Connecting the world in a responsible way

Nokia

Sustainability brochure 2015
At Nokia, we want to be proud of what we achieve – and how we achieve it.

In this brochure, you’ll find information about the key areas for our sustainable operations:

- Harnessing the great opportunities of technology for people
- Recognizing our great responsibility in connecting the world
- Delivering products and services that help our customers do more with less energy
- Respecting people and our planet in everything we do
We take our responsibility in connecting the world seriously, and we know that our technology can be part of the solution for many global challenges.

To ensure our activities support sustainable development, our performance has to reflect the following priorities:

- Improving people’s lives with technology
- Respecting people in everything we do
- Protecting the environment
- Making change happen together

Our sustainability strategy and activity areas are also well aligned with the UN Sustainable Development Goals.
We harness the great opportunities of technology for people

We are not only excited where technology will lead us but also committed to innovating ways to use technology for a more sustainable tomorrow. Our radio networks customers serve over 5 billion subscriptions worldwide. This provides tremendous opportunities.

We improve the resilience of communities to extreme weather changes
Telecom technologies are crucial in ensuring remote areas stay connected in real time. This reduces the impact of natural disasters and helps communities stay safe. We have launched a compact, rapidly deployable LTE network-in-a-box which enables vital public safety communications to be implemented at emergency scenes where wide area network coverage is not available. In addition, mobile operators can use the miniature LTE network to bring high-bandwidth connectivity to rural and remote areas.

We use our technology to promote public safety
Nokia’s life-saving emergency alert system can be used to deliver potentially life-saving messages to mobile subscribers in specified areas by warning of dangerous natural disasters or other emergencies. Public safety authorities can use this platform to define an emergency area and provide information. Operators can use their subscriber data to deliver alerts to people known to be inside an emergency area within minutes, and consumers get potentially life-saving messages directly on their mobile devices.

We contribute to deliver benefits of broadband infrastructure and services in all corners of the world
Connectivity increases productivity and economic growth, improves access to knowledge, information and education. But according to the latest International Telecom Union ICT Facts and Figures, 20% of households in developed countries and as much as 66% of households in developing countries do not have internet access, leaving more than 4 billion people from developing countries offline. We address this issue through our technology, innovation and cooperation with various stakeholders and by introducing innovative technology that enhances access to the internet.

We work with NGOs to improve people’s lives around the world
We target our support where we can make the greatest contribution using our core competencies in information and communications technologies.

Our cooperation focuses on promoting children’s rights, empowering young people, and supporting those affected by drought and other natural disasters.

Our technology connects things as well as people
In the future, connected devices will become a part of intelligent, programmable systems that have the potential to improve lives in a huge number of areas. These include the better use of scarce resources as well as more effective healthcare.
**Our progress in 2015:**
As part of our cooperation with Save the Children, to help improve the resilience of communities to extreme weather changes in 350 villages in India, we announced that we will provide our LTE-based network-in-a-box solution for public safety mobile broadband in six of these villages.

We launched the Nokia FastMile which is designed to overcome missing broadband connectivity by bringing much needed high-speed broadband to the citizens of unconnected areas. This solution delivers good quality broadband faster and it's also cheaper than fixed solutions in areas where copper or optical connectivity is not available.

Our life-saving emergency alert system delivered more than 10 million messages covering over 1,000 emergencies in one country.

**Our cooperation partners for closing the connectivity deficit in various parts of the world:**

- To drive the power of ICT and broadband-based technologies for sustainable development to the international policy agenda, we work with the UN Broadband Commission

- To achieve the UN Broadband Commission target of entry-level broadband priced at less than 5% of monthly income, we work with the Alliance for Affordable Internet

- To create technology solutions that will enhance broadband connectivity in rural India, we have partnered with the Indian Institute of Technology-Madras (IIT-M)
We recognize our great responsibility in connecting the world

Technological progress cannot, and should not, be made at any cost. At Nokia, we understand our responsibility in connecting the world in a fair and sustainable manner.

Mobile networks need to cope with 1,000 times more traffic by 2020
Keeping absolute network energy consumption essentially flat over coming years is a challenging but achievable goal for us.

Information security is more important than ever
Operators, enterprises and users are sharing and storing increasing amounts of information using communications technology – and we aim to be the most secure mobile broadband technology provider.

Corruption, poor human rights and labor conditions are an obstacle to development
We are committed to enhancing ethical business practices by upholding high standards of ethics and human rights in our own activities – and demanding the same from our suppliers and partners.

Technologies should respect, and not infringe, human rights
We were the first telecommunications vendor to carry out due diligence specifically addressing human rights risks related to privacy and freedom of expression.
Our progress in 2015:
On average, the radio networks we modernized in 2015 consume now 45% less energy.

