



CORPORATE SUSTAINABILITY REPORT 2019





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NOKIAN TYRES IN A NUTSHELL

Nokian Tyres develops and manufactures premium tires for people who value safety, sustainability, and innovative products. We offer peace of mind in all conditions and instill our Scandinavian heritage in every tire that we make.

Our company designs tires for passenger cars, trucks, and heavy machinery and our Vianor chain provides tire and car services. In 2019, the company's net sales were approximately EUR 1.6 billion and it employed some 4,700 people. Nokian Tyres is listed on Nasdaq Helsinki. You can read about the company's ownership structure [here](#).

A global company

In 2019, Nokian Tyres' products were sold in 61 countries. Our primary brand is Nokian Hakkapeliitta. Our growth is supported by the branded distribution network, which includes the Vianor and Vianor Partner chains, Nokian Tyres Authorized Dealers (NAD) network, and the N-Tyre network.

At the end of 2019, the Vianor network included a total of 1,170 service centers in 19 countries. The NAD network operated in 27 countries with 2,182 stores. The N-Tyre network covered 133 stores in Russia, Kazakhstan, and Belarus.

Nokian Tyres has three factories: one in Finland, one in Russia, and one in United States, which was opened in October 2019 and where the commercial production commenced in January 2020.

Nokian Tyres has its own sales companies in Finland, Sweden, Norway, Russia, Ukraine, Kazakhstan, Germany, Switzerland, the Czech Republic, Poland, Belarus, Canada, the United States, and China. We have obtained quality and environmental certifications for our production facilities in Finland and Russia as well as for the Swedish sales company.



WE ARE COMMITTED TO REDUCING CLIMATE CHANGE



” In 2019, we assessed the risks and opportunities of climate-related changes aligned with the recommendations of TCFD.

Sustainability has never been more important than it is now, as climate change increasingly dominates discussions. Nokian Tyres is committed to helping save the world's winters for tomorrow's generations: in 2019, we set stricter targets for reducing greenhouse gas emissions.

In 2019, we further strengthened our commitment to sustainability. 'Leader in sustainability' was added as a differentiator in our strategy. We are committed to the UN Global Compact, and joined the General Platform for Sustainable Natural Rubber and set our own strict targets to combat global warming as a part of the Science Based Targets initiative.

We were again included in the DJSI World and the more strictly defined DJSI Europe, which means we are among the top 10% of the most sustainable listed companies in the world.

Safety is a top priority

Improving safety in the workplace has been one of our key targets for several years. So I am very proud to state that following a lot of dedication and hard work, we have managed to significantly decrease accidents at the workplace. Our Lost Time Injury Frequency dropped to 4.3. In Heavy Tyres, we had no lost-time injuries for over a year.

We are also committed to ensuring the safety of our partner and supplier employees around the world. Auditing our rubber processor plants has been an important way of improving the labor rights of the workers.

Being a leader in sustainability means admitting when you fall short of goals. This year, our VOC (volatile organic compounds) emissions increased at our Finnish factory. We are actively working to resolve this.

In 2019, we assessed the risks and opportunities of climate-related changes, aligned with the recommendations of Task Force on Climate-related Financial Disclosures.

Our work continues, and we are currently defining new sustainability goals for beyond 2020. They will be ambitious, as leadership in sustainability entails.

We want to be seen as the sustainability benchmark in the industry – creating added value for people, the economy, and the environment.

Hille Korhonen
President & CEO

THIS IS WHAT WE ARE PROUD OF

LEADER IN SUSTAINABILITY

We were again included in the Dow Jones Sustainability Index, and rose to the Silver Class in the RobecoSAM Sustainability Yearbook 2019.

LESS ACCIDENTS

Our injury frequency rate LTIF dropped 51% from last year.

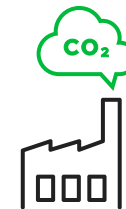
SUSTAINABLE NATURAL RUBBER

We have audited 90% of our major rubber processing partners.



LESS CO₂ EMISSIONS

We have reduced CO₂ emissions from production by 44% in six years.

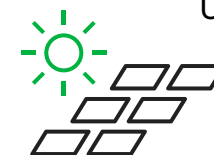


RECYCLING

100% of production waste was recycled in Finland.

WE CARE

Our team did over 800 hours of community work in the US.



MORE SOLAR ENERGY

We installed solar panels in the parking lot of our new US factory.

FUNDAMENTALS

Management of sustainability at
Nokian Tyres is based on our values of
team spirit, entrepreneurship, and inventiveness.

MANAGING SUSTAINABILITY

For Nokian Tyres, sustainability means sustainable product development, safe and eco-friendly products, and high standards of quality in everything that we do. Management of sustainability at Nokian Tyres is based on our values of team spirit, entrepreneurship, and inventiveness.

Sustainability is an essential part of our daily work and leadership. Through sustainable business practices and financial success, we can offer security, work and well-being for our personnel and contribute to the well-being of local communities, while also considering investors, customers, and other stakeholders.

[Read more about our stakeholders.](#)

Nokian Tyres' business is guided by the ethical principles presented in the board-approved Code of Conduct, which was revised in 2018. The document describes the operating culture at Nokian Tyres, generally accepted courses of action, and our commitment to working in accordance with the legislation and regulations. The purpose of the Code of Conduct is to assist people in making the ethically right decisions in their daily work throughout the Nokian Tyres organization, and we expect all to adhere to it. Starting from 2018, taking an eLearning-course on all aspects of the

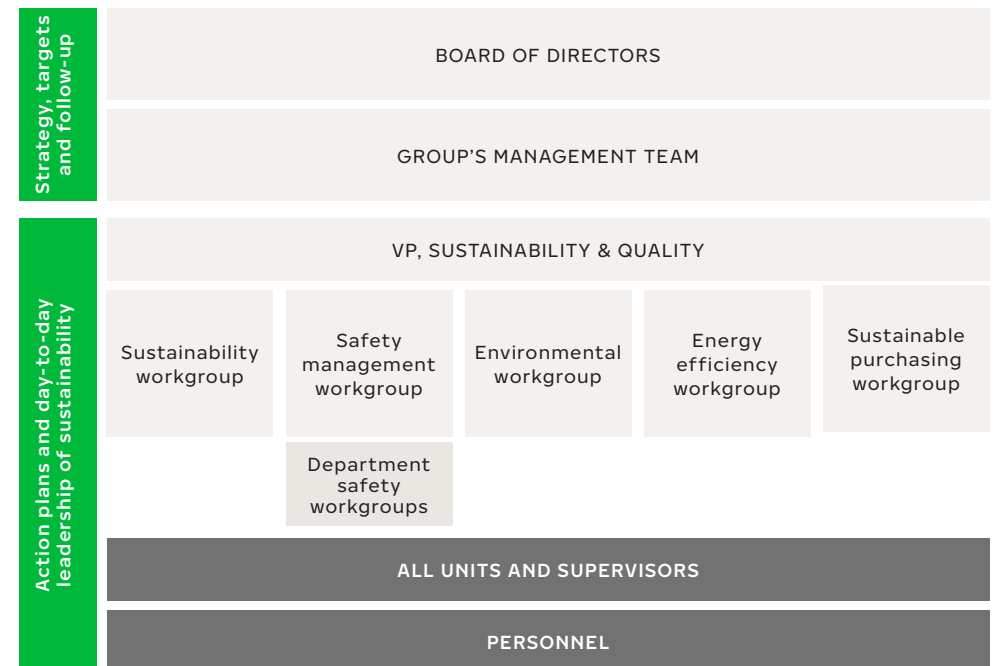
Code of Conduct and the anti-corruption guidelines has been required from all our personnel, including top management. By the end of 2019, 93% of our personnel had completed it.

