


An aerial photograph of a beach with turquoise waves and white foam. Several surfers are visible in the water, some riding waves. The overall color palette is dominated by shades of blue and green.

Connecting the world in a responsible way

**NOKIA**

Nokia People & Planet Report 2015

# About this report



Thank you for taking the time to read our People & Planet Report 2015. It covers the key ethical, socio-economic and environmental issues most relevant to Nokia's business and stakeholders during the 2015 fiscal year. For an explanation of how we decided what would be included in the report, please see the 'Materiality: How we have identified our priorities' section.

## The scope of this report

The scope of this report is Nokia Group functions, Nokia Networks and Nokia Technologies in 2015. The HERE digital mapping and location services business which was acquired by a German automotive industry consortium during 2015, is excluded from this report unless otherwise indicated.

As our environmental impact and our ability to manage it originate predominately from our networks business, the 'Protecting the environment' chapter focuses on explaining the sustainability matters related to Nokia Networks. However, the numeric data regarding our facilities energy use, waste and water include Nokia Group functions, Nokia Networks and Nokia Technologies. The chapters 'Improving people's lives with technology' and 'Making change happen together' include references to activities that took place in early 2016 but this is indicated in the text separately.

## Reporting frameworks and assurance

In our reporting, we are committed to expanding our transparency and our coverage. To help ensure compatibility with other organizations, our report is prepared in accordance with the Global Reporting Initiative GRI G4 guidelines, "in accordance – Core" criteria. Our report is also compliant with the UN Global Compact advanced. The Global Reporting

Initiative index is available as a separate PDF document on our website and some more detailed sustainability data is included as a separate chapter at the end of this report.

Our selected key sustainability indicators have been assured by an independent auditor of Nokia, PricewaterhouseCoopers Oy.

## A summary of this report

This report was published in May 2016 and it is only available in digital format because we want to print less. We encourage you to only print the pages you need. We have also published an online summary of this report which is available at [nokia.com/people&planet](http://nokia.com/people&planet).

## Further information

We have published annual corporate responsibility reports for around two decades and the reports are available in digital format on our website from as far back as 2003.

We also discuss sustainability and corporate responsibility topics in our official annual reports, including the annual report on Form 20F that is filed with the U.S. Securities and Exchange Commission in the United States. The reports are available at [company.nokia.com/financials](http://company.nokia.com/financials).

In addition to our own reports, we provide detailed information through various external reports. In 2015, we reported our climate impacts to CDP – a leading global organization working with shareholders and companies to disclose the greenhouse gas emissions of major corporations. We answered the RobecoSAM questionnaire, which is used as the basis for the Dow Jones Sustainability Index, and we answered the EcoVadis evaluation which our customers use to evaluate our sustainability performance.

## Your feedback

We welcome your views on our activities and our performance. If you'd like to share your opinions, please contact us at [sustainability.global@nokia.com](mailto:sustainability.global@nokia.com)

## Find us in social media:

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# Letter from the President and CEO



2015 has been an exceptional year for Nokia. While we celebrated our 150<sup>th</sup> anniversary as a company, we also announced two significant transactions which have put us in an excellent position to tap the future opportunities of the programmable world: the acquisition of Alcatel Lucent, and the sale of our digital mapping and location services business, HERE, to a German automotive industry consortium. We ended the year with net sales up 6%, non-IFRS diluted Earnings Per Share up 67%, and operating margin up 200 basis points.

High integrity is just as important as high performance however. Our focus on high ethical standards means that while our company was transforming once again, our sustainability vision remained the same: to design technologies that expand the human possibilities of the connected world while making it more productive, healthy and sustainable. This vision is influenced by our values, which define our actions as a company, and as individuals: respect, achievement, renewal and challenge.

Our sustainability approach is influenced by key macro trends: the increased importance of privacy and security; the demand for high ethics and transparency; climate change and the sustainable use of natural resources; and the importance of attracting and retaining talent. Because of this, our four key priorities have guided and supported our sustainability agenda: improving people's lives with technology; protecting the environment; respecting people in everything we do; and making change happen together.

As we look to improve people's lives with technology we are committed to connecting the unconnected. "Connectivity deserts" remain in far too many parts of the world: rural and urban, rich and poor. We are mindful of the work of the International Telecommunication Union's Broadband Commission, which aims to expand broadband access in every country. It reports that 20% of households in developed countries – and as many as 66% of households in developing countries – do not have internet access, with more than four billion people in developing countries remaining offline. One of the main reasons for this is cost. Nokia is tackling this challenge in a number of ways, by creating products such as Nokia FastMile, a wireless alternative to fixed broadband in areas where copper or optical connectivity is not available.

Protecting the environment means reducing the environmental impact of both our own operations, and that of our customers. To mention a few examples, we achieved a 12% annual reduction in total emissions from our facilities, including our green electricity purchases which we maintained at around 50% worldwide, and reduced the total amount of waste produced. In early 2015, we launched a Zero CO<sub>2</sub> emission base station which helps to decrease base station site energy use by up to 70%. Recently, we complemented our zero emission offering by launching the AirScale Base Station, which consumes zero energy in its radio parts when there is no traffic.

Respecting people in everything we do means running our business in line with internationally

recognized ethical and responsible business practices and integrating our high standards in our supply chain. It means working hard to embed gender balance within our workplace. UNESCO reports women graduates in engineering to be well below 50% and this falls further when we look at the number of women inside companies in those industries. Nokia has made improvements this past year and has supported the YFactor initiative aimed at enabling more women to pursue careers in science, technology, engineering, and maths disciplines. Nokia has also supported the StrongHer initiative, an employee network of 1,300 active members in 50+ countries but there is more to be done. We will be taking further concrete action in 2016 to address gender balance more completely.

Respecting people also means fostering a culture where health and safety is a priority, and creating a great place to work for our employees. During 2015, we embedded processes and guidelines supporting sustainable development into company-wide activities. We continued training our employees on ethical business guidelines, with around 98% of employees having completed the training. To ensure our suppliers follow the same ethical standards as we do, we increased our audits through the EcoVadis scorecards. 180 of our key suppliers reported their climate impacts via the Carbon Disclosure Project framework and over 90 of them set emission reduction targets. This helps us plan improvement programs with our suppliers so we can improve the reporting of our emissions. We also made good progress in validating the smelters used in our supply chain as conflict-free.

While we have made good progress in health and safety we remain vigilant. In 2015 we experienced tragic incidents where 6 people working for our contractors lost their lives. We take these events seriously – we want to make sure that everyone associated with Nokia business goes home safely at the end of the day. In 2015 we launched our global Life Saving Rules program, making clear that Nokia respects everyone's right to refuse to do something that they believe is dangerous.

We make the change happen with our key stakeholders, working with various organizations driving sustainable development such as GeSI, the CDP supply chain program, the Telecommunications Industry Dialogue, the Climate Leadership Council, Conflict-Free Sourcing Initiative and Digital Europe. We also added one partner to our NGO network, joining forces with the Finnish Children and Youth Foundation to raise awareness of the importance of thinking positively about oneself and the future. Nokia made a number of donations throughout the year, with our employees choosing one of the targets in December – providing humanitarian relief to Syrian refugees through Oxfam.

Finally, Nokia contributed to the UN Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in 2015. Our effort will focus on the goals where we can make most impact such as promoting inclusive and sustainable economic growth; building resilient infrastructure; fostering innovation; taking urgent action to combat climate change and its impact; and revitalizing the global partnership for sustainable development.

The SDGs will be further integrated into our sustainability activities, and we will continue to support and measure our sustainability progress against the principles outlined in the United Nations Global Compact as well.

My warm thanks to all the teams and individuals throughout Nokia, and the community partners we work with, who contributed to our progress. I also want to thank our customers, who spur us to further advance our sustainability work, as well as our suppliers, who help us meet the expectations of our customers. We can be proud of the progress we made in 2015, but not complacent – we can and will improve. As a new combined company, we are undertaking a new sustainable materiality analysis in order to create the necessary measurable long term goals to ensure that Nokia's 2015 success is improved upon. We are a new Nokia, and we will have sustainability goals to reflect this.

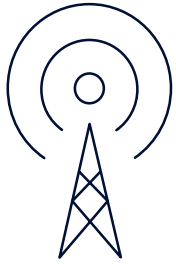
**Rajeev Suri**  
President and CEO

A high-angle, wide shot of a large, powerful wave breaking in the ocean. Several surfers are visible, riding the face of the wave. The water is a deep, vibrant blue, and the white foam of the breaking wave is prominent. The surfers are in various stages of their ride, some crouching low and others standing. The overall scene is dynamic and energetic.

# Key sustainability achievements and challenges in 2015



## We are proud of...



### Our efforts in helping our customers improve on energy efficiency and the use of renewable energy

In 2015, we had over 50 cases which helped our customers reduce their networks' energy use and emissions. On average, the radio networks we modernized during 2015 now consume 45% less energy. We also launched a new product offering, our Zero CO<sub>2</sub> emission base station site, which includes more than 20 products and services for our Single RAN Advanced portfolio. The offering enables a reduction in base station site energy consumption of up to 70%, creating a significant driver for modernizing base station sites. With the significantly lower energy consumption, renewable energy sources such as solar and wind power, as well as fuel cells, become viable options for powering a base station site, making it possible to achieve zero CO<sub>2</sub> emissions.



### The improved energy efficiency of our operations

Our overall energy consumption decreased by approximately 7% compared to the previous year and as a result, our greenhouse gas emissions from offices and factories declined by approximately 12%, including our renewable electricity purchases. Out of the electricity we used, 51% was from renewable sources.



### The good progress we made with Save the Children during this first year of our cooperation

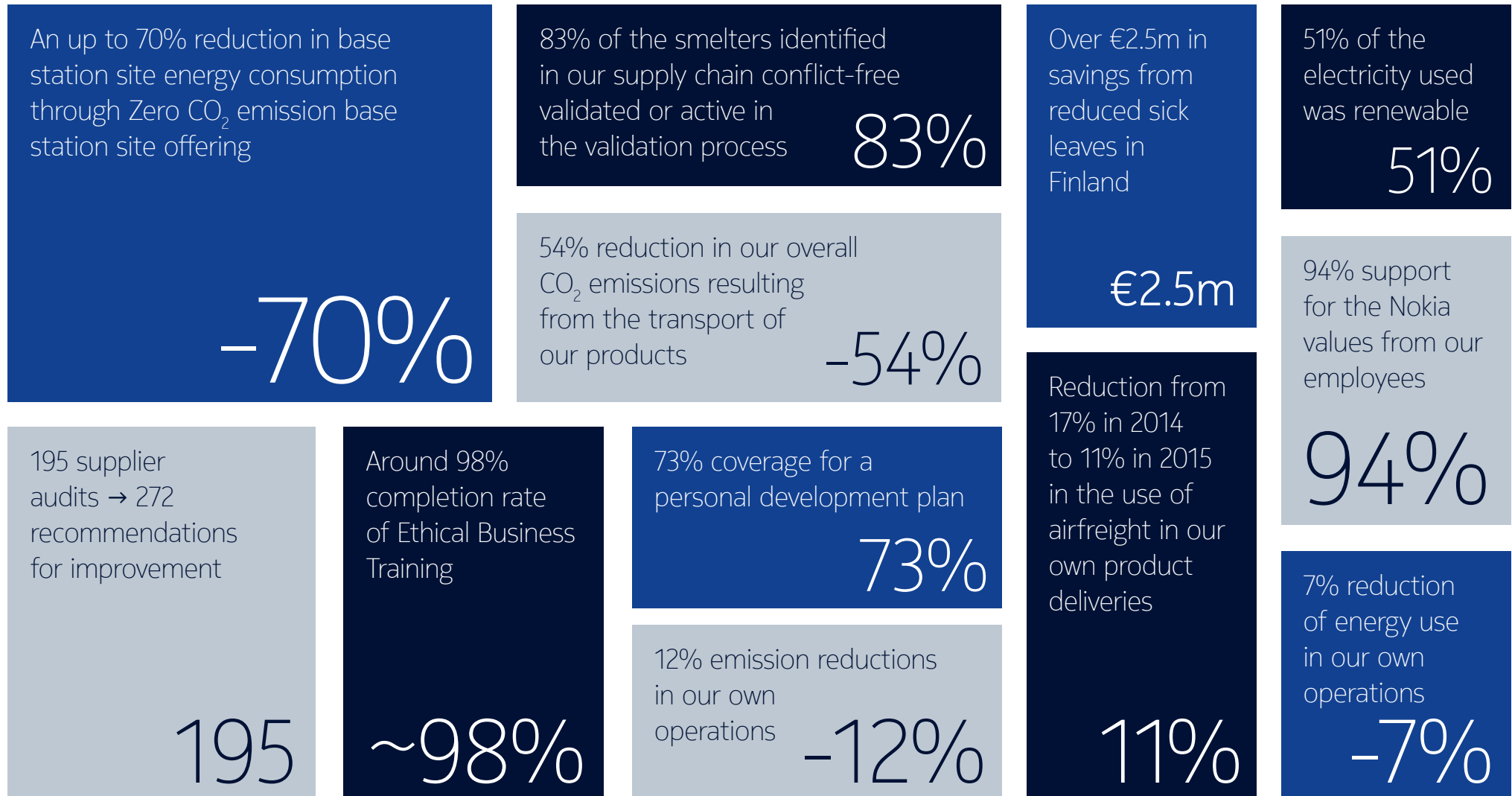
Save the Children assessed Nokia's relevant policies and processes against the ten principles in the Children's Rights and Business Principles. We also conducted a thorough review of our existing guidelines and processes related to mitigating the risk of child labor in our supply chain. The Nokia Child Labor Remediation Guideline, which provides overall guidance on how to care for children in the event a child labor case is confirmed, was also renewed. To make sure it is applicable worldwide, Save the Children teams in three continents – Africa, Asia and Europe – reviewed the new remediation process as well.



### The good progress our suppliers made with reporting their climate impacts

Our suppliers exceeded our expectations as 180 of our key suppliers reported their climate impacts via CDP and over 90 of them had set emission reduction targets. This helps us to plan improvement programs with our suppliers and improve reporting of our emissions.

## We achieved...



## We were recognized for...

Our efforts to support sustainable development were recognized as world-class in a number of external sustainability reviews

CDP gave us a top score for our performance and disclosure of climate change data, and kept us in the CDP A-list, as well as in the Nordic Climate Disclosure Leadership Index for 2015.

Our economic, environmental and social responsibility was recognized when we were selected to be an index component of the Dow Jones Sustainability Indices.

We retained our position in the Ethibel Sustainability Index (Global and Europe).

We retained our position in the FTSE4GOOD.

We were included in the Corporate Knight's Global 100 Most Sustainable Corporations list.

Nokia's President and CEO Rajeev Suri received the Marco Polo award

Nokia's President and CEO Rajeev Suri received the Marco Polo award, the highest honor given to a non-Chinese citizen, for Nokia's longstanding contribution towards the development of China's economy, technology and culture. The award recognized our pioneering efforts in driving the global development of TD-LTE and facilitating the creation of a rich, worldwide ecosystem and supply chain in China.

Nokia won Vodafone Group's prestigious Responsible Supplier Award for 2015

Nokia works closely with Vodafone and all of its customers to create a safer and more sustainable work environment throughout the industry. This award recognized Nokia's high ethical and sustainability standards and marked the culmination of the investment we have made in employee training on our Code of Conduct, ethical business practices as well as our Life Saving Rules program.

Nokia Networks won the "Most Innovative Security Strategy for vendors" category for Mobile Guard for IoT

In the annual Leading Lights program, one of the telecom industry's most prestigious awards program focusing on next-generation communications technologies, applications, services, and strategies, we won the Leading Lights award in the new category "Most Innovative Security Strategy for vendors". The award was given for our Security in Networks for Internet of Things solution Mobile Guard. The solution analyzes network traffic patterns of telco services such as mobile broadband, SMS and voice, offering earlier malware detection than conventional systems that employ classic signature mechanisms and other generic methods. Nokia Mobile Guard also notifies the users, blocks the affected services on the network and helps subscribers cleanse their infected smart devices.



MEMBER OF  
**Dow Jones Sustainability Indices**  
 In Collaboration with RobecoSAM



## We must improve on...



### Managing waste

In 2015, we generated a total of 4,800 metric tons of waste which is 31% less than in 2014. However, the volume of our waste that was sent to a landfill increased from 300 metric tons in 2014 to 400 metric tons which means that we weren't as efficient in waste utilization as in 2014.

More detailed targets related to our environmental and social responsibility are included in the topic specific sections.



### Ensuring our contractors understand the risks related to their work and follow our rules

At Nokia Networks, employees and contractors face inherent risks when installing and maintaining equipment and constructing base stations on behalf of our customers. Therefore, health and safety performance, as well as the compliance of our contractors, are critical factors in our overall performance. For the third year in a row there were no employee fatalities or critical injuries. However, we deeply regret that six contractors lost their lives while conducting work on behalf of Nokia during 2015. Three of these fatalities were related to road accidents that occurred on public roads.



### Conducting in-depth audits in our supply chain

To ensure our suppliers follow the same ethical standards as us, we increased our audits through the EcoVadis scorecards but at the same time, the number of in-depth audits on site decreased.



### Setting long-term targets

We do not disclose long-term targets for many of the areas in this report this year as the acquisition of Alcatel Lucent and the related integration will impact our future goal setting. However, we piloted a scientific target-setting methodology for our greenhouse gas emissions to better understand what our greenhouse gas reduction target should be in order to do our share in keeping global warming below 2°C.

# About Nokia



2015 marked our anniversary as a 150-year-old company, and it was yet another year of fundamental change as we took a major step forward towards shaping the revolution in connectivity and digitization in the Programmable World.

## Nokia at a glance

Nokia is a global leader in the technologies that connect people and things. Powered by the innovation of Bell Labs and Nokia Technologies, we are at the forefront of creating and licensing the technologies that are increasingly at the heart of our connected lives. With state-of-the-art software, hardware and services for any type of network, we are uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud and the Internet of Things (“IoT”).

### Who we are today

In 2015, we announced our acquisition of Alcatel Lucent in a deal that, after closing in early 2016, made us the leading player in multiple technology categories, including 4G (“LTE”), 5G, IP, and optical and fixed networks. After the closing, we have approximately 106,000 employees. We have organized our networks-oriented businesses into four business groups: Mobile Networks, Fixed Networks, IP/Optical Networks and Applications & Analytics (together the “Networks business”). The Networks business is also supported by Bell Labs, our research arm and innovation driver. Additionally, we have a fifth business group, Nokia Technologies, which focuses on advanced technology development and licensing.

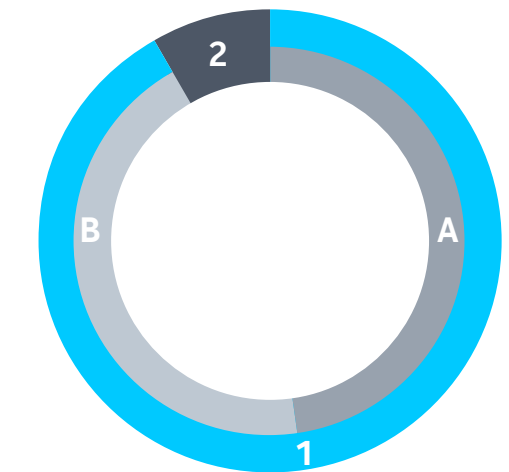
In December 2015, we sold our HERE digital mapping and location services business to a German automotive industry consortium, allowing us to hone our focus on seizing major opportunities to positively

impact people’s lives each day and improve how we access and tap the power of connectivity.

### Our businesses in 2015

Our two main businesses in 2015 were Nokia Networks, a top provider of mobile connectivity infrastructure and services, and Nokia Technologies, our driver of future innovation and licensing (Nokia Networks and Nokia Technologies, together called “Continuing operations”).

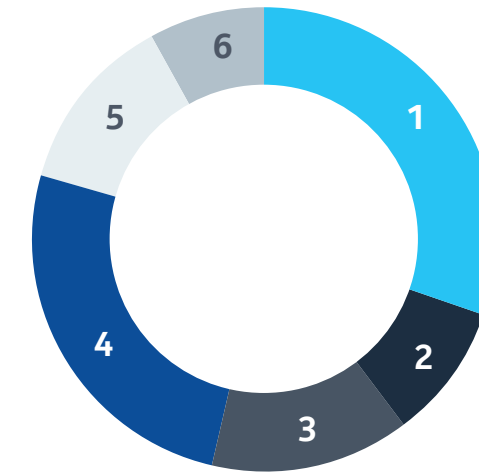
#### Net sales 2015 by business



1 Nokia Networks	€11,490m	(+3%)
A Mobile Broadband	€ 6,064m	(0%)
B Global Services	€ 5,422m	(+6%)
2 Nokia Technologies	€ 1,024m	(+77%)

Together, in 2015 Nokia Networks and Nokia Technologies further demonstrated their leadership in their respective fields with solid financial performances. Group net sales were €12.5 billion with strong underlying profitability. We once again made significant targeted research and development (R&D) investments, a cornerstone of our success in innovation, with R&D expenditures equaling approximately €2.1 billion in 2015.

#### Net sales 2015 by region



1 Europe <sup>(1)</sup>	€ 3,813m	(+9%)
2 Middle East & Africa	€ 1,177m	(+12%)
3 Greater China	€ 1,712m	(+24%)
4 Asia-Pacific	€ 3,230m	(-2%)
5 North America	€ 1,594m	(+4%)
6 Latin America	€ 973m	(-4%)

(1) All Nokia Technologies net sales are allocated to Finland.

Year-on-year change is in parentheses.

Derived from our financial statements which were prepared in accordance with International Financial Reporting Standards, IFRS.

### Our presence and employees in 2015

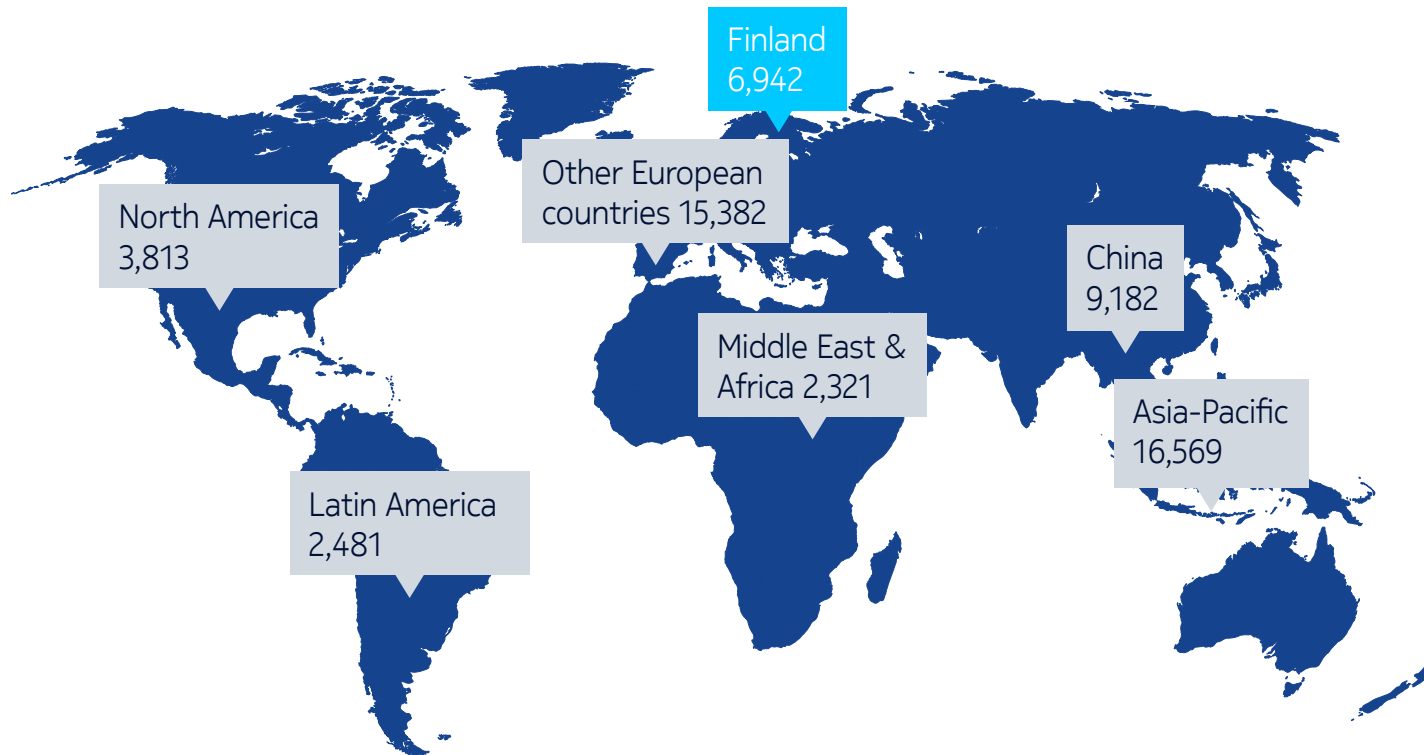
In 2015, through our Continuing operations, we had a global presence with operations in Europe, the Middle East & Africa, Greater China, North America, Asia-Pacific and Latin America and R&D facilities in Europe, North America and Asia; and sales in approximately 130 countries.

We employed approximately 56,000 people at the end of 2015. Of the total, approximately 37%

worked in R&D, approximately 6% worked at the Nokia headquarters in Espoo, Finland, and every 5<sup>th</sup> employee was from India.

The infographic shows the average number of employees in 2015 divided according to their geographical location.

### Average number of employees by region in 2015



After the acquisition of Alcatel Lucent in early 2016, we have approximately 106,000 employees, including more than 40,000 employees in R&D.

## How we contribute to the overall economy

As a global company, we have a significant economic impact on our stakeholders, both directly and indirectly. Our direct economic impact includes our purchases of goods from suppliers, dividends paid to shareholders, wages and benefits paid to our employees, as well as financial expenses paid to creditors and income taxes paid to the public sector. We also contribute to economic development indirectly in various ways, with the most impact coming through our technology: connectivity and access to the Internet has yielded tremendous economic and social empowerment for hundreds of millions of people around the world.

Connectivity and access to the Internet has yielded tremendous economic and social empowerment for hundreds of millions of people around the world.

### Economic impact table (Nokia Group)

Stakeholder	Impact (EUR million)	2015 <sup>(1)</sup>		2014 <sup>(1)</sup>		2013 <sup>(1)</sup>		2012
		Continuing operations	Nokia Group (Continuing and Discontinued operations)	Continuing operations	Nokia Group (Continuing and Discontinued operations)	Continuing operations	Nokia Group (Continuing and Discontinued operations)	Nokia Group
Customers	Net sales	12,499	13,574	11,762	15,189	11,795	23,444	30,552
Suppliers	Total purchases of goods and services	6,810	-	6,281	-	6,194	-	21,125
Shareholders	Dividends paid	-	512	-	1,392	-	71	755
Employees	Wages and benefits <sup>(2)</sup>	3,075	-	2,797	-	3,030	4,591	6,080
Creditors	Net financial expenses	177	186	401	391	277	270	340
Public sector	Paid direct income taxes	262	290	313	636	209	386	478

(1) Discontinued operations refer to HERE and our former Devices and Services business

(2) Includes termination benefits and excludes social security expenses

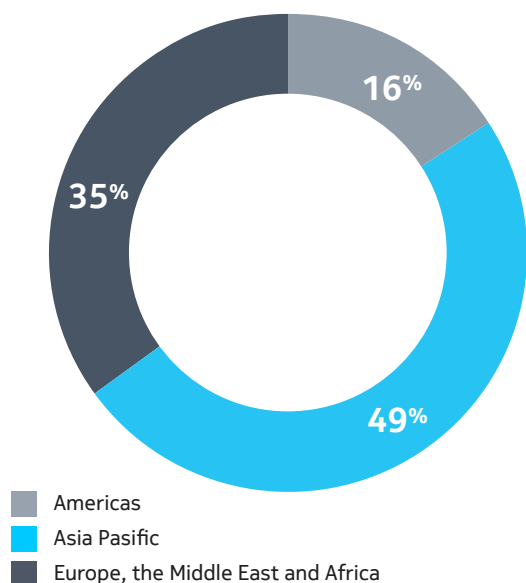


## Our tax payments

In recent years, one of the hot topics in global corporate responsibility discussions has been the transparency and sustainability of a company's tax planning, and the allocation of tax payments between the countries in which they operate.

In 2015, Nokia paid a total of €290 million of direct income taxes (€636 million in 2014), of which approximately 16% was paid in the Americas, 49% in Asia Pacific, and the remaining 35% in Europe, the Middle East and Africa. Of this total, approximately €28 million was related to discontinued operations (our former Devices and Services business and HERE).

### Direct income taxes paid by region



In addition to paying direct income tax, we contribute to society in the form of pension contributions, social security contributions, payroll taxes, value-added taxes, sales taxes, customs duties, excise taxes, environmental taxes, and other similar duties and fees. Nokia is a major taxpayer and collector of indirect taxes and payroll-related taxes, and pays and collects these taxes in accordance with the applicable rules and regulations.

### Our tax strategy

The foundation of our tax strategy is to pay the right amount of tax that is legally due in the correct jurisdiction. Furthermore, we observe all applicable rules and regulations in every country where we operate, and we follow the rules set by the relevant authorities.

We also follow a global transfer pricing policy that is based on the Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations issued by the Organisation for Economic Co-operation and Development (OECD). The guidelines outline the arm's length principle as an internationally accepted valuation standard for intercompany dealings. Based on the policy and the guidance given by the OECD, we comply with the arm's length principle in all our intercompany dealings. We also follow the development of local transfer pricing rules and regulations in all territories and adopt localized transfer pricing policies if necessary.

We may also seek so-called advance pricing agreements, i.e. agreements between taxpayers and tax authorities, to the extent feasible in order to gain

mutual understanding and acceptance on the tax treatment of intercompany arrangements. The benefit of such agreements is to remove uncertainty regarding tax treatment, especially in complex business arrangements.

Nokia does business in many countries, and in every one of these countries we operate in an open and cooperative relationship with the tax authorities. Our tax planning is aligned with our business models, and taxes are considered in business decision-making – but only as one of many elements. Our business and location planning is driven by sound commercial needs.

We are subject to income taxes in multiple jurisdictions. Our businesses and investments globally, particularly in emerging markets, are subject to uncertainties, including unfavorable or unpredictable changes in tax laws, taxation treatment, and regulatory proceedings, including tax audits.

### Our indirect economic impact

We also contribute to economic development indirectly in various ways. Our indirect economic impact includes creating business opportunities and jobs along our supply chain, and competence development for our employees. In addition, our technology facilitates positive change on a wider scale. Connectivity helps to bring market information and financial services to remote areas. It increases productivity and also enables new ways of doing business such as e-commerce, transforms public service delivery, and democratizes innovation. Our industry also has a major role to play in technology transfer and human capital development globally.

Details of Nokia's financial performance are published in our quarterly interim reports, in our Form 20-F, and in our annual accounts, all of which are available on our website.

In 2015, Nokia Group non-IFRS effective tax rate for continuing operations was 23%.

### Creating business opportunities and jobs in India

For example, Nokia Networks' Chennai factory is the largest manufacturing facility in the Indian telecommunications equipment manufacturing sector, with a workforce of 1,200 highly skilled employees. It is also a strategic hub for Nokia's global operations. The company has invested approximately INR 500 crore since 2008 in the 140,000 square-meter facility, which produces and distributes mobile broadband products for advanced technologies such as LTE in domestic and global markets. In 2015, the factory reached a major milestone when it announced that it had manufactured over two million components for telecommunications networks.

In 2015, we employed altogether 11,588 people in India.

### Contributing to the development of China's economy, technology and culture

Nokia has been in China since 1982 and our pioneering work will continue in the country. In 2015, we signed a one billion USD agreement with China Mobile to support their 4G network rollout during 2015 and beyond. Nokia Networks

is providing its TD-LTE-Advanced technology and 2G/3G/4G core network solutions, software and professional services. The infrastructure capabilities and technical expertise we provide will also help China Mobile drive the evolution of China's Internet of Things (IoT) ecosystem and promote the use of IoT applications for various areas. Read more at [company.nokia.com/en/news/press-releases/2015/10/30/nokia-networks-china-mobile-sign-one-billion-usd-agreement-covering-2015-contracts](http://company.nokia.com/en/news/press-releases/2015/10/30/nokia-networks-china-mobile-sign-one-billion-usd-agreement-covering-2015-contracts). Also in 2015, Nokia President and CEO Rajeep Suri received the Marco Polo award, the highest honor given to a non-Chinese citizen, for Nokia's longstanding contribution towards the development of the country's economy, technology and culture. The award recognized our pioneering efforts in driving the global development of TD-LTE and facilitating the creation of a rich, worldwide ecosystem and supply chain in China.

We are proud of our role in the country's rise to become a leader of the global economy. The economic growth in China was a key contributor in reaching one of the UN Millenium Development goals, to reduce global poverty by 50% by 2015.

**In 2015, Nokia President and CEO Rajeep Suri received the Marco Polo award, the highest honor given to a non-Chinese citizen, for Nokia's longstanding contribution towards the development of China's economy, technology and culture.**

### Connecting the unconnected

According to the World Bank, a 10% increase in high-speed internet connections leads to a 1.3% increase in economic growth. In 2015, we had sales in approximately 130 countries and agreed on improving network capacity and coverage in various emerging countries such as Colombia, Kenya, Vietnam, China and India.

[Read more about our indirect economic impact in the section Improving people's lives through technology.](#)

### DID YOU KNOW?

- Smart Agriculture will boost yields by 30%, avoid 20% of food waste and could deliver economic benefits worth USD 1.9 trillion.
- An assessment of eight economic sectors – mobility & logistics, manufacturing, food, buildings, energy, work & business, health and learning – shows that ICT could generate over USD 11 trillion in economic benefits per year by 2030, the equivalent of China's expected annual GDP in 2015.
- ICT-enabled telecommuting and virtual conferencing can save employees time and money. Additional revenues from e-commerce could total USD 1.8 trillion and E-Work could add USD 0.5 trillion while freeing up 100 hours per E-Worker annually.

Source: GeSI Smarter 2030 report



# Our approach to sustainability and corporate responsibility

“We are committed to respecting people and our planet in everything we do, as well as innovating ways to connect the world for a better tomorrow.”

Rajeev Suri  
Nokia's President and CEO

## Our sustainability vision: to invent, design, and deploy sustainable technologies that make a real difference to people's lives, and take responsibility for the impact we can make in the world

Our sustainability vision is aligned with and enriches our company vision: "to expand the human possibilities of the connected world." In the new connected world, where everyone and everything becomes connected through data from billions of sensors everywhere, there is a renewed opportunity to enhance the way people live and work each day – to make the world more productive, efficient, safe, healthy, smart, and sustainable.

Our sustainability vision is to invent, design, and deploy sustainable technologies that make a real difference to people's lives, and take responsibility for the impact we can make in the world. As a values-driven business, we purposefully design technologies to drive social, environmental, and economic progress, and wherever we can, seek to harness the opportunities of connectivity for people and our planet.



# Our priorities: Improving, Respecting, Protecting – together

At Nokia, we want to be proud of what we achieve and how we achieve it. In addition to running our business in line with internationally recognized ethical and responsible business practices, we work hard to create value for people and our planet.

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.

## Improving people's lives with technology

This means enhancing the use of technology to help people live better lives and to support the shift towards a low-carbon economy.

## Respecting people in everything we do

This means running our business in line with internationally recognized ethical and responsible business practices and integrating our high standards in our supply chain. It also means fostering a culture where health and safety is a priority, and creating a great place to work for our employees. As we produce equipment that enhances digitalization, we believe it's our responsibility to ensure our communications

technologies are used to respect, and not infringe, human rights such as privacy.

## Protecting the environment

This means we save energy, cut carbon emissions, and minimize waste by improving our activities throughout the value chain. It also means helping telecom operators manage energy use in their networks as the growth of mobile data services continues.

## Making change happen together

This means working with various stakeholders including suppliers, non-governmental organizations (NGOs), industry, customers and partners to make an even greater contribution to global efforts to achieve a more sustainable, socially responsible world.

**We embed these four principles in our activities because we envision a world where:**

We run our business with zero carbon and waste

Our employees are 100% engaged

We have no concerns for unethical behavior

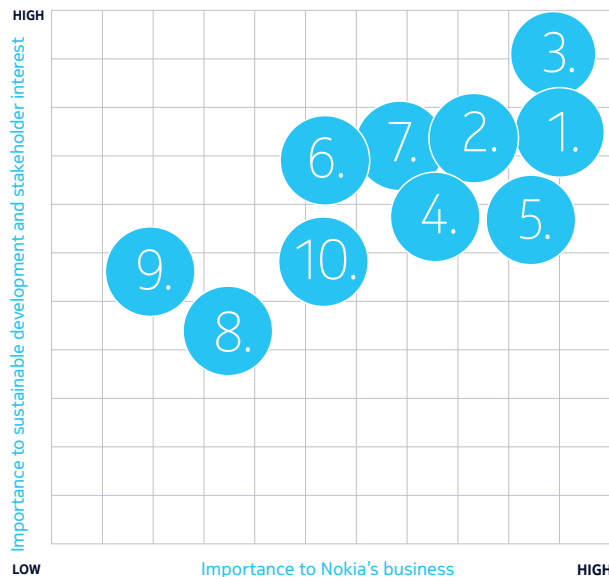
The human possibilities of the connected world have been brought to life and connectivity is accessible for all

# Materiality: How we identified our key priorities

Our sustainability and corporate responsibility activities focus on the topics that are most important, or material, to our business. We use a combination of factors to identify material topics, analyzing the shared value for people, the planet, and our company. These include:

- Nokia's vision and strategy
- Our long history and experience in sustainability and corporate responsibility
- Our regular engagement with various stakeholders, including industry cooperation around key sustainability topics and materiality analysis
- Our customers' sustainability requirements and the evaluation criteria in the EcoVadis supplier assessment
- Requirements and feedback from investors, and indexes such as the Dow Jones Sustainability Index and the CDP
- Global macro trends and challenges identified in the UN Sustainable Development Goals
- Assessments of risks and opportunities for both our business and our sustainability efforts
- Issues that are subject to public debate and media and analyst interest
- International sustainability frameworks such as the Global Reporting Initiative (GRI) G4 and the UN Global Compact.

## Key topics and their impact on sustainable development, stakeholder interest, and Nokia's business



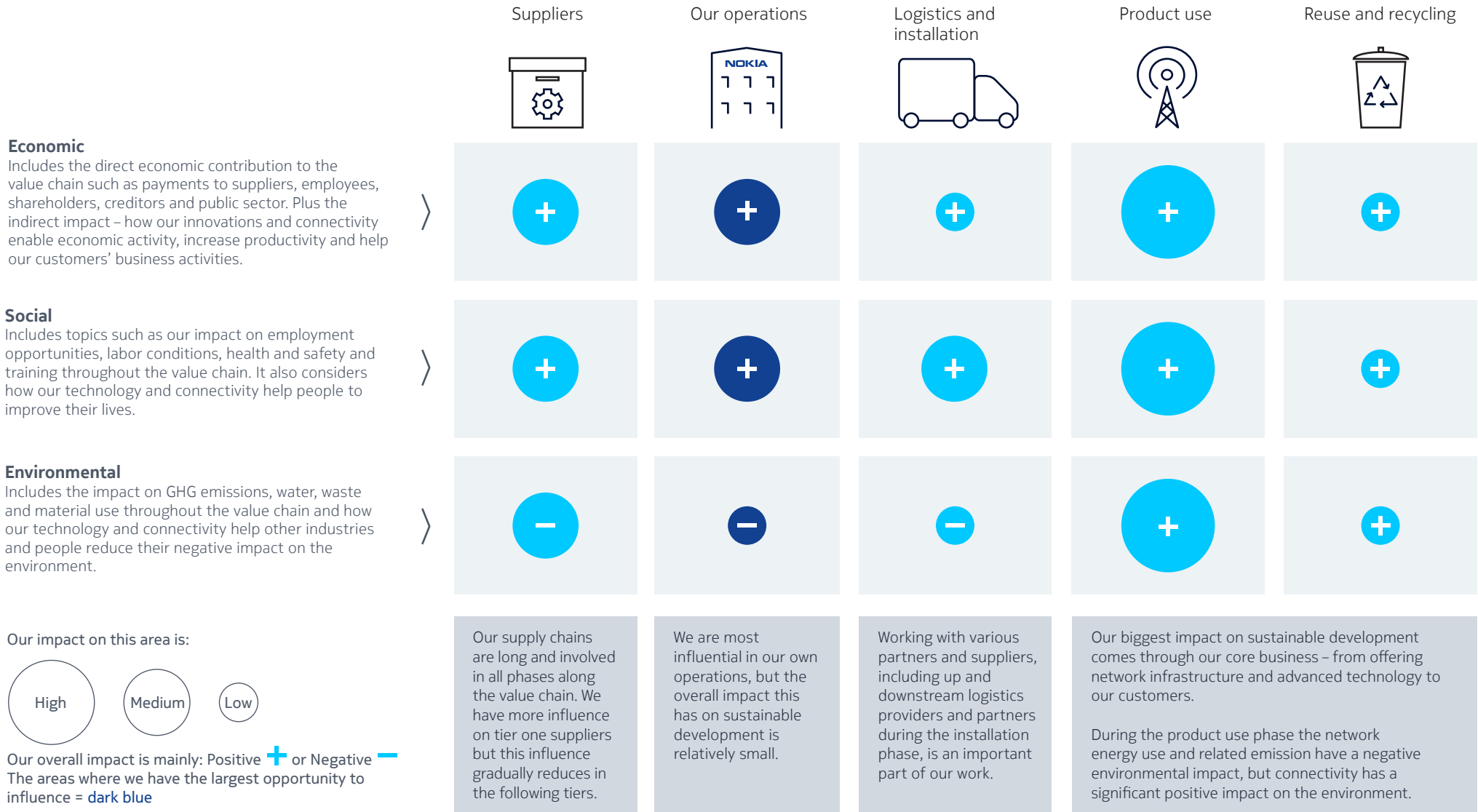
1. Nokia's direct economic impact
2. Corporate Governance, Ethics & Transparency
3. Improving people's lives with technology
4. Privacy and preventing misuse of our technology
5. Human capital
6. Suppliers' and partners' labor conditions
7. Energy efficiency of our products
8. Energy use, water and waste in our own operations
9. Energy use, water and waste in our supply chain
10. Responsible product design

All the topics shown in this diagram are important in our responsibility work. Those in the top right corner of the diagram are most important to our stakeholders and our business in terms of sustainable development.

In 2015 we reviewed and updated the comprehensive materiality analysis we performed in 2014. We focused in particular on systematic analysis of stakeholder requirements and our influence on sustainable development throughout the value chain as well as industry cooperation and the UN Sustainable Development Goals introduced in September 2015.

Overall, we want to maximize our positive impact and minimize our negative impact. Our detailed targets and performance related to each focus area is discussed in the respective chapters later in this report.

## Nokia's impact and influence on sustainable development throughout the value chain



## Global macro trends impacting our sustainability approach

Based on our analysis, the key trends impacting our sustainability approach remained the same: the human potential of technology, the increased importance of privacy, the demand for high ethics and transparency, climate change and sustainable use of natural resources, and the importance of attracting and retaining talent.

### The human potential of technology

With our technology expertise, and by connecting things as well as people, we are well positioned to support efforts to address many of the global challenges listed on the UN Sustainable Development agenda. Our radio networks customers serve around five billion subscriptions worldwide. This provides tremendous opportunities because connectivity increases both productivity and economic growth. It also plays a key part in reducing carbon emissions. The Programmable World will bring further benefits, including better use of scarce resources, greater human well-being, reduced environmental damage, and greater efficiency.

### Increased importance of privacy

While increased connectivity improves people's lives in many ways, privacy concerns are also increasing with the rapid growth in sensitive, private data being transmitted across telecommunications networks. As a company that provides technologies and services that fuel our information society, getting privacy right is critical for Nokia.

## Key trends affecting our sustainability approach

- The human potential of technology

- Climate change
- Need for more sustainable use of natural resources

- Increased importance of privacy
- Demand for high ethics and transparency
- Importance of attracting and retaining talent

## Our approach to sustainability and corporate responsibility

### Improving people's lives with technology

- Harnessing the opportunities of connectivity and technology for people and our planet

### Protecting the environment

- Helping telecom operators reduce energy use and emissions
- Reducing the environmental impacts of our own operations

### Respecting people in everything we do

- Tackling issues related to business ethics, privacy and potential misuse of technology
- Working with suppliers and partners to improve labor conditions
- Leveraging human capital

### Making change happen together

- Engaging with employees, NGOs, others in the industry, authorities, universities and suppliers to make an even greater contribution to global efforts to achieve a more sustainable, socially responsible world



### Demand for high ethics and transparency

Unethical business practices like corruption and lack of respect for human rights and labor conditions are major obstacles to development in many countries. We believe Nokia can be part of the solution by upholding high standards of ethics and human rights in our own activities and throughout our value chain. Neglecting these issues would present a major risk for our reputation and our business.

### Climate change and sustainable use of natural resources

Climate change is one of the biggest global challenges of our time and the debate regarding decoupling economic growth from global emissions is increasing. Climate Change and sustainable management of resources have a medium and long-term impact on our business as their effects are wide-ranging, from inhibiting global economic development and increasing the risk of natural disasters, to contributing to rising energy prices and leading to changes in regulations. Although these effects may have a long-term impact on our business, they also create a business opportunity for us. We cannot focus solely on minimizing

negative environmental impact and improving resource efficiency in our own operations; we must also help our operator customers meet the growing demand for communication in a sustainable way. We can do this by making our products energy efficient and encouraging the use of renewable energy, and by helping our customers support the circular economy.

### Attracting and retaining talent

The companies that are able to attract, keep, and motivate the best talent are usually the most successful ones. Skillful and engaged employees have a direct impact on our business success, which is why we want to create a great place to work for all our employees.

[Read more how we help our customers support circular economy on page 86.](#)



# How the UN Sustainable Development Goals relate to Nokia

In 2015, the United Nations General Assembly – the heads of states from 193 nations – adopted a new agenda for sustainable development in order to end poverty, protect the planet, and ensure prosperity for all. The agenda includes a set of 17 ambitious Sustainable Development Goals to be achieved by 2030.

Nokia is committed to contributing to the Sustainable Development Goals (SDGs). In 2015, we evaluated how our business supports reaching these goals. Based on the evaluation, we have the potential to contribute to basically every goal through our advanced technology and network infrastructure. Our sustainability strategy and activity areas are also well aligned with the SDGs. The most material SDGs in each of the activity area are highlighted in the image.

## Improving people's lives with technology



## Respecting people in everything we do



## Protecting the environment



## Making change happen together



## Improving people's lives with technology and the SDGs



In the area of improving people's lives with our technology, the most material SDG for us is goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation.

We defined this as most material because through our innovations and network infrastructure we can contribute to basically all the remaining goals as well.

In addition, we estimate that there will be 50bn connected devices in 2025 which will enable many billions of people, devices, and sensors to connect in a way that opens up a world of possibilities. These possibilities include making our planet safer, cleaner, healthier, more sustainable, more efficient, and more productive.

In 2015, we used our technology to improve public safety and the resilience of communities to extreme weather changes; we continued connecting the unconnected; we explored the possibilities around digital health; and launched products that decrease CO<sub>2</sub> emissions from network infrastructure.



### End poverty in all its forms everywhere

Read more: How we contribute to the overall economy; Improving people's lives with technology; Partnering with NGOs »



### End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Read more: Possibilities through Internet of Things »



### Ensure healthy lives and promote well-being for all at all ages

Read more: Possibilities through Internet of Things; Unlocking the potential of digital health »



### Ensure inclusive and quality education for all and promote lifelong learning

Read more: Improving access to education in Myanmar; Improving school governance in Uganda »



### Achieve gender equality and empower all women and girls

Read more: Partnering with NGOs »



### Ensure access to water and sanitation for all

Read more: Possibilities through Internet of Things »



### Ensure access to affordable, reliable, sustainable and modern energy for all

Read more: Possibilities through Internet of Things »



### Promote inclusive and sustainable economic growth, employment and decent work for all

Read more: How we contribute to the overall economy; Possibilities through Internet of Things »



### Reduce inequality within and among countries

Read more: Connecting the unconnected »



### Make cities inclusive, safe, resilient and sustainable

Read more: Possibilities through Internet of Things; Improving resilience in India »



### Ensure sustainable consumption and production patterns

Read more: Possibilities through Internet of Things »



### Take urgent action to combat climate change and its impacts

Read more: Participating in the battle against climate change »



### Conserve and sustainably use the oceans, seas and marine resource

Read more: Possibilities through Internet of Things »



### Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

Read more: Possibilities through Internet of Things »



### Promote just, peaceful and inclusive societies

Read more: Partnering with NGOs; Improving lives with technology »



### Revitalize the global partnership for sustainable development

Read more: Making change happen together; Improving lives with technology »

Read about our activities in the [Improving people's lives with technology section](#).

## Protecting the environment and the SDGs



From an environmental perspective, the most material goal for us is goal 13: Take urgent action to combat climate change and its impacts.

It is estimated that by 2030, the ICT industry has the potential to reduce global carbon emissions ten-times more when compared to the emissions created by the industry. Nokia's positive contribution comes through providing equipment that enhances digitalization, but as over 80% of the environmental impact of our business comes during the use phase of base stations, we must also pursue ways to increase the energy efficiency of our products and enhance the use of renewable energy.

In addition, even though the environmental impact of our own operations is relatively small, we improve our eco efficiency throughout the life cycle of our products.

In 2015, we continued to achieve world-class environmental performance in our own operations; we launched new products that help our customers decrease energy use and emissions in their networks; and we continued reusing and recycling old telecom equipment collected from our customers.



### Ensure access to water and sanitation for all

Read about our activity: [Paying attention to our water use »](#)



### Ensure access to affordable, reliable, sustainable and modern energy for all

Read about our activity: [Doing more with less energy »](#)



### Build resilient infrastructure, promote sustainable industrialization and foster innovation

Read about our activity: [Enhancing energy efficiency and use of renewable energy »](#)

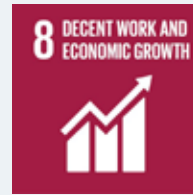


### Ensure sustainable consumption and production patterns

Read about our activity: [Managing our environmental impact »](#)

You can read about our activities supporting these goals in the [Protecting the environment section](#).

## Respecting people in everything we do and the SDGs



In our activities around social responsibility we identified Goal 8: Promote inclusive and sustainable economic growth, employment

and decent work for all – as the most material one.

In addition to offering employment for over 100,000 people around the world (in 2016), we create business opportunities and jobs along our supply chain. We promote responsible business practices by running our business in line with internationally recognized ethical and responsible business practices and by requiring the same high standards from our suppliers. We also foster a culture where health and safety is a priority, and we provide equal opportunities for our employees from over 143 nationalities. This includes men and women from several age groups.

In 2015, we trained almost all our employees on ethical behavior, we addressed the key safety risks for our employees and contractors, we increased training opportunities for our employees and we launched our first product dedicated to Internet of Things (IoT) security.



### Ensure healthy lives and promote well-being for all at all ages

Read about our activity: [Ensuring decent work and fair employment »](#)



### Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Read about our activity: [Increasing training opportunities for our employees »](#)



### Achieve gender equality and empower all women and girls

Read about our activity: [Supporting diversity »](#)



### Reduce inequality within and among countries

Read about our activity: [Ensuring decent work and fair employment »](#)



### Promote just, peaceful and inclusive societies

Read about our activity: [Promoting ethical behavior; Addressing human rights »](#)

Read more in the [Respecting people in everything we do section](#).

## Making change happen together and the SDGs



We believe that through partnerships it is possible to make an even greater contribution to a more sustainable and socially responsible world. We

drive improvements by working with our suppliers, industry peers, customers and NGOs. And our activity is directly aligned with goal 17: Revitalize the global partnership for sustainable development.

In 2015, our engagement sought to promote human rights, enhance energy efficiency and transparency, and ensure inclusive and quality education for all. We also supported activities that help achieve gender equality and empower women and girls. Additionally, these activities promote inclusive and sustainable economic growth, employment and decent work for all and they reduce inequality within and among countries.



### End poverty in all its forms everywhere

Read about our activity: [Partnering with NGOs »](#)



### Ensure healthy lives and promote well-being for all at all ages

Read about our activity: [Partnering with NGOs »](#)



### Ensure inclusive and quality education for all and promote lifelong learning

Read about our activity: [Partnering with NGOs »](#)



### Achieve gender equality and empower all women and girls

Read about our activity: [Partnering with NGOs »](#)



### Ensure access to water and sanitation for all

Read about our activity: [Monitoring water availability »](#)



### Promote inclusive and sustainable economic growth, employment and decent work for all

Read about our activity: [Enhancing sustainability in our supply chain; Promoting children's rights »](#)



### Reduce inequality within and among countries

Read about our activity: [Partnering with NGOs »](#)



### Make cities inclusive, safe, resilient and sustainable

Read about our activity: [Strengthening disaster preparedness in India »](#)



### Ensure sustainable consumption and production patterns

Read about our activity: [Enhancing sustainability in our supply chain](#)



### Take urgent action to combat climate change and its impacts

Read about our activity: [Encouraging suppliers report climate impacts; Strengthening disaster preparedness in India »](#)



### Promote just, peaceful and inclusive societies

Read about our activity: [Enhancing sustainability in our supply chain; Partnering with NGOs »](#)

Read more in the [Making change happen together section](#).

## How we manage sustainability and corporate responsibility

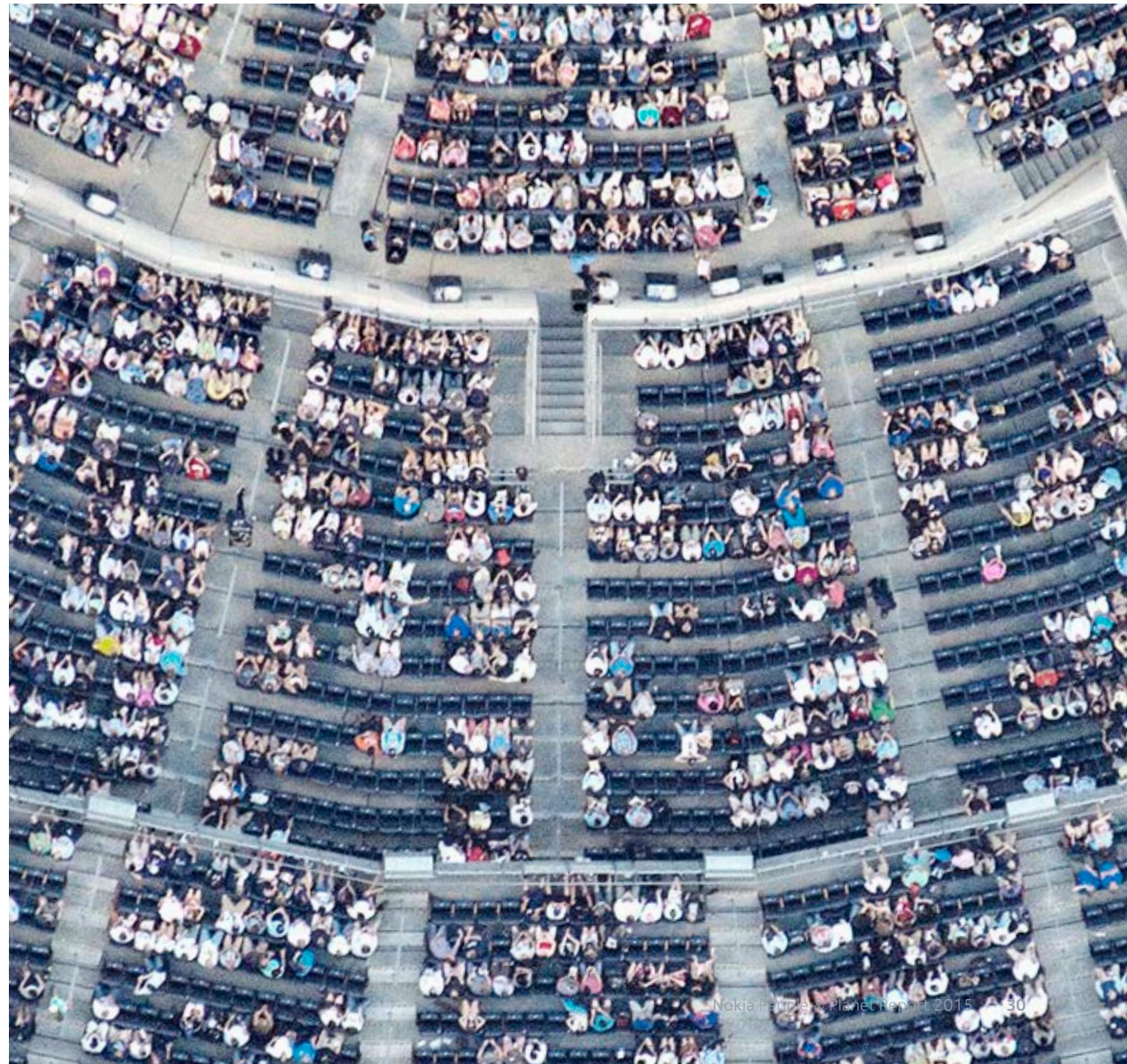
We have strong governance structures and practices in place to manage ethical business practices and corporate responsibility at Nokia. Our Code of Conduct sets out our expectations for employees across the company. The code is supported by policies and management systems related to responsibility issues. Our aim is to ensure that social and environmental matters are taken into account in everything we do.

Our policies are available on our website at [company.nokia.com/en/about-us/corporate-governance/policies](http://company.nokia.com/en/about-us/corporate-governance/policies) and they include:

- Global HR policies
- Health, Safety, and Labor Conditions Policy
- Volunteering Policy
- Privacy Policy
- Human Rights Policy
- Environmental Policy
- Conflict Minerals Policy
- Supplier requirements

### Sustainability and corporate responsibility governance at Nokia

Sustainability and corporate responsibility issues are reviewed regularly at all levels, including the highest decision-making bodies of the company.



The highest decision-making body at Nokia after the General Meeting of shareholders is the Board of Directors, which regularly reviews relevant sustainability matters at their meetings. In 2015 the Board reviewed and approved our new sustainability governance model which increasingly highlights the Board's role in topics related to sustainability.

The Nokia Group Leadership Team, chaired by the President and CEO, is responsible for managing our operations. This includes reviewing and approving our policies and main responsibility initiatives. They also approve Nokia's sustainability strategy, long-term and annual targets, the annual sustainability report, as well as how we link sustainability performance into our rewarding system. They review and give feedback at least twice a year.

In 2015, our Executive Vice President for Marketing and Corporate Affairs was responsible for corporate responsibility at the executive management level. To support the role, a new Vice President for Corporate Affairs was appointed in 2015. In addition to corporate responsibility, the responsibility area includes government relations as well as internal and external communications.

Our Corporate Responsibility team develops the responsibility framework that outlines our priorities, targets, and policies. The team drives and advises on responsibility initiatives throughout the business, and works together with representatives and subject-matter experts from our business units to develop and implement processes and activities to achieve our environmental and social targets.

Our Responsibility Council, which consists of senior representatives – typically leadership team members from our business units and support functions – meets quarterly and ensures alignment across the business on responsibility strategy, priorities, and the implementation of responsibility activities.

Our Ethics and Compliance Office supports employees in making decisions that are ethical, legal, and consistent with Nokia's values. The team also investigates any concerns about potential breaches of our Code of Conduct.

[More information about our corporate governance practices is available in our annual reports and on our website.](#)



## Risk and opportunity management

We have a systematic and structured approach to risk management across our business operations and processes. Key risks and opportunities are primarily identified against business targets, either in business operations or as an integral part of long and short-term planning. Key risks and opportunities are analyzed, managed, monitored, and identified as part of business performance management with the support of risk management personnel.

Our overall risk management concept is based on managing the key risks that would prevent Nokia from meeting its objectives, rather than solely focusing on eliminating risks. The principles documented in the Nokia Risk Management Policy, which is approved by the Audit Committee of the Board of Directors, require risk management and its elements to be integrated into key processes. One of the main principles is that the business or function head is also the risk owner, although all employees are responsible for identifying, analyzing, and managing risks as appropriate to their roles and duties.

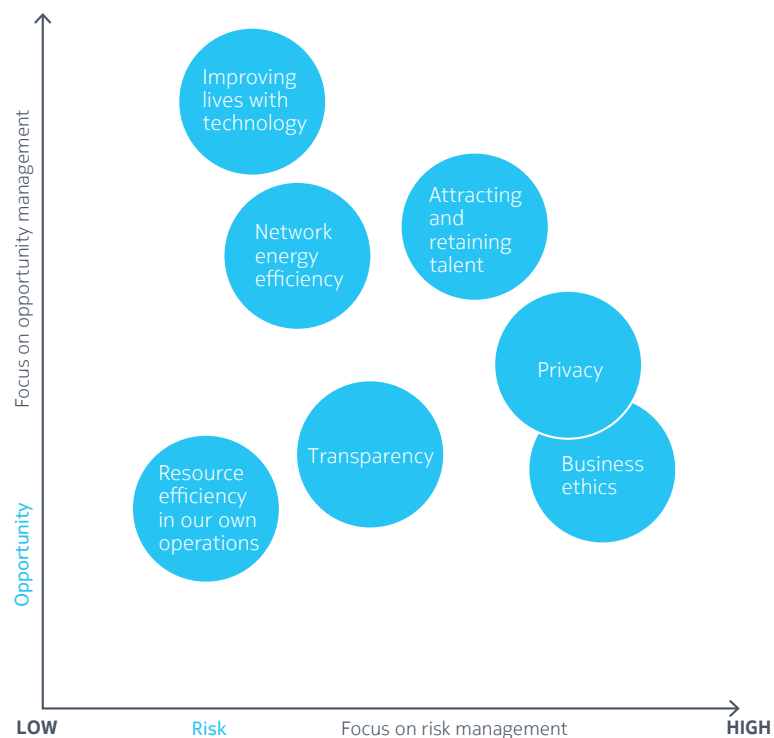
Risk management covers strategic, operational, financial, and hazard risks. Key risks and opportunities are reviewed by the Group Leadership Team and the Board of Directors to create visibility on business risks as well as to enable prioritization of risk management activities. In addition to the principles defined in the Nokia Risk Management Policy, specific risk management implementation is reflected in other key policies.

The most important risk factors together with the principal factors and trends affecting our operations are discussed in our 2015 annual report, in our Form 20-F. These include sustainability-related risks such as:

- Risks related to privacy, product safety, health, and security, as well as the environment including also the adverse effects resulting from the climate change.
- Risk of non-compliance with regulations or our supplier and customer requirements
- Violation of ethical standards, including our Code of Conduct
- Labor unrest and strikes
- Reduced employee motivation, difficulties in recruiting, and loss of key personnel
- Purchasing boycotts and public harm to our reputation and brand due to actual or alleged reasons.

We systematically analyze sustainability-related opportunities. Our innovations hold the potential for changing the way we live, from technologies that improve people's lives to helping reduce our environmental impact.

### In this picture we have provided some illustrative examples of responsibility related opportunities and risks



#### Improving lives with technology and network energy efficiency

There are revenue and, to some extent, also brand opportunities in creating technologies that improve people's lives and in developing more energy efficient networks.

#### Attracting and retaining talent

The ability to attract, motivate and keep talent has an impact on how well we are able to manage our revenue and cost related opportunities and risks.

#### Privacy and business ethics

Privacy and ethics are brand, reputation and regulatory driven risk areas but there are also opportunities in these areas. Ethics also covers how we work with suppliers and partners.

#### Transparency

Transparency has an impact on brand related risks and opportunities.

#### Resource efficiency in our own operations

Eco-efficiency in our own operations and logistics include cost savings opportunities and also have an impact on Nokia's brand perception.





# Improving people's lives with technology

Our radio networks customers serve around five billion subscriptions worldwide. This provides tremendous opportunities: Connectivity increases productivity and economic growth, improves access to knowledge, information and education, and plays a key part in reducing carbon emissions. We are committed to harnessing these great opportunities for the good of people and our planet.

## Opening up a world of possibilities through Internet of Things (IoT)

Nokia has been at the forefront of every major shift in how the world communicates and connects. Through each technology shift, our inventions have enabled an ever-increasing quantity of information to flow across communication networks while providing the computing power to optimize this flow of information intelligently and efficiently.

Now, Internet of Things (IoT) will shape how people, businesses, and services connect with each other. It will enable many billions of people, devices, and sensors to connect in a way that opens up a world of possibilities. These possibilities include making our planet safer, cleaner, healthier, more sustainable, more efficient, and more productive by:

- Using scarce resources more intelligently through precision agriculture and smart control systems to optimize light, nutrition, and water supply.
- Creating intelligent healthcare systems that make the most of data analytics and collective knowledge to improve quality of care.
- Introducing smart metering and intelligent energy solutions to reduce emissions and energy costs.
- Transforming travel by connecting vehicles to each other, and connecting drivers and passengers with public safety services, guidance

systems, and traffic sensors embedded into vehicles.

- Creating whole industries with just-in-time manufacturing and supply chains that intelligently self-manage and instantly adapt to meet customer demand.
- Automating financial and retail services to simplify our lives and create new business opportunities.

We are committed to harnessing these great opportunities. As an example, in 2015, Nokia Networks signed a partnership with Oi Brasil to accelerate development of the IoT ecosystem in Brazil and across the region. Together we will set up an LTE IoT lab and create a working group to study solutions and opportunities in IoT, develop joint projects and test innovative solutions. The investments in innovation will be supported by a fund that will finance projects within IoT verticals such as agribusiness, connected cars, homes and smart cities and e-health. Read more at [company.nokia.com/en/news/press-releases/2015/11/19/nokia-networks-oi-brasil-sign-partnership-to-develop-internet-of-things-solutions-in-latin-america](http://company.nokia.com/en/news/press-releases/2015/11/19/nokia-networks-oi-brasil-sign-partnership-to-develop-internet-of-things-solutions-in-latin-america).

In addition, Nokia Technologies develops and licenses technologies we believe will enable the Programmable World. We seek to create value from our investments by expanding our successful patent licensing program and helping other companies

and organizations benefit from our innovations through our established and successful licensing business. The Nokia Networks portfolio also includes around 3,700 patent families, comprising of approximately 10,000 individual patents and patent applications that were created through work as an industry leader in the R&D of wireless, broadband and transport technologies.

You can read more about our patents and licenses in Nokia's Form 20F.

Nokia has been at the forefront of every major shift in how the world communicates and connects.

Our activities seek to support these UN Sustainable Development Goals



## USE CASE

### Connected cars – use case for Mobile Edge Computing

Millions of people are injured in traffic accidents every year. In 90% of these incidents, the cause is human error. Connected cars can improve road safety, but they need ultra-low latency for communications.

In 2015, Nokia and its partners demonstrated for the first time in the world in an operator's live LTE network how Mobile Edge Computing (MEC) can be used for car to car and also for car to infrastructure communications. Vehicles connected via the distributed cloudlets based on Nokia's Mobile Edge Computing platform receive information such as warnings from other vehicles almost in real time, which is particularly important for traffic safety applications. MEC is an enabler for optimized infrastructure investments and the first step towards 5G and autonomous driving.

Nokia is one of the founding members of the Mobile Edge Computing (MEC) ETSI Industry Specification Group, which now has over thirty participating members driving standardization and fostering an open environment around IT and cloud-computing capabilities within the Radio Access Network (RAN). Through MEC, Nokia will drive differentiated services and new applications with an open architecture and standardized interfaces.



## Enhancing the power of connectivity

Connectivity has tremendous potential for economic and social empowerment for any individual. At Nokia, our commitment is to contribute to deliver benefits of broadband infrastructure and services in all corners of the world.

In 2015, we enhanced the power of connectivity by creating product offerings that help overcome missing broadband connectivity, improve the resilience of communities to extreme weather changes and increase public safety. Our product offerings also support the battle against climate change.

### Connecting the unconnected

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.

Our innovations in this area include the launch of 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.

**We believe access to internet is certainly a fundamental need today and in line with the United Nations' stance, it is a basic human right as it facilitates the realization of a range of other human rights.**

Through our technology, we enhance network capacity and coverage in countries around the world. In 2015, we had sales in approximately 130 countries and agreed on improving network capacity and coverage in various emerging countries such as Colombia, Kenya, Vietnam, China and India. We also signed a five-year framework agreement with Ooredoo Group for advanced mobile broadband network, in Doha, Qatar, to support their long-term development strategy across its footprint in the Middle East, North Africa and Southeast Asia. Nokia will provide advanced mobile broadband technologies and professional services to help Ooredoo Group ensure superior 2G, 3G, 4G and LTE-A networks. Read more at [company.nokia.com/en/news/press-releases/2015/10/12/ooredoo-group-signs-five-year-framework-agreement-with-nokia-for-advanced-mobile-broadband-network](http://company.nokia.com/en/news/press-releases/2015/10/12/ooredoo-group-signs-five-year-framework-agreement-with-nokia-for-advanced-mobile-broadband-network).

We also work with others in our industry in order to make connectivity and broadband investments happen and to help to shape the emerging Programmable World in various countries. We are a member of The Alliance for Affordable Internet which is a technology sector coalition with an aim to achieve the UN Broadband Commission target of entry-level broadband priced at less than 5%

of monthly income, thereby enabling billions more people to come online.

In early 2016, we announced a partnership with the Indian Institute of Technology-Madras (IIT-M), one of the country's foremost educational institutions, to create technology solutions that will enhance broadband connectivity in rural India. We also established the Telecom Infra Project (TIP) together with Facebook, Intel, Deutsche Telekom, EE, Globe, SK Telecom and other operators, equipment providers, systems integrators and technology companies from around the world. The goal is to accelerate sustainable global growth of high quality, scalable and affordable telecommunications infrastructure. Also, our President and CEO Rajeev Suri was appointed as Broadband Commissioner to contribute to creating and innovating on projects that can digitize the under-developed and under-connected world.

Read more about how we drive innovation and cooperate with the industry in the Making change happen together section.



### Improving the resilience of communities to extreme weather changes and promoting public safety

Telecom technologies are also crucial in ensuring remote areas stay connected in real time. This reduces the impact of natural disasters and helps communities stay safe.

In 2015, we 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. As part of our cooperation with Save the Children, to help protect children and their communities in 350 villages in India, we announced that Nokia Networks will provide its LTE-based network-in-a-box solution for public safety mobile broadband in six of these villages. This network-in-a-box solution allows the rapid setup of vital communications in rural emergency or disaster situations amongst the village task-force members, enabling high bandwidth video chatting, VoIP calls, and location tracking within these task-forces.

Also related to the safety of communities and people, we made an announcement to go global with Nokia's life-saving emergency alert system. The alert solution 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. In 2015, when we announced the news, the solution had delivered more than 10 million messages covering over 1,000 emergencies in one country.

Connectivity also enables more efficient collection and analysis of data, which can help in improving the resilience of communities to extreme weather changes across their region. In 2015, we continued piloting a web-based system to monitor water availability in drought-prone regions of Ethiopia and Kenya together with Oxfam. This system provides real-time information to quickly identify the early onset of drought, enabling response efforts to be

mobilized before the situation reaches a crisis point. During the year, we monitored and mapped over 1,000 water points across Kenya and Ethiopia, identifying a further 56 strategic water points to be incorporated into the project.

In 2015, we continued piloting a web-based system to monitor water availability in drought-prone regions of Ethiopia and Kenya together with Oxfam.

In 2015, we 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.

### Unlocking the potential of digital health

In the field of digital health, our Technologies unit seeks ways to connect people to digital solutions that can improve their health and well-being. The impact of digital on health will be tremendous. The mobile revolution will trigger a democratization of healthcare where patients take a bigger role in their well-being. Here, the emerging Programmable World presents opportunities to address health-conscious consumers and people with an elevated risk of chronic conditions, and expand the patient care experience from hospitals and wards into the home.

Through the acquisition of Alcatel Lucent in early 2016, we also became part of two initiatives around digital health: In Senegal we are combatting diabetes by using mobile technology and in Mexico we are building a national mHealth initiative combatting diabetes and obesity. You can find out more about these projects on our website at [www.nokia.com/people&planet](http://www.nokia.com/people&planet).

### Participating in the battle against climate change

The information and communications technology (ICT) industry has a fundamental role to play in the battle against climate change. According to GeSI's Smarter2030 report, the ICT sector's emissions "footprint" is expected to decrease to 1.97% of global emissions by 2030. Furthermore, the

emissions avoided through the use of ICT are nearly ten times greater than the emissions generated by deploying it.

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. In addition, as the amount of mobile data traffic continues to grow exponentially, our role is to help operators deal with this growth in a sustainable way. In 2015, we pursued ways to increase the energy efficiency of our products and enhanced the use of renewable energy. We launched our Zero CO<sub>2</sub> emission base station site offering, which includes more than 20 products and services for our Single RAN Advanced portfolio. The offering enables a reduction in base station site energy consumption of up to 70%, creating a significant driver for modernizing base station sites. With the significantly lower energy consumption, renewable energy sources such as solar and wind power, as well as fuel cells, become viable options for powering a base station site, making it possible to achieve zero CO<sub>2</sub> emissions. You can read more about our Zero CO<sub>2</sub> emission offering on page 83 of this report.

Our Technologies unit also registered patents in the field of energy-saving technologies.

You can read more about our impact on the overall economy on page 16.

You can read more about our programs with NGOs starting on page 103 of this report.

You can read more about our place in a changing world on our website [www.nokia.com](http://www.nokia.com) and in our annual reports.

### DID YOU KNOW?

- 75% of the population is expected to be connected via smartphone and broadband internet by 2030, generating revenue opportunities across sectors, as well as significant cost savings due to efficiency improvements.
- ICT will connect 2.5 billion extra people to the knowledge economy by 2030, giving 1.6 billion more people access to healthcare and half a billion more people access to e-learning tools.
- E-working solutions can boost the productivity of teleworkers around the world, giving them back an average of 100 hours a year to spend with friends and family.
- Smart agriculture could reduce water needs by 250 trillion liters and abate two gigatonnes of CO<sub>2</sub>e.

Source: GeSI Smarter 2030 Report

ICT has the potential to enable a 20% reduction in global CO<sub>2</sub> emissions by 2030, thus holding emissions at 2015 levels.



# Respecting people in everything we do

As a provider of technologies and services that fuel our information society, we are committed to helping to ensure that such technologies and services are used to respect, and not infringe, human rights or privacy. We also want to create an inclusive working environment where everyone feels valued, motivated and inspired to reach their full potential.

# Our approach to social responsibility

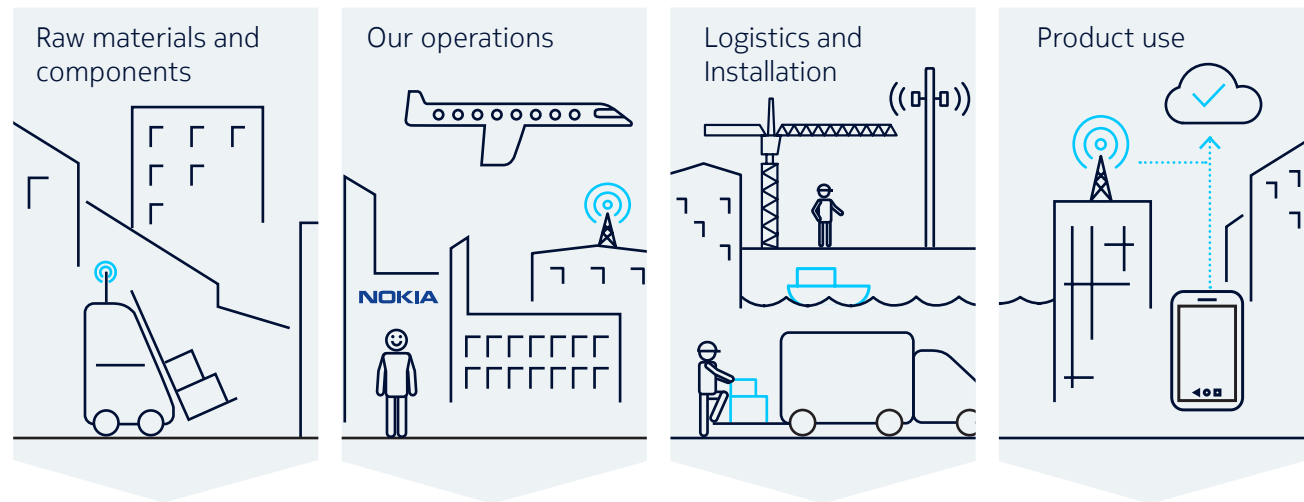
For us, respecting people in everything we do means running our business in line with internationally recognized ethical and responsible business practices and integrating our high standards in our supply chain. It also means fostering a culture where health and safety is a priority, and creating a great place to work for our employees. In addition, as we produce equipment that enhances digitalization, we believe it's our responsibility to ensure our communications technologies are used to respect, and not infringe, human rights.

## Managing our social responsibility

Our focus

Running our business in line with internationally recognized ethical and responsible business practices

Improving privacy and security in the digital society



Our activity

- Ensure compliance through supplier requirements, audits, training
- Work to find a sustainable solution to the issue of conflict minerals through commitment, collaboration, competence development, transparency
- Integrate our high standards in our supply chain
- Address key health and safety risks through training and analysis
- Integrate human rights into our company-wide processes
- Leverage human capital
- Address key health and safety risks through training and analysis
- Ensure compliance through supplier requirements, assessments and consequence management
- Build security into the design of all our products
- Conduct extensive risk assessments and human rights due diligence to mitigate the potential misuse of our products
- Manage privacy

Our activities seek to support these UN Sustainable Development Goals





## Promoting ethical behavior

Nokia earns the trust of our customers and regulators through our commitment to promote ethical behavior and human rights as expressed in our Code of Conduct. The Code sets forth clear principles of business integrity and provides simple and direct guidance to our employees, suppliers, business partners on Nokia's values and how to work successfully at and with Nokia. The code is available on our website at [company.nokia.com/en/about-us/corporate-governance/nokia-code-of-conduct](http://company.nokia.com/en/about-us/corporate-governance/nokia-code-of-conduct).

### What our code means for employees, suppliers and partners

Nokia's employees, suppliers and business partners are expected to uphold the highest ethical standards in their business conduct. We are committed to conduct business ethically and

in accordance with all applicable laws and regulations of the countries where we operate. To help employees in making the right business decisions, Nokia's Code of Conduct includes basic legal guidelines and essential ethical behavioral standards.

### Renewal of the Nokia Code of Conduct

In 2015, we simplified the Nokia Code of Conduct into five overarching principles for business conduct: Obey laws and follow policies; Be fair and honest; Treat each other with respect; Declare conflicts of interest and avoid appearance of impropriety; Report any concerns promptly.

The Code is supplemented with 14 policy risk area statements including Improper Payments, Conflict of Interests, Fair Competition, Privacy, Dealing

with Government Officials, Intellectual Property & Confidential Information, Working with Suppliers, Trade Compliance, Insider Trading, Health Safety & Labor Conditions, Controllership, Fair Employment Practices, Human Rights, and Environment. Some of the policies are available on our website at [company.nokia.com/en/about-us/corporate-governance/policies](http://company.nokia.com/en/about-us/corporate-governance/policies).

We launched the new Code of Conduct by announcing an annual global "Integrity Day," a day when Nokia employees across the globe celebrate and renew our commitment to integrity. The Code was also cascaded to employees in 14 languages through intranet, email, posters, line managers and we launched a special mobile app to reach out to our highly mobile and tech-savvy workforce.

**In 2015, we simplified the Nokia Code of Conduct into five overarching principles for business conduct:**

- 1 Obey laws and follow policies.
- 2 Be fair and honest.
- 3 Treat each other with respect.
- 4 Declare conflicts of interest and avoid appearance of impropriety.
- 5 Report any concerns promptly.

## Training of our employees, suppliers and business partners

We help our employees better understand and implement the Code in their daily work by providing training in ethical business practices, and work with our suppliers and business partners to ensure they are aware of our expectations.

Our annual training on ethical business conduct is mandatory for all employees, to help them understand how to apply our Code of Conduct in everyday decision-making. The Ethical Business Training demonstrates how the Code can be applied to real-life scenarios, addressing issues such as ethics in the workplace, fair competition and anti-trust, trade compliance, privacy, bribery and corruption, gifts, entertainment and hospitality, conflicts of interest, human rights, environment, equal opportunity, discrimination and harassment. In 2015, around 98% of employees completed this training\*.

## Leadership engagement and compliance oversight

Nokia's Board of Directors, principally through the Audit Committee, provides engaged leadership and oversight on compliance to our company executives and employees. In 2015, the Audit Committee met seven times to discuss, among other topics, compliance strategy and issues, and to review the results and outcomes of Nokia's compliance initiatives. In addition, Nokia's President and CEO chairs on a quarterly basis the Global Compliance Committee for the purpose of providing oversight and strategic direction to the committee on

## In 2015, around 98% of employees completed the Ethical Business Training.

matters of ethics and compliance. At the regional level, Nokia's regional leaders convene Regional Compliance Committees to provide local oversight and to assist in executing Nokia's compliance program and initiatives.

## Compliance risk assessments of our business

We conduct risk assessments to evaluate the compliance risks our employees confront and to determine whether there are any new or emerging risks we need to address in our compliance program. In 2015, we conducted an internal compliance risk assessment that included manager and team discussions with approximately 27,000 of our employees around the world pertaining to over 45 compliance risk areas. The results of these discussions are being used in formulating and implementing risk mitigation actions and changes to existing compliance processes.

In addition to the periodic risk assessments, we continuously ask whether our compliance program is effective and resonates with our employees. We conduct surveys on an anonymous basis in which employees are asked questions about the effectiveness of the compliance program, and we measure our progress year over year. We actively seek out input on the program. Our business

leaders hold town-hall meetings with our employees at sites around the world. They also talk about the importance of ethical business externally. As an example, ethics and compliance was discussed with a group of key suppliers in our Supplier Summit 2015.

Our internal audit team collaborates with the compliance team in audits and other inquiries that assess the effectiveness of our compliance processes and controls. These multiple channels of feedback are invaluable in driving a culture of continuous improvement in our compliance activities.

## Our annual training on ethical business conduct is mandatory for all employees, to help them understand how to apply our Code of Conduct in everyday decision-making.

\*The Ethical Business training completion percentage excludes employees recruited in December 2015 and around 730 persons that transferred to Nokia as part of acquisitions completed in 2014–2015.

## Reporting ethical concerns

We require employees and anyone working with Nokia to report any concerns about any suspected violations of our Code of Conduct, and we provide multiple channels to report such concerns.

One can report concerns by email, through the Code of Conduct application on a mobile device, via an

on-line channel or by phone (country specific phone numbers). Employees may also raise their concern anonymously. We promptly investigate all concerns and take appropriate corrective action as necessary.

In 2015, the Ethics & Compliance Office received a total of 225 enquiries and concerns. Of this total, 64 enquiries were for advice, guidance or

clarification on our policies rather than reporting a suspected violation. Of the total, 107 enquiries and concerns were reported through the ethics hotline and anonymous channel, and the remainder were reported directly to the Regional Compliance Counsels.

### Reporting channels:

Email  
[ethics@nokia.com](mailto:ethics@nokia.com)

Online  
[nokiaethics.alertline.com](http://nokiaethics.alertline.com)

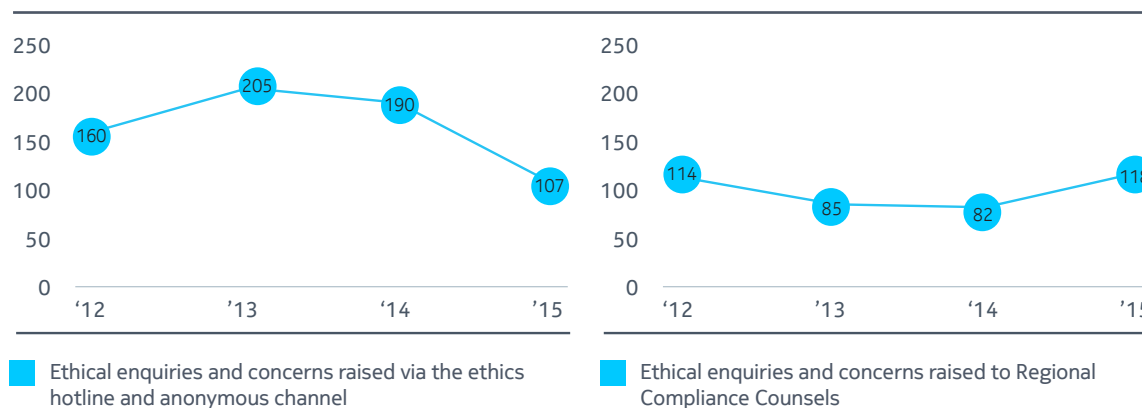
Phone  
[nokiaethics.alertline.com/clientInfo/7782/phone.pdf](http://nokiaethics.alertline.com/clientInfo/7782/phone.pdf)

### Number of potential violations reported per category

Category	Total in 2015
Fair Competition	1
Intellectual Property & Confidential Information	9
Conflict of Interest	14
Dealing with Government Officials	4
Improper Payments	4
Privacy	7
Fair Employment	34
Controllership	58
Guidance	64
Health, Safety & Labor Conditions	6
Human Rights	2
Working with Suppliers	16
Guidance – Investigation	4
Trade Compliance	2
<b>Total</b>	<b>225</b>

Nokia has sought to create a culture in which employees feel comfortable raising concerns and potential violations of the Code of Conduct, and the Code has a clear statement that retaliation for such reporting of concerns will not be tolerated.

### Ethics enquiries



In 2015, our Ethics & Compliance Office investigated 124 alleged violations of the Nokia Code of Conduct. As a result of these investigations, 62 employees were dismissed and a further 18 received written warnings and 32 were verbally counseled.

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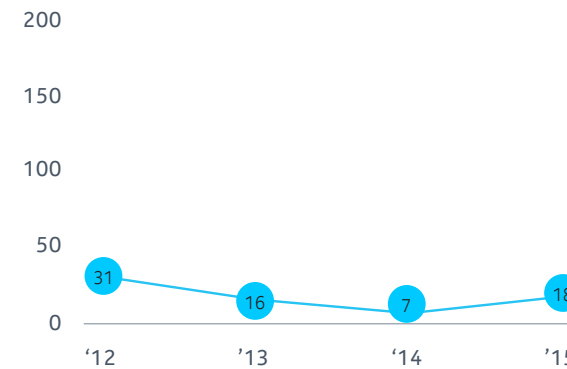
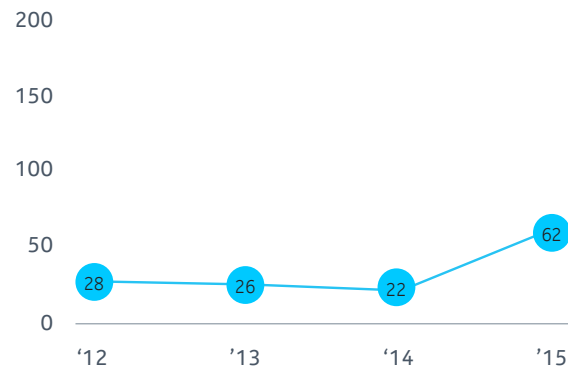
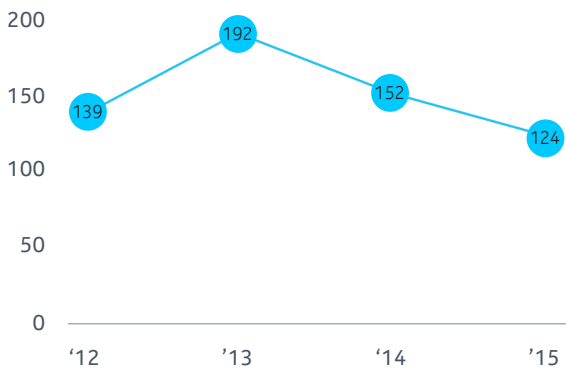
### Anti-corruption: prevention and detection

Our anti-corruption strategy focuses on prevention and detection. From our risk assessments, we know which employees are more likely to be exposed to the risks of corruption, and we have developed specialized on-line anti-corruption training which is required from these employee groups. We also arrange trainings in person, if needed.

Our contracts with our suppliers, including contractors and business partners, require adherence to our Code of Conduct, including our anti-corruption and improper payment policies, and we provide on-line training on these requirements.

Nokia has due diligence procedures to screen the appointment and extension of any contracts with third parties used in sales and promotion roles, all of which are subject to approval by the Compliance Office.

### Investigations and resulting disciplinary action



■ Number of investigations by Ethics & Compliance office

■ Number of employees dismissed on grounds of violation of Code of Conduct

■ Number of employees given a written warning

## Examples of ethical issues encountered by employees

Issue raised	Our guidance	Action taken
<p>A Line Manager was concerned that they were consistently losing to a competitor in bidding process. The Line Manager was concerned that one or more of our employees may be passing along information to a former employee who now worked for the competitor.</p>	<p>Nokia has a fair competition policy which clearly prohibits sharing or communicating information, or otherwise aligning with competitors, including informal communication or participation in events where competitors regularly meet (e.g. trade associations/ Events or standardization activity).</p>	<p>An investigation was conducted, and it was concluded that there was no intentional or unintentional collusion or improper sharing of information by the Nokia employees (or the competitor's employees).</p> <p>No sanctions were imposed as there was no intentional misconduct, but training in competition law and the parameters of permissible and impermissible conversation with competitors was given to the entire team.</p>
<p>The reporting employee sent an mail to the ethics hotline alleging that Care Technical Manager is demanding and accepting money from external temporary labor in his team and from a vendor. Further it is also alleged that he has inducted several relatives as external temporary labour in the team.</p>	<p>Our Code of Conduct clearly states that bribery has no place in Nokia and all employees are prohibited from giving or receiving bribes.</p>	<p>The allegations were substantiated following an investigation by the Ethics &amp; Compliance Office.</p> <ol style="list-style-type: none"> <li>1. For receiving kickback from colleagues and violating the Nokia process and receiving payment from a vendor, the manager was dismissed.</li> <li>2. The vendor was terminated from Nokia for violating the process.</li> </ol>
<p>An employee is working with Global Procurement team and they are planning a major supplier event with hundreds of suppliers in order to show them that we are a winning player in the market and to strengthen our business relationship with them. Members of the management team now suggested that we could ask the suppliers (our guests) to co-finance this event, i.e. we could ask them to sponsor our lunch, dinner or other catering services during the event.</p>	<p>Nokia has issued the Standard Operating Procedure (SOP) on corporate hospitality and this procedure to provide guidelines for the acceptable practices relating to the giving and receiving of business courtesies.</p>	<p>Nokia and its employees may accept only nominal value hospitality &amp; entertainment from suppliers that is directly associated with and integral to an ongoing business activity with them. Examples of such hospitality are lunch in the supplier cafeteria during a business negotiation at the supplier's place of business, ordinary dinner in connection with negotiations, local transportation with the supplier representatives, etc.</p> <p>Thus, it was not appropriate to ask them to co-finance.</p>

## Improving privacy and security in the digital society

We believe that people have a right to know what happens to their personal data. We are committed to respecting privacy and fulfilling the expectations of our customers in this area. We also carry out due diligence specifically addressing human rights risks relating to privacy and freedom of expression to make sure our technologies are used to respect, and not infringe, human rights.

### Improving our privacy management

Getting privacy right in a complex technology and business environment calls for strategic and consistent management of privacy and data-related risks and opportunities. We strive to apply appropriate safeguards to protect people's personal data against unauthorized use or disclosure.

Our privacy management model is set out in our group-wide Privacy Management Policy, which provides clear privacy principles and a governance framework to implement sound privacy-related practices across our businesses. The framework includes:

- Executive oversight
- Policies and their implementation
- Training and awareness
- Risk assessment and mitigation
- Procedures for responding to inquiries, complaints, and privacy breaches
- Monitoring and compliance auditing.

### Getting privacy right in a complex technology and business environment calls for strategic and consistent management of privacy and data-related risks and opportunities.

In 2015, the privacy team focused on for example improving our privacy management capabilities, which we reorganized in 2014 after the sale of our Devices and Services business to Microsoft.

#### Developing technology-oriented solutions to tackle privacy challenges

The evolution of technology creates new privacy challenges. We focus on developing technology-oriented solutions to tackle these challenges. Privacy has to be engrained in the technologies as part of their design, not as an afterthought. We believe that this engineering-led approach can play an important role in identifying and mitigating privacy threats created by new technologies.

In 2015, we created a privacy engineering and assurance process definition and started to implement it within the product creation processes of our businesses. We also participated in external forums, contributing to the broader development of the emerging discipline of privacy engineering.

Standardization will support the development of privacy-safeguarding technology that will enhance information sharing across our society. We have been promoting the adoption by industry standards bodies of a methodology for assessing privacy impact when developing technology standards. This methodology also makes it easy to select privacy-mitigating safeguards in those standards. The Organization for International Standardization (ISO) subcommittee responsible for privacy standardization has already embraced this approach. Other standards bodies such as the World Wide Web Consortium (W3C), the 3rd Generation Partnership Project (3GPP), the European Telecommunications Standards Institute's Technical Committee on Cybersecurity (ETSI TC Cyber), and the Institute of Electrical and Electronics Engineers (IEEE) have also undertaken efforts to integrate a similar approach in their standardization processes.

## Enhancing our portfolio of security products and services

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.

### Building security into product design

In the massively growing market of machine-to-machine communication and the Internet of Things (IoT), security is a vital component for business success. In the Vodafone M2M Barometer 2015 report, 75% of people surveyed were concerned about security breaches.

We lead the industry in responding to the concerns of mobile users and creating advanced telecommunications security. We build security into the design of all our products, and it is an integral part of our product creation process throughout the development life cycle. To further ensure implementation of product security, a dedicated unit

has been established and respective programs and processes implemented. We are also continuously expanding our portfolio of security products and services with both our own innovations and those from qualified partners.

In 2015, we launched our first product dedicated to Internet of Things (IoT) security: Mobile Guard for IoT, expanding our existing network-based malware detection and mitigation solution for smart devices to the IoT segment. Additional security solutions and services launched in 2015 include Telco Cloud Security, providing automated deployment and management of security policies and functions in cloud environments with our Cloud Security Director product and offering Telco Cloud Services to support our customers in their migration to the cloud. We also launched Network Access Guard, supporting attribute and role-based identity and access policy management as well as single sign-on to any type of network element, and Signaling Guard, tackling vulnerabilities in Signaling System 7 (SS7) and preventing hacking and DDoS attacks.

In 2015, we launched our first product dedicated to Internet of Things (IoT) security: Mobile Guard for IoT, expanding our existing network-based malware detection and mitigation solution for smart devices to the IoT segment.

In June 2015, Nokia Networks won the Leading Lights award in the new “Most Innovative Security Strategy for vendors” category for Mobile Guard for IoT.

We are optimizing our existing Radio Access Security and Core Network Security solutions to meet the increasing performance requirements of mobile operators. Our security portfolio is consolidated under the Nokia NetGuard name and will be extended further to meet the challenges of security in IoT, cloud, and big data applications.

### Sharing security know-how and expertise

The Nokia Security Center (NSC) in Berlin, Germany combines a laboratory and demonstration center with conference facilities. It is a hub of leading expertise focused on creating robust telecommunications security solutions. Equipped with its own fully operational 4G/LTE test network, the center provides a platform to develop and share security know-how and expertise in cooperation with mobile network operators, partners, governments, and academic institutions.

In 2015, we organized 80 events and hosted almost 600 customers and partners. NSC Berlin took part in the ninth National IT Summit, which

is a central platform in Germany for cooperation between government, industry, academia, and society on the topic of digitalization. Moreover, the center continued its partnership and cooperation with the key German organizations contributing to telecommunication security: Allianz für Cyber-Sicherheit and Deutschland sicher im Netz.

The NSC is a key component of our strategy to make security and privacy a key differentiator for our company. It provides valuable insight into current and emerging threats. By enabling mobile operators to protect their network infrastructure, services, and users, robust security helps them attract new customers, reduce churn, and increase revenues.

We also pledged to help the OpenSSL Project in its fight against future vulnerabilities like the Heartbleed security bug by becoming the project's first platinum sponsor.



By enabling mobile operators to protect their network infrastructure, services, and users, robust security helps them attract new customers, reduce churn, and increase revenues.





## Addressing human rights risks relating to privacy and freedom of expression

While communication networks have an important role to play in promoting human rights by enabling free expression, access to information, exchange of ideas, and economic development, we recognize our responsibility to ensure they are only used to respect, and not infringe, human rights.

The Nokia Human Rights Policy articulates our commitment to respecting human rights and reinforces our commitment to due diligence in this area across our businesses. In line with the policy, we conduct extensive risk assessments and human rights due diligence to mitigate the risk of potential misuse of our products. Our due diligence practices follow the UN Guiding Principles for Business and Human Rights, and in 2015 we expanded our scope even further by including other potential areas of concern in our investigations. To strengthen objective decision making from a strictly human rights perspective, we changed the due diligence case approval process slightly: the final review of all cases is now with our global legal department and if needed the cases are also reviewed by the Group Leadership Team.

**Our due diligence practices follow the UN Guiding Principles for Business and Human Rights, and in 2015 we expanded our scope even further by including other potential areas of concern in our investigations.**

### **Integrating human rights into our company-wide processes**

During 2015, we updated the Nokia Human Rights Policy to reflect our organization after the sale of our Devices and Services business to Microsoft. To ensure our employees find the new policy, we included it as a policy risk area statement in the new Nokia Code of Conduct, and consequently human rights was automatically included in the 2015 Nokia Level Risk Assessment Review and ethical business training, which around 98% of our employees completed in 2015.

In addition, we conducted in-depth human rights training for selected key teams, including prevention of product misuse. The target groups included senior management as well as customer, procurement, product management, and human resources teams in 20 countries across three different regions.

### **Addressing the challenge of balancing privacy and human rights with security**

Starting in 2015, we have seen an emerging trend in the increased threat of terrorism and insecurity. Many countries around the world have suffered and continue

**Nokia was the first telecommunications vendor to carry out due diligence specifically addressing human rights risks related to privacy and freedom of expression.**

to suffer at the hands of terrorism. As the terrorist threat evolves we will continue to face the challenge of balancing privacy and human rights on the one hand and with security on the other. There are no easy answers here, and the debate will evolve in different ways in different countries. While this happens we will continue to act in a way that is in keeping with our values.

### **Implementing the guiding principles of the Telecommunications Industry Dialogue**

Nokia is also a founding member of the Telecommunications Industry Dialogue (ID) on Freedom of Expression and Privacy. Influenced by the UN Guiding Principles on Business and Human Rights, the Industry Dialogue has published guiding principles that specifically address the issues of privacy and freedom of expression as they relate to the telecommunications sector. The principles explore the interaction and boundaries between a government's duty to protect human rights and the corporate responsibility of telecommunications companies to respect these rights. We are committed to implementing the guiding principles of the ID and to reporting annually on our progress while also externally assuring our implementation status.

In early 2016, Nokia became an official observer member of the Global Network Initiative, with aim of becoming a full member in March 2017.

## Implementing the guiding principles of the Telecommunications Industry Dialogue in 2015

ID Guiding principle	Implementation status
<p>1 Create and/or maintain relevant policies, with Board oversight or equivalent, outlining commitment to prevent, assess and mitigate to the best of their ability the risks to freedom of expression and privacy associated with designing, selling and operating telecommunications technology and telecommunications services.</p>	<p>Nokia is committed to the Guiding Principles of the Telecommunications Industry Dialogue. We outline our commitment to human rights, including freedom of expression and user privacy, in our Code of Conduct. Our Human Rights Policy builds on the Code to further underpin our commitment in this area.</p>
<p>2 Conduct regular human rights impact assessments and use due diligence processes, as appropriate to the company, to identify, mitigate and manage risks to freedom of expression and privacy — whether in relation to particular technologies, products, services or countries — in accordance with the Guiding Principles for the Implementation of the UN Protect, Respect and Remedy Framework.</p>	<p>The Nokia Human Rights Policy articulates our commitment to respecting human rights and reinforces our commitment to due diligence in this area across our businesses.</p> <p>In line with the policy, we conduct extensive risk assessments and human rights due diligence to mitigate the potential misuse of our products.</p> <p>Our due diligence practices follow the UN Guiding Principles for Business and Human Rights, and in 2015 we expanded our scope even further by including other potential areas of concern in our investigations.</p>
<p>3 Create and/or maintain operational processes and routines to evaluate and handle government requests that may have an impact on freedom of expression and privacy.</p>	<p>As a vendor of telecommunications equipment, we sometimes receive government requests through our customers, usually regarding network functionality. In such cases, we handle these requests through our human rights due diligence process mentioned above.</p>
<p>4 Adopt, where feasible, strategies to anticipate, respond and minimize the potential impact on freedom of expression and privacy in the event that a government demand or request is received that is unlawful or where governments are believed to be misusing products or technology for illegitimate purposes.</p>	<p>We encourage everyone to report any suspicion of misuse through</p> <p>Email: <a href="mailto:ethics@nokia.com">ethics@nokia.com</a>                  Online: <a href="https://nokiaethics.alertline.com">https://nokiaethics.alertline.com</a>                  Phone: <a href="https://nokiaethics.alertline.com/clientInfo/7782/phone.pdf">https://nokiaethics.alertline.com/clientInfo/7782/phone.pdf</a></p>
<p>5 Always seek to ensure the safety and liberty of company personnel who may be placed at risk.</p>	<p>We are committed to providing a safe and healthy workplace where all employees are treated with respect and provided with equal opportunities. This commitment is outlined in our Code of Conduct.</p>

## ID Guiding principle

## Implementation status

<p>6 Raise awareness and train relevant employees in related policies and processes.</p>	<p>We focus on training the teams directly involved in the due diligence process but we have also included an introduction to the Human Rights Policy in the annual Ethical business training, which is mandatory for everyone working at Nokia.</p> <p>In 2015, we conducted in-depth human rights training for selected key teams, covering areas such as prevention of product misuse, child labor, and forced labor. The target groups included senior management as well as customer teams, procurement, product management, and human resources teams in several countries across three different regions.</p>
<p>7 Share knowledge and insights with all relevant and interested stakeholders to improve understanding of the applicable legal framework and the effectiveness of these principles in practice, and to provide support for the implementation and further development of the principles.</p>	<p>We participate in major multi-stakeholder events and, when required, we provide feedback on reviews, guidance and statements. We also share case studies and challenges from our operating environments with other ID members.</p> <p>More information on these activities is available on the ID website: <a href="http://telecomindustrydialogue.org/">telecomindustrydialogue.org/</a></p> <p>We are also active in the national level dialogue. In 2015, we participated as a presenter in a training session on Human Rights Guiding Principles for Business and Human Rights. The session was targeted for other Finnish multi-national corporations and it was organized by FIBS, a non-profit corporate responsibility network in Finland.</p>
<p>8 Report externally on an annual basis, and whenever circumstances make it relevant, on progress in implementing the principles, and as appropriate on major events occurring in this regard.</p>	<p>We report on our progress in our annual sustainability report.</p>
<p>9 Help to inform the development of policy and regulations to support freedom of expression and privacy including, alone or in cooperation with other entities, using its leverage to seek to mitigate potential negative impacts from policies or regulations.</p>	<p>We aim to engage in constructive dialogue with all our stakeholders whenever the need arises. Our main forum for advancing issues related to freedom of expression and privacy is the ID group.</p>
<p>10 Examine, as a group, options for implementing relevant grievance mechanisms, as outlined in Principle 31 of the UN Guiding Principles for Business and Human Rights.</p>	<p>We encourage reporting of any suspicion of misuse through                  Email: <a href="mailto:ethics@nokia.com">ethics@nokia.com</a>                  Online: <a href="https://nokiaethics.alertline.com">https://nokiaethics.alertline.com</a>                  Phone: <a href="https://nokiaethics.alertline.com/clientInfo/7782/phone.pdf">https://nokiaethics.alertline.com/clientInfo/7782/phone.pdf</a></p>

## Ensuring decent working conditions and fair employment

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. We aim to conduct our business in a way that satisfies our customers, consumers, investors, and employees.

### Topics covered in our labor conditions management framework

We have a fundamental responsibility to provide decent working conditions and to treat our people fairly. Our Code of Conduct sets the standard for labor conditions, and we have a comprehensive set of global human resources policies in place that ensure fair employment. We follow the International Labor Organization (ILO) Declaration

on Fundamental Principles and Rights at Work and meet or exceed the requirements of labor laws and regulations everywhere we operate.

Our global employment policies demand high standards of ethical conduct and are aligned with the SA8000 Standard, and the common industry code of conduct. They cover:

- Child labor avoidance
- Forced labor avoidance
- Freedom of association
- Non-discrimination
- Humane treatment
- Working time
- Compensation
- Occupational health and safety.

In 2015, child labor and forced labor were included as topics in the in-depth human rights trainings for selected key teams.

### Child labor avoidance

We have a strict policy against using child labor. Our ethical and human resource policies and related processes are designed to ensure that no one below the legal working age is hired in our business. If we identify child labor, we implement a Child Labor Remediation Plan in line with SA8000 recommendations.

In 2015, we did not find any instances of child labor, and to further minimize the risk, we also evaluated how well we are incorporating children's rights into our core strategies by inviting Save the Children to review Nokia's processes and policies from a children's rights perspective.

[Read more about our cooperation with Save the Children in the 'Making change happen together' chapter of this report.](#)



Photo: Eeva Johansson, Save the Children

### Incorporating children's rights into our core strategies.

In 2015, Save the Children reviewed Nokia's processes and policies from children's right perspective.

To start with, Save the Children analyzed Nokia's guidelines and materials and made some very valuable recommendations. Nokia has implemented those recommendations and to make sure these recommendations reach Nokia's employees in relevant global and local teams, classroom training sessions were organized in Europe and Asia.

After these discussions, Nokia made the decision to also conduct a thorough review of its existing guidelines and processes related

to mitigating the risk of child labor in its supply chain. Together the parties reviewed Nokia's process for investigating potential child labor incidents and its related guidance. Nokia and Save the Children did walk-through sessions on the process, updated the related guidance and again, made Nokia employees aware of the needed improvements.

The Nokia Child Labor Remediation Guideline, which is overall guidance on how to care for children in the event a child labor case is confirmed, was also renewed. To make sure it is applicable worldwide, Nokia asked Save the Children teams in three continents – Africa, Asia and Europe – to review the new remediation process as well.

### Forced labor avoidance

We strictly prohibit the use of forced, bonded, or imprisoned labor. We acknowledge the types of challenges and risks that we are likely to face in relation to this topic and work to mitigate them. Our employment policies also include examples of concrete actions to minimize these risks. In 2015, we did not find any instances of forced labor.

### Freedom of association and collective bargaining

We support freedom of association for all our employees and the right to collective bargaining. Collective bargaining agreements are always local, and in most countries where we operate collective bargaining agreements are also binding for employees who are not members of a union.

We also recognize local works councils in relevant countries and are willing to engage with them. We provide ongoing, regular communication with employees as well as at meetings such as EuroForum in Europe. EuroForum meetings are planned and executed by a preparatory team consisting of both employee and management representatives. In addition, employees have the right to freely choose their union representatives through free elections.

We strictly prohibit the use of forced, bonded, or imprisoned labor. We acknowledge the types of challenges and risks that we are likely to face in relation to this topic and work to mitigate them. Our employment policies also include examples of concrete actions to minimize these risks. In 2015, we did not find any instances of forced labor.

Some of our factories are located in countries with restrictive legislation, such as China, and there we inform employees through alternative employee representative bodies. Of our production employees, around 70% (85% in 2014) were represented by an independent trade union or covered by collective bargaining agreements.

### Non-discrimination

We have zero tolerance of any form of discrimination. We prohibit discrimination based on any personal attribute such as age, gender, nationality, opinions, memberships, religion, disabilities, or race in all employment practices, including recruitment, promotions, training, and pay levels.

### Working time

We regard working time as the time an employee must be available, ready to work and to perform duties monitored and regulated by the employer. We define regular working hours in accordance with local laws. Furthermore, to ensure the healthy development and growth of young workers – from 15 to 18 years old or as specified by local legislation – they are not permitted to perform hazardous, unsafe, or unhealthy work, or to work during the

night, and the maximum daily working time allowed is eight hours.

### Compensation

All our employees have the right to compensation for a regular working week that is sufficient to meet their basic needs and provide some discretionary income. We pay at least the minimum wage or the appropriate prevailing wage, whichever is higher, comply with all legal requirements on wages, and provide any fringe benefits required by law or contract. Where compensation does not meet employees' basic needs and provide some discretionary income, we work with the Fair Labor Association to take appropriate actions that seek to progressively realize a level of compensation that does. In addition, we do not exclude part-time or temporary workers from our employee benefits plans as a direct result of company policy or benefits practice.

### Managing and monitoring labor conditions

We monitor and assess labor conditions in all our businesses, especially within our manufacturing operations. We have our own factories in China, Finland, Germany, India and Japan. Each factory monitors labor conditions through regular self-assessments that are used to create improvement plans. This helps us continuously improve labor conditions.

Our Labor Conditions Management Framework guides the implementation of our global employment policies and guidelines. We publish information related to policies and guidelines on our intranet.

## Demonstrating robust health and safety standards

At Nokia Networks, employees and contractors face inherent risks when installing and maintaining equipment and constructing base stations on behalf of our customers. We strive to ensure that all our employees and contractors are aware of the risks associated with their job and receive the necessary training and equipment to work safely – whether in the office or on site.

### Addressing key risks through training, analysis, assessments, and consequence management

Health and safety is an integral part of our Code of Conduct and is therefore included in our mandatory Ethical Business Training for all employees. In this training we emphasize the importance of identifying and avoiding risks, and reporting incidents. In addition, we run campaigns that focus on the key safety risks for our employees and contractors, and encourage open reporting of incidents and near misses by contractors and employees.

In 2015, we introduced a set of non-negotiable rules called the Nokia Life Saving Rules, which include six simple safety rules related to our top three risk areas: driving, working at height, contractor management, and electrical activities.

Everyone working for Nokia, including our subcontractors and suppliers, must follow these rules as an absolute minimum.

Health and safety performance, as well as the compliance of our contractors, are critical factors in our overall performance. To ensure that our contractors understand how seriously we take these requirements, we have a formal consequence-management process that follows all fatal, critical, and high-potential incident investigations. Where our expectations have not been met, we apply a staged form of consequence, ranging from a warning to termination.

We report for all tiers of contractors to ensure that all incidents are investigated. We learn from these incidents and implement corrective and preventive measures. Any fatality is unacceptable.

To put in place effective measures to prevent similar incidents from happening, we identify and analyze the root causes of high-potential and near-miss incidents.

In 2015, we conducted project readiness reviews to more closely review high-risk projects in each market. We conducted 87 reviews across all markets. The assessments are conducted with a team of key health and safety stakeholders and project team members, assessing project readiness using a formalized process and assessment tool. Projects are scored and tracked to identify improvements as needed.



## Engagement at all levels of the organization

Our health and safety performance is reviewed by a committee with the Group Leadership Team representatives on a quarterly basis. All fatal and high-potential incidents are reviewed in these meetings. In addition, our senior leaders are increasingly involved in matters of safety through regular reviews and site tours. We aim to create a culture among our employees and contractors that identifies hazards and supports active risk prevention and action so that we can significantly reduce the number of incidents that occur.

In 2015, we continued the senior leader tours, completing 108 visits. Engaging our leaders helps

to reinforce the importance of proactive safety management.

We also closely monitor our H&S performance:

- Management reviews once a year
- Consequence management committee once a quarter
- Fatality prevention meeting and updates once a quarter
- CEO review and leadership face to face meeting twice a year
- Internal audits
- External verification to OHSAS 18001

Our health and safety management system is certified with the internationally recognized OHSAS 18001 standard. In order to maintain this certificate, in 2015 we completed 21 external audits globally and maintained the scope of the certificate in Nokia Networks.

## Health and safety performance



Our incident and near miss tracking includes also cases from externals working for Nokia. Cut-off day for incidents reporting is 12<sup>th</sup> January. There can be some cases, especially from contractors, reported after the cut-off day.

Nokia's health and safety organisation puts most effort on prevention of critical and fatal incidents and we realise lost-time incidents data is not as accurate as the aforementioned data.

## USE CASE

### Increasing the wellbeing of our employees

We believe that organizing activities such as sports events, mindfulness exercises, and change coaching increases the well-being of our employees and helps us get the very best from them. Improvements in employee health and well-being can also translate into cost savings. In Finland alone, reduced sick leave resulted in over €2.5 million of savings in 2015 compared to the previous year.

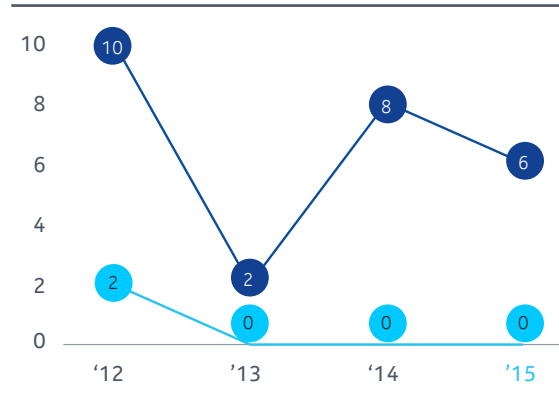
The Nokia Wellbeing@Work Model was recognized at the 2015 Nokia Quality Awards.

## Our health and safety performance in 2015

In 2015, we reviewed 43 incidents, issued 20 warnings, and terminated relationships with four suppliers. Near-miss or high-potential incidents accounted for 71% of the warnings.

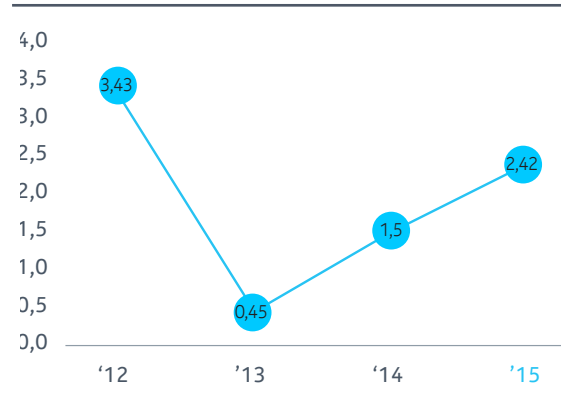
For the third year in a row there were no fatal or critical incidents involving employees. However, we deeply regret that six contractors lost their lives while conducting work on behalf of Nokia during 2015. Three of these fatalities were related to road accidents that occurred on public roads.

**Work related fatalities**



■ Total number of contractor and subcontractor fatalities  
■ Total number of employee fatalities

**Critical and fatal incidents of all incidents reported, %**



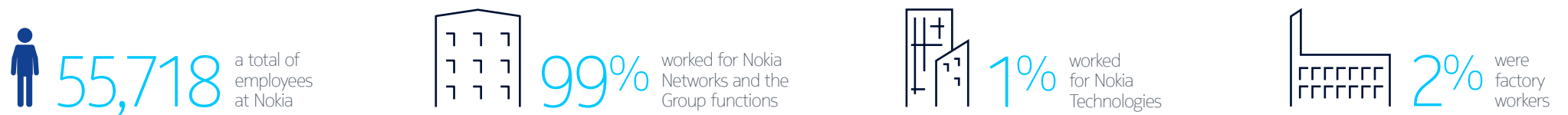


## Making Nokia a great place to work

A motivated workforce is vital to our success. We aim to build a common high-performance culture throughout the organization. This means pursuing continuous improvement and high performance in line with our values and creating a great place to work with the highest possible employee engagement.

### Employment by the numbers in 2015\*

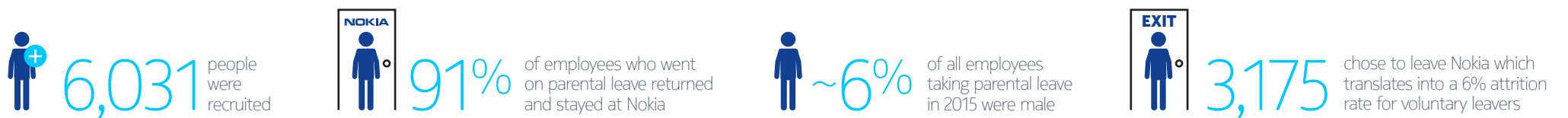
#### At the end of 2015:



#### Compared to previous year:



#### During the year:



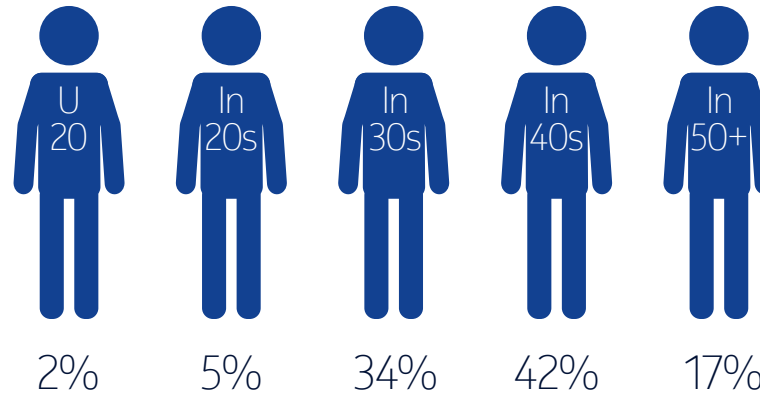
\*These figures cover Nokia Networks, Nokia Technologies, and Group functions.

## Supporting diversity

We believe it is important to employ a diverse range of people from all backgrounds, experiences, levels of education, genders, ages, and nationalities.

In 2015, we announced our support for a new initiative aimed at enabling more women to pursue careers in science, technology, engineering, and math (STEM) disciplines through the YFactor initiative. In addition to joining this initiative, we are recommending stronger implementation of gender-balanced practices and the encouragement of diverse teams within organizations.

### Employee breakdown by age group



### At the end of December 2015:

**80%** of our employees were men (80% in 2014)

we had employees of at least 143 different nationalities (130 in 2014)

The Nokia Group Leadership team included members from Canada, Finland, Singapore and the USA

**12%** of the senior management positions were held by women (13% in 2014) and women's share of the line manager positions remained at 15%

**~4%** of our total population were made up 16-24 year olds

The average age of a Nokia employee was 38

## USE CASE

Nokia supports the Broad-Based Black Economic Empowerment (B-BBEE) Act, to drive economic transformation and a more inclusive marketplace in South Africa. Our B-BBEE policies and strategies are developed to ensure that measurable progress is made towards genuine black economic empowerment, with priorities that include:

- § Reaching level 2 contributor status measured in terms of the new ICT Sector Code
- § Being certified as an Empowering Supplier within the context of B-BBEE
- § Advancing equity ownership
- § Making preferential procurement a priority
- § Supporting enterprise and supplier development
- § Accelerating the development of core skills through focused training initiatives
- § Meeting employment equity targets

The Act requires organizations to undergo an annual verification process; our last B-BBEE verification was completed in April 2015. Based on the results, Nokia's two operating entities in South Africa, Nokia Solutions and Networks Holdings Pty Ltd and Nokia Solutions and Networks South Africa Pty Ltd, achieved its level 2 contributor ranking, with a Procurement Recognition Level of 125%.

## Enhancing our company culture

We have a number of different cultures throughout Nokia, influenced by a range of factors including geography, leadership styles, business focus, and acquisitions – but we have just one company culture. The Nokia culture builds on our values and is embedded across the organization through governance structures, policies, and our systems and processes.

In 2015, we launched an extensive global roadshow targeting all Nokia line managers. The one-day, face-to-face sessions provided all line managers with the opportunity to learn more about our strategy, brand, values, leadership framework, and other culture-related topics. The sessions provided extensive levels of interactivity and facilitated new personal and professional networking opportunities, both within and across our businesses.

The Making It Happen campaign also supported the launch of the new Nokia Leadership Framework, which comprises four key standards:

- We know our business and perform
- We lead with clarity and integrity
- We develop ourselves and others
- We shape the future.

As we evolve our leadership programs and initiatives in the years to come, the new Nokia Leadership Framework will provide the guiding principles to evolve our leaders and their behaviors to support our ambitious goals.

We have a number of different cultures throughout Nokia, influenced by a range of factors including geography, leadership styles, business focus, and acquisitions – but we have just one company culture.

## Sharing the same values as our employees

The Nokia values are an important building block in bringing our teams together. They are designed to guide our decisions, our ways of working, and the responsibilities we have towards our customers and other stakeholders. We strive to bring these values to life in how we think, act, behave, and communicate.

In 2015, employee awareness of our values continued to be strong. According to our employee engagement survey, 94% of our employees fully support the Nokia values. Based on their experiences, Respect was seen as the value that had been most successfully brought to life.

## The Nokia values

### Respect

We treat each other with respect and we work hard to earn it from others.

### Achievement

We work together to deliver superior results and win in the marketplace.

### Renewal

We invest to develop our skills and grow our business.

### Challenge

We are never complacent and perpetually question the status quo.

### 92% of our employees responded to our employee engagement survey

Employee engagement is needed to achieve long-term success and is therefore an integral part of our culture. We carry out an annual employee engagement survey across the Group, and in 2015 the survey indicated a high level of engagement across Nokia.

In 2015, 92% of our employees responded to the survey, a slight decrease compared to 2014. Of those who answered:

- 92% said they are personally motivated to help Nokia be successful
- 88% said they can fully apply their skills and abilities in their work
- 87% said they strongly believe in the goals and objectives of Nokia
- 86% said they are proud to tell others they work for Nokia
- 85% said they are passionate about what we do at Nokia.

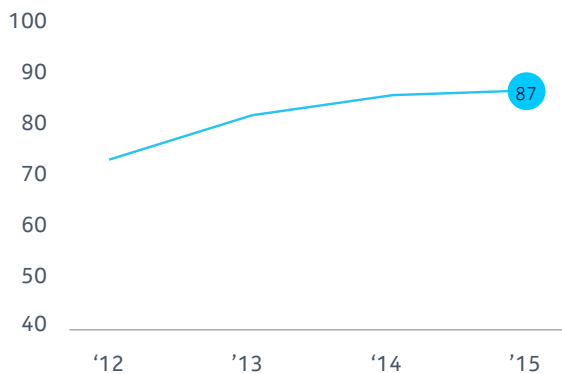
(The above figures cover employees in Nokia Group functions and Nokia Networks.)

Despite the ongoing consolidation of Nokia business groups as well as the announcement of the Alcatel Lucent acquisition, both employee engagement and leadership scores continued to rise in 2015.

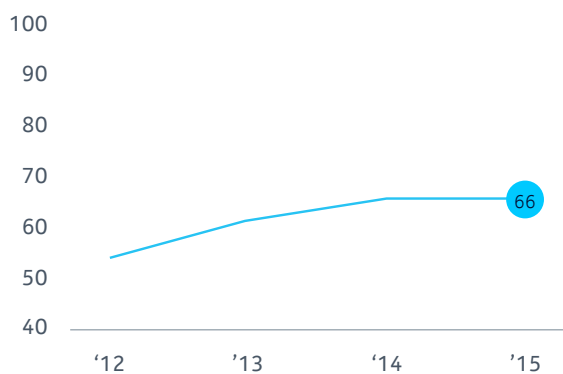
In the key areas of innovation, support, and culture, our engagement levels now exceed the average (norms) of other high-tech companies and in some cases exceed those of high-performing technology companies in the information and communications technology industry.

### 94% of our employees fully support the Nokia values.

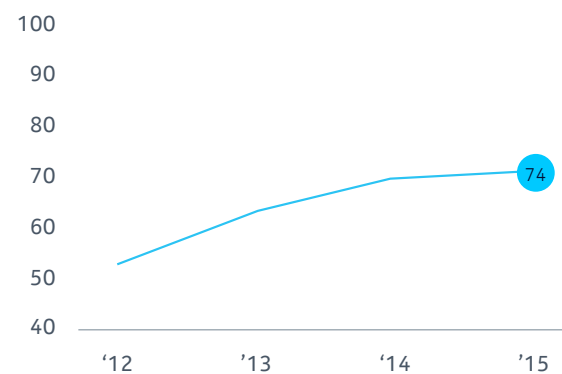
Trend: Employee engagement index, %



Trend: Intention to stay, %



Trend: Leadership, %



Scope: Nokia Networks and Group Functions

## Increasing training opportunities for our employees

We continued to invest in training and support for our people to help them develop the skills needed to deliver our business strategy. In 2015, our Academy learning center provided around 163,600 training days for Nokia Networks and Nokia Group functions employees (194,300 in 2014). Around 64% of this training was instructor led (45% in 2014) and the remainder was web based. Part of the instructor-led training was conducted using cost-effective technologies such as virtual classroom learning. In addition to the training provided at the Academy, our training offering includes training arranged by our business units and third parties. In 2015, our employees spent an average of 37 hours in training.

In 2015, the Academy spent around €30.6 million in training Nokia Networks and Group functions employees. In addition, Nokia Technologies spent around €0.3 million in external trainings.

Everyone at Nokia is encouraged to dedicate a minimum of 40 hours to learning every year. To help our employees make the most of our learning offering, we introduced “Learn in Nokia” online training sessions where we help our employees grasp essential topics. The program was kicked off in December 2015 and we aim to hold these sessions three times a year.

We identified 1,244 employees for leadership trainings in 2015 (1,056 in 2014). Participants gave the program an average rating of 5.41 out of 6

(5.37 in 2014). This does not include programs for executives, or those offered as open enrollment by the Academy. In Technologies, we also have specific leadership development programs. These include License to Lead for new and first level team leaders which focuses on enhancing the leader's self-awareness and building skills to lead a high performance team. Leadership Excellence is targeted for second level team leaders and the program highlights the importance of leading multiple teams and creating a context for others to succeed.

## Supporting personal development

Personal development is key to retaining and engaging our employees, and developing their skills. We encourage employees to complete a Personal Development Plan (PDP), agreed with their line manager, outlining how they will work towards their personal and career aspirations in the short and long term. In 2015 we moved to a quarterly process called One in 90, (1-in-90) which refers to a one-hour dialog session every 90 days between the line manager and each of their team members. The dialog is an open and honest discussion and should cover five areas: objective setting and

review of results, individual development, employee well-being and engagement, coaching by the line manager, and mutual feedback. The first session includes annual performance and development dialogue in which the employee and the manager discuss about the outcome and agree the next steps for development.

In 2015, on average 73% of our employees had a PDP in place and around 98% had completed a performance evaluation. In Nokia Technologies business, all employees had completed Annual Development Review meaning they had received performance and potential assessments for 2015.

## Encouraging more frequent and less formal ways of recognizing individual performance.

We use a global framework to set salary bands, which are applied regardless of gender, age, or background. Levels of compensation are determined by local labor markets and take into account both individual contribution and company performance. In countries and sites where we have collective agreements in place, salaries are set according to those agreements.

**In 2015, on average 73% of our employees had a PDP in place and 98% had completed a performance evaluation.**

Our performance management and rewards approach highlights the importance of quality dialog between managers and employees, and greater rewards for individual contribution.

Our employee reward and recognition program, Recognize Excellence, empowers employees and managers with a discretionary budget to perform peer-to-peer recognition and rewards. Aligned to and supported by the new values, this is designed to encourage more frequent and less formal ways of recognizing individual performance.

In 2015, approximately 56,800 employees in 46 countries were given the opportunity to participate in the Employee Share Purchase Plan for the plan cycle in 2015.

### Renewing the reporting process for volunteering

Volunteering is an important part of our employee engagement and enables us to make meaningful contributions to the communities where we operate. By working with local communities and projects of their choice, our employees can learn new skills and gain new perspectives, and the communities benefit from the professionalism and experience of our employees.

**In 2015, approximately 56,800 employees in 46 countries were given the opportunity to participate in the Employee Share Purchase Plan for the plan cycle in 2015.**

For over a decade, the Nokia Helping Hands program has given every Nokia employee the opportunity to volunteer two working days a year to support projects in the local community. In 2015, we started restructuring the reporting process and the related tool, and therefore our volunteering program was not fully functional during the year.

## What we said vs. what we did in 2015

### Ensuring decent working conditions and fair employment

Target for 2015	Progress in 2015	Status
Maintain and improve our overall employee engagement, progress towards 90% favorable	We improved on employee engagement compared to the previous year and our annual employee engagement survey scored 87% favorable (86% in 2014).	On track 
Maintain and improve overall employee support for our company direction	87% of our employees said they strongly believe in the goals and objectives of Nokia	On track 
Establish a firm understanding for Nokia's culture and vision	We organized a global roadshow providing the opportunity to learn more about our strategy, brand, values, leadership framework, and other culture-related topics.	On track 

## Our targets for 2016: Ensuring decent working conditions and fair employment

Increase employee awareness on the importance and impact of open reporting to ensure our employees feel comfortable raising possible ethics concerns.

Maintain and improve our overall employee engagement, progress towards 90% favorable.

Maintain and improve overall employee support for our company direction.

Establish a firm understanding for Nokia's culture and vision.

Revise and start implementing a new diversity strategy and action plan.

Further strengthen our commitment to privacy and freedom of expression and become a full member of the Global Network Initiative by March 2017.





# Protecting the environment

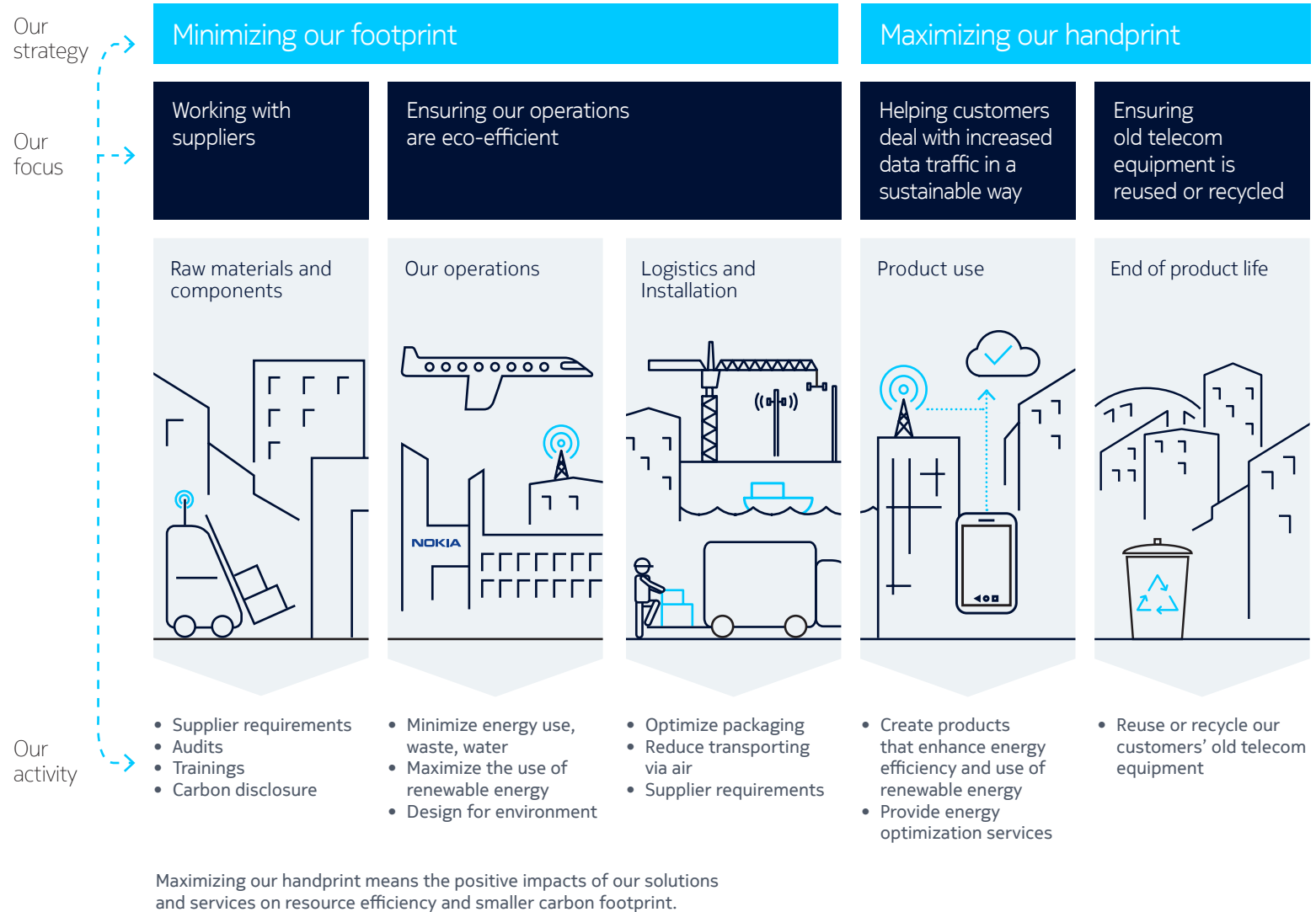
Providing broadband infrastructure, software, and services around the world inevitably affects the environment because making, distributing, and operating these products requires energy and other resources. In order to minimize this impact, we aim to make our own operations as eco-efficient as possible. In addition, as the amount of mobile data traffic continues to grow, we are committed to helping operators deal with this growth in a sustainable way.

# Managing our environmental impact

We improve our eco efficiency throughout the life cycle of our products and consider the interdependence of environmental impacts at different life cycle phases. This includes managing the impact of our own operations as well as the use phase of our products and their end-of-life treatment.

We also expect our business partners and suppliers to share our commitment to the environment. Read more about our work with suppliers on page 92.

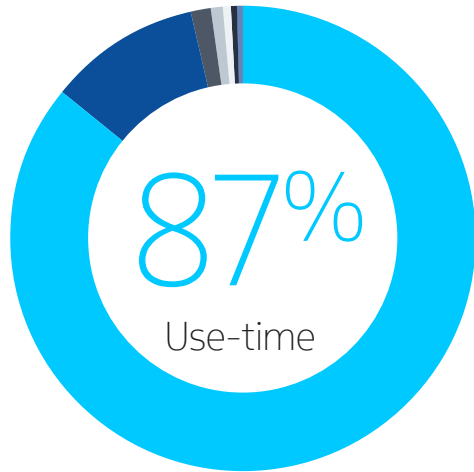
Our activities seek to support these UN Sustainable Development Goals



## Our carbon footprint through the value chain

The eco-efficiency of our own activities – meaning the impacts from production, facilities, business travel, and product transportation to market – is directly affected by our decision-making. However, we feel it is also important to influence how the components for our products are produced and transported and how our products are used.

### Our carbon footprint, metric tons CO<sub>2</sub>e \*



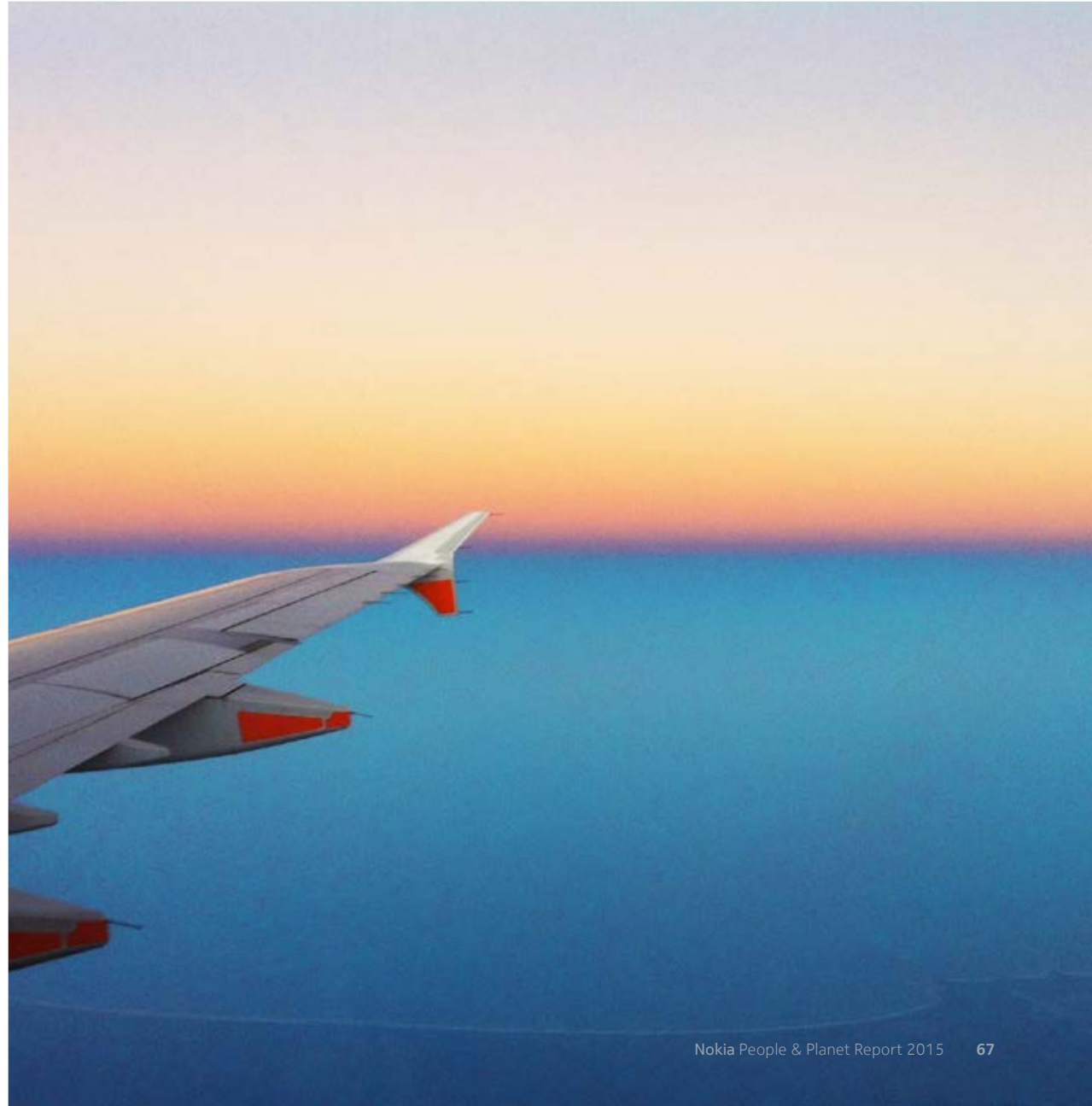
Use-time of products	20,170,000	(87,4%)
Purchased goods and services	2,500,000	(10,8%)
Energy used in facilities and by service car fleet	164,700	(0,7%)
Logistics	82,500	(0,4%)
Employee commuting	70,000	(0,3%)
Business air travel	52,400	(0,2%)
Leased assets	41,000	(0,2%)

\* Business air travel and logistics in CO<sub>2</sub> (not CO<sub>2</sub>e).

Our Scope 1 & 2 emissions

Scope: Nokia Networks

Percentages counted out of reported, relevant GHG emissions



## Maintaining world-class environmental performance in our own operations

Improving the efficiency of our activities is helping us to save energy, cut carbon emissions and costs, and minimize waste. Our environmental management system (EMS) helps us monitor progress and identify ways to improve further. It provides the basis for all of our environmental activity, focusing on environmental matters related to energy and material efficiency.

In 2015, we focused on 15 significant environmental aspects related to network energy consumption and material content, supplier, and subcontractor environmental performance, and energy and water efficiency in our offices and laboratories. We piloted a scientific target-setting methodology for our greenhouse gas emissions to better understand what our greenhouse gas reduction target should be in order to do our share in keeping global warming below 2°C. However, we were not ready to set the actual goal in 2015 as the acquisition of Alcatel Lucent will impact our future goal setting.

We piloted a scientific target-setting methodology for our greenhouse gas emissions to better understand what our greenhouse gas reduction target should be in order to do our share in keeping global warming below 2°C.

We renewed our environmental policy and embedded it in the Nokia Code of Conduct to make sure our employees understand that it applies to everyone. We also embedded the policy in our annual Ethical Business Training, which is mandatory for all employees, and our environmental experts visited selected sites around the world to explain what our environmental policy means for them.

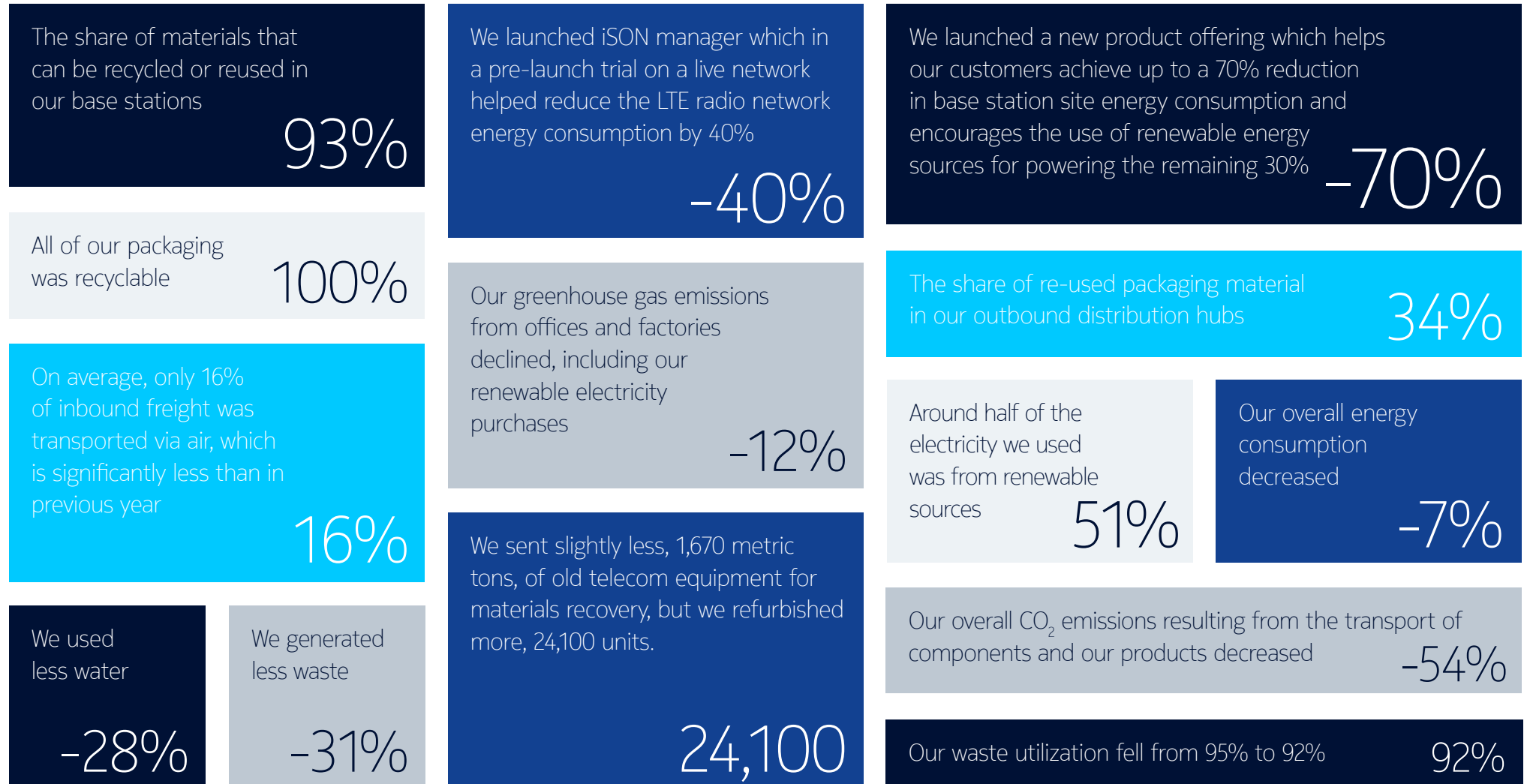
As our networks operations are ISO 14001 certified globally, our environmental performance is audited

regularly by an external body. The audits cover processes, business activities, organizational units, and regions. Our headquarters is audited annually and in 2015, it was also awarded the WWF Green Office certificate.



As our networks operations are ISO 14001 certified globally, our environmental performance is audited regularly by an external body.

## Our environmental performance in 2015 and comparison to 2014



## Doing more with less energy

Improving energy efficiency and cutting emissions from our offices, laboratories, factories, and other operations is a key element of our environmental strategy.

In 2015, we continued to improve our energy efficiency, purchasing certified renewable energy from the grid and promoting less travel and lower-carbon modes of travel. Our overall energy consumption decreased by approximately 7% compared to the previous year and as a result, our greenhouse gas emissions from offices and factories declined by approximately 12%, including our renewable electricity purchases. Out of the electricity we used, 51% was from renewable sources.

### Improving the energy efficiency of our facilities

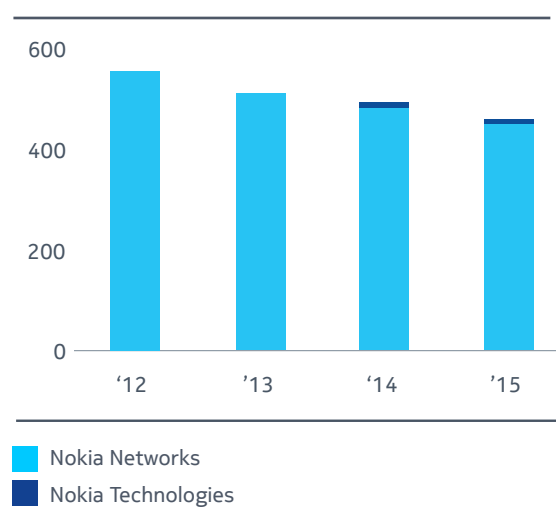
Our operations are not energy intensive as such, but our test labs consume a considerable amount of energy and are therefore our most energy-intensive facilities.

In 2015, we continued building a culture of energy efficiency across our business by identifying and implementing a series of energy efficiency measures at our facilities, including environmental controls utilizing a variety of sensors, LED lighting replacement, and more efficient and controllable equipment. To assist in reducing our transport emissions, we installed electric vehicle charging points at a number of sites.

The energy efficiency initiatives in our labs and offices helped us achieve energy savings of around 33,000 MWh, which led to cost savings of €3.3 million (based on €100/MWh) and a 14,100 metric tons reduction in CO<sub>2</sub> emissions.

We have trialed a number of intelligent measurement and display technologies that help inform staff of the energy use within their working environment so that they understand where we can be more efficient. In addition, our awareness campaigns give staff the opportunity to provide feedback on where improvements can be made.

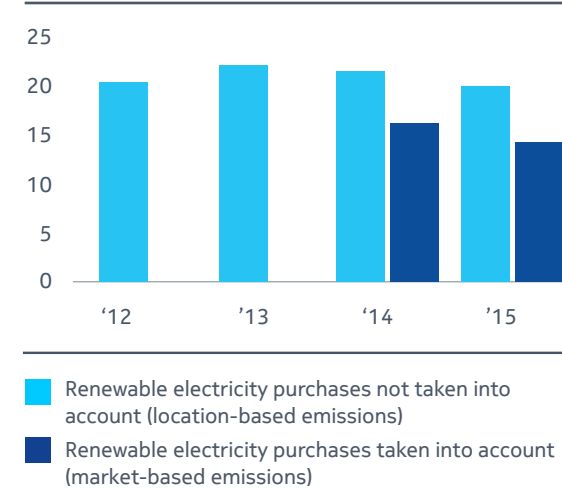
Energy consumption in our facilities, GWh



Our overall energy consumption decreased by approximately 7% compared to the previous year and as a result, our greenhouse gas emissions from offices and factories declined by approximately 12%, including our renewable electricity purchases.

Creating a culture of energy efficiency is a state of mind where people can make informed decisions based on in-depth information.

Emissions from energy consumption in facilities in relation to net sales (metric tons CO<sub>2</sub>e/EUR million)



We started calculating market-based emissions in 2014, which is why our purchases of renewable electricity are not visible for 2012–2013. Scope: Nokia Networks

## USE CASE

### **Our Technology Center in Tampere, Finland minimizes energy consumption and monetizes waste**

We are used to thinking that data centers use huge amounts of energy – in the US, for example, data centers are among the largest and fastest growing consumers of electricity. However, Nokia Networks Technology Center (TC) in Tampere has shown that it is possible to reverse this trend. Efficiency improvements for a new multi-functional data center are now being implemented, and the philosophy behind the construction work is very green indeed.

The data center has been designed to be extremely energy efficient. The lion's share of the energy consumed by the data center will be used to power the servers. For anything else, like the cooling of the servers, energy consumption will be minimized.

Data center servers accumulate heat and require cooling and this is where Tampere TC does things differently. The cooling is solely powered by renewable energy sources through district cooling. Once hot, the water needed in the cooling process can be recycled to other facilities such as nearby hospitals and schools for heating purposes. Rather than considering this hot water as waste, Tampere TC will sell it back to the City of Tampere for district heating.

Using the Power Usage Effectiveness (PUE) formula to measure data center efficiency, we can calculate that if all such centers around the world worked as efficiently as Nokia's in Tampere, the global energy savings would be equal to the amount of power produced by 100 nuclear power plants.

In addition, software applications and products are virtualized and therefore do not require their own dedicated hardware, meaning they can be combined on the same server instead. As the need for hardware elements falls, so does the need for space. Data centers can be smaller and we all know that every square meter has a price tag

Not only will the data center buy its energy from the nearby Tammerkoski hydroelectric power plant, it is also planned that the building's roof will be covered with solar panels that will produce 200 kWh of energy, or ten percent of the energy required to power the data center.

The data center building is owned by Aberdeen Real Estate Fund Finland (AREFF), a real estate investment fund managed by Aberdeen Asset Management. Together with the city of Tampere, AREFF has also innovated and invested in the building and its brand new data center cooling infrastructure.



### Making our way of working more eco-friendly

We have several policies and guidelines that help us to minimize emissions generated from our own operations, and they are all linked to our ways of working. The figure below illustrates how mobility, in many cases enabled by our own technologies, can help us reduce emissions in our daily work.

### Reducing emissions from business travel

Our initiatives to reduce emissions from business travel include: encouraging virtual meetings using ICT, allowing employees to work from home, implementing policies that encourage the use of electric or low-emission cars, organizing shuttle buses between hotels, offices, and airports, and encouraging our employees to use public transportation.

In 2015, we organized a campaign to raise awareness about the importance of reducing unnecessary travel to protect the environment and reduce costs. We also launched our Mobile Travel Assistant (MTA) service,

which helps us inform travelers about their bookings and offers them practical tips throughout their journey. Shuttle buses between hotels and airports in particular offer travelers a good opportunity to reduce the cost and environmental impact of business travel.

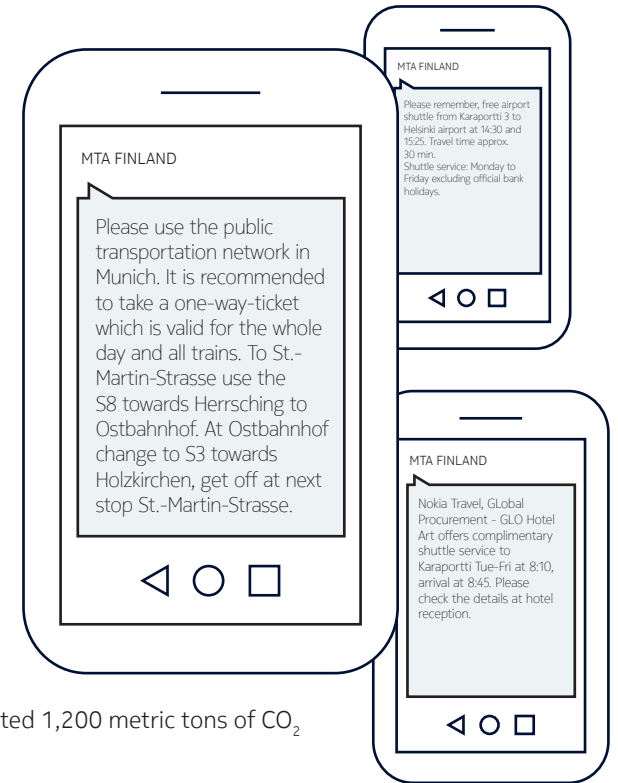
In 2015, for Nokia Networks, our emissions related to business air travel, based on flown air miles, were around 52,400 metric tons of CO<sub>2</sub> emissions, a reduction of approximately 15% compared to the 2014 level. Business travel includes flights, hotels, rail, rental cars, taxis, and public transport. Our reporting is based on the biggest contributor to business travel emissions, air travel, for which we calculate the CO<sub>2</sub> emissions based on the number of miles flown.

### Driving down company car emissions

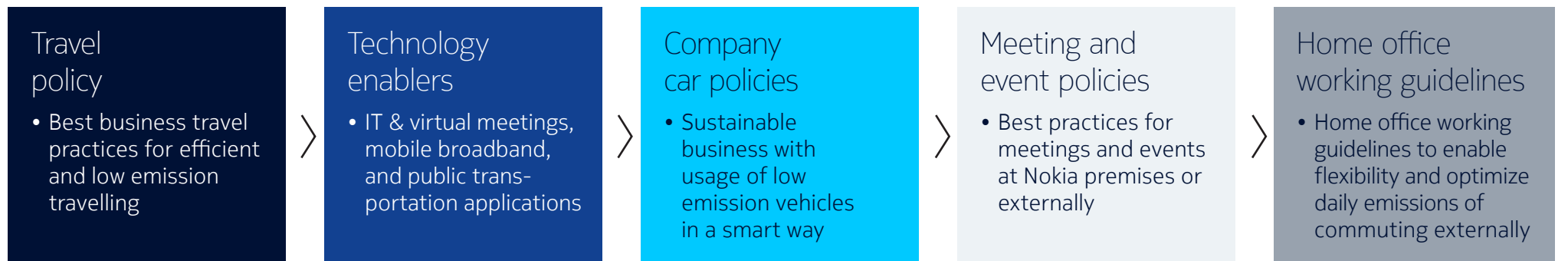
We encourage our employees to select cars that consume less CO<sub>2</sub> per km than the market average. To support the use of electric cars, we provide charging stations in some of our biggest offices and we aim to

install more.

We also have employees around the world in our services business who regularly drive to base station sites. In 2015, we started tracking the fuel consumption and emissions of our global services fleet in order to improve transparency and enable us to develop company car policies globally. In 2015, our global services fleet generated 1,200 metric tons of CO<sub>2</sub> emissions.



## Smart mobility





### Creating more eco-friendly logistics

We aim to continually improve the efficiency of our logistics in order to be able to minimize the environmental impact of transporting components from suppliers to us and delivering our products to customers. We are focusing on reducing the use of airfreight and optimizing packaging.

### Reducing the share of airfreight

In 2015, the share of airfreight in transporting components from our suppliers to us decreased significantly in our Nokia Networks business.

On average, only 16% of inbound freight was transported via air in 2015, which is significantly less than in previous year (30% in 2014).

We also reduced the use of airfreight in our own product deliveries, with the share decreasing from 17% in 2014 to 11% in 2015\*.

### Reduction in overall emissions from logistics

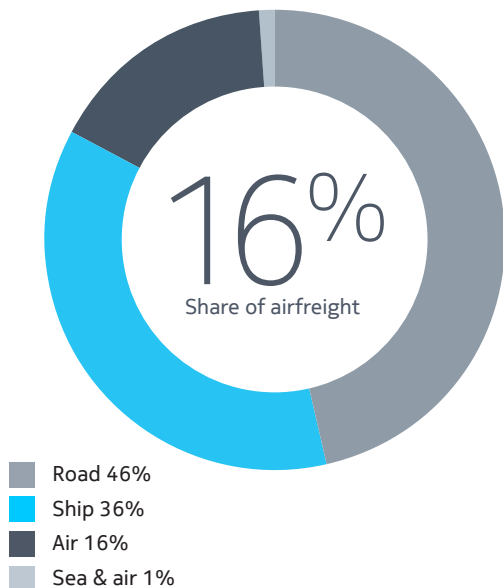
In 2015, our overall CO<sub>2</sub> emissions resulting from the transport of components from suppliers to us and the delivery of our products decreased by

54%\*\* in comparison to 2014. This was mainly due to the smaller share of airfreight and reduction in transport as well as more efficient packaging and lighter packages.

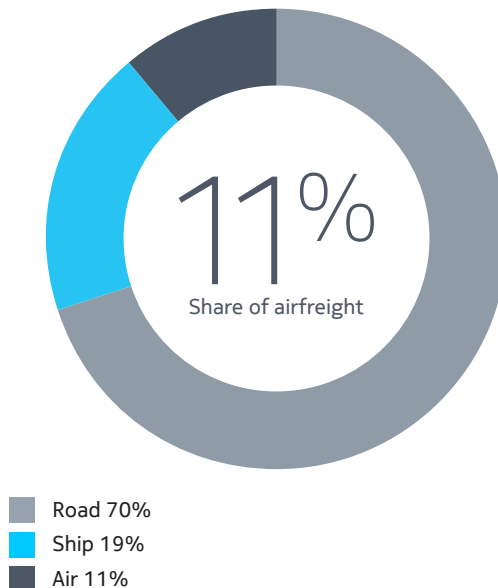
\*Based on volumes of the freight (cubic meters).

\*\*Emissions are calculated based on weight and kilometers (ton-kilometers) and take into account the transportation type. The change in emissions has been calculated by comparing total CO<sub>2</sub> emissions from logistics in 2014 and 2015.

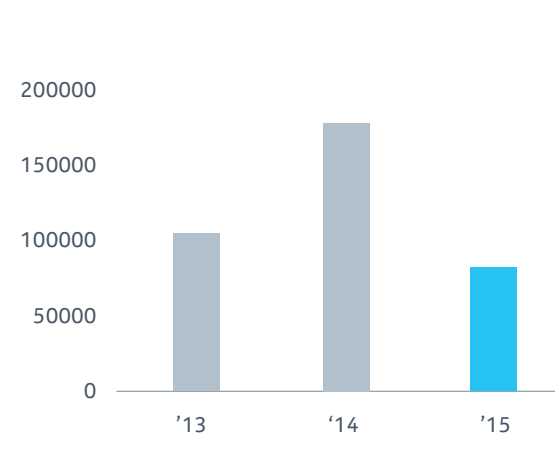
Share of airfreight in transporting components from our suppliers to us



Share of airfreight in our own product deliveries



CO<sub>2</sub> logistics, metric tons CO<sub>2</sub>



Includes transporting components from suppliers to us and delivering our products.

## Limiting the use of natural resources

To support responsible use of natural resources we save space in transporting our products, reuse packaging in our distribution hubs and reduce, reuse, and recycle waste in our own operations.

### Transporting boxes without any additional containers

To save space, reduce the use of materials, limit costs, and cut fuel consumption and carbon emissions, in selected shipments we use pallets to transport boxes without any additional containers. We call this method box-on-pallet packaging.

In 2015, we increased the use of box-on-pallet, which helped us reduce the use of packaging material by around 850 metric tons compared to conventional packaging solutions. In addition, we increased the packaging density of our deliveries to customers by around two percentage points by

introducing a new simulation tool and new carton sizes that are further optimized for product mix. Both of these actions also helped to decrease the CO<sub>2</sub> emissions resulting from our deliveries.

### Reusing packaging

All of our packaging is recyclable and we use recycled fiber wherever possible. We also reuse the product packaging that we receive at our inbound distribution hub to package outbound products.

Our total reuse of packaging at our distribution hubs increased slightly due to even more focused approach to re-use. In 2015, we used a total of 7,300 metric tons of packaging material in our distribution hubs for outbound deliveries and 34% of it was re-used material, excluding OEM (original equipment manufacturer) packaging, such as packaging for cabinets, antennas, batteries, cable reels. OEM packaging is typically re-used by 100%.

In 2015, we increased the use of box-on-pallet, which helped us reduce the use of packaging material by around 850 metric tons compared to conventional packaging solutions.



## Raising eco-awareness among our employees

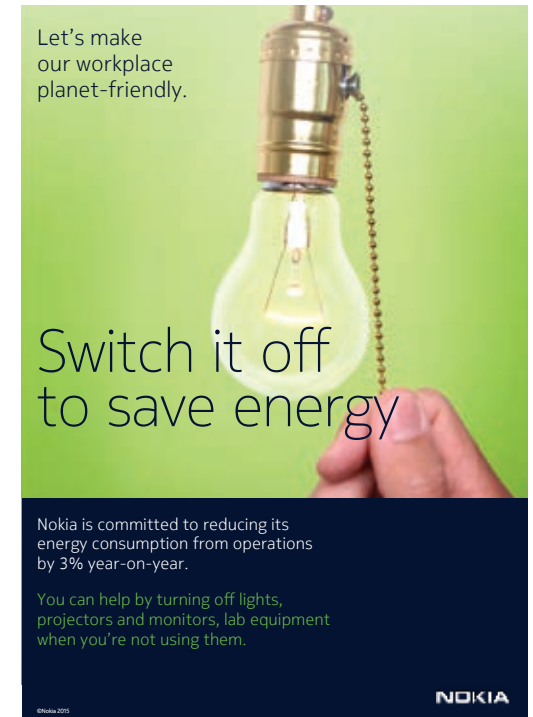
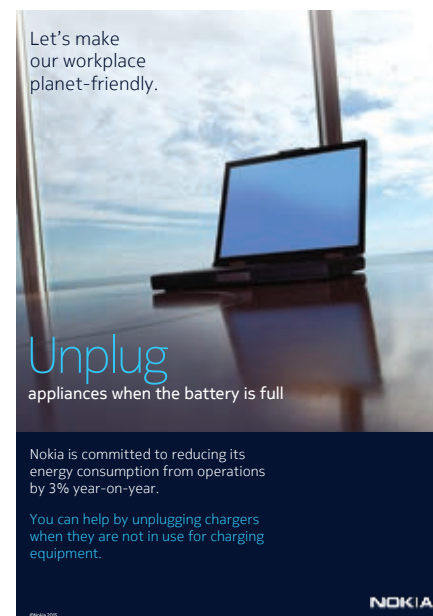
Raising environmental awareness among our employees and providing them with opportunities to engage is crucial to helping us improve further. In 2015, we organized 10 training or awareness-raising sessions for our environmental community, on topics such as climate change and environmental management. We also renewed our environmental e-learning, which focuses on our environmental management system and the ISO 14001:2004 environmental management standard.

We ran a three-week global switch-off campaign with the aim of showing our employees how much energy we use at the majority of our larger sites and giving them tips on how everyone can help reduce our energy usage and lower Nokia's carbon footprint. We also switched off lights for WWF's Earth Hour event and encouraged our employees to take part.

We also arrange local activities. In 2015, we kicked off WWF's Green Office program at our head office in Espoo, Finland, where one key goal is







to raise general environmental awareness. We arranged an office furniture recycling campaign for our employees when we closed one of our offices in Espoo and relocated people to the Nokia campus. As we didn't need all the furniture from the old office, we invited our employees to come and collect it for their own use, for free. We also offered it to local schools and daycare centers for free. During the year, we also had another campaign where we donated 300 chairs to a local school, instead of sending it to landfill. We redistributed redundant office furniture also in Kuwait. We worked with CSR Eco Solutions and SIMS Kuwait and donated 30 workstations to a local school which means we diverted 7.5 metric tons of waste from the local landfill.

We also engage with our customers and our industry to promote sustainability. Read more in the Making change happen together section.



## What we said in 2014 vs. what we did in 2015

### Maintaining world-class environmental performance in our own operations

Target for 2015	Progress in 2015	Status
We aim to reduce electricity consumption at our factories by 2% per unit produced, compared to 2014.	Our overall electricity consumption at our factories decreased but we failed to reach the reduction target per unit produced.	Not achieved 
We aim to continue reducing the total greenhouse gas emissions from our facilities (Scope 1 and 2) compared to 2014.	Our greenhouse gas emissions from offices and factories declined by approximately 12%, including our renewable electricity purchases. *	Achieved 
We aim to maintain the share of renewable electricity at around 50% globally, depending on its availability in countries where we operate.	The share of the electricity coming from certified renewable sources increased to 51%.	Achieved 
We aim to further develop our low-emission fleet and maintain related emissions below the market average.	<p>We encouraged our employees to select cars that consume less CO<sub>2</sub> per km than the market average and we installed charging stations for electric cars in some of our biggest offices.</p> <p>We started tracking the fuel consumption and emissions of our global services fleet in order to improve transparency and enable us to develop company car policies globally. Our global services fleet generated 1,200 metric tons of CO<sub>2</sub> emissions.</p>	On track 
We aim to reduce the amount of waste generated across our operations and increase recycling by improving facilities for collection and sorting, and encouraging employees to recycle more.	We generated 31% less waste than in 2014, but we weren't as efficient in waste utilization as in 2014. Our waste utilization fell from 95% to 92%.	Partly achieved 
We aim to reduce the amount of water used in our operations.	We used 28% less water than in 2014.	Achieved 

\* As per Greenhouse Gas Protocol: Market-based Scope 1 and 2 from facilities

## Our targets for 2016: Maintaining world-class environmental performance in our own operations

Reduce our overall electricity consumption from our facilities (scope 1 & 2) by 2%, compared to 2015.

Reduce our CO<sub>2</sub> emissions from our facilities (scope 1 and 2) by 2%, compared to 2015.

Further develop our low-emission fleet and maintain related emissions below the market average.

Further investigate the scientific target-setting methodology for our greenhouse gas emissions to better understand what our greenhouse gas reduction target should be in order to do our share in keeping global warming below 2°C.

## Minimizing the environmental impact of our products

Our product development processes incorporate the following design-for-environment principles:

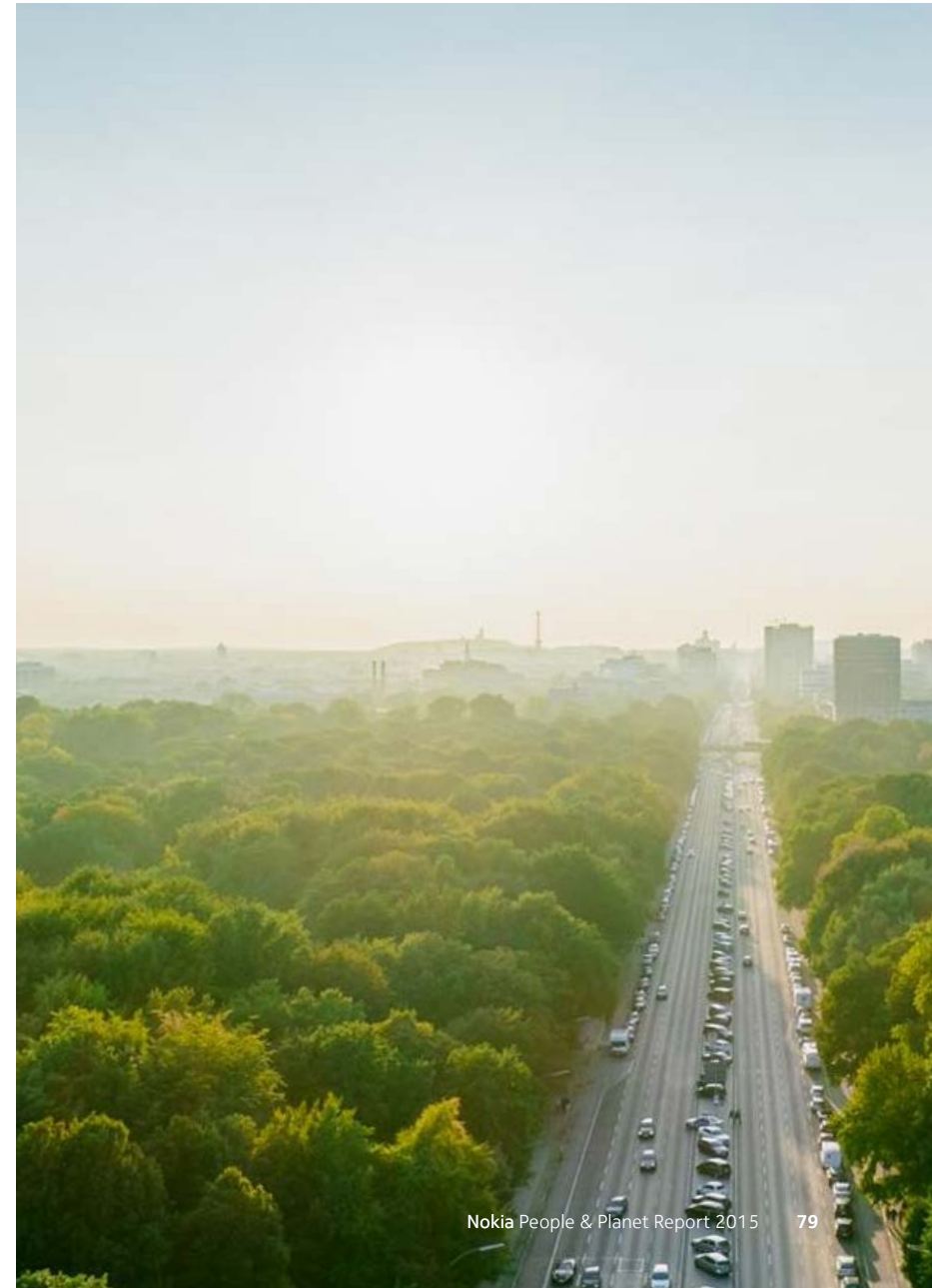
- Minimize material and energy use
- Minimize the use of materials detrimental to the environment
- Design equipment to be easily or remotely maintainable, or maintenance free
- Maximize reuse and recycling.

Designers adhere to environmental requirements, which are frequently updated. Guidelines exist for all designs, products, parts, modules, components,

batteries, and packaging materials. The guidelines include a list of substances and materials that are banned or restricted in our products for environmental reasons. They also include guidance that every new main product release should be at least 15% more energy efficient than the previous release.

Our requirements include the publication of the Nokia Environmental Product Declaration, which contains detailed product-related environmental information. This document is shared with our customers.

In addition, all plastic and metal product parts are given the correct material mark. All Nokia sales packaging parts also include material markings. Material marking supports the recycling of products and packaging at the end of their life cycle. The markings used by Nokia comply with the relevant ISO standards.



## Tracking the substances used in our products

As a manufacturer of complex and technologically advanced products, it is important to have systems in place to track the substances used in their parts and components.

The use of materials and substances is regulated by various legislations and regulations. These include the commonly known Restriction of Hazardous Substances Directive (RoHS) and the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation, but there are references to substance restrictions under legislations like the Waste Electrical and Electronic Equipment Directive (WEEE), the Waste Batteries and Accumulators Directive, the Packaging and Packaging Waste Directive, radioactive substances, Persistent Organic Pollutants (POP), and many more. At times, there are also third party concerns related to the use of some substances.

### Nokia Networks Substance List

We list substances falling under restrictions in the Nokia Networks Substance List. The list also includes monitored substances that are under discussion to be restricted or phased out in the future.

To ensure compliance, the substance list is integrated into our Design for Environment (DfE) requirements and product development processes. We include the substance list in our purchasing process as a reference document for our suppliers, and require them to provide us with the material content of the parts and components they deliver.

This forms part of our global purchasing terms and conditions, an essential part of our contracts with suppliers.

### Ensuring our continued legal compliance

In addition to ensuring current compliance, we need to be prepared for potential substance restrictions in the future. That is why our substance tracking systems are increasingly important to ensure our continued legal compliance and fulfill our customers' requirements.

### RoHS

In 2015 we continued tracking the use of the four phthalates restricted by RoHS Commission Delegated Directive 2015/863: Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP). We have banned these substances in new products, the ban beginning in 2017. We also aim to substitute these phthalates from products that are currently in use by the end of 2016, although the RoHS directive's amendment transfer period continues until mid-2019.

Another important topic regarding RoHS in 2015 was the follow-up of renewal applications for RoHS exemptions. All relevant exemptions but one, exemption 7b, have been put forward for renewal. The lead specified in exemption 7b has been banned in Nokia Networks products for many years.

At the end of 2015, the European Court of Justice confirmed the interpretation of the reporting obligation related to the REACH

Substance of Very High Concern (SVHC) information duty. Each of the articles incorporated as a component of a complex product is covered by a duty to inform customers if there is any SVHC present in an article above 0.1% by weight. We have recommended these SVHC substances are phased out or substituted in all new Nokia Networks products and packaging. If a SVHC is used, suppliers have to inform us about the use in all concentrations, even if it is less than or equal to 0.1% by weight. This restriction is applied to the full, up-to-date SVHC candidate list as defined by the European Chemicals Agency (ECHA).

### Halogenated flame retardants

Another field of further clarification in 2015 related to concerns around the use of halogenated flame retardants, which are used in a variety of our product parts and components in order to meet flammability standards. Many suppliers automatically switch to halogen-free material when it is technologically possible for them to do so. However, we started to define special component categories or materials where it is possible to substitute halogen-free material without compromising product safety and reliability requirements and set it as a requirement for our suppliers. This work will continue throughout 2016.



## Reducing energy use of our products during the use phase

Based on our detailed life cycle assessment (LCA) of the Flexi base station, the major environmental impact of base stations comes from electricity consumption in the use phase. Therefore, the use-phase of our products is a key priority for us.

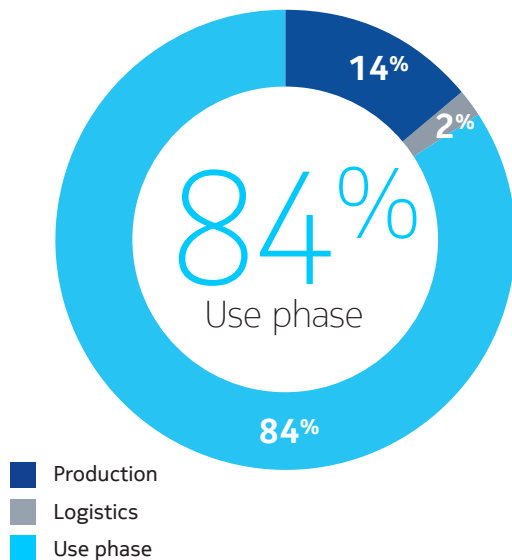
We measure product energy efficiency, by following the European Telecommunications Standards Institute's (ETSI) standard and

to ensure our products are comparable with similar products on the market, our new product releases are analyzed according to the ETSI -ES 202 706 standard.

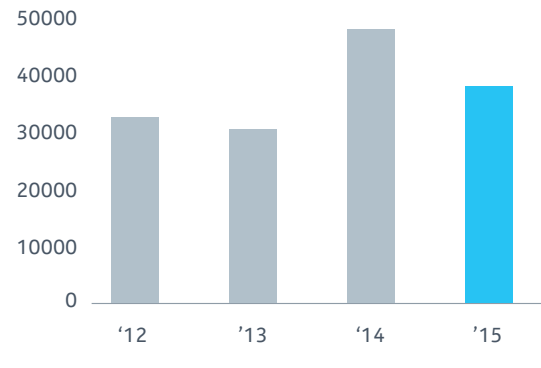
In 2015, when only looking at the energy consumption of our products, we measured that our products consume now 21% less energy compared to the products sold in 2014, and the related CO<sub>2</sub> emissions have also decreased by 21%.

Each new product enables higher volumes of network traffic, resulting in improved overall energy efficiency.

**For a typical urban base station site in Europe, the use phase accounts for over 84% of global warming potential (%)**



**Use-time energy of products, GWh**



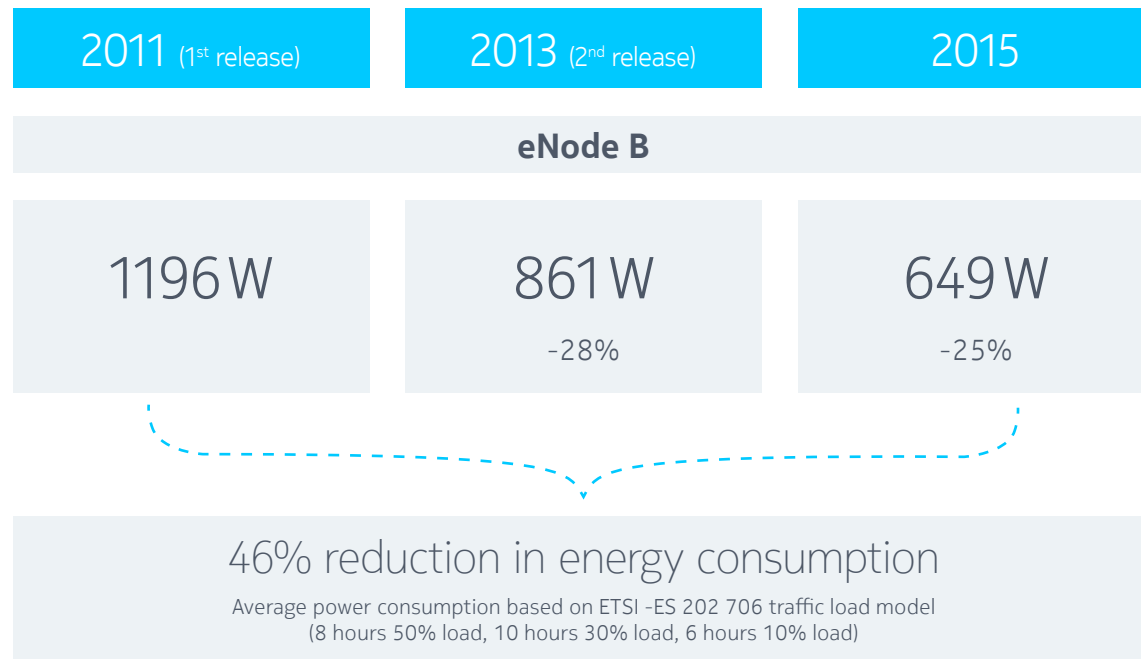
Use-time energy consumption is based on products sold in high volumes, representing over 80% of the total use-time energy consumption. In 2015 measured, nominal energy data as defined by ETSI -ES 202 706 standard was available for 98% of items included in the calculation (55% in 2014). Our estimates in previous years were conservative. Calculations are based on 10 years use-time.

Energy efficiency improvements take big leaps when a totally new technology generation is taken into use. As an example, LTE networks carry a huge amount of data and the number of subscribers is continually increasing. One might think that the power consumption increases at same speed but that is not the case due improvements in technology. A base station that is connected to

the mobile phone network communicating directly with mobile handsets uses nowadays significantly less power than for example five years ago. One proof point of that is our 1800 MHz eNodeB. Between 2011 and 2015 we have launched three versions of the product and the version launched in 2015 uses only 54% of the power that was needed to carry an equal amount of data in 2011.\*

Energy efficiency improvements take big leaps when a totally new technology generation is taken into use.

### Energy consumption of eNodeB 2011–2015



\*Product is 1+1+1 LTE 1800 MHz RFM 2TX MIMO 20MHz 40+40W cell. Average power consumption based on ETSI -ES 202 706 traffic load model.

### USE CASE

#### The environmental impact of our products can also be positive

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 CO<sub>2</sub>e emissions by 2030, thus holding emissions at 2015 levels, and to effectively decouple economic growth from emissions growth.

## Helping operators deal with the growth in mobile data traffic in a sustainable way

The growing demand for mobile data is being driven by thousands of apps and millions of smartphones, tablets, and other new devices connected to highly capable LTE networks. New subscribers and the emergence of the Internet of Things will only add to this demand.

With the boom in smartphones and data-intensive wireless devices, mobile subscriptions for high data consumption devices are expected to reach 8 billion by 2019. Networks are required to become 'highways' of data-traffic and carry it with increasing speed and lower latency content like video. Mobile data traffic is expected to grow 10 fold between 2015 and 2019.

To help our customers meet the world's growing demand for communications, it is essential to help operators meet the demands of data traffic growth in a sustainable way. Therefore, we continuously improve the energy efficiency of our products, develop software that helps managing energy consumption, support customers with energy optimization services, and create base station site offerings that encourage the use of renewable energy.

To enable massive improvements in energy efficiency, we are driving advanced power amplifier innovation, energy efficiency deployment studies

for customer networks, industry initiatives, and standardization. Implemented in the right way, we believe that energy efficiency in mobile networks can stay ahead of traffic growth and keep absolute network energy consumption flat at the very least.

### Enhancing energy efficiency and the use of renewable energy

A base station is just one contributor to overall energy use in networks. Around 80% of a mobile network's energy is consumed by base station sites, meaning the base station and all related equipment at the site. Much of this energy is used to power cooling systems, for heating and lighting, consumed by uninterruptible and other power supplies, and in running idle resources. For example, analysis shows that cooling is responsible for up to 50% of the energy consumption of a base station site.

For over a decade, our Flexi base stations have been clear forerunners in terms of energy efficiency as they can operate in outdoor temperatures of up to 55°C without any additional cooling. As well as improving the energy efficiency of a base station site, they also improve its material efficiency as the basic configuration only weighs approximately 50 kg and does not require a cabinet or additional cooling equipment. In comparison, a cabinet-based base station typically weighs over 200 kg.

In 2015, we launched our Zero CO<sub>2</sub> emission base station site offering, which includes more than 20 products and services for our Single RAN Advanced portfolio. The offering enables a reduction in base station site energy consumption of up to 70%, creating a significant driver for modernizing base station sites. With the significantly lower energy consumption, renewable energy sources such as solar and wind power, as well as fuel cells, become viable options for powering a base station site, making it possible to achieve zero CO<sub>2</sub> emissions. Zero-emission base station sites can now be built for all electricity grid situations, from good grid to no grid.

### USE CASE

#### Environmental benefit of modernization

In 2015, we had over 50 cases which helped our customers reduce their networks' energy use and emissions. On average, the radio networks we modernized during 2015 consume now 45% less energy.

-45%

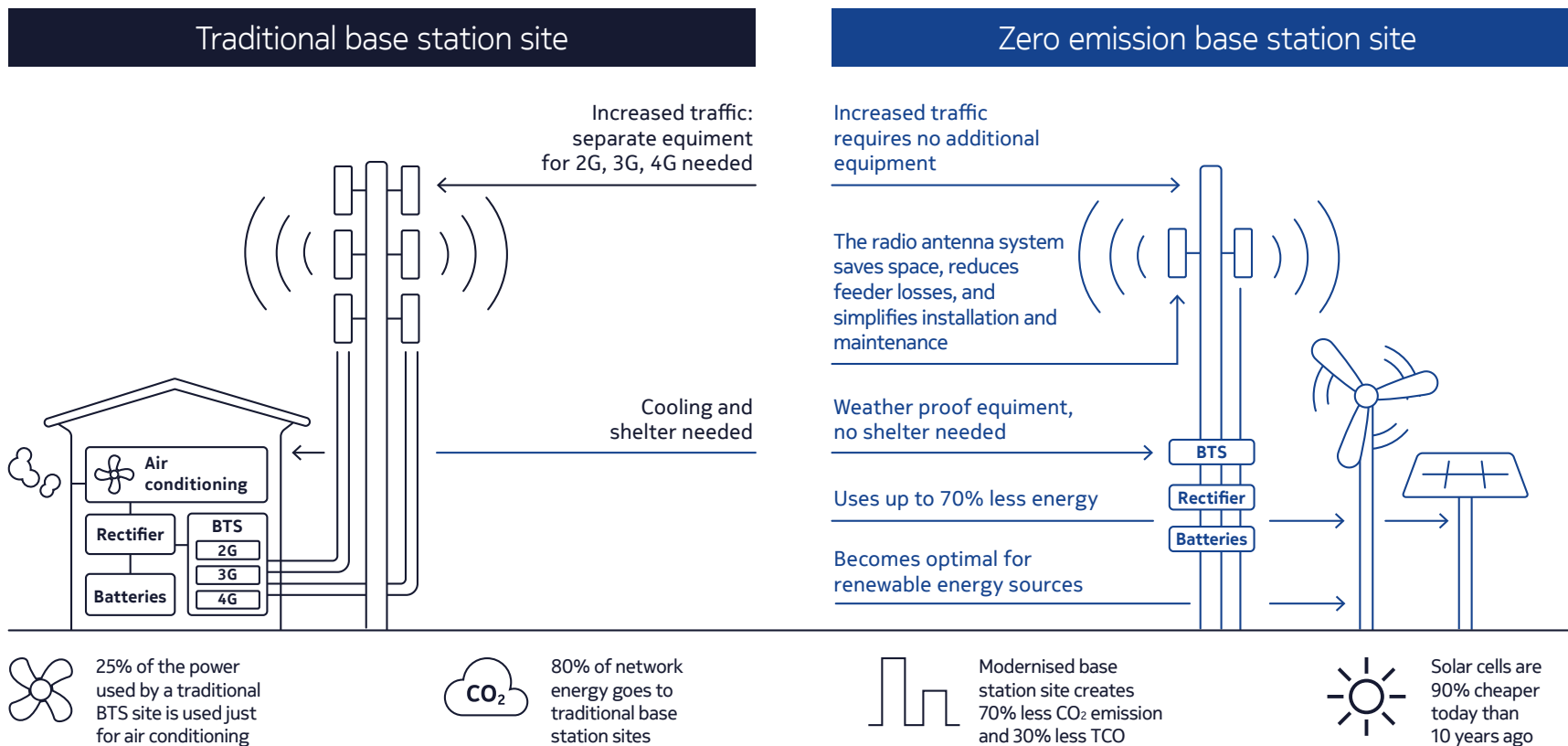
Operators can move towards zero emissions through a combination of base station improvements and the use of renewable energy sources. Improvements in energy efficiency can be achieved for example by using antenna systems that save space, reduce feeder losses, and simplify installation and maintenance; by choosing batteries that use

renewable energy sources, and by using software that manages energy consumption in radio units.

Beyond the sustainability value it brings, investing in energy efficiency can also reduce the total cost of ownership (TCO) and improve base station functionality. Bearing in mind the forecasted growth

in traffic, reducing network energy consumption must be a major objective for the next decade. In some countries energy consumption can account for as much as 50% of the TCO for a base station site. Our Zero CO<sub>2</sub> emission base station site offering can reduce the operator's TCO by as much as 30%.

### Single RAN Advanced – on a journey to zero carbon dioxide emissions



In 2015, another launch related to energy efficiency was the iSON Manager Energy Efficiency module. The module enables energy savings by adapting available network capacity according to the network usage. Extra capacity can be turned off and re-activated according to the network traffic load requirements. In a pre-launch trial on a live network with Korean operator KT Corporation, the solution helped reduce the LTE radio network energy consumption by 40%. The functionality is now available through the Eden-NET SON solution that provides automated network configuration, optimization and healing processes for modern mobile networks.

**We believe that energy efficiency in mobile networks can stay ahead of traffic growth and keep absolute network energy consumption flat at the very least.**

We also participated in the Orange Labs Research Exhibition held in Paris during the UN climate change conference to showcase a prototype liquid-cooled base station. The prototype demonstrates multiple eco-efficiency features. According to our own measurements, liquid cooling requires only 10% of the energy used by traditional air cooling. It also makes it easy to reuse the waste heat from base stations – even for heating houses. This solution would be especially useful in big cities, where base stations are installed on rooftops or inside buildings. It also lowers component temperatures in general and decreases temperature differences in the device, leading to improved reliability.

## USE CASE

In 2015, we worked with Tele2 Estonia in order to upgrade their networks to 4G using the 2,100 MHz band. This made Tele2 one of the first operators in the world to use the band traditionally reserved for 3G services to develop 4G.

Through this modernization Tele2 Estonia was able to increase their network capacity and coverage. The modernization also made their network more sustainable. The upgrade included new base station software provided by Nokia which made it possible to carry both the existing 3G signal and the new 4G signal with the existing 3G radio – with sharing the hardware they avoided building second network for LTE. In addition by using lower frequency for 4G they avoided installation of new additional base station sites reducing CO<sub>2</sub> emissions further.

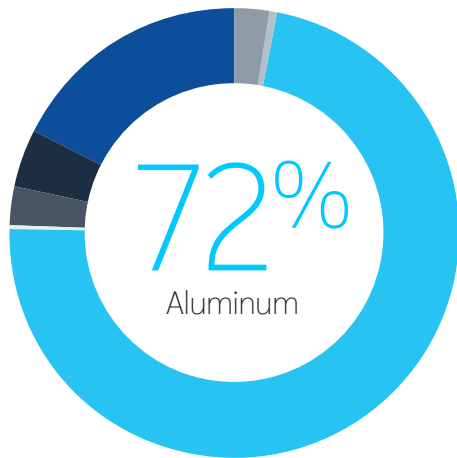
Tele2 has estimated that the upgrade has resulted in an approximately 41% reduction of CO<sub>2</sub> emissions.

**-41% CO<sub>2</sub>**

## Ensuring old telecom equipment is reused or recycled

As new technologies modernize base stations, often by replacing older but still viable equipment, one might ask what happens to the old equipment. Our aim is to reuse equipment in its current form, recover the material and energy content of obsolete products, and ensure the safe treatment of any

### A typical base station uses mostly aluminium, grams



Aluminum alloys,	40,262
Copper alloys,	120
Brass alloys,	1,500
Polymeric materials,	2,307
Mixed electronics,	9,686
Steel,	1,482
Stainless steel,	294

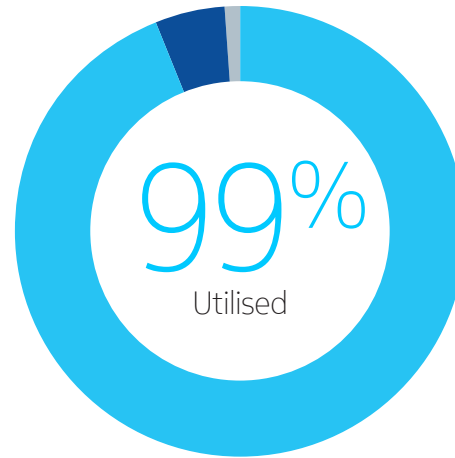
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potentially hazardous substances they contain. More than 93% of the material used in our base stations can be reused or recycled.

### Ensuring old telecom equipment is reused or recycled

Our Asset Recovery Service covers Nokia Networks products as well as other vendors' telecom

### Only 1% of old telecoms equipment was sent to landfill



Recycled	94%
Energy recovery	5%
Landfill	1%

## More than 93% of the material used in our base stations can be reused or recycled.

equipment. Our customers can purchase a complete service from the collection and buyback or trade in of pre-owned equipment to e-waste recycling and reporting, depending on their needs and requirements.

Before recycling equipment we inspect it to see if it can be reused. Old equipment that is no longer needed can often be used to refurbish and extend the lifetime of customer networks, helping to conserve virgin resources. We check the equipment at our refurbishment center to ensure that all reused material is of the highest quality, and once it has been checked and approved it is given a Nokia warranty.

We subcontract the treatment of equipment that is not reused to authorized recycling companies that take care of the complete recycling process and provide transparent key performance indicator (KPI) reporting.

Some parts, such as batteries, require special handling, and they are sent to specific recyclers. Other material is preprocessed, for example by shredding, and recyclable materials are further processed by smelters or sent for remanufacturing. The very small volume of materials that cannot be recycled are either used as energy in the recycling process or sent to specialist landfill.

In 2015 we had 384 asset recovery cases (320 in 2014). We sent a total of 1,670 metric tons of old telecom equipment for materials recovery (1,710 metric tons in 2014) and refurbished 24,100 units (15,900 units in 2014).

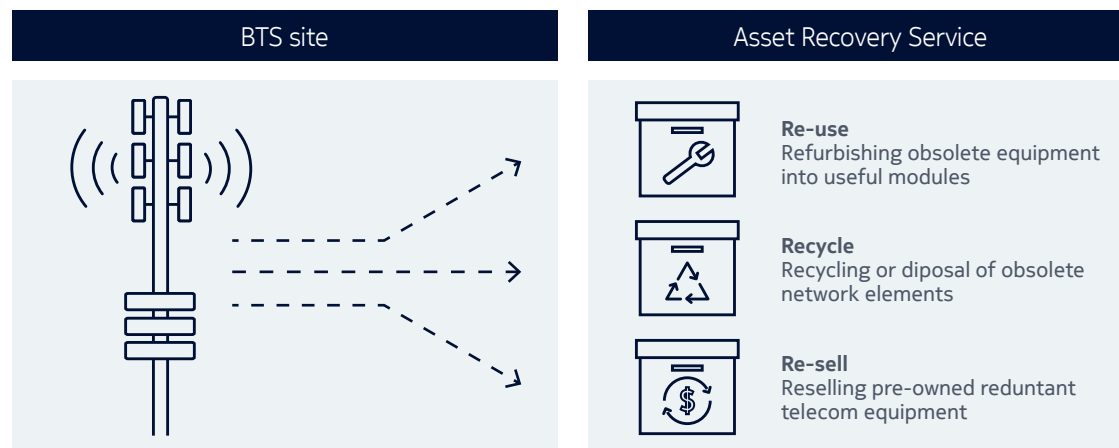
Collaboration with recycling contractors is essential to meet our desire for transparency and responsible

disposal. Contractors also need to meet high standards: They are required to comply with ISO 14001 or similar international certification standards as well as national and international laws and requirements, international conventions, and EU directives. We expect the highest standards and will terminate contracts if significant non-compliance is discovered.

#### Asset recovery compared to 2014




Asset recovery cases	Old telecom equipment sent for material recovery, metric tons	Refurbished equipment, units
320 → 384	1,710 → 1,670	15,900 → 24,100

#### Modernize the BTS site



## What we said in 2014 vs. what we did in 2015

### Helping operators deal with the growth in mobile data traffic in a sustainable way

Target for 2015	Progress in 2015	Status
We aim to improve the energy efficiency of our products in each main release by 15%.	We launched a new product offering, the Zero CO <sub>2</sub> emission base station site, which includes more than 20 products and services for our Single RAN Advanced portfolio. The offering enables a reduction in base station site energy consumption of up to 70%.	On track, partially exceeded 
We aim to work with our customers to help them reduce the energy consumption of their telecommunications networks through our innovative product solutions.	<p>We had over 50 cases which helped our customers reduce their networks' energy use and emissions. On average, the radio networks we modernized during 2015 consume now 45% less energy.</p> <p>In a pre-launch trial on a live network, iSON Manager Energy Efficiency module helped reduce the LTE radio network energy consumption by 40%.</p>	On track 
We aim to implement a methodology to measure product energy efficiency, following the European Telecommunications Standards Institute's standard.	Our base station products are now tested according to ETSI's power consumption test standard. We also tested around 95% of the products that are no longer under active development but which are still used by our customers.	Exceeded and completed 



## Our targets for 2016: Helping operators deal with the growth in mobile data traffic in a sustainable way

Improve the energy efficiency of our products in each main release by 15%.

Work with our customers to help them reduce the energy consumption of their telecommunications networks through our innovative product solutions.

To phase out and substitute the four phthalates restricted by RoHS Commission Delegated Directive 2015/863: Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP) by the end of 2016.

Continue to expand the Zero CO<sub>2</sub> Emission offering with new innovations.

As part of our Technology Vision 2020, our goal is to keep absolute network energy consumption essentially flat over the coming years.

# Making change happen together

An aerial photograph showing four people walking in a straight line across a vast, flat, light-colored landscape, possibly a salt flat or a frozen body of water. The people are leaving tracks behind them, and their shadows are cast on the ground. The sky is a clear, deep blue.

By partnering with others, we can make an even greater contribution to a more sustainable and socially responsible world. We drive improvements by working with our suppliers, industry peers, customers, and NGOs.

# Our key stakeholders

We engage regularly with stakeholders through normal business practices. From a responsible business point of view, our most important stakeholders – in addition to our employees – are customers and suppliers. We also engage with NGOs and industry peers, and rely on good relationships with shareholders, governments, and universities.

Listening to stakeholders and translating their expectations into business value is important to us. This engagement means we are better informed about emerging issues and trends, and engagement enables us to share our knowledge with others for the greater good.

Our activities seek to support these UN Sustainable Development Goals



## Our key stakeholders from a sustainability perspective

Our focus



Our activity

- Driving improvements in cooperation
  - Building competencies around sustainability
  - Ensuring high standards of ethics through audits and assessments
  - Encouraging climate reporting through the CDP
- Raising eco awareness
  - Providing voluntary work opportunities through Nokia Helping Hands
  - Involving our employees in charity
  - Leveraging human capital
- Arranging corporate responsibility reviews
  - Reporting through EcoVadis
  - Providing energy efficiency analysis and recommendations
  - Showcasing possible future solutions supporting sustainable development

We also engage with

- Industry**  
 In 2015, we focused on topics such as
- Freedom of expression and privacy
  - Climate change
  - Supply chain sustainability
  - Connecting the unconnected
  - The UN Sustainable Development Goals
- Investors**  
 In 2015, we reviewed our sustainability activities regularly with investors and provided them with detailed information on our sustainability activities through for example CDP, RobecoSAM, Vigeo and FTSE4GOOD.
- NGOs**  
 In 2015, we focused on topic such as
- Promoting children's rights
  - Empowering young people
  - Supporting those affected by drought and other natural disasters
- Universities**  
 In 2015, we focused on
- Research, training programs, and events that foster innovation
  - Promoting scientific innovation, talent, and knowledge creation through the Nokia University Donations Program

## Ensuring sustainability in our supply chain

In this chapter we refer to the supply chain of Nokia Networks.

Our supply chain comprises of three types of procurement: product (the materials that go into our products), services (which we use to create our offering to customers, including network planning, installation, and construction), and indirect (the goods and services we need to run our business, like IT, fleet and logistics, finance, legal, marketing, facility services). Our manufacturing suppliers are located predominantly in Asia, but because our service suppliers are located around the world, our responsibility extends globally. Of our total spend, 80% is distributed among roughly 400 suppliers.

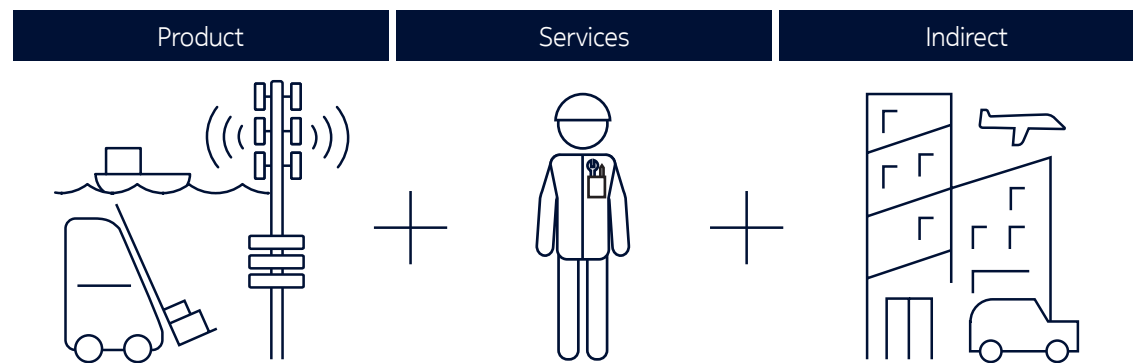
### Ensuring high ethical, labor, and environmental standards in our supply chain

We seek productive, ethical, and transparent relationships with our suppliers. We follow Nokia

purchasing procedures when selecting new suppliers and managing relationships with existing ones. Our interactions with suppliers are transparent and open, and we do not accept or give gifts or entertainment beyond nominal value (lunch in a canteen, marketing products with supplier logos).

Before we start working with any supplier, we expect them to be qualified according to Nokia standards, to comply with all applicable laws and regulations, and to share the values expressed in our Code of Conduct.

### Our supply chain in a nutshell



Before we start working with any supplier, we expect them to meet the high ethical, labor, and environmental standards set out in our Supplier Requirements, which form part of our contractual agreement with suppliers.

1

Suppliers are expected to have management systems, resources, and a code of conduct that demonstrates a commitment to respecting human rights and ethical business conduct.

2

We expect our suppliers to apply the same standards to their own suppliers, our sub-suppliers.

3

## Monitoring compliance through audits

We ensure compliance through regular and robust assessments, and work with suppliers to improve performance where needed. Our audits include:

**Nokia Supplier Requirements audits:** Corporate responsibility is treated as part of our general audits, where auditors assess the entire set of supplier requirements. These audits are typically used in the case of new, high-risk suppliers, or when there is a significant change, such as a supplier moving their manufacturing facility from one country to another.

**In-depth audits on labor conditions and environmental management:** For our existing suppliers, we conduct in-depth audits dedicated to corporate responsibility. These audits are conducted in line with the SA8000 methodology, and they include document reviews, interviews with managers and employees, and site visits, as well as inspections of facilities, production lines, and warehouses.

**Corporate responsibility performance assessments through EcoVadis:** We increasingly assess our

suppliers through EcoVadis, where their policies, procedures, actions, and results regarding sustainability are assessed and scored by an independent analyst.

In 2015, we spent 53 days conducting in-depth audits (104 in 2014) at 16 supplier sites in the Philippines, Tanzania, India, and China impacting a total of around 11,300 supplier employees. We found 272 instances of non-compliance of which 124 related to health and safety (193 in 2014). Based on the findings, we made 272 recommendations for improvement, and these are being addressed through corrective action plans (see examples on page 97).

We increased the number of suppliers that are assessed using the EcoVadis corporate responsibility assessment platform. In 2015, we used this tool to assess 155 suppliers (107 in 2014) which means that altogether 219 suppliers, accounting for around 50% of our total spend have been assessed through EcoVadis since we started using the tool in 2013.

In 2015 we conducted a total of 195 audits and assessments, of which 16 constituted in-depth audits on labor conditions and environmental management, 24 were audits against our full set of supplier requirements, and 155 were EcoVadis scorecard audits.

## Number of in-depth audits compared to 2014

Number of supplier sites audited in-depth	Number of instances of non-compliance	Number of recommendations
23 → 16	341 → 272	493 → 272

## Findings from our in-depth audits

Category	Instances of non-compliance	Number of potential risk areas identified	Total number of recommendations for improvement
Child labor	0	0	0
Forced labor	0	0	0
Health and safety	74	50	124
Freedom of association and right to collective bargaining	2	3	5
Discrimination	0	0	0
Disciplinary practices	0	0	0
Working hours	6	5	11
Remuneration	9	7	16
Management systems	51	40	91
Environmental management	14	11	25
<b>Total</b>	<b>156</b>	<b>116</b>	<b>272</b>

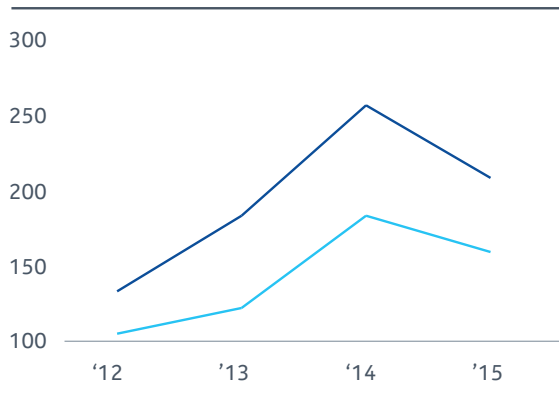
## Number of supplier audits or assessments covering corporate sustainability elements

Baseline	2012	2013	2014	2015
In-depth audits focused on labor conditions and the environment	2	10	23	16
On-site system audits (SR)	57	27	25	24
Supplier CR assessments (EcoVadis)	-	26	107	155

## Working with suppliers to drive improvements

While we conduct assessments to ensure compliance, we realize that assessments alone are not sufficient to drive continuous improvement and competence development on sustainability. By improving the competencies and transparency around labor conditions and workers' rights, health and safety, carbon efficiency, and conflict-free sourcing, we can better address and facilitate them.

### Trainings organized in 2015



- Number of management-level supplier employees participating in Nokia sustainability workshops and webinars
- Number of suppliers participating in Nokia sustainability workshops and webinars

In 2015, we organized webinars on climate change, conflict minerals, and corporate responsibility, involving a total of 117 suppliers which is slightly less than in 2014.

We build the needed capacity by first training our own procurement teams on these topics. They need to be equipped with the ability to communicate our requirements to suppliers and identify potential sustainability risks. In 2015, 99% of our procurement staff completed mandatory ethical business training.

To improve competencies in our supply chain, we run web-based training workshops for suppliers operating in high-risk countries. In 2015, we organized webinars on climate change, conflict minerals, and corporate responsibility, involving a total of 117 suppliers. In addition, we held face-to-face training workshops for 42 suppliers in India, the Philippines, and Tanzania. During these sessions we discussed about the Nokia Code of Conduct and our supplier requirements with a specific focus on labour conditions, health and safety as well as environmental risks. Both parties got to share also their own best practices and challenges.

The webinars and workshops have proven very useful. In addition to producing concrete action plans, these sessions have most likely resulted in an increasing number of our suppliers disclosing their carbon footprints and savings. We have also seen progress in addressing the issue of conflict minerals and reporting transparency.



### Feedback from training in India, the Philippines and Tanzania

“It’s a new thing for us to experience a partner that covers end to end in terms of the corporate values and practices. Not 100% can be done but any changes that can be implemented is a new beginning.”

“Workshop was very efficient, got to know many important aspects. Will work and start induction program & Zonal championship leagues and track employee satisfaction progress.”

“More workshops like these need to be conducted frequently.”

“Good interaction, good participation by attendees, very interesting topics and well presented by experts.”

## Encouraging our suppliers to report their climate impacts

All our suppliers, except those with very low environmental impact, must have a documented environmental management system (EMS) in place. For key suppliers and for those with greater impact, it must be certified to ISO 14001, and we track this compliance through audits and assessments.

The main target for our environmental work with suppliers is to encourage key suppliers to report their climate impacts and set carbon reduction targets through the CDP Supply Chain Program. This helps us to plan improvement programs with our suppliers and improve reporting of our scope 3 emissions.

In 2015, as part of our Carbon Reduction Program, we invited all our most carbon-intensive suppliers to participate in Nokia Climate Change Webinars, where we shared our best practices on emissions

reductions achieved in our facility management, research and development, operations, logistics, travel, and fleet activities. We also encouraged our suppliers to map their emissions, calculate those for the previous financial year, and report their climate impacts and set carbon reduction targets through the CDP Supply Chain Program during May–July 2015.

As a result, 180 of our key suppliers, an increase of 39 from 2014 and representing 53% of our total procurement spend, responded to the request to disclose information regarding their performance on climate impacts. Of these, 140 disclosed their carbon emissions (an increase of 29 from 2014) and 116 their carbon emission reductions (an increase of 39 from 2014), while 92 set reduction targets (an increase of 19 from 2014). The total saving from these carbon reduction initiatives was 5.2 million metric tons of CO<sub>2</sub> equivalent and around \$349 million during the course of the year.

In addition, an increasing number of our suppliers – 76 in total (64 in 2014) – calculated a Nokia allocation of their emissions based on the products and services we purchase from them. This totaled 576,090 metric tons of CO<sub>2</sub>e (670,500 tCO<sub>2</sub>e in 2014)\* By scaling up the allocated emissions to 100% of our suppliers, we estimated our scope 3 emissions from our supply chain to be approximately 2.5 million metric tons of CO<sub>2</sub>e.

\*Due to the timing of the submissions made to the CDP, emissions data relates to the 2014 calendar year.

All our suppliers, except those with very low environmental impact, must have a documented environmental management system (EMS) in place. For key suppliers and for those with greater impacts, it must be certified to ISO 14001, and we track this compliance through audits and assessments.

- 53% of our total procurement spend disclosed information regarding their climate impacts through CDP
- The total saving from our suppliers' carbon reduction initiatives was 5.2 million metric tons of CO<sub>2</sub> equivalent and around \$349 million during the course of the year.
- 76 suppliers calculated a Nokia allocation of their emissions

## Promoting good labor practices

Tackling issues relating to labor conditions is a key topic on our sustainability agenda with suppliers. We put a specific focus on health and safety as our contractors can face significant risks, including installing and maintaining equipment at height or in confined spaces, and when driving long distances. We strive to ensure that our contractors are aware of the risks associated with their work and that they receive the training and equipment necessary to ensure they can work safely.

In 2015 we continued this focus on health and safety, undertaking health and safety requalification assessment for all existing services suppliers, numbering several thousands, to ensure they can continue to fulfill our health and safety requirements. The project will continue with onsite health and safety maturity assessment in 2016. As part of our health and safety consequence management, we issued 20 warnings (23 in 2014) to suppliers for failing our health and safety requirements, and we terminated business with four suppliers. We also added child labor as a topic in our health and safety incident investigation and consequence management processes. The topic was also discussed during our workshops with suppliers.

### Zero tolerance for child labor and forced labor

We do not engage in, nor support in any way, the use of child labor or forced labor. This principle is embedded in our Code of Conduct, and we also expect our suppliers to meet the same high standards we set for ourselves.

In our Supplier Requirements, we demand that upon employment, individuals shall be provided with a work

contract, agreement, or offer letter, that they have basic induction, and that they are not required to provide financial deposits or hand over original identity documents. Forced labor must not be used. Employees must be free to leave the company after giving reasonable notice. Suppliers must ensure that exit procedures are compliant with local legislation, international labor standards, and applicable collective agreements.

In 2015, we did not find any instances of child or forced labor.

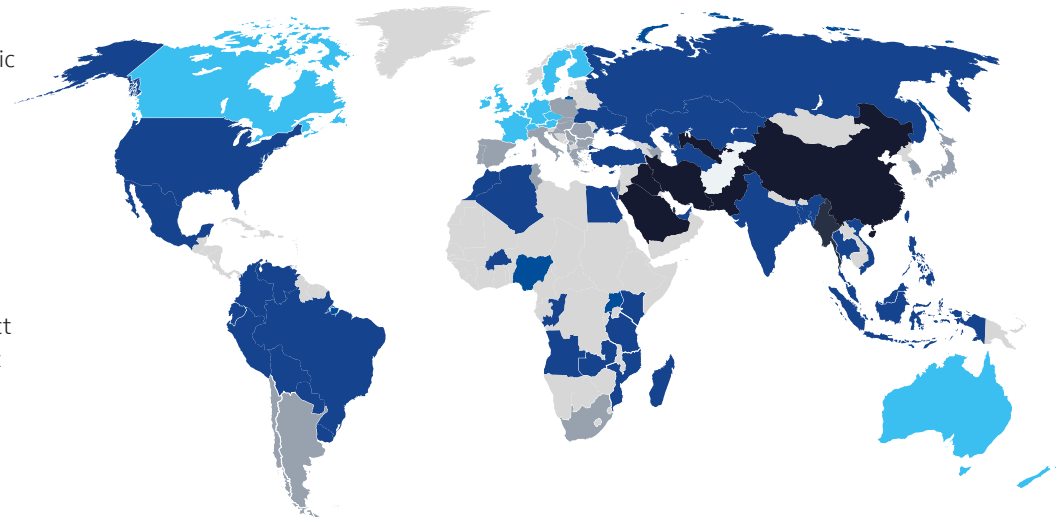
### Freedom of association and collective bargaining

Our suppliers must respect, and not obstruct or discourage in any way, the right of all employees to

seek to form or join their own organizations and to bargain collectively. In cases where this is restricted by law, we facilitate parallel means to ensure that individuals or groups are able to raise concerns with management. We usually review freedom of association as part of the broader topic of worker-management communication during our corporate responsibility audits.

In 2015, we identified potential risk areas of non-conformities during our on-site audits in China. To give some examples, feedback and complaint channels, as well as procedures and records for the election of union representatives, were found to be missing. Additionally, the feedback procedure did not include an anonymous channel.

## Countries where risks related to child labor, forced or compulsory labor, and freedom of association occur



Extreme risk	0–2.5
High risk	> 2.5–5
Medium risk	> 5–7.5
Low risk	> 7.5–10
Not available	

This map includes three parameters: child labor, forced labor, and freedom of association. It was created based on Maplecroft's Global Risks Portfolio. The map covers countries where we have significant business with suppliers, but may not cover all countries where our suppliers operate.



## Some examples from our corrective action plan

Non-compliance identified	Our recommendation for improvement	Action taken
There is a financial deduction for poor performance.	Financial deduction for disciplining employees should be abolished.	The company amended their policy with a statement that the financial deduction for poor performance will be taken only from the performance incentives that are additional to the basic salary.
There is no license or permit for the third party that is handling the company's hazardous waste.	The third party handling the hazardous waste should have the requisite license or permit from the relevant authority to perform the work.	The requirement was communicated to the third party and the license or permit of the third party handling the hazardous waste was obtained and documented.
There is no evidence available that full and final settlement has been completed with those who have left the company.	Full and final settlement should be completed for all employees who have left the company.	A full and final settlement procedure was implemented with 27 employees. The company also provided a timeline for completing the process preparations and a commitment to continue the process in the future.
No one is responsible for occupational health and safety (OHS).	Qualified OHS personnel should be in place in order to ensure solid health and safety performance.	A person was assigned as OHS manager. The company shared with us the related appointment letter including the job description and the organization chart.
There are no hazard identification and risk assessment procedures in place.	Hazard identification and risk assessment should be documented and reviewed from time to time, or whenever required.	The company implemented a procedure for hazard identification, risk assessment, and determining controls. A risk register, including a specific risk score and the relevant corrective or preventive action, was also provided. The risk assessment template and project risk register template was provided and verified.
There is no one in the company who has first-aid certification.	An adequate number of employees should be trained in first-aid procedures to ensure that at least one trained person is available on every project or site, as well as in the office.	The Red Cross trained the company's office staff and field employees.

## Working to find a sustainable solution to the issue of conflict minerals

Electronic components contain many different metals, which can include tantalum, tin, tungsten, and gold (3TG). We are concerned that the mining and trade of the minerals that these metals are extracted from is potentially fueling military conflict, related human rights violations, and environmental degradation.

We are working to find a sustainable solution to the issue of these so-called conflict minerals to ensure responsible and conflict-free sourcing through legitimate trade and positive development in the affected regions.

Our suppliers must commit to only sourcing these materials from environmentally and socially responsible sources. Materials that either directly or indirectly contribute to conflict are unacceptable. We collaborate with our industry peers through the Conflict Free Sourcing Initiative (CFSI), set up by the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI), to improve the traceability of minerals and ensure responsible sourcing. We have developed a robust due diligence approach, aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals.

**We aim to have 100% of the smelters identified in our supply chain validated as conflict-free by 2018.**

## We work to find a sustainable solution to the issue of conflict minerals through

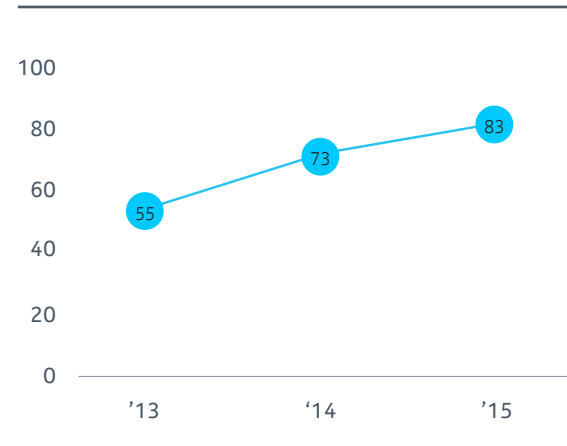
- Our own commitment
- Commitment from suppliers
- Collaboration with the industry
- Competence development
- Transparency in reporting

In 2015, in order to improve data quality and completeness of information following our conflict minerals inquiry last year, we conducted two sets of conflict minerals inquiries with our suppliers. We raised awareness through webinars, collected conflict minerals reporting templates, and provided detailed feedback to suppliers on their performance. We also reached out to smelters that were not yet validated as conflict free, to encourage them to undergo the Conflict-Free Smelter Program (CFSP) audit to ensure their conflict-free status. As a result, 83% of the smelters identified in our

supply chain were conflict-free validated or active in the validation process in 2015.

We also published our second conflict minerals report which provides further information on our due diligence activities in 2014. The results of the due diligence process during 2015 will be published in our next Conflict Minerals Report, which will be available on our website [www.nokia.com/people&planet](http://www.nokia.com/people&planet) in June 2016.

**Share of smelters that have been validated as conflict-free or are active in the validation process\***



\* % out of known smelters in Nokia's supply chain

## What we said vs. what we did in 2015

### Ensuring sustainability in our supply chain

Target for 2015	Progress in 2015	Status
Work with suppliers to ensure all open audit findings conducted in 2014 are addressed, and perform 30 new audits.	We conducted 16 in-depth audits	Not achieved 
Increase the number of suppliers reporting their energy use and greenhouse gas emissions via CDP to 170.	180 of our key suppliers reported their climate impacts via CDP.	Exceeded 
Continue encouraging our top 100 suppliers to set emissions reduction targets by 2016.	92 of our top suppliers had set emissions reduction targets by the end of 2015.	On track 
Continue to engage with and train suppliers on sustainability issues through workshops and webinars.	We conducted three onsite workshops and several webinars on topics such as labor conditions, climate change and conflict minerals.	On track 
Increase the number of suppliers using the EcoVadis supply chain management tool to cover 70% of our supplier spend.	We increased the number of suppliers assessed, however the total spend coverage dropped from 60% in 2014 to 50% as we focused on broader scope of suppliers than just the high spend.	On track 
Roll out health and safety qualification tracking for all active suppliers.	We rolled out qualification tracking for several thousand suppliers.	On track 
Continue working to ensure our products are conflict free	83% of smelters identified in our supply chain were validated as conflict-free or active in the validation process.	On track 

## Our targets for 2016: Enhancing sustainability in our supply chain

40 in-depth audits.

Complete the roll out of health and safety qualification tracking for all suppliers, phase-out non-compliant suppliers and automate this process to enable better traceability.

Continue encouraging our suppliers to report their climate impacts via CDP with a target to have 200 suppliers involved.

Have 100 of our suppliers setting emission reduction targets.

Continue our training program with at least 10 on-site workshops for suppliers.

Increase improvement activities and re-assessments with our suppliers, and by the end of 2016, 75% of the suppliers we evaluate through EcoVadis should score at satisfactory level (score 45/100).

Our long term target: Have 100% of the smelters identified in our supply chain validated as conflict-free by 2018.

## Supporting our customers' sustainability goals

We conduct annual corporate responsibility reviews with our customers in order to better understand their needs. In 2015, these reviews included topics such as supply chain transparency, substance and materials monitoring, and energy efficiency.

In response to feedback from our customers, we improved our transparency by refining our data collection so that we can provide relevant sustainability information for each customer. In addition, we carried out projects where we analyzed the energy efficiency of our key operators' networks and made recommendations for improvements. We also participated in the Orange Labs Research Exhibition held in Paris during the UN climate change conference to showcase a prototype liquid-cooled base station.

In order to improve supply chain sustainability in the ICT industry, we engaged in a pilot program regarding customer-initiated auditing in a company's supply chain. We also continued to enable the Joint Audit Cooperation group (JAC) audits in our own facilities.

In order to increase the transparency of our performance as a supplier, specifically our environmental and social management, we use

industry platforms such as EcoVadis and CDP. In 2015, we were a top performer in both evaluations.

## Cooperating with others in our industry

We regularly contribute to working groups and committees of various industry organizations that promote sustainability goals.

In 2015, Nokia was a member of the United Nations Global Compact, the Global e-Sustainability Initiative, the CDP supply chain program, the Telecommunications Industry Dialogue, the Climate Leadership Council, Conflict-Free Sourcing Initiative and Digital Europe, as well as several standardization and university cooperation groups. We participated in groups addressing topics such as freedom of expression and privacy, climate change, common responsibility on supply chain issues, connecting the unconnected and the UN Sustainable Development Goals.

### Promoting a common approach for measuring the environmental impact of network infrastructure

To promote environmental sustainability, we continued participating in OPERA-Net 2 – a project of the Celtic-Plus European ICT Cluster Research Initiative, part of the Eureka Network – which aims to work with standards bodies to develop a common approach for measuring the

environmental impact of network infrastructure. A key focus is on managing energy use related to thermal management, and improvements in product materials efficiency. In 2015, a liquid cooled radio base station demonstrator proved up to 80% saving potential in cooling related energy consumption, and showed how easy heat reuse – and a decrease in CO<sub>2</sub> footprint – is when heat is in liquid. Materials efficiency highlighted that use of recycled materials is important for decreasing CO<sub>2</sub> footprint, and there is improvement potential from using of recycled plastics in products. We also developed materials selection methodology, in which we can take into account both technical, environmental and cost aspects when making final decisions about material.

In 2015, Nokia was a member of the United Nations Global Compact, the Global e-Sustainability Initiative, the CDP supply chain program, the Telecommunications Industry Dialogue, the Climate Leadership Council, Conflict-Free Sourcing Initiative and Digital Europe, as well as several standardization and university cooperation groups.

## Promoting human rights together with a group of telecommunications operators and vendors

To promote human rights, we continued to engage with the Telecommunications Industry Dialogue, a group of telecommunications operators and vendors jointly addressing freedom of expression and privacy. Influenced by the UN Guiding Principles on Business and Human Rights, the Industry Dialogue has published guiding principles that specifically address the issues of privacy and freedom of expression as they relate to the telecommunications sector. The principles explore the interaction and boundaries between a government's duty to protect human rights and the corporate responsibility of telecommunications companies to respect these rights. We provide annual reports on how we implement these principles in our business decisions. The progress is included in this report, starting on page 50.

## Identifying opportunities and challenges created by technology through conversation

In 2015, WIRED and Nokia announced #maketechhuman, a new initiative created to start a conversation about technology, its role in society, and whether it truly serves humanity. The goal of the initiative was to identify opportunities and challenges created by technology, and then shape the future in a positive direction through conversation, awareness, and content. The initiative also included a content hub, a narrative on

WIRED.com that is the first of its kind. Throughout the duration of the initiative, the hub served as a place for users to share their enthusiasm and concerns about technology. The best of the debate was captured in our end-of-year digital magazine, available through the WIRED app. In it, you will find key articles from the debate hub, our most popular videos and podcasts, and new feature reports on the five key themes: artificial intelligence, privacy, security, connection and equality. The digital magazine is available at <http://www.wired.com/brandlab/2015/12/introducing-the-maketechhuman-ebook>.

## Strengthening our role in connecting the unconnected

We are a member of The Alliance for Affordable Internet which is a technology sector coalition aiming to achieve the UN Broadband Commission target of entry-level broadband priced at less than 5% of monthly income, thereby enabling billions more people to come online. Through A4AI, public sector, private sector and not-for-profit organisations are coming together to create policy and regulatory solutions that drive down the cost of Internet access around the world as well as working operationally in a number of countries to collectively find the best solution to solve this affordability issue.

In early 2016, we announced new partnerships in order to strengthen our role in making connectivity and broadband investments happen and helping to

shape the emerging Programmable World in various countries.

In February 2016, Nokia announced it has established the Telecom Infra Project (TIP) together with Facebook, Intel, Deutsche Telekom, EE, Globe, SK Telecom and other operators, equipment providers, systems integrators and technology companies from around the world. The overall target of TIP is to accelerate sustainable global growth of high quality, scalable and affordable telecommunications infrastructure by driving innovation in collaboration with the industry. We provide TIP with both experience and credibility from the mobile communication ecosystem, and we want to promote transparency and open architecture, and explore new business models to improve people's lives through better connectivity. The industry will benefit from a growing ecosystem that will provide connectivity to places that previously were unconnected.

In March 2016, our President and CEO Rajeev Suri was appointed as Broadband Commissioner to contribute in creating and innovating on projects that can digitize the under-developed and under-connected world. The Broadband Commission was jointly convened by UNESCO and ITU in 2010 for industry, government, academic, and NGOs to come together to discuss and debate the acceleration of the adoption of broadband globally, with a special focus on developing and less developed nations.

## Partnering with NGOs

Through our corporate social responsibility programs, 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.

In 2015, our cooperation focused on promoting children's rights, empowering young people, and supporting those affected by drought and other natural disasters. Our global partners continued to be Plan, Save the Children, and Oxfam. In addition, we kicked off WWF's Green Office program at our headquarters in Espoo, Finland and started cooperation with the Finnish Children and Youth Foundation to strengthen young people's faith in the future. We also made several donations to charity.





## Promoting children's rights with Save the Children

Our partnership with Save the Children focuses on promoting the rights of children. We help to define ways to use technology to improve learning and empower people to use technology to strengthen disaster preparedness and relief efforts given the major threat posed to children by natural disasters and poverty. Save the Children has also evaluated how well we incorporate children's rights into our core strategies.

Our cooperation is based upon the Child Rights and Business Principles launched by the UN Global Compact, Save the Children and UNICEF in 2012.

### Using technology to strengthen disaster preparedness and relief efforts in India

In India, our cooperation focuses on protecting children and their families during disasters. We are helping to increase the resilience of children and their communities in 350 villages in India across five states: Bihar, Tamil Nadu, Andhra Pradesh, Delhi, and Rajasthan. Our technology plays a key role in this work.

In 2015, we completed the first phase of the project: Save the Children helped communities in 176 villages prepare to respond efficiently during and after

disasters by creating specific disaster-management plans, school safety plans, and village task forces.

In phase 2, the project has been expanded to cover a further 174 villages across the five states and develop partnerships with relevant stakeholders such as relevant departments and ministries in government and civil societies. Our aim is to further strengthen the disaster resilience model in all 350 villages over the next three years.

To enable communication between early responders and task forces, we will provide our unique network-in-a-box (NIB) solution to be used as a standalone communication system, complete with its radio, core, access, and application layers. In this LTE-based solution for public safety mobile broadband, the main mobile network functions are integrated into a small 'box' and the solution can be deployed during disasters in case the main operator-run network is affected. The solution will be deployed in six villages.

Additionally, information and communication technology will also be provided to help track the distribution of entitlements to the communities in these villages under various social protection schemes.

### Our impact in 2015

- Through improving access to government social protection schemes the program has so far touched the lives of 350,000 people, including 185,000 children.
- Through assessments and surveys, we have helped 176 villages to identify and understand their potential risks and vulnerabilities. The results are helping villages develop a risk reduction and mitigation plan.
- We have established over 200 disaster-management resource centers, which play a crucial role in disseminating early warnings, coordinating search, rescue, and evacuation activities, and supporting local government authorities during a disaster. Outside times of disaster these centers serve as information centers for villagers who want to learn more about disaster risk reduction and social protection schemes.
- 5 Disaster Risk Reduction Task Forces have been formed in each village: Early Warning Group (EWG), Search and Rescue Group (SRG), First Aid Group (FAG), Psycho-Social Group (PSG), Relief Management Group (RMG).



### Improving children's access to education in Myanmar

Our project with Save the Children in Myanmar, The Best Start, aims to improve early learning and development opportunities for marginalized children in the country. The project aims to reach 14,500 children in three townships in Shan State, Kayin State, and Bago Region. The principal target group is children up to five years old.

In 2015, we supported establishing early childhood care and development centers, and together with Save the Children, we evaluated the key areas where we could make a difference in the future. Our plan for 2016 and beyond will focus on helping children in these remote villages access education and strengthening disaster preparedness in these areas. In order to provide the best possible care and education for children in remote areas, we will also improve information sharing between early childhood care and development network groups.

#### Our impact in 2015

- We established 58 early childhood care and development centers
- We helped 2,200 children access early childhood care and development services.





## Empowering young people with Plan International

We work with Plan International to empower young people in developing countries through education and advocacy.

In 2015, we continued supporting Plan International's Open Space Literacy program, which aims to increase children's literacy skills in 300 schools across Kenya. The program provides access to high-quality learning materials and improves teachers' capacity through enhanced teaching methods and ICT training. It also engages communities in the management of local schools and promotes high-quality education.

The program is expected to reach approximately 67,500 pupils aged 6 to 8 years. The investment in infrastructure, teacher training, and community involvement will also indirectly benefit a further 83,000 children aged 9 to 11. The project has been endorsed by Kenyan ministries, including the Ministry of Education, Science and Technology,

as well as the Kenya Institute of Curriculum Development, the Teachers Service Commission, and the regional government of Nairobi.

Another project we support aims to improve school governance in Uganda using technology and community media. Improving school governance helps ensure that children receive high-quality education and contributes to gender equality goals, lifelong learning opportunities, and adult literacy.

In 2015, we expanded our project from 105 schools in 2014 to 155 schools in the districts of Kamuli and Tororo. We also worked together to design and utilize machine learning algorithms to help with the automatic analysis and categorization of the thousands of messages flowing through the SMS-based school governance system. This is expected to help local authorities better respond to the requests, notifications, and ideas coming from teachers, parents, and pupils.

### Our impact in 2015

- In Kenya, we supported the provision of ICT integration infrastructure to 25 schools, impacting 16,000 children, 580 teachers, 140 school board management members, and more than 1,000 community members.
- In Uganda, a total of 155 schools benefitted from the SMS-based communication system, which helps improve school governance.

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LASTEN JA NUORTEN SÄÄTIÖ

## Restoring young people's faith in the future together with the Finnish Children and Youth Foundation

According to various studies, the faith of Finnish youth in their future is in decline. The prolonged economic downturn, climate change, and the gloomy news about regional conflicts are puzzling young minds not only in Finland, but all over the globe. To address this phenomenon, Nokia joined forces with the Finnish Children and Youth Foundation in order to raise awareness of the importance of thinking positively about both oneself and the future.

As many of humankind's greatest achievements have begun with a dream, we have worked with the Finnish Children and Youth Foundation to develop a program called Dreams, which challenges young people to take concrete steps toward their dreams.

A key element of the program is Dreamsters, a group of well-known Finns who visit schools

and speak about their own experiences of the importance of having dreams and what persistently working to achieve those dreams has meant for them. Dreamsters also encourage students to take 30-day challenges that can be done through a special Thirty for Dreams application. Young people spread a positive attitude by sharing their challenges and experiences through specific Dreams accounts on Instagram, Facebook, Snapchat, and Twitter.

Through the Dreams program, Nokia and the Finnish Children and Youth Foundation aim to reach tens of thousands of students between the ages of 13 and 16 in hundreds of schools across Finland by 2018. In addition to upper elementary school students, the program also targets teachers and parents, challenging them to support the young people as well as to strive for their own personal aspirations.

### Our impact in 2015

- Dreamsters conducted 50 upper-elementary school visits, including schools in northernmost Lapland, reaching around 10,000 young people.





## Monitoring water availability in drought-prone regions with Oxfam

We partner with Oxfam to promote sustainable development. Together, we are piloting a web-based system to monitor water availability in drought-prone regions of Ethiopia and Kenya. This system provides real-time information to quickly identify the early onset of drought, enabling response efforts to be mobilized before the situation reaches a crisis point.

In 2015, Oxfam field staff, water point operators, and local stakeholders attended joint training on how data is being collected and analyzed. This helps communities prepare to be more resilient to extreme weather changes across the region. Ongoing plans include continuing to engage with local and national authorities to ensure the sustainability of the system and maximizing the use of the data collected.

### Our impact in 2015

- Over 1,000 water points across Kenya and Ethiopia monitored and mapped
- A further 56 strategic water points identified to be incorporated into the project.



## Our donations to charity

In addition to our regular cooperation with NGOs, we made several donations during 2015. These include donations to various smaller charities through Global Giving, where we targeted our support at projects that seek to realize the human rights of all, to achieve gender equality, and to mitigate the risk of being left behind by the digital revolution.

We made an additional donation to Plan, supporting their efforts in helping young women become change agents for local economies in Indonesia. We also donated to Oxfam's work in Syria, Jordan, and Lebanon to get life-saving aid to people fleeing Syria's conflict.

Together with the Finnish telecommunications operator Elisa, we announced our plan to donate a mobile network with complete indoor coverage for the new children's hospital in Helsinki, Finland, which is due to be completed in 2017.



## USE CASE

### Empowering lives together with our employees

In early December in 2015, we launched an online portal for our employees where we had preselected seven charity projects seeking to realize the human rights of all, to achieve gender equality, and to mitigate the risk of being left behind by the digital revolution. We then asked our employees to select the charity that they wanted Nokia to donate to, and in return we promised to divide our donation according to their votes.

The voting site was open for about three weeks in December, and during that time we received thousands of votes from 79

countries. Around 60% of the votes came from Finland, Greece, India, Poland, and Germany.

Around 80% of the votes were for three projects. The project that received the most votes, approximately a third of the total, was one providing humanitarian relief to Syrian refugees through Oxfam. The second most popular project was one supporting Plan in helping young women become change agents for local economies in Indonesia, while the third most popular was one helping people with disabilities to have an active, inclusive role in society, powered by Global Giving in Colombia.

The remainder of our donation, approximately 20%, was directed to projects powered by Global Giving that focus on helping young people in Nigeria protect their health through mobile health solutions, helping bridge the digital divide in Mexico, helping create gender parity in the computer science and technology workforce, and helping bridge the knowledge gap between teachers and students in technology.

At the same time as announcing the results of the vote, we also announced that we had donated a further €100,000 to Oxfam, the charity that received the most votes.

## Our targets for 2016: Partnering with NGOs

Create a group-wide strategy to guide corporate investment activities and include priorities aligned with SDGs & business drivers.

All new corporate investment programs to be measured against a monitoring and evaluating system.

Our long term target:  
By 2020, foster the spirit of employee volunteerism across the company and increase their engagement.

## Promoting innovation and supporting talent in cooperation with universities

Our work with academic institutions ranges from collaborative research, training programs, and events that foster innovation, to supporting talent and continuous learning. In addition, the Nokia University Donations Program enhances collaboration between the world's leading experts from universities around the world with the aim of promoting scientific innovation, talent, and knowledge creation.

In 2015, we supported various universities through the program, including the University of California in the United States, the University of Glasgow in the United Kingdom, Xidian University in China, and Dresden Technical University in Germany.

Our donations supported topics such as urban mobility, immersive interaction with virtual environments, technologies for future 5G systems, and the use of virtual reality in healthcare.

In addition, our Technologies unit cooperated with Aalto University in Finland on an indoor positioning system for sustainable manufacturing. Indoor positioning can be used, for example, for asset tracking.

### USE CASE

#### **Our engagement with universities and young people in Finland in 2015**

- We cooperated in research programs with Aalto University, the University of Helsinki, the University of Oulu, and Tampere University of Technology.
- We supported projects that enhance the universities' course offering and content.
- We organized joint events, attended career fairs, and provided speakers.
- We employed around 45 thesis workers and 225 summer trainees.
- We offered 13 trainee positions through a mentor program.
- We were a main sponsor of the Responsible Summer Job 2015 campaign created by a large group of organizations, societies, and businesses with a shared interest in youth employment issues in Finland.
- We were involved in the Me & My City concept in Helsinki, Espoo, and Oulu. In Espoo, we also provided a location for the concept. Me & My City is a learning concept aimed at schoolchildren that covers society, working life, and entrepreneurship.
- We teamed up with the Finnish Children and Youth Foundation to raise awareness of the importance of thinking positively about oneself and the future.

An aerial photograph of a multi-lane highway bridge crossing a river. The bridge has several cars on it. To the left of the bridge, there is a large parking lot with several cars parked, and a building with a red facade. The river is greenish-brown, and the surrounding area is lush with green trees and grass. The sky is clear and blue.

# Independent practitioner's assurance report

Our key sustainability indicators have been assured by an independent auditor, PricewaterhouseCoopers Oy.



# Independent Practitioner's Assurance Report

To the Management of Nokia Corporation

We have been engaged by the Management of Nokia Corporation (hereinafter also the "Company") to perform a limited assurance engagement on selected Nokia Corporation's sustainability information for the reporting period 1 January 2015 to 31 December 2015 as set out in Nokia Corporation's People & Planet Report 2015 on the Company's website (hereinafter the "Selected sustainability information").

## Selected sustainability information

The scope of our work was limited to assurance over the information summarised below. The information covers Nokia Group (Continuing operations) and/or Nokia Networks (year 2015 and comparison to year 2014), as indicated in the People & Planet Report 2015.

### Environmental impact:

- Scope 1 greenhouse gas (GHG) emissions from facilities, by greenhouse gases (metric tons CO<sub>2</sub>e)
- Scope 1 GHG emissions from car fleet (metric tons CO<sub>2</sub>)
- Scope 2 GHG emissions, market based and location based (metric tons CO<sub>2</sub>e)
- Scope 3 GHG emissions: upstream transportation and distribution (metric tons CO<sub>2</sub>)
- Scope 3 GHG emissions: product use-time (metric tons CO<sub>2</sub>e)
- Energy consumption within Nokia, by types of energy (GWh)
- Renewable electricity amount (GWh) and portion of total electricity consumption (%)
- Product use-time energy consumption (GWh)
- Water withdrawal in facilities (m<sup>3</sup>) and recycling/reuse (%)
- Waste amounts by disposal methods (metric tons) and utilisation rate (%), within Nokia
- Improved energy efficiency of a product (example eNodeB-product)

### Social impact:

- Number of work related employee fatalities and number of work related contractor and subcontractor fatalities
- Percentage of employees who have completed the annual training on ethical business conduct (Ethical Business Training)
- Employee Engagement Index (%)
- Yearly employee attrition of voluntary leavers (%)
- Share of women within senior management (%)
- Progress in implementing the Guiding Principles of the Telecommunications Industry Dialogue (ID)
- Further development of child labor mitigation practises
- Number of incidents of child labor
- Number of subscriptions served by Nokia's radio networks customers

### Supply chain management:

- Number of system audits against Nokia Supplier Requirements
- Number of in-depth audits (focused on labor conditions and environment) against Nokia Supplier Requirements and SA8000
- Number of suppliers assessed on Corporate Responsibility in EcoVadis Sustainable Supply Management platform
- Number of suppliers that set GHG emission reduction targets (in CDP)
- Share of smelters that have been validated as conflict-free or are active in the validation process (out of known smelters in Nokia's supply chain), %

### Management's responsibility

The Management of Nokia Corporation is responsible for preparing the Selected sustainability information in accordance with the reporting criteria as set out in the Company's reporting principles and GHG Protocol (hereinafter the "Reporting criteria"). The Management of Nokia Corporation is also responsible for such internal control as the management determines is necessary to enable the preparation of Selected sustainability information that is free from material misstatement, whether due to fraud or error.

### Practitioner's independence and quality control

We have complied with the independence and other ethical requirements of the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

PricewaterhouseCoopers Oy applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Selected sustainability information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements

(ISAE) 3000 (Revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". That standard requires that we plan and perform the engagement to obtain limited assurance about whether the Selected sustainability information is free from material misstatement.

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. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the Selected sustainability information. The procedures selected depend on the practitioner's judgement, including an assessment of the risks of material misstatement of the Selected sustainability information.

Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of the Company.
- Visiting the Company's Head Office and one site in Germany.
- Conducting a video interview with one site in India.
- Interviewing employees responsible for collecting and reporting the Selected sustainability information at the Group level as well as at the site level.
- Assessing how Group employees apply the reporting instructions and procedures of the Company.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

### Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Nokia Corporation's Selected sustainability information for the reporting period ended 31 December 2015 is not properly prepared, in all material respects, in accordance with the Reporting criteria.

When reading our assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Our assurance report has been prepared 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.

Helsinki, 9 May 2016

### PricewaterhouseCoopers Oy

**Heikki Lassila**  
Authorised Public Accountant, KHT

**Maj-Lis Steiner**  
Authorised Public Accountant, KHT

# Nokia sustainability data

These figures cover Nokia Networks 2012–2015 data and Nokia Group data for Continuing operations for 2014–2015. Continuing operations cover Nokia Networks and Nokia Technologies. Group Common Functions are small, 585 persons in 2015, and their effect is typically combined with Nokia Networks data without specifically mentioning it. In 2015, Nokia Networks represented majority of the Continuing operations (92% net sales, 99% of year-end employees).

HERE and Devices and Services business are treated as Discontinued operations. In 2015 Nokia sold its HERE digital mapping and location services business to a consortium of German automotive companies. The sale was completed on December 4, 2015. Devices & Services business was part of the Nokia Group until its sale on April 25, 2014. 2014 Nokia Group (Continuing operations) figures presented in following tables differ from figures published in 2014 report due to HERE being reported

as Discontinued operations. We report some key environmental and financial data from Discontinued operations in a separate table after the details for Continuing operations.

For longer term historical development, please see previous Nokia Siemens Networks and Nokia sustainability reports on [www.nokia.com/people&planet](http://www.nokia.com/people&planet).

Environmental data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
Greenhouse gas (GHG) emissions (metric tons) <sup>1</sup>							
<b>GHG Scope 1 (direct emissions from facilities and car fleet) <sup>2</sup></b>	<b>4,600</b>	<b>17,700</b>	<b>7,800</b>	<b>6,600</b>	<b>8,400</b>	<b>7,000</b>	⊖
Direct CO <sub>2</sub> emissions from energy use in facilities	4,600	5,100	4,300	3,400	4,600	3,800	⊖
Hydro-Fluoro-Carbon (HFC) (as CO <sub>2</sub> e)	-	12,600	3,500	2,000	3,800	2,000	⊖
CH <sub>4</sub> from energy use in facilities (as CO <sub>2</sub> e)	8	9	8	7	9	7	⊖
N <sub>2</sub> O from energy use in facilities (as CO <sub>2</sub> e)	3	3	3	2	3	2	⊖
CO <sub>2</sub> emissions from car fleet <sup>3</sup>	-	-	-	1,200	-	1,200	⊖
<b>GHG Scope 2 (Indirect emissions from purchased electricity and heat), Location-based <sup>2,4</sup></b>	<b>274,000</b>	<b>241,700</b>	<b>233,700</b>	<b>223,600</b>	<b>236,900</b>	<b>225,500</b>	⊖
<b>GHG Scope 2 (Indirect emissions from purchased electricity and heat), Market-based <sup>2,5</sup></b>	<b>-</b>	<b>-</b>	<b>174,700</b>	<b>158,100</b>	<b>177,900</b>	<b>158,500</b>	⊖
CO <sub>2</sub> e avoided due to purchased renewable energy <sup>6</sup>	57,300	73,400	89,900	68,900	90,100	70,500	
<b>GHG Scope 3 (Indirect emissions, covering relevant and non-relevant, but easily available categories)</b>	<b>17,403,900</b>	<b>16,447,100</b>	<b>28,524,900</b>	<b>22,916,500</b>	-	-	
CO <sub>2</sub> e emissions from purchased goods and services <sup>7</sup>	-	-	2,700,000	2,500,000	-	-	
CO <sub>2</sub> e emissions from external data centers <sup>8</sup>	2,300	2,100	700	600	-	-	
CO <sub>2</sub> emissions from upstream transportation and distribution <sup>9</sup>	-	105,000	178,900	82,500	178,900	82,500	⊖
CO <sub>2</sub> emissions from business air travel <sup>10</sup>	52,600	53,000	62,000	52,400	-	55,400	
CO <sub>2</sub> e emissions from employee commuting <sup>11</sup>	74,000	62,000	69,000	70,000	70,000	70,000	
CO <sub>2</sub> e emissions from upstream leased assets <sup>12</sup>	-	-	33,300	41,000	33,900	41,600	
CO <sub>2</sub> e emissions from product use-time energy consumption <sup>13</sup>	17,275,000	16,225,000	25,481,000	20,170,000	25,481,000	20,170,000	⊖
<b>Total Scope 1, 2 and 3 GHG emissions (location-based)</b>	<b>17,682,500</b>	<b>16,706,500</b>	<b>28,766,400</b>	<b>23,146,700</b>	-	-	
<b>Total Scope 1, 2 and 3 GHG emissions (market-based)</b>	<b>-</b>	<b>-</b>	<b>28,707,400</b>	<b>23,081,200</b>	-	-	
Biologically sequestered carbon <sup>14</sup>	0	0	0	0	0	0	

\* In this table data assured covers 2015 metrics for Nokia Group (Continuing operations) and Nokia Networks, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

Environmental data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
Other air emissions							
Emissions of Ozone Depleting Substances (ODS), as ODP (metric tons) <sup>2,15</sup>	0,04	0,08	0,03	0,03	0,03	0,03	
Energy consumption (1 GWh = 3,600 GJ)							
<b>Energy consumption within Nokia <sup>2</sup></b>							
Purchased electricity, total (GWh)	497	458	427	402	433	406	⊙
District heating, total (GWh)	32	23	23	21	23	22	⊙
District cooling (GWh)	0	0	6	6	6	6	⊙
Chilled water, total (GWh)	0	2	1	1	1	1	⊙
Fossil gas, total (GWh)	24	24	21	16	22	18	⊙
Biogas, total (GWh)	0	0	0	0	5	5	⊙
Oil, total (GWh)	1	<1	<1	<1	<1	<1	⊙
<b>Energy, total (GWh)</b>	<b>554</b>	<b>508</b>	<b>478</b>	<b>446</b>	<b>491</b>	<b>458</b>	⊙
Direct energy, total (GWh)	25	25	21	17	28	23	⊙
Indirect energy, total (GWh)	529	483	457	429	463	435	⊙
Renewable electricity (GWh) <sup>12</sup>	193	204	215	201	216	205	⊙
<b>Renewable electricity share of total electricity <sup>16</sup></b>	<b>39%</b>	<b>45%</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>	<b>51%</b>	⊙
<b>Energy consumption outside of Nokia</b>							
Product use-time energy consumption (GWh) <sup>13</sup>	32,230	30,270	47,540	37,630	47,540	37,630	⊙

\* In this table data assured covers 2015 metrics for Nokia Group (Continuing operations) and Nokia Networks, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

Environmental data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
<b>Water (within Nokia) <sup>2</sup></b>							
<b>Water withdrawal total (thousands m<sup>3</sup>)</b>	597	532	506	370	533	383	⊕
<b>Water withdrawal by source (%) <sup>17</sup></b>							
Municipal water supply	-	-	100%	100%	100%	100%	
Recycled/reused water (thousands m <sup>3</sup> ) <sup>18</sup>	15	11	11	11	11	11	⊕
<b>Recycling/reuse % of total withdrawal</b>	<b>3%</b>	<b>2%</b>	<b>2%</b>	<b>3%</b>	<b>2%</b>	<b>3%</b>	⊕
<b>Waste and recycling</b>							
<b>Waste and recycling within Nokia <sup>2, 19</sup></b>							
<b>Total (metric tons)</b>	<b>7,100</b>	<b>6,200</b>	<b>7,000</b>	<b>4,700</b>	<b>7,000</b>	<b>4,800</b>	⊕
Reuse	1,100	800	700	600	700	600	⊕
Recycle	4,200	4,300	5,000	3,100	5,000	3,200	⊕
Energy recovery	1,000	600	1,000	600	1,000	600	⊕
Landfill	800	500	300	400	300	400	⊕
<b>Utilisation rate % <sup>20</sup></b>	<b>89%</b>	<b>93%</b>	<b>95%</b>	<b>93%</b>	<b>95%</b>	<b>92%</b>	⊕
<b>Non-hazardous waste <sup>21</sup></b>	<b>6,800</b>	<b>6,000</b>	<b>6,800</b>	<b>4,500</b>	<b>6,800</b>	<b>4,600</b>	
<b>Hazardous waste</b>	<b>300</b>	<b>200</b>	<b>200</b>	<b>200</b>	<b>200</b>	<b>200</b>	
<b>Product end-of-life treatment (metric tons)</b>							
Weight of equipment returned from customers for recycling <sup>22</sup>	5,310	3,540	1,710	1,670	-	-	
Weight of equipment returned from customers incinerated with energy recovery	530	150	90	90	-	-	
Weight of equipment returned from customers sent to landfill	70	50	40	20	-	-	
Number of returned equipment items reused/remanufactured	53,700	38,400	15,900	24,100	-	-	
<b>Weight of packaging materials reused in distribution hubs (metric tons)</b>	<b>3,700</b>	<b>3,600</b>	<b>2,400</b>	<b>2,500</b>	-	-	

\* In this table data assured covers 2015 metrics for Nokia Group (Continuing operations) and Nokia Networks, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

## Notes

We have most data available for Nokia Networks, which represents the majority of the Nokia Group's Continuing operations (92% net sales, 99% of year-end employees in 2015). "-" Means we do not have data available for that particular year or scope or the metric is not applicable for that scope. For example metrics related to Board of Directors and Executive management board are applicable only on the Group level and are not applicable for Nokia Networks.

**1)** Our approach to measuring greenhouse gas emissions follows the Greenhouse Gas (GHG) Protocol ([www.ghgprotocol.org](http://www.ghgprotocol.org)) developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The GHG Protocol defines three scopes of CO<sub>2</sub>e-emissions:

- Scope 1 – direct emissions, from sources owned or controlled by the company
- Scope 2 – indirect emissions, from the consumption of purchased electricity, heat, and/or steam. As per GHG Protocol Scope 2 Guidance -An amendment to the GHG Protocol Corporate Standard, published in 2015, we report 2014 onwards both location-based and market-based Scope 2 emissions.
- Scope 3 – indirect emissions, as a consequence of the activities of the company, but from sources not owned or controlled by the company.

### Organisational boundaries

We use the "operational control" approach (instead of equity share approach), which means we include

entities based on whether we can introduce and implement operating policies rather than on the basis of financial control or economic interest. Our Scope 1 and 2 and selected Scope 3 GHG measurements have been assured by a third party since 2003 and assurance will continue on an annual basis. Read our assurance statement on page 113.

**2)** Facility energy data and related greenhouse gas emissions data is typically (but not as a strict rule) from sites over 3000 m<sup>2</sup>, covering at least 80% of facilities' total net internal area. (81% in 2015) The excluded "small sites" are typically multi-tenant buildings where energy, water and waste consumption fees are covered in the rent. Emission data from excluded sites has been estimated based on Nokia averages and reported under "Scope 3, Upstream leased assets". Some facilities' November and December consumption has been estimated as the invoices detailing actual usage remain outstanding at the time of reporting. Due to received actual data for 2014 and corrections done as part of internal quality improvements, some energy and greenhouse gas, waste and water figures are slightly updated from values published in 2014 People and Planet report. We reported Scope 1 emissions from car fleet for the first time in 2015. We do not have data on the fuel use (MWh) as data is based on distance driven.

### 3) Scope 1 emissions

**Direct CO<sub>2</sub>e emissions from Nokia facilities** include emissions from gas and oil usage in Nokia facilities

and HFC emissions. Emissions are calculated by using GHG Protocol version 1.3, fuel-level emissions for stationary combustion, referencing to IPCC 2006 for "commercial consumption." Lower heating values are used. The effect of greenhouse gases CH<sub>4</sub> and N<sub>2</sub>O produced during burning process are listed in the table as CO<sub>2</sub>-equivalents. HFCs are refrigerants and emissions are minor fugitive emissions from facilities' cooling systems. Nokia uses also some HCFCs as refrigerants, but they are not included in the inventory because they are not covered by the Kyoto Protocol. These refrigerants are anyhow included in the published Ozone Depleting Potential -figure. Of the Kyoto Protocol greenhouse gases, Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF<sub>6</sub>) are not applicable for Nokia.

**Fleet data** represents CO<sub>2</sub> emissions from cars Nokia Network uses in its business purposes, typically in Global Services. Emission calculation is based on actual driven mileage and official CO<sub>2</sub> emission value per km of each car make and model. As data collection started recently, there are still some gaps in the reporting scope. 2015 actual data covers European countries where Fleet Logistics manage the fleet, which means actual data coverage is approximately 70% of the global service fleet and results to around 400 metric tons CO<sub>2</sub>. Fleet Logistics manage also benefit cars, which are not part of Scope 1. As fleet mapping for service and benefit cars is not yet complete, 2015 data includes "unknown" fleet. To follow precautionary principles, 50% of emissions from unknown fleet was allocated



for service fleet and hence included in Scope 1, even though the service fleet share is likely less than 50%. Also, to extrapolate European numbers to global level, 30% emissions were added to European emissions, leading to total of 1,200 metric tons of CO<sub>2</sub>.

#### 4) Scope 2 emissions, location-based

Indirect CO<sub>2</sub>e-emissions (Scope 2 emissions) include emissions from purchased electricity, district heating, district cooling and cooling with chilled water. As per GHG Protocol definitions, location-based method quantifies scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries. In our case, for USA recent EPA eGrid factors are used, “eGrid 2012, 2009 summary tables” for 2014 and 2015, for UK Defra 2015 values and for all other countries emissions are calculated by using Internal Energy Agency’s (IEA) country-level emission factors. For 2012–2013 electricity and district heating used the same emission factor (“EF for purchased electricity and heat”). For 2014–2015 electricity was calculated with IEA statistic “Grid Electricity Generated - Average Load (Annual) (Direct)” and district heating and cooling and chilled water with IEA “heat-consumed” statistics. Prior to 2014, the chilled water emission factor was based on guidance from U.S. Department of Energy: “Energy Information Administration Form EIA-1605, Appendix N. Emission Factors for Steam and Chilled/Hot Water”. Despite delay on IEA country statistics/EPA eGrid statistics, data from previous years has not been updated with new factors. The latest or recent version of the IEA publication has been used, as an example having 2011 statistics used for 2014. As CO<sub>2</sub>

typically represents over 99% of the GHG emissions in electricity and heat production, IEA indirect emission factors include CO<sub>2</sub> only. EPA and Defra factors are for CO<sub>2</sub>e.

#### 5) Scope 2 emissions, market-based

Emissions are coming from the same energy flows as explained in note 4. Market-based Scope 2 accounting method quantifies emissions based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with instruments, or unbundled instruments on their own. In our case, contractor-specific emission factors are available for certified renewable electricity (with emission factor zero) but not for “brown” electricity. Residual emission factors were available in Europe, by RE-DISS project, but not so far for other regions. Where residual emission factors were not available, the IEA/Defra/EPA eGrid emission factors were used.

6) In 2014–2015, avoided CO<sub>2</sub>e emissions are calculated against residual emission factors in Europe, where these factors are available by RE-DISS project. The 2012–2013 avoidance is calculated against location-based emission factors.

7) CO<sub>2</sub>e emissions from purchased goods and services: emissions are reported based on data collected with CDP Climate Survey from Nokia Network’s biggest suppliers, representing around 23% of total purchase spend. Collected data is then multiplied to cover 100% of spend. Around 60% of suppliers’ emissions allocated for Nokia are suppliers’ Scope 1+2 emissions and 40% suppliers’ scope

3 emissions, so data is partly covering emissions beyond Tier 1. Suppliers providing transportation services for products are excluded as “emissions from transportation and distribution” are reported in a separate scope 3 category. Some suppliers provide both “purchased goods” and “capital goods” and for simplicity all their emissions are reported under purchased goods. 2015 disclosure is based on latest CDP data representing suppliers’ year 2014 emissions. We recognize this emission category does include a lot of uncertainty, as suppliers have different qualities in their own reporting and in allocating emissions to Nokia and due to the extrapolation Nokia does for data to represent 100% of Nokia spend.

8) CO<sub>2</sub>e emissions from external data centers: data is a subset of “emissions from purchased goods and services” and based on IT equipment power consumption data collected from external data center service providers and IEA country emission factors (2011 emission factors used for 2014–2015 data, average 2005–2009 emission factor for 2012–2013 calculations).

9) CO<sub>2</sub> emissions from upstream transportation and distribution: Numbers include emissions from inbound and outbound logistics. Data is based on the top 5 logistics supply partners (LSP) delivery data (tonne-km) and transportation mode. Similar CO<sub>2</sub> emission factors are used across the LSPs. Upstream emissions include emissions from transportation paid by Nokia. Nokia Technologies did not have emissions in this category in 2014–2015. We call this category typically “CO<sub>2</sub> from logistics” or “CO<sub>2</sub> from transport”.

**10)** CO<sub>2</sub> emissions from business air travel: The emissions figure has been extrapolated to cover 100% of data. In 2015, in Networks collected data was available for 95% air travel spend. The figure includes travel by externals in cases where travel cost is covered by Nokia and bookings made through Nokia's designated travel agencies. Emissions have been calculated with GHG Protocol emission factors taking into account flight length and different emission factors for long/medium/short hauls and cabin classes.

**11)** CO<sub>2</sub>e emissions from employee commuting: Nokia has conducted in the past an employee commuting survey in order to calculate the corresponding CO<sub>2</sub> emissions. The following information was required: country, how many days one works at the office/home, commuting distance, time and means of transport. 3455 employees participated in the survey from 58 different countries. 2010 data was used as the basis of the survey. The emissions were then extrapolated to correspond with all Nokia employees.

**12)** CO<sub>2</sub> emissions from upstream leased assets: Emission data from "small leased sites" has been estimated based on Nokia average consumption (in 2014) per sqm, based on measured Scope 1 and Scope 2 data. Allocations are based on different building use types. Estimated sites are typically multi-tenant buildings where energy management service and fees are covered in the rent.

**13)** CO<sub>2</sub> emissions from product use-time energy consumption, i.e. from use of sold products: 2013–

2015 emission calculations are based on products sold in high volumes, representing over 80% of the total use-time energy consumption. In 2015 measured, nominal energy data as defined by ETSI -ES 202 706 standard was available for 98% of items included in the calculation (55% in 2014). Our estimates in previous years were conservative. Calculations are based on 10 years use-time. Emission factor is the IEA global emission average (2011 value published in 2013) for 2011–2015 value. Nokia Technologies did not have emissions in this category in 2014–2015.

**14)** Biologically sequestered carbon (i.e. carbon dioxide emission from burning biomass/biofuels) and emissions from fermentation are not relevant for Nokia as we do not burn or fermentate biomass or biofuels on-site. We use biogas in fuel cells in one of our offices.

**15)** Nokia uses no Ozone Depleting Substances (ODS) in its products or production. The reported ODS figures are due to minor leakage of ODS contained in cooling systems in facilities. Annual emissions vary due to changing annual maintenance needs. ODP (Ozone Depleting Potential) = emission in kg of CFC-11 equivalent.

**16)** Renewable ("green") electricity covers different tracking instruments. Over the years, most widely used have been RES-E Guarantee of Origin certificates in Europe and Green-e RECS certificates in USA. In addition Nokia has purchased smaller amounts of supplier specific instruments and generated on-site renewable energy. Instruments used in 2014–2015 meet the eligibility criteria defined for purchased renewable electricity in GHG Protocol Scope 2 Guidance.

**17)** Water withdrawal is reported according to Global Reporting Initiative (GRI) definitions.

**18)** Recycled/reused water amount includes water recycled both for sanitary purposes and for irrigation.

**19)** Accuracy of waste data is not as high as with energy and water, as waste vendors often report amounts based on number of waste bins emptied and average weight for waste type, instead of weighing each container. Waste reporting is covering 44% of the total facility area in 2015.

**20)** Utilised waste includes waste that has been either reused, recycled or energy of it has been utilised. Remaining waste has been either sent to a landfill or incinerated without energy recovery. Composting of biowaste is recorded under recycling.

**21)** The definitions for what is reported under hazardous and non-hazardous waste have been done on a global level to keep corporate reporting simple. E.g. all discarded batteries and electric & electronic waste (WEEE) are reported globally under hazardous waste, although only different sub-categories of WEEE are defined hazardous in different countries. The actual waste treatment is always done according to local legal requirements.

**22)** 2015 recycling amount was amended from 1,610 metric tons to 1,670 metric tons with additional full-year data after reporting cut-off day for Nokia's Form 20-F in March 2015.

Social and ethics data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
<b>Employment</b>							
Number of employees, year-end situation <sup>23</sup>	58,411	48,628	54,586	55,145	55,399	55,718	
Number of new employees	6,757	6,270	9,839	5,884	9,978	6,031	
Rate of new employee hires, % <sup>24</sup>	11%	12%	19%	11%	19%	11%	
Total number of leavers	18,584	16,278	4,939	4,771	4,973	4,920	
Number of voluntary leavers	8,341	3,737	2,989	3,089	3,016	3,175	
Attrition rate of voluntary leavers <sup>24</sup>	10%	8%	6%	6%	7%	6%	⊙
Attrition rate due to involuntary leavers <sup>24</sup>	14%	18%	3%	2%	3%	2%	
Total turnover rate	-	-	10%	9%	10%	9%	
Percentage of open positions filled by internal candidates	-	-	-	38%	-	38%	
Share of employees with full-time contract	-	-	98%	99%	98%	99%	
Share of employees with permanent contracts	-	-	95%	94%	95%	95%	
Retention rates of employees who took parental leave	-	-	95%	92%	95%	91%	
<b>Training &amp; Education</b>							
Amount of training days provided by Academy <sup>25</sup>	106,800	124,600	194,300	163,600	-	-	
Average number of training hours per employee by Academy	14	19	27	21	-	-	
Average number of all training hours per employee <sup>26</sup>	-	-	-	37	-	-	
Training costs by Academy (for Nokia Technologies overall training costs), € million	-	31	35	31	35	31	
Percentage of employees with Personal Development Plan (PDP) in place	36%	68%	78%	73%	-	-	
Percentage of employees that completed a performance evaluation <sup>27</sup>	-	84%	99%	98%	99%	98%	

\* In this table data assured covers 2015 metrics for Nokia Group (Continuing operations) and Nokia Networks, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

Social and ethics data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
<b>Diversity &amp; Equal Opportunity</b>							
Share of women within workforce	19%	20%	20%	20%	20%	20%	
Share of female line managers (with one or more subordinates)	13%	15%	15%	15%	15%	15%	
Share of women within senior management	13%	13%	14%	13%	13%	12%	⊖
Share of women on the Executive management board	-	-	-	-	0%	0%	
Share of women in the Board of Directors	-	-	-	-	22% (2 of 9)	25% (2 of 8)	
Number of nationalities within workforce	-	-	130	143	130	143	
Number of nationalities in the Executive management board	-	-	-	-	5 (of 5)	4 (of 4)	
Share of non-Finnish employees within senior management	-	-	76%	75%	72%	72%	
Share of non-Finnish in the Executive management board	-	-	-	-	80%	75%	
Average age of employees in the year-end	-	-	37	38	38	38	
<b>Workplace Relations &amp; Employee Engagement</b>							
Share of employees responding to the engagement survey	87%	93%	96%	93%	94%	92%	
Employee Engagement Index (%)	73	82	86	87	86	87	⊖
<b>Occupational Health &amp; Safety <sup>28</sup></b>							
Near miss incidents reported	141	636	630	428	-	-	
Lost-time incidents of employees	101	57	56	40	-	-	
Employee work related fatalities	2	0	0	0	0	0	⊖
Contractor and sub-contractor work related fatalities	10	2	8	6	-	-	⊖

\* In this table data assured covers 2015 metrics for Nokia Networks and also Nokia Group (Continuing operations) for those metrics where Group data is available, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

Social and ethics data	Nokia Networks				Nokia Group (Continuing operations)		2015 Data assured*
	2012	2013	2014	2015	2014**	2015	
<b>Ethics</b>							
Number of concerns reported through the ethics hotline and the anonymous reporting channel	160	205	190	100	-	107	
Number of concerns reported directly to regional compliance counsel	114	85	82	116	-	118	
Number of investigations by the Ethics & Compliance Office	139	192	152	122	-	124	
Number of employees given a verbal counselling related to Code of Conduct	-	-	-	32	-	32	
Number of employees given a written warning on grounds of violation of Code of Conduct	31	16	7	18	-	18	
Number of employees dismissed on grounds of a violation of the code of conduct	28	26	22	62	-	62	
Percentage of employees who have completed the annual training on ethical business conduct (Ethical Business Training) <sup>29</sup>	86	96	98	98	97	98	⊙

Supply chain management data	Nokia Networks				Nokia Group (Continuing operations)		2015 Data assured*
	2012	2013	2014	2015	2014	2015	
Number of in-depth audits (focused on labor conditions and environment) against Nokia Supplier Requirements and SA8000	2	10	23	16	-	-	⊙
Number of on-site system audits against Nokia Supplier Requirements	57	27	25	24	-	-	⊙
Number of suppliers assessed on Corporate Responsibility in EcoVadis Sustainable Supply Management platform	-	26	107	155	-	-	⊙
Number of suppliers assessed on their climate change impact based on their CDP reporting for Nokia	66	121	141	180	-	-	
Number of suppliers that set GHG emission reduction targets (in CDP)	31	48	73	92	-	-	⊙
Number of suppliers participating in Nokia sustainability workshops and webinars	105	122	183	159	-	-	
Number of management-level supplier employees participating in Nokia sustainability workshops and webinars	133	183	256	208	-	-	
Share of smelters that have been validated as conflict-free or are active in the validation process (out of known smelters in Nokia's supply chain), %	-	55	73	83	-	-	⊙

\* In this table data assured covers 2015 metrics for Nokia Networks and also Nokia Group (Continuing operations) for those metrics where Group data is available, as well as comparison to 2014, when presented in other parts of this report. Please see more information on Independent Practitioner's Assurance Report in page 113.

\*\* Restated due to HERE being reported as Discontinued operations.

Financial data	Nokia Networks				Nokia Group (Continuing operations)		2015
	2012	2013	2014	2015	2014**	2015	Data assured*
<b>Financial data (EUR million)</b>							
Net sales	13,779	11,282	11,198	11,490	11,762	12,499	⊙
Operating profit	-795	420	1,210	1,096	1,412	1,688	⊙
Spending in R&D	2,046	1,822	1,786	1,928	1,948	2,126	⊙

\* Included in the audited financial statements. Please see Auditor's Report in page 204 in the "Nokia in 2015" Annual Report.

\*\* Restated due to HERE being reported as Discontinued operations.

## Notes

We have most of the data available for Nokia Networks, which represents the majority of the Nokia Group's Continuing operations (92% net sales, 99% of year-end employees in 2015). “-” Means we do not have data available for that particular year or scope or the metric is not applicable for that scope. For example metrics related to Board of Directors and Executive management board (Nokia Group Leadership Team) are applicable only on Group level and are not applicable for Nokia Networks.

**23)** Year-end headcount as published in financial reporting. Persons that transferred to Nokia as part of small acquisitions completed in 2014–2015 (affecting 735 employees in 2015) are included in the year-end value, but not in the other social indicators presented in the table. 2015 headcount as published in financial reporting does not include 25 employees in Nokia Technologies. However, these employees are included in the HR database and hence included in the Nokia Group-level social indicators presented in the table.

**24)** Hiring and attrition rates are calculated against average permanent headcount.

**25)** Academy is providing training for Nokia Networks employees and since 2014 also for Group Common Functions. Training provided for externals is not included in the numbers. One training day includes 7 training hours.

**26)** Calculation is including other employees than factory workers and internal employees of service companies.

**27)** For 2015 we have replaced the two processes “Performance Evaluation” (performance) and “Talent Watch” (potential) with “Annual Development Review”. The “Annual Development Review” process combines the assessments of performance and potential and results in a recommendation on the next step of development for all employees.

**28)** Cut-off day for incidents reporting is 12<sup>th</sup> January. There can be some cases, especially from contractors, reported after the cut-off day.

**29)** The completion percentage excludes new hiring done in December of the reporting year and employees that transferred to Nokia as part of small acquisitions completed in 2014–2015 (affecting 735 employees in 2015).

## Key economic and environmental data – Nokia Group (including Discontinued operations)

These figures cover key Nokia Group sustainability data for 2012–2015. The years are not directly comparable largely because of the following reasons: In 2015 Nokia sold its HERE digital mapping and location services business to a consortium of German automotive companies. The sale was completed on December 4, 2015. HERE data has been reallocated to “Discontinued Operations” in

2013–2015 figures reported below. In September 2013, Nokia announced the sale of substantially all of its Devices & Services business to Microsoft. Subsequent to the approval for the sale received in the Extraordinary General Meeting in November 2013, Nokia Group has presented Devices & Services as a discontinued business, including those items outside of the scope of the transaction;

specifically, discontinued manufacturing facilities located in Chennai, India and Masan, Republic of Korea, which was closed in fall 2014. The sale was completed on April 25, 2014.

This report covers the last four years – for longer term historical records please see Nokia’s previous reports at [www.nokia.com/people&planet](http://www.nokia.com/people&planet).

### Economic key data

	2012				2013			2014			2015		
	Nokia Group	Continuing Operations*	Discontinued Operations*	Nokia Group	Continuing Operations*	Discontinued Operations*	Nokia Group	Continuing Operations*	Discontinued Operations*	Nokia Group			
Net sales, EUR million	30,552	11,795	11,649	23,444	11,762	3,428	15,189	12,499	1,075	13,574			
Operating profit/loss, EUR million	-2,299	672	-743	-71	1,412	-1,778	-366	1,688	97	1,785			
Research & development, EUR million	4,782	1,970	1,778	3,749	1,948	899	2,847	2,126	498	2,624			
Paid direct income taxes, EUR million	478	209	177	386	313	323	636	262	28	290			

### Environmental key data <sup>1</sup>

Energy consumption, GWh	1,072	562	363	925	491	144	635	458	27	485
Direct CO <sub>2</sub> e from facilities, metric tons	22,200	22,000	8,200	30,200	8,400	3,700	12,100	5,800	600	6,400
Indirect CO <sub>2</sub> e from facilities energy consumption, market-based, metric tons <sup>2</sup>	-	-	-	-	177,900	7,600	185,500	158,500	15,900	174,400
Indirect CO <sub>2</sub> e from facilities energy consumption, location-based, metric tons, <sup>2</sup>	498,800	259,500	169,600	429,100	236,900	70,400	307,300	225,500	15,500	241,000
Water withdrawal, thousand m <sup>3</sup>	1,689	576	1,052	1,628	533	327	860	383	37	420
Total waste, metric tons	38,500	6,900	22,000	28,900	7,000	6,300	13,300	4,800	100	4,900
Total waste utilisation, %	96%	91%	96%	95%	95%	92%	94%	92%	22%	91%

\*Continuing and Discontinued Operations restated due to HERE being reported as Discontinued Operations.



## Notes

**1)** In addition to reallocating HERE data to Discontinued operations, there are some minor updates for 2014 energy, greenhouse gas, waste and water figures, compared with values published in 2014 People and Planet report. Changes are due to actual data received for some estimated values used in original 2014 reporting and some corrections done as part of internal data quality improvements. For Continuing operations facility energy data and related greenhouse gas emissions data is typically (but not as a strict rule) from sites over 3000 m<sup>2</sup>, covering at least 80% of facilities' total net internal area. 2015 waste data is covering 44% of facility area. The excluded "small sites" are typically multi-tenant buildings where energy, water and waste consumption fees are covered in the rent. Emission data from excluded sites has been estimated based on Nokia averages and reported under "Scope 3, Upstream leased assets", (see detailed data for Continuing operations). Former Nokia Devices and Services data is covering 100% of the facility area.

**2)** Market-based and location-based indirect CO<sub>2</sub>e emissions: dual reporting as specified by Greenhouse Gas Protocol, Scope 2 Guidance, An amendment to the GHG Protocol Corporate Standard, by World Resource Institute (WRI), 2015. Location-based method quantifies scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries. The market-based Scope 2 accounting method quantifies emissions based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with instruments.



Find out more about sustainability at Nokia and download our reports  
[www.nokia.com/people&planet](http://www.nokia.com/people&planet)