We launched our first product dedicated to Internet of Things security: Mobile Guard for IoT.

We trained around 98% of our employees on ethical behavior, we addressed the key safety risks for our employees and contractors, and we invited Save the Children to review Nokia's processes and policies from children's rights perspective.

We conducted human rights training for selected key teams, including prevention of product misuse.
We deliver great products that help our customers do more with less energy

As a provider of the technologies and services that power our information society, we recognize our responsibility in helping telecom operators reduce energy consumption in their networks. That’s why our products are designed to avoid wasting energy. We also pursue ways to promote the use of renewable energy.

As the amount of mobile data traffic continues to grow exponentially, we help operators deal with this growth in a sustainable way. Our recent activity in this area includes the launch of Zero CO₂ emission base station site offering, which enables a reduction in base station site energy consumption of up to 70%. With the significantly lower energy consumption, renewable energy sources become viable options for powering a base station site. The offering is complemented with the AirScale Base Station, which consumes zero energy in its radio parts when there is no traffic.

The environmental impact of our products can also be positive. The information and communications technology (ICT) industry can help reduce the environmental impact of businesses and individuals alike. According to the Global e-Sustainability Initiative’s (GeSI) Smarter 2030 Report, ICT has the potential to enable a 20% reduction of global CO₂ emissions by 2030, thus holding emissions at 2015 levels, and to effectively decouple economic growth from emissions growth.

Our positive contribution comes through providing technology that enhances digitalization and enables the delivery of the services that help decrease emissions and make the activities of people, communities and businesses more eco-efficient.
Reducing base station site energy consumption

**Nokia Flexi base stations** increase a site’s energy efficiency by allowing outdoor operations at temperatures up to 55°C – without additional cooling.

**Zero CO₂ emission base station site offering** enables a reduction in base station site energy consumption of up to 70%.

**AirScale Base Station** consumes zero energy in its radio parts when there is no traffic.

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**Traditional base station site**

- Increased traffic: separate equipment for 2G, 3G, 4G needed
- Cooling and shelter needed
- 25% of the power used by a traditional BTS site is used just for air conditioning
- 80% of network energy goes to traditional base station sites

**Zero emission base station site**

- Increased traffic requires no additional equipment
- The radio antenna system saves space, reduces feeder losses, and simplifies installation and maintenance
- Weather proof equipment, no shelter needed
- Uses up to 70% less energy
- Becomes optimal for renewable energy sources
- Modernised base station site creates 70% less CO₂ emission and 30% less TCO
- Solar cells are 90% cheaper today than 10 years ago

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We work together with our suppliers to ensure they meet our Supplier Requirements, with a specific focus on high standards of human rights, health and safety, and environment. In addition, we conduct in-depth audits on our product development processes are designed with the environment in mind. This means minimizing material and energy use, as well as the use of materials that are detrimental to the environment; maximizing reuse and recycling.

According to our Employee engagement survey, Nokia employees believe in the future of the company and our strategy, and see Nokia as a place where they can develop. We understand that personal development is central to employee well-being.

We save energy, cut carbon emissions and minimize waste by improving our activities throughout the value chain. We are cutting emissions by purchasing certified renewable energy from the grid, as well as by paying attention to the environmental impact of our operations.

Good health and safety performance is a particular focus for us because we operate in some challenging environments – for example when driving long distances or installing equipment at height or in confined spaces.

We respect people and our planet in everything we do.

1. Ethically sourced products
2. Designed with the environment in mind
3. Created by inspired employees
4. Produced in an eco-efficient environment
5. Delivered safely to our customers
We respect people and our planet in everything we do.

We focus on:
- Improving safety management
- Open reporting
- Risk prevention
- Working with suppliers

We run programs to improve our health and safety performance, and encourage open reporting of incidents and near misses by contractors and employees.

ISO 14001 is the standard with which our business processes are certified.

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We are committed to:
- Labor conditions and environmental management – and we organize training workshops for suppliers operating in high-risk countries.
- Recycling; and designing equipment to be easily or remotely maintainable or maintenance-free. We also support circular economy by taking back equipment that is at the end of its useable life, including that of other manufacturers, to ensure that it is reused or recycled responsibly.
- Key in retaining and engaging our employees, as well as developing their skills. That’s why we invest in training and support for our people so they can develop their capabilities and help us deliver our business strategy.
- Efficiency and the way we use natural resources. Efficient re-use of waste also plays an important part in ensuring we are as eco-friendly as possible.

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Find out more about sustainability at Nokia and download our reports

www.nokia.com/people&planet

External recognitions for our work in 2015