[Read more about how we manage sustainability at Nokian Tyres.](#)

The graph "Sustainability management at Nokian Tyres" describes the most important standards and policies that guide our work in sustainability (page 10).

The UN's 17 Sustainable Development Goals (SDGs) are created to promote prosperity while protecting the environment. In 2018, we determined seven SDG's, which are important for Nokian Tyres. These goals provide a tool to examine sustainable business in the long term. We have integrated these SDG's into the chart "Nokian Tyres' sustainability goals for 2020 and their progress" (page 8).

LEADERSHIP OF NOKIAN TYRES' CORPORATE SUSTAINABILITY



NOKIAN TYRES' SUSTAINABILITY GOALS FOR 2020 AND THEIR PROGRESS

Area of sustainability	Goal	Progress in 2019
MANAGING SUSTAINABILITY 	We will improve our Dow Jones Sustainability Index assessment.	- We were again selected to Dow Jones' DJSI World sustainability index and to the more strictly defined DJSI Europe index. - We rose to the Silver Class in the RobecoSAM Sustainability Yearbook 2019.
PRODUCTS  	- Reducing the rolling resistance of the product range by 7% from 2013 to 2020, thereby creating a decrease of 500 million kg in CO₂ emissions from traffic. - Each new product generation will have a lower rolling resistance compared to the previous one.	- We reached the goal already in 2017. In 2019, the rolling resistance remained on the level of 2018: 8.3% lower compared to 2013 (8.2% in 2018). - We have launched new products with a lower rolling resistance than the previous products.
PEOPLE  	- Occupational health and safety: A 70% improvement in the LTIF injury frequency rate tracking from 2015 to 2020. - Everyone gets to go home healthy every day.	- The LTIF injury frequency improved and was 4.3 in 2019 (13.9 in 2015). This is a 69% improvement compared to 2015. - No severe accidents occurred in the Group during the year. - In 2019, Nokian Heavy Tyres achieved a milestone in industrial safety: a year with zero occupational accidents leading to absences.
ENVIRONMENT    	- Energy efficient production: decreasing energy consumption annually by 1% from 2016 to 2020. - A 20% reduction in CO₂ emissions from production (kg CO₂ kg product) from 2013 to 2020 (scope 1 and scope 2). - Reducing the use of municipal water by 25% compared to the 2013 baseline (m³/product ton). - Utilizing 100% of production waste and taking no production waste to landfills; Finland 2016, Russia 2020. - Zero environmental accidents.	- No reduction in 2019. Energy consumption in production increased by 0.4% from the previous year. However, the total energy reduction was 10.4% between 2016 and 2019. - The actual reduction of CO₂ emissions from production was 44% in 2013-2019. - In 2019, the consumption of municipal water was approximately 38% lower than in 2013, which means that the target was met and exceeded. - In Nokia, Finland, 100% of production waste was recycled (100% in 2018) and the recycling rate was 90% in Vsevolozhsk, Russia. (88% in 2018). - No environmental accidents occurred in 2019. - In 2019, we set our strict Science Based Targets to lower greenhouse gas emissions in line with climate science. The proposal is in the validation process.
ECONOMY	Our financial target is to earn good returns for our shareholders: dividend above 50% of net earnings.	In 2019, we paid a dividend of EUR 1.58 per share (EUR 1.56 in 2018), which was 73.9% of our net earnings (2018: 96.7%).
SUPPLY CHAIN 	- All of our raw material suppliers will have conducted a sustainability self-assessment in 2017. - We will have audited all of our major rubber processor partners (at least 80% of our natural rubber purchasing volume) by 2020. - At least two thirds of our raw material suppliers will have ISO 14001 certification in 2020.	89.6% of our raw material suppliers have responded to the sustainability self-assessment survey (86.8% in 2018). - We achieved our goal of auditing at least 80% of our major rubber processor partners. By the end of 2019, we had audited 90%. - In 2019, 73.3% of our raw material suppliers had ISO 14001 certification (72% in 2018).

Handling issues

As part of our Code of Conduct, we have a reporting procedure that instructs all of our employees to report any identified or suspected internal or external misuse or violation. In reporting a suspected misuse or violation, the person is advised to contact either his/her supervisor, Internal Audit, Legal & Compliance, or the HR unit. We strongly encourage our personnel to report any potential violations of ethical guidelines and laws, so that we can investigate and handle each case. It is also possible to make a report through the Whistleblow channel. The same channel is available to external stakeholders by email at whistleblow@nokiantyres.com.

Our Whistleblowing process was updated in December 2018 and additional administrative improvements were implemented during 2019. Nokian Tyres' Whistleblowing committee was formed in 2019. The committee consists of persons responsible for internal audit, legal affairs, and HR matters within the Nokian Tyres group. The Chief Audit Executive coordinates the Whistleblowing process as well as handling of any compliance breaches found during the investigations or in other related processes at the Group level. All material findings and general statistics are reported to The Audit Committee of the Board of Directors.

In 2019, altogether 7 suspected misconducts were reported on the official channel or raised to the Group's awareness via other channels. Three of the cases resulted in internal disciplinary actions and/or demanded clarifying the local practices. One issue is still under investigation. In three cases, no misconduct has been identified.

Materiality assessment

In 2018, we conducted a sustainability assessment together with our most important internal and external stakeholders. They defined their individual material topics, risks, and opportunities pertaining to Nokian Tyres' sustainability efforts. After analyzing the results of the assessment with our sustainability experts, nine topics were selected as material. Our aim is to conduct a materiality assessment every three years.

[Read more about our nine material topics.](#)

The defined material topics relate to three themes that are covered in this report:

- Sustainable natural rubber
- Road safety
- Climate change: reducing greenhouse gas emissions

Sustainable natural rubber

Natural rubber is one of the key raw materials of tires. In 2017, the EU declared natural rubber as one of the critical raw materials in terms of both economic importance and supply risk.

The increasing global demand for natural rubber causes increased pressure on the relatively limited geographical area in which rubber trees grow: mainly in Southeast Asia and some parts of Africa. Nokian Tyres takes part in initiatives on natural rubber sustainability and, in 2019, we joined the General Platform for Sustainable Natural Rubber (GPSNR).

Nokian Tyres is also committed to finding indicators for better managing human rights in the supply chain. In 2019, our procurement unit created a classification model for Nokian Tyres' suppliers to help us assess the sustainability in our supply chain.

[Read more: Human rights in the supply chain.](#)

Road safety

Product safety is the most important special area of sustainability with regard to our company as well as our customers and end users. We put constant effort in the development and functional testing of tires' safety characteristics. Extreme weather phenomena caused by climate change

and varying road conditions increase the importance of safe tires and drive the demand for all-season and all-weather tires.

As a leading manufacturer of studded and non-studded winter tires, Nokian Tyres has called for a mandatory ice grip marking for winter tires. In northern conditions, ice grip is the most important property for winter tires. Until 2019, the markings only included a wet grip rating. As the result of years of work, the ice grip marking is now being included into the EU Tyre Label. The ice grip test is currently undergoing standardization at the International Organization for Standardization (ISO). The new label will enter into force in May 2021.

[Read more: Improving road safety is a priority.](#)

Climate change: reducing greenhouse gas emissions

The most significant environmental impacts during the use of a tire are caused by the vehicle's fuel consumption. Lower fuel consumption reduces the greenhouse gases (GHG) released into the air. Tires with low rolling resistance can save fuel, thereby reducing CO₂ emissions. Through determined product development efforts, we have managed to reduce the rolling resistance of our tires by 8% on average compared to the levels of 2013.

[Read more: Lower rolling resistance – less CO₂ emissions.](#)

We calculate the GHG emissions from our operations annually, including emissions from the transport of raw materials to us, and reduce them systematically as planned. An EU directive requires corporations to carry out energy audits and other energy-efficiency measures. By increasing the proportion of renewable energy sources, we can reduce our GHG emissions from energy consumption. The biomass boiler plant has significantly reduced our GHG emissions in Nokia, Finland. In 2019, we started installing solar panels at our US factory.

Most greenhouse gas emissions connected to tires, however, are outside of our direct influence. Production of tire raw materials causes roughly four times more CO₂ emissions than the production of tires. Approximately 90% of a tires' CO₂ emissions are created during its use. In 2019, we have included scope 3 emissions in our sustainability report and our aim is to start encouraging our raw material suppliers to lower their CO₂ emissions, too. This would lower CO₂ emissions across the entire supply chain.

SUSTAINABILITY MANAGEMENT AT NOKIAN TYRES

Sustainability is a part of our company's culture, strategy and goals. The management of sustainability is based on our values of team spirit, entrepreneurship and inventiveness.

Our Sustainability Management is guided by Nokian Tyres Code of Conduct, Whistleblowing and policies such as Environment, Safety and Quality Policy, Group Treasury Policy, Group Credit Policy, Procurement Policy, Disclosure Policy, Data Protection Policy, and equality- and diversity policies based on local regulations.

AREAS OF SUSTAINABILITY MANAGEMENT



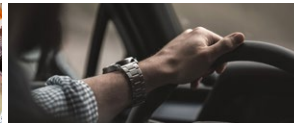
Products / R&D

We develop and manufacture ecofriendly, safe and high-quality tires that reach their destination safely even under demanding conditions.



People

We are committed to acting in the manner required by the UN's Guiding Principles for Business and Human Rights, and to following the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. We respect human rights and treat all individuals equally.



Economy

Through profitable growth, we enable the further development of our operations and ensure financial security, work and well-being for our stakeholders.



Environment

We are committed to act in a way that does not harm the environment or people.



Procurement

We are committed to sustainable procurement and further developing sustainability in our supply chain.

ESSENTIAL STANDARDS, GROUP POLICIES AND PROCEDURES RELATED TO SUSTAINABILITY

Tire/vehicle safety regulations, such as United Nations tyre regulations, various tire labelling (consumer information) regulations and standards, such as EU Tyre Labelling regulation, chemical regulation, Nokian Tyres tire testing policy, UN Global Compact.

Policies and procedures related to safety, well-being, hiring, induction, people reviews and competence development, human rights and equality (global policy during 2020). ISO 45001, Travel Policy, UN Protection Policy, UN Global Compact.

Stock exchange rules, IFRS, Corporate Governance, risk management, UN Global Compact.

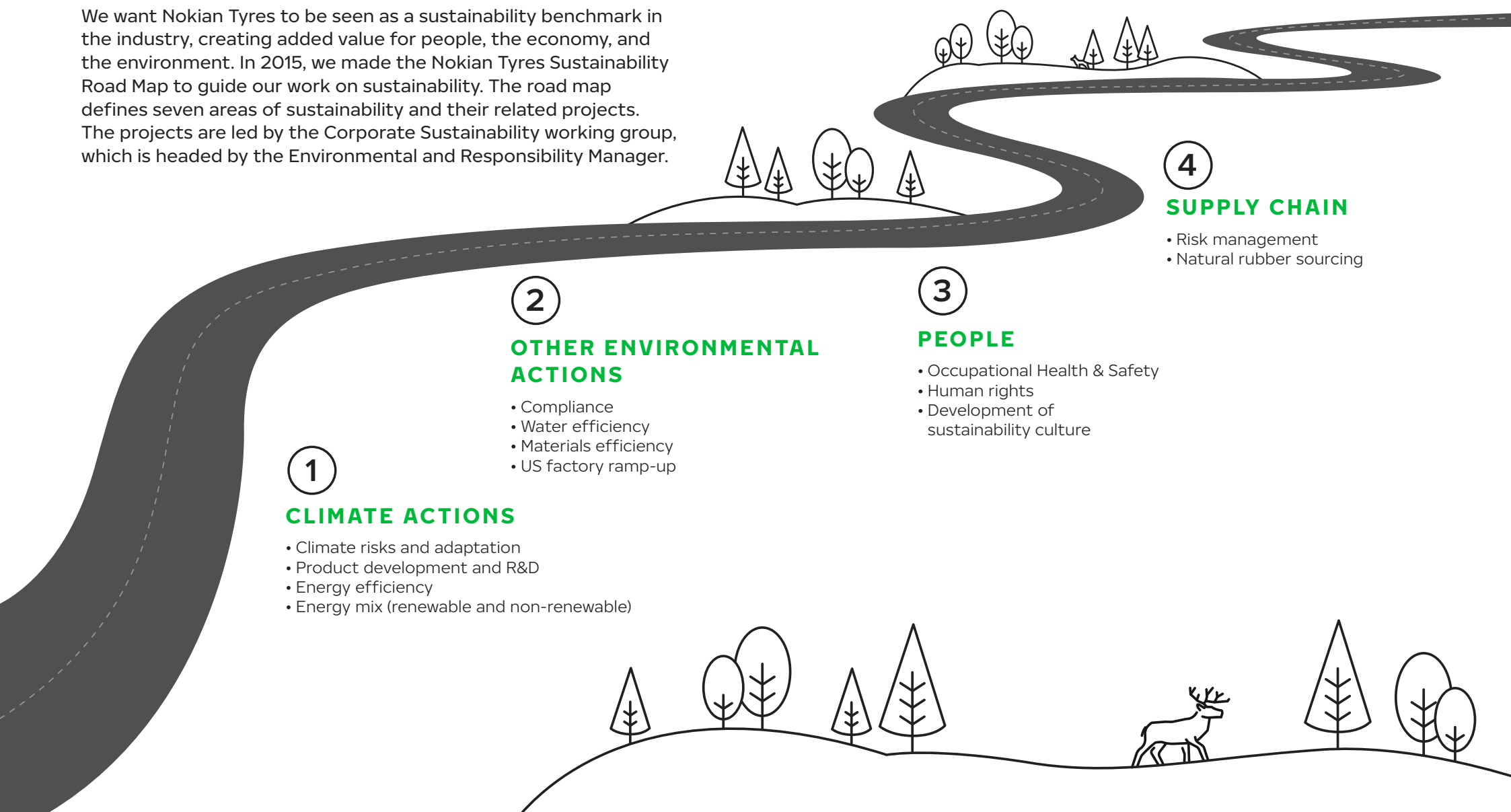
ISO 14001, IATF 16949, Environmental Management, Chemical Safety Management, Responsible Care program, Science Based Targets, UN Global Compact.

Procurement policy, Supplier Code of Conduct, ISO 9001, ISO 14001, UN Global Compact.

LOCAL GUIDELINES AND PROCEDURES

SUSTAINABILITY ROAD MAP

We want Nokian Tyres to be seen as a sustainability benchmark in the industry, creating added value for people, the economy, and the environment. In 2015, we made the Nokian Tyres Sustainability Road Map to guide our work on sustainability. The road map defines seven areas of sustainability and their related projects. The projects are led by the Corporate Sustainability working group, which is headed by the Environmental and Responsibility Manager.



1

CLIMATE ACTIONS

- Climate risks and adaptation
- Product development and R&D
- Energy efficiency
- Energy mix (renewable and non-renewable)

2

OTHER ENVIRONMENTAL ACTIONS

- Compliance
- Water efficiency
- Materials efficiency
- US factory ramp-up

3

PEOPLE

- Occupational Health & Safety
- Human rights
- Development of sustainability culture

4

SUPPLY CHAIN

- Risk management
- Natural rubber sourcing

OUR VALUES GUIDE US

Inventiveness

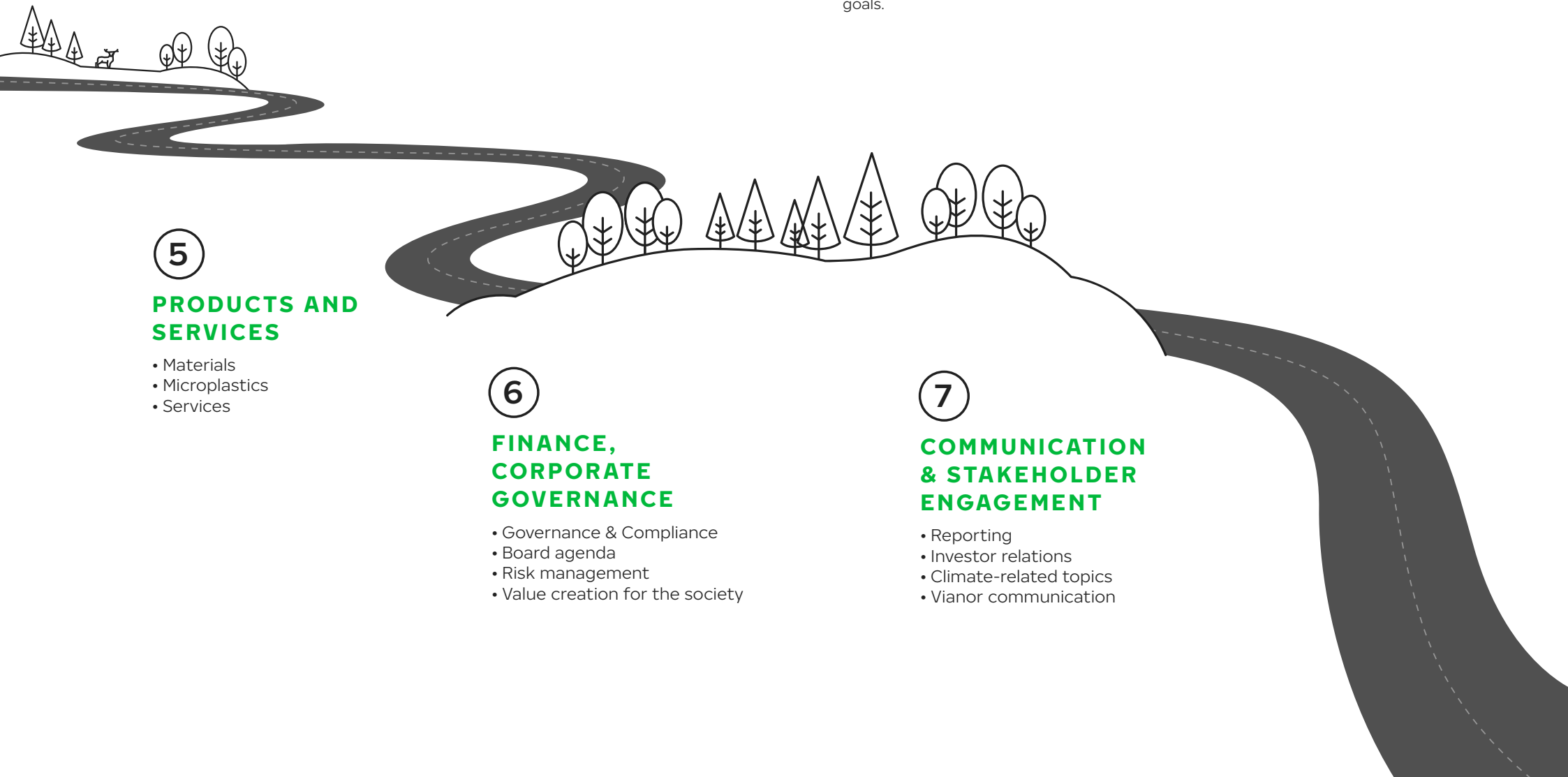
We always find solutions and opportunities.

Entrepreneurship

We take ownership to reach our ambitious goals.

Team Spirit

We succeed together.



5

PRODUCTS AND SERVICES

- Materials
- Microplastics
- Services

6

FINANCE, CORPORATE GOVERNANCE

- Governance & Compliance
- Board agenda
- Risk management
- Value creation for the society

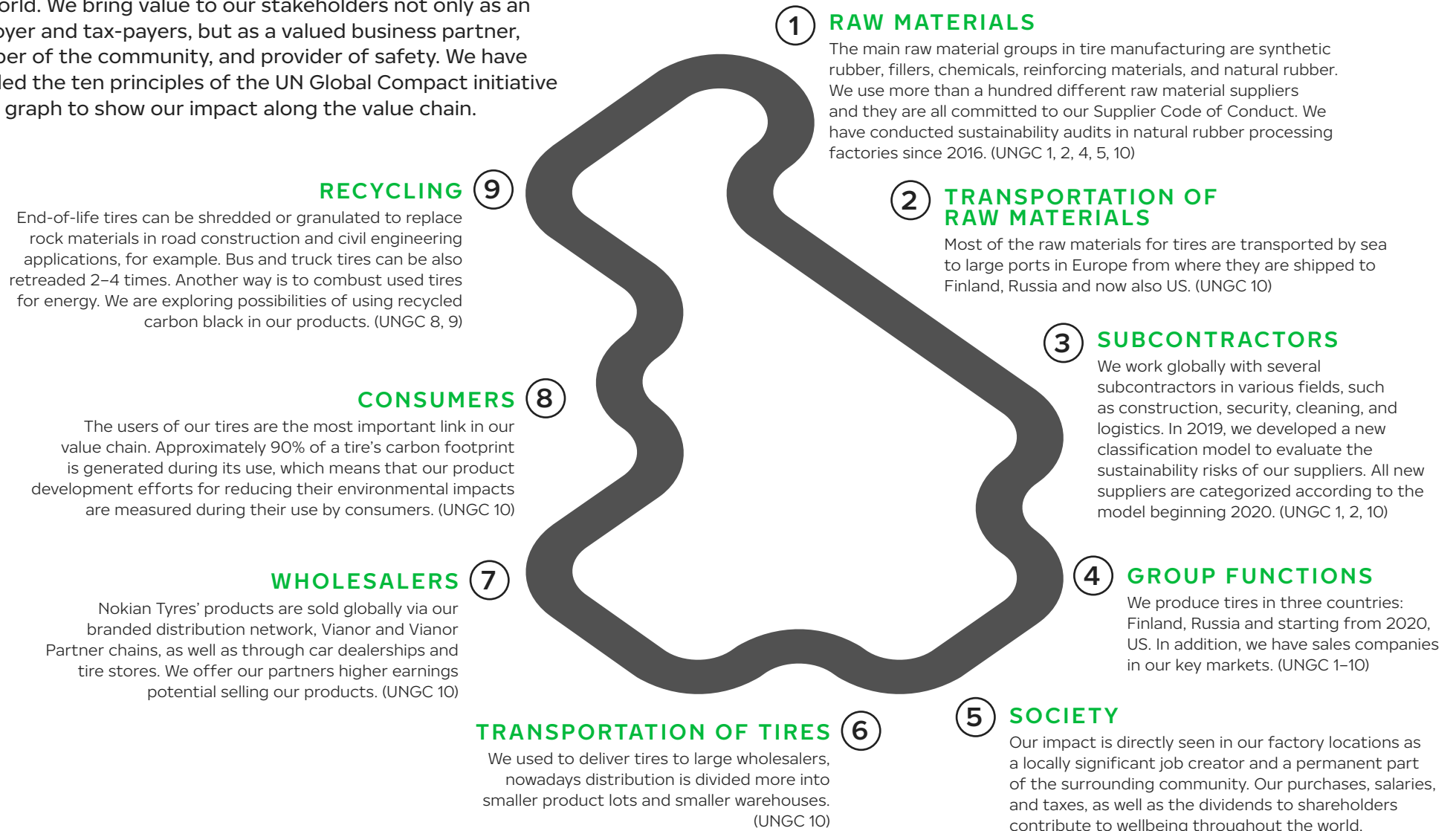
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COMMUNICATION & STAKEHOLDER ENGAGEMENT

- Reporting
- Investor relations
- Climate-related topics
- Vianor communication

NOKIAN TYRES VALUE CHAIN

A tire is a global product whose value chain extends throughout the world. We bring value to our stakeholders not only as an employer and tax-payers, but as a valued business partner, member of the community, and provider of safety. We have included the ten principles of the UN Global Compact initiative in the graph to show our impact along the value chain.



NOKIAN TYRES AS A PART OF SOCIETY

Nokian Tyres' objective is to create value for its various stakeholders, such as shareholders, customers, consumers, and our personnel. We want to meet the stakeholder expectations. Through sustainable business practices and financial success, we can offer security, work and well-being for our personnel and contribute to the well-being of local communities.

You can read more about our financial targets and key figures in our [Financial Review 2019](#).

Nokian Tyres contributes to society and communities as a responsible employer and through the fair payment of salaries and taxes. We directly employ some 4,700 people around the world. When we include all of our subcontractors, our role as a job creator becomes even more significant. Our tire factories are significant employers. The salaries and taxes that we pay support the structures of society and improve the quality of life for thousands of people.

The Group's tax rate in 2019 was -18.7% (18.4% in 2018). The adjusted tax rate excluding a tax refund of EUR 113.7 million concerning the tax disputes from 2007–2011 was 15%. The tax rate is positively affected by tax incentives in Russia, which are valid until approximately 2022. The estimated

INCOME TAX EXPENSE

Region	M€ 2019
Nordic countries	-93*
Russia and Asia	27.8
Other Europe	-1.8
North America	-0.8
Other countries	4.7

*Tax expense was 20,7 M€ excluding a tax refund of 113.7 M€

operational tax rate is expected to be at the level of 18% for 2020.

In its decision-making and administration, Nokian Tyres adheres to the Finnish Limited Liability Companies Act, the Finnish Securities Markets Act and the rules issued by Nasdaq Helsinki Ltd, Nokian Tyres' Articles of Association, and the Finnish Corporate Governance Code 2020 for listed companies. Nokian Tyres complies with the code without exceptions. The code is published at www.cgfinland.fi/en/.

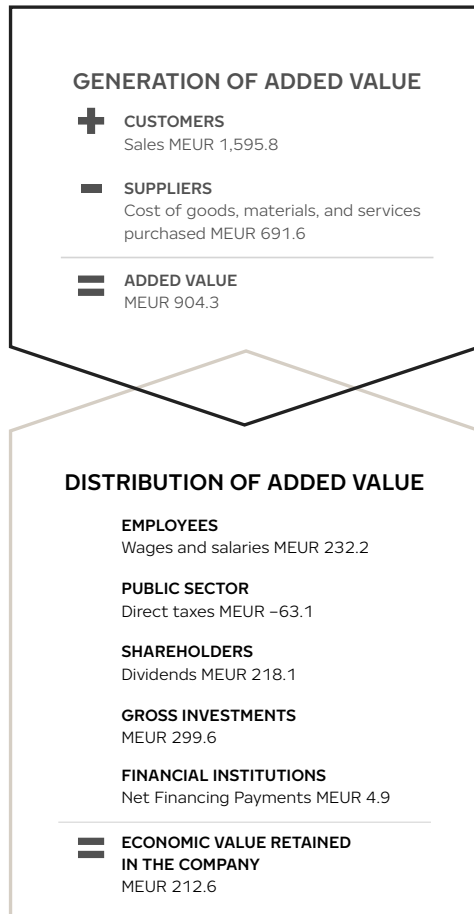
We are included in the OMX GES Sustainability Finland GI index, which provides transparent, objective and reliable information for making responsible investments. The companies are selected for the index based on their compliance with the requirements that focus on the management of environmental, social, and corporate governance (ESG). For the third consecutive year, we were also included in

OUR AMBITIONS

Nordic countries: We are the market leader in selected segments in the Nordic countries	Russia: We are the market leader in selected segments in Russia
Central Europe: We increase our sales by 50% in Central Europe in five years	North America: We double our sales in North America in five years
All major winter tire markets: Our tires are available on all major winter tire markets.	Vianor: Targeting +3% EBITDA of Nokian Tyres-owned Vianor by the end of 2019. This target was reached in 2018.
Heavy Tyres: We increase the sales of Heavy Tyres by 50% in four years.	

FINANCIAL TARGETS 2019–2021

Growing faster than the market: Above 5% CAGR with comparable currencies	Healthy profitability: EBIT at the level of 22%	Good returns for our shareholders: Dividend above 50% of net earnings
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the prestigious Dow Jones Sustainability Index. We are also included in the STOXX Global ESG Leaders and FTSE4Good indices.

In May 2019, Nokian Tyres signed a loan agreement linked to sustainability with the Finnish OP Corporate Bank. The margin of the EUR 100 million loan will increase or decrease dependent on Nokian Tyres meeting three sustainability key performance indicators:

1. Commitment to the indicators defined according to the Science Based Targets initiative, which has been created to lower greenhouse gas emissions.
2. Auditing the human and labor rights in natural rubber processing plants.
3. Reducing workplace accidents.

Concrete targets linked to financing help the financiers to have a meaningful discussion on sustainability and support the progress of these targets together with clients.

Nokian Tyres has a Disclosure Policy that describes the key processes related to Nokian Tyres' external communications as well as the main principles that Nokian Tyres follows when communicating with the capital markets and media. You can read about our communication principles [here](#).

Risk management

Nokian Tyres has adopted a risk management policy, approved by the Board of Directors, which supports the achievement of strategic goals and ensures the business continuity. The Group's risk management policy focuses on managing both the risks pertaining to business opportunities and the risks affecting the achievement of the Group's goals in the changing operating environment. At Nokian Tyres, Corporate Risk Management (CRM) also includes the sustainability aspects. Nokian Tyres detailed the overall business risks and risk management in the [Corporate Governance Statement](#).

For the first time, climate change-related factors were included in the risks. For example, the following risks could potentially have an impact on Nokian Tyres' development:

- Nokian Tyres is subject to risks related to consumer confidence and macroeconomic and geopolitical conditions. Political uncertainties may cause serious disruption and additional trade barriers and affect the company's sales and credit risk. Economic downturns may increase trade customers' payment problems and Nokian Tyres may need to recognize impairment of trade receivables.

- The tire wholesale and retail landscape is evolving to meet changing consumer needs. New technologies are fueling this with increasing digitalization. Failure to adapt to the changes in the sales channel could have an adverse effect on Nokian Tyres' financial performance.
- Nokian Tyres' success is dependent on its ability to innovate and develop new products and services that appeal to its customers and consumers. Despite extensive testing of its products, product quality issues and failure to meet demands of performance and safety could harm Nokian Tyres' reputation and have an adverse effect on its financial performance.
- Nokian Tyres' production facilities are located in Finland, Russia, and the United States. Any unexpected production or delivery breaks at these facilities would have a negative impact on the company's business. Interruptions in logistics could have a significant impact on peak season sales.
- Significant fluctuations in raw material prices may impact margins. Nokian Tyres sources natural rubber from producers in countries such as Indonesia and Malaysia. Although Nokian Tyres has policies such as the Supplier Code of Conduct and established processes to

monitor the working conditions, it cannot fully control the actions of its suppliers. The violation of laws, regulations or standards by raw material producers, or their divergence from practices generally accepted as ethical in the European Union or the international community, could have a material adverse effect on Nokian Tyres' reputation.

- Tire industry can be subject to risks caused by climate change, such as changes in consumer tire preferences, regulatory changes or the impact of extreme weather events on natural rubber producers. Nokian Tyres is committed to reducing GHG emissions from its operations in order to combat climate change. Nokian Tyres calculates the GHG emissions from its operations annually and reduces them systematically. More detailed analysis on Nokian Tyres' climate change related risks and opportunities has been provided in Nokian Tyres' Non-Financial Reporting Statement for 2019.
- Foreign exchange risk consists of transaction risk and translation risk. The most significant currency risks arise from the Russian ruble, the Swedish and Norwegian krona, and the US and Canadian dollar. Approximately 60% of the Group's sales are generated outside of the euro-zone.

” Tire industry can be subject to risks caused by climate change, such as changes in consumer tire preferences, regulatory changes or impact of extreme weather events on natural rubber producers.

- In May 2017, the Finnish Financial Supervisory Authority filed a request for investigation with the National Bureau of Investigation regarding possible securities market offences. In March 2019, the police moved the suspicions of securities markets offences to consideration of charges. The suspects have denied any involvement in criminal activity.

Nokian Tyres' risk analysis also pays special attention to corporate social responsibility risks, the most significant of which are related to the company's brand image and product quality. Analyses and projects related to information security, data protection, and customer information are continuously a special focus area.

A global company with local impacts

Corporate philanthropy is our company's way of giving back to our community locally, regionally, nationally, and internationally. Donating our time, products, services, and money to charities and nonprofits helps us to build trust with our communities, consumers, and other companies as well as to improve our employee engagement.

Our mission is to offer peace of mind in all conditions. Our approach to philanthropy mirrors our mission, entrepreneurial and inventive company culture, and sustainable way of doing business. We do not support any governmental, political, or religious entities.



” In 2019, the Dayton factory’s launch team performed over 800 combined hours of community service in the first month of its training program.

We offer our resources to projects based on the following three categories:

1. ROAD SAFETY

It is our responsibility to promote safe and smooth transportation.

2. LOCAL COMMUNITIES

We focus on supporting special community and environment projects in the areas where we operate.

3. INVENTIVENESS & ENTREPRENEURSHIP

For improving the equal opportunities for youth, we support entrepreneurial and inventive projects with educational institutions of various levels, in line with our company culture, the Hakkapeliitta Spirit.

In 2019, we continued to support the Safety on the road education for local school children in Nokia, Finland, and donated books for safety education. We also continued our local support for the global FIA Action for Road Safety in Finland, where it is organized by Finnish AKK under the name of “Turvassa tiellä” (“Safe on the road”).

In the beginning of 2019, we organized an Eco Challenge in Russia and emptied illegal tire dumps. As a result of joint efforts by Nokian Tyres and the Foundation of

Environmental Management, 500 metric tons of used tires have been transferred to recycling facilities since the launch of the Eco Challenge. The aim of the project was to increase public awareness of tire disposal, as the recycling rate in Russia is still low.

In 2018, Nokian Tyres set up a donations committee in Dayton, Tennessee, where the company’s first US factory was being constructed. The company also has donations committees in Nashville and in Colchester. In 2019, the Nashville committee made a donation to, among other things, the Tennessee State University’s scholarship fund, in order to support educational efforts at the Nashville-based school. The committee also contributed funds and food to United Way’s Give Thanks food drive, which fed families in need for the Thanksgiving holiday.

In 2019, the factory’s launch team performed over 800 combined hours of community service during the first month of its training program. The company also announced the Nokian Tyres Road to Sustainable Success, a three-pronged community outreach program that supports local education in Southeast Tennessee, provides scholarships for high-achieving students, and advocates for sustainability in the region.

Partnerships and sponsoring

Nokian Tyres locally assists and supports organizations and events that suit the company culture and brand. We continuously work with various organizations in places where we employ people.

Our long-term partnership with the International Orienteering Federation continues also in 2020. Our agreement provides us with high visibility during the annual World Orienteering Championships and World Cup events. Nokian Tyres also actively participated in the World Orienteering Day promoting the sustainable outdoor activity.

Nokian Tyres became the title sponsor for the first ever Finnish IRONMAN race. The Nokian Tyres IRONMAN 70.3 Finland event took place in Lahti, Finland on June 30, 2018. This high-energy sport matches our values that promote mobility and an active lifestyle while supporting the company's brand visibility in Finland as well as internationally.

Succeeding under exceptionally demanding conditions through cleverness and relentlessness is also something found in the Swamp Soccer World Championships, which takes place annually in Hyrnsalmi, Finland. Nokian Tyres has been the title sponsor of the championships for more than 10 years.

In 2019, Nokian Tyres served for the first time as a major sponsor of the Colorado Classic, a premier women's cycling race in the U.S. The event was celebrating its first year as a standalone women's race after previously hosting a men's competition as well. In December, Nokian Tyres sponsored the Birds of Prey FIS Ski World Cup event, which took place in Beaver Creek, Colorado.

Nokian Tyres and POWDR Corp ski resorts began their collaboration in 2017 and have enjoyed two seasons in partnership together. While hosting product launch events at POWDR resorts, the co-operation has also enabled us to educate resort guests about tire and road safety.

In 2019, Nokian Tyres also sponsored the ski marathon TOKSOVO CUP in the Leningrad region in Russia. During the event, all visitors were offered a chance to get their tire tread depth measured and given recommendations about the need to change tires.



” Nokian Tyres became the title sponsor for the first ever Finnish IRONMAN race. The high-energy sport triathlon matches our values that promote mobility and an active lifestyle.

A wide-angle landscape photograph of a Norwegian fjord. In the foreground, a calm body of water reflects the sky. A small peninsula with a few red-roofed houses and a road juts into the water. The middle ground shows a lush green valley with scattered farmhouses and fields. In the background, towering, rugged mountains with patches of snow rise steeply under a cloudy sky. The overall tone is serene and majestic.

CLIMATE AND THE ENVIRONMENT

We are committed to
saving winters for the
future generations.

OUR GOAL IS TO MANAGE THE ENVIRONMENTAL IMPACTS

Nokian Tyres has uncompromising respect for the environmental and safety aspects, as well as for ensuring high quality and a good customer experience throughout our operations. We consider the product's entire life cycle and all of its functions in terms of environmental responsibility.

In 2019, we included climate-change related risks and possibilities into our sustainability report. The work was conducted according to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Nokian Tyres is also committed to setting Science Based Targets in order to further reduce greenhouse gas emissions. In February 2020, these SBT's were sent for approval.

Our environmental and quality targets are specified in the company's Environmental, quality and sustainability strategies, which are drawn up for a period of five years. The Vice President for Quality & Sustainability is involved in drawing up the strategy along with the Environmental and Responsibility Manager. Working together with environmental experts, the Environmental and Responsibility Manager prepares an annual environmental program for the factories. The program specifies the detailed targets, actions, schedules, and responsible persons for the goals presented in the strategy. In addition, individual units have their own projects for developing the operations and processes.

KEY MEASURES IN 2019

Object	Target in 2019	Status in 2019	Target in 2020
STATUTORY REQUIREMENTS	Implementation according to the Nokian Tyres' environmental permits and legislation at the factories.	Implemented.	Implementation according to the Nokian Tyres' environmental permits and legislation at the factories.
VOC EMISSIONS	Compliance with the VOC-directive at the Nokia factory, finding new solutions for achieving target level.	VOC emissions in relation to production increased approximately by 51% compared to the previous year in Nokia, Finland, and are thus above the level required by the EU VOC Directive. The increase is partially due to moving the retreading unit away from Nokia to Sastamala, which changed the balance in the calculations. However, in internal analysis the increase was found to be larger than should be expected. VOC gathering system will be checked, corrective actions taken and after that, a new measurement will be organized in March 2020 to confirm the result.	Compliance with VOC-directive at the Nokia factory, finding new solutions for achieving target level.
ENERGY	Implementing energy saving actions. Decrease in energy usage by 1%/metric ton of production at the factories.	Target not achieved. Energy consumption increased 0.4% from the previous year.	Implementing energy saving actions. Decrease in energy usage by 1%/metric ton of production at the factories.
CLIMATE	Setting Science Based Targets for approval.	Targets were set and sent for validation to the Science Based Targets initiative in February 2020.	Approval of the Science Based Targets and drawing up an implementation plan.
CHEMICAL SAFETY	Two factory audits by chemical specialists, concentrating on the use and storage of chemicals.	Implemented.	Two factory audits by chemical specialists, concentrating on the use and storage of chemicals.
MATERIALS DEVELOPMENT	Ensuring that no Substances of Very High Concern as referred to in REACH are contained in the products.	Implemented.	Ensuring that no Substances of Very High Concern as referred to in REACH are contained in the products.
INCREASING ENVIRONMENTAL AWARENESS AMONG THE PERSONNEL	Regular trainings and environmental communication.	Implemented.	Regular trainings and environmental communication.
BUILDING PROJECTS	US factory and Spanish testing center: assuring chemical and environmental safety.	Implemented.	US factory and Spanish testing center: assuring chemical and environmental safety in the production phase.

The development of environmental aspects and quality is reviewed monthly at the management meetings.

You can read more about managing sustainability in Nokian Tyres from our [website](#).

Control of chemicals

Control of chemicals aims at ensuring the safest possible use of chemicals for our employees, the environment and end users. Our company meets all of the requirements of the European (the REACH and CLP regulations) and local legislation concerning chemicals.

We do not use carcinogenic chemicals or SVHC chemicals (Substances of Very High Concern) as per the EU's REACH regulation in our production. Our products do not contain any conflict minerals.

Moreover, all of our products meet the EU REACH requirements concerning PAHs (Polycyclic aromatic hydrocarbons). We also intend to ensure that no products sold in the Vianor service centers now or in the future contain any such chemicals.

No auxiliary chemicals are taken into use at the Nokia factory before our chemical control team has issued a department-specific usage permit for the substance in question. The purpose of this practice is to harmonize the use of chemicals throughout the company and, whenever possible, to

replace harmful chemicals with safer ones. The same procedure will be taken into use at the Vsevolozhsk and Dayton factories in 2020.

We require all of our chemicals suppliers to provide us with chemical safety data sheets (SDS) in compliance with the valid legislation prior to the purchasing of chemicals. The SDSs of the chemicals that we use are registered in a database that all employees can access. We also organize regular trainings on chemicals for our employees.

Audits

Regular audits are an important part of our efforts related to environment, safety, and quality. Their purpose is to ensure eco-friendliness in production and a safe working environment that meets high standards of quality. The audits aim to verify that our operation complies with the legislation, Environment, Safety, and Quality policy, and the instructions in the activity management system. We carry out internal environmental and quality audits according to an annual plan, so that each area of the activity management system is audited at least once every three years. We draw up the annual plan on the basis of a five-year plan, taking into account the findings of the previous audits.

In production, we audit the environmental aspects and chemical safety through regular safety walks at individual departments, and once every six months, through inspection rounds by chemicals experts. Audits include the audits carried out by our customers and partners, such as automotive industry representatives. An external auditor performs an audit once a year in order to assess our activities' compliance with the relevant standards. Legal and regulatory compliance is supervised by the authorities and insurance companies annually or as required.

Permits and complaint mechanics

Our production facilities have valid environmental permits as well as chemical handling and storage permits. These permits and other environmental and safety activities are supervised by several authorities according to the local laws. We immediately notify the authorities of any disruptions, accidents, and major deviations from permit requirements.

We actively monitor the trends in environmental and safety regulations within the EU and in all of the countries where we operate: Finland, Russia, and the US. We also anticipate the effects of pending regulations on our operations.

We document the annual environmental impacts of our tire factories and report them to the local authorities as required in each country. We record feedback into a register and take the necessary corrective actions. In 2019, all the received complaints concerned odor.

You can read more about our complaint mechanism [here](#).

Environmental costs

In addition to personnel and technology, we allocate financial resources to environmental responsibility. During the fiscal period, our environmental management costs amounted to approximately EUR 415,000. Other environmental costs amounted to approximately EUR 1,400,000. This figure includes the expenses and investments that are related to air, soil, and water protection and waste management.

ENERGY, EMISSIONS, WATER AND WASTE

The environmental impacts from tire production include odor, dust emissions, noise, waste, and solvent emissions (VOC emissions). The most significant of these impacts are the VOC emissions and locally odor. We constantly strive to reduce these impacts in the best possible ways: we improve our operations and find efficiencies, and correct identified deviations. In accordance with our Environmental, Safety, and Quality Policy, we aim for zero defects in our activities within these areas. All the statistics can be found also on the [Performance in figures](#) section.

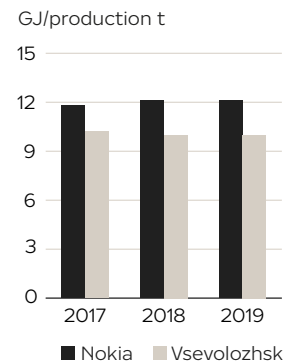
ENERGY

We purchase energy for our factory in Finland from an external supplier. The required energy can be divided into electricity, heating and steam. In 2019, only electricity produced with nuclear energy was bought for the factory in Nokia, Finland. As the energy sources for heating and steam generation, we use biomass and natural gas. The biomass power plant that supplies our factory in Finland reduces the use of fossil fuels in favor of local energy sources in the region. In Nokia, Finland, about 42% of all used energy is produced with renewable energy sources.

Our Energy efficiency workgroup continued its activities in 2019. Unfortunately we did not achieve our target of reducing our yearly energy consumption by 1% per production ton. The energy consumption increased 0.4% from the previous year.

However, the target of reducing energy consumption by 3% was already exceeded in 2018, and the total reduction was 10.4% between 2016 and 2018.

ENERGY INTENSITY



Nokia	
EMISSIONS	
Solvent emissions VOCs	60 t/a
Particle emissions	1,4 t/a
CO ₂	190 scope 1+2 kg CO ₂ eq/production (t)
Noise	<50 dB
INPUT	
Energy	620 TJ
Municipal water	67,000 m ³
River Nokianvirta	6,552,200 m ³
Raw materials	55,300 t
PRODUCTS	
Tires and materials	51,800 t
WASTE	
Landfill	0 t
Utilized	5,400 t
Hazardous	190 t
Water into the sewage	89,000 m ³
Water into the Nokianvirta river	6,531,000 m ³

Vsevolozhsