduce all waste to a minimum, especially the waste destined to end up untreated in landfills. In 2008 we managed to decrease both the total waste amount and waste per device compared to previous year. Utilised waste includes waste that has been either reused, recycled or energy of it has been utilised. Remaining waste has been either sent to landfill or incinerated without energy recovery.

# Environmental management

We believe that environmental management has to be fully incorporated in our business processes. Environmental issues are everyone's responsibility at Nokia and an integral part of managing our business because they are related to all we do. Our environmental work is based on global policies and standards.

Nokia's environmental network acts as a virtual team across the organization and is led by the Vice President and Head of Environmental Affairs at Nokia. The group-wide environmental strategy, targets and priorities are developed and agreed by the Nokia Environmental Management Team (NEMT) representing all relevant Nokia units. The key issues prepared by NEMT are approved by the Corporate Relations Steering Group, which in 2008 had a management representative from each Business Group and Horizontal Group and some Corporate Functions in Nokia, and was chaired by a Group Executive Board (GEB) Member, the Executive Vice President of Corporate Relations and Responsibility. Major issues are escalated to the GEB if needed.

We use Environmental Management Systems (EMS) and the ISO 14001 standard to control and manage the environmental aspects of our production sites and large offices. Nokia has a corporate level ISO 14001 certificate in place for all manufacturing sites. We also require this of our main contract manufacturers, and an EMS is one of our supplier requirements. We have also implemented an internally verified EMS in our large offices and R&D sites.

Our Environmental Management System consists of:

- Nokia Environmental Policy
- Identification of environmental aspects, and evaluation of their significance
- Objectives and programmes for achieving environmental targets
- Compliance with legal and other regulatory requirements
- Audits, management reviews and continuous improvement
- Operational management (data & processes) for energy & water consumption, waste etc.

# The goal of the Nokia EMS is to improve our environmental performance, focusing on:

- Energy consumption
- Water consumption
- Air emissions
- Ozone-depleting substances
- Waste management
- Packaging.

All actions arising from internal and external audit findings have been followed up, corrected and are monitored until closure.

We believe that minimising our environmental impacts requires continuous improvement, so a team of people has been set up to share best practices and to follow up global environmental targets. It includes people responsible for EMSs from manufacturing sites, and a representative from office sites who is responsible for EMS.

In 2008, we will begin integrating the EMS into our quality management system. During the first step we agreed on internal targets including global limits for waste produced and energy consumed per phone.

# **Regulatory compliance**

Nokia's environmental targets overall go way beyond regulatory compliance. Typically the requirements set by Nokia for its operations and products meet or go beyond the strictest environmental requirements by any regulations applied in the world.

There were no breaches of environmental regulations during the year.

Nokia's aim is ensure that the regulatory framework is based on global standards and requirements.

# Suppliers' Environmental Performance

# **Supplier Requirements**

An essential part of our work is to define clear expectations for our suppliers wherever they are located.

We have developed a comprehensive set of global Nokia Supplier Requirements (NSR), which include specified environmental and social requirements. NSR's environmental and social requirements are based on international standards ISO 14001, SA 8000, OHSAS18001, PCMM and ILO, and UN conventions.

We recognize that there are other standards and management systems in use and accept those which are equivalent to or exceed our own requirements. These requirements are updated according to business and stakeholder needs.

We have also developed environmental requirements for the products, components and parts that we source.

# **Supplier Assessments**

All our suppliers must commit to comply with Nokia Supplier Requirements as part of their contract with Nokia. In addition to contractual agreements we also promote good performance and monitor compliance through supplier self assessments and supplier on-site assessments

# During 2008 we:

- Decided to start using the Self Assessment Questionnaire delivered through the on-line tool E-TASC (Electronic tool for accountable supply chains) to replace our previous SER self assessments
- Conducted 62 Nokia Supplier Requirements assessments (which include environmental, ethics, health & Safety and labour conditions) and eight in-depth labor, health and safety and environmental assessments

At the end of 2008, 91% of our direct suppliers' sites serving Nokia were ISO14001 certified. These certified suppliers account for at least 98% of our hardware purchasing expenditure.

#### **Environmental impact/footprint**

Environmental impacts are considered at every stage of the life cycle of Nokia products. This means that suppliers manufacturing components for Nokia equipment must live up to our strict standards on environmental protection. The "supply chain" part of the life-cycle refers to many steps. It can start from raw material extraction and processing and continue right through to component manufacturing and assembly. In 2007, we started to work with our component and contract manufacturer suppliers to increase visibility of environmental performance and target setting. This work continued through 2008 and has enabled us to better understand the environmental impacts of our supply chain and help drive improvements. Our initial focus is on four key environmental areas:

- energy consumption at supplier sites and improvement targets
- CO2 emissions from supplier sites and improvement targets
- water consumption at supplier sites and improvement targets
- waste generation at suppliers sites and improvement targets

In 2008 of our suppliers that together account for 69% of our overall hardware expenditure, 82% have reduction targets for energy, carbon dioxide, water and waste in place and monitored. This monitoring is continuing in 2009

#### **Sourcing materials**

Our environmental requirements include the need to know, control and manage the material content of the components and parts supplied. We expect suppliers to integrate environmental considerations in their design procedures and to ensure environmental issues are considered in their own supply chain management.

During 2008, we continued to work with suppliers to raise awareness and ensure actions for compliance to EU regulations on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

# Working with stakeholders

During 2008 we continued to work at an industry level through GeSI Supply Chain Working Group, where we actively participate in the Learning and Capability Building, Joint Audit and Audit Process, and Extractives sub-groups.

# Stakeholder engagement

We believe we can maximize our environmental contribution by working with others in our industry and beyond. In 2008, we continued our global cooperation with World Wide Fund for Nature (WWF) focusing on environmental awareness building of Nokia's employees. We also organized together a stakeholder seminar on Environmental issues as competitive advantage in China, having authorities. NGOs, corporations and academics as participants. WWF also provided environmental content for Nokia devices. In March 2008 Nokia and WWF, together with World Conservation Union (IUCN), launched an environmental online community, connect2earth.org, targeted to young people. Through the community, people can share their ideas through images, videos and text on solutions for the environmental challenges. The best content uploads were rewarded, and the winner presented her idea in IUCN's World Conservation Congress in Barcelona.

Nokia supports several environmental initiatives all over the world. We started to sponsor for example The Catlin Arctic Survey and Naturgate initiatives in 2008, and continued to support the Clean Baltic Sea -programme.

#### **Training and development**

At Nokia employees can participate in a wide range of internal events and training that help raise awareness and develop understanding of environmental issues, both inside and outside the company.

Global environmental forums, held twice a year, bring together senior management and employees to engage in open dialogue around Nokia's environmental strategic directions and activities. These are supported by area forums, focusing on environmental issues from a regional perspective.

A series of environmental virtual information sessions covering a wide range of topics related to Nokia's environmental work are organized as online teleconferences, making it possible to join from anywhere in the word. Presented by both internal and external experts, nine environmental virtual information sessions were held in 2008.

Environmental road shows are held regularly at Nokia offices and production sites throughout all regions. Helping to increase environmental awareness, the road shows focus on environmental issues at both a Nokia-level as well as a site specific-level, and provide tips for sustainable choices in people's private lives as well.

Many of Nokia's regular management training programs include environmental issues. In addition, there are management training workshops on business cases with an environmental focus, and seminars covering relevant and topical environmental issues are arranged with WWF, the global conservation organization, as part of the Nokia/ WWF partnership.

Connect to Protect, another example of a joint activity with WWF, is an internal web-based learning platform. It helps to raise environmental awareness among Nokia employees and to provide guidance on adopting an environmentally friendly lifestyle both at home and at work.

In 2008 we launced an internal volunteer program called We:champions for people who are interested in environmental matters and want to play an active role in their own organization to drive Nokia's environmental issues even futher. By the end of the year, close to 400 new We:champions had registered. This is in addition to close to 1000 environmental ambassadors in China, who also now are part of the We:champions.

We ran many internal campaigns in Nokia sites during 2008 to raise environmental awareness. As an example, Nokia Singapore and Espoo had take-back campaigns in June and July 2008. The purpose of campaigns was to build awareness on the recycling of phones, tell employees about our partnership with WWF and to recruit we: champions. The campaign received widespread attention and generated discussion and new ideas on mobile phone recycling possibilities at Nokia sites. We:champions contacted as many employees as possible to give a two minute face to face briefing on recycling.

# Goals

Nokia created a climate strategy in 2006. It looks at the energy consumption and CO2 emissions of our products and operations and sets energy and CO2 emission reduction targets for our most important activities. We updated this strategy in 2008 and have set ourselves the following targets. The targets marked [V] have external verification of performance in place.

# **Products and services**

- Reduce the average charger's no-load power consumption from 2006 level by 50 percent by the end of 2010 (V)
- Continue to study new technologies which will use renewable energy resources, such as solar panels and kinetic energy
- Continue to look for ways to reduce data centers energy consumption

# Operations (including suppliers and service providers)

- Ensure that improvements in energy efficiency meet and exceed the general efficiency targets per units manufactured
- Ensure that all our key suppliers set energy efficiency and CO2 reduction targets
- Set CO2 reduction targets for logistics service providers

# **Facilities**

- Create 6% of new energy savings in technical building maintenance systems between 2007 and 2012 com pared to the baseline year 2006, in addition to the savings of 3.5% achieved already in 2003–2006. (V)
- In 2009–2010, begin deploying green electricity purchases to those countries where Nokia operates and where buying green electricity makes the most impact on CO2 savings. This will depend on how carbon intensive the local power generation industry is and where green electricity purchases are available.
- Reduce CO2 emissions through these measures by a minimum of 10% in 2009 and by a minimum of 18% in 2010, compared to the base year 2006.

#### Work and management practices

- Reduce work-related travel and commuting by increasing remote work and remote working possibilities and reduce office space to gain savings in energy consumption and CO2 emissions.
- Offer employees the possibility to offset the carbon dioxide emissions caused by their air travel.
- Utilise energy saving technologies in offices and in office equipment and hardware.

#### Participation in external initiatives

• Continue to investigate opportunities to join further voluntary initiatives promoting energy efficiency across the industry.

Provide solutions and influence policy makers to realise the role and potential of ICT in reducing the overall energy consumption in economies when addressing climate change policies.

# Independent assurance

Nokia has requested PricewaterhouseCoopers Oy (Nokia statutory auditor) to perform a limited assurance engagement on selected Nokia's 2008 Corporate Responsibility information containing Environmental indicators in the areas of Nokia's own activities, products and supply chain as follows:

- Facility related direct (EN3) and indirect (EN4) energy consumption and related greenhouse gas emissions (EN16)
- Nokia's (excluding Nokia Siemens Networks and NAVTEQ) energy savings in 2008 and 2008 year-end current status against the cumulative minimum savings target by 2012. Energy consumption in base year 2006 and energy savings in 2007 have been assured by Ecofys Germany GmbH, and we will rely on their assurance work, and hence no assurance procedures will be performed by PricewaterhouseCoopers Oy on these amounts.
- Green electrical energy portion of Nokia's total electricity consumption (excluding Nokia Siemens Networks and NAVTEQ)

RoHS compliance of products.

- New chargers' compliance with EU CoC/Energy Star.
- No-load energy consumption of chargers including also progress in reaching the target of reducing the average charger's no load energy consumption by 50% from the 2006 level by the end of 2010. The chargers' average energy consumption in base year 2006 and consumption reductions in 2007 have been assured by Ecofys Germany GmbH, and we will rely on their assurance work, and hence no assurance procedures will be performed by PricewaterhouseCoopers Oy on these amounts.
- Status of ISO 14001 certifications for Nokia sites
- Percentage of suppliers having Environmental Management System (EMS) in place for sites serving Nokia.
- Percentage of suppliers having reduction targets for energy, CO2, water, and waste in place and monitored.
- Suppliers' compliance with Nokia Supplier Requirements.
- Supplier Satisfaction Survey procedures and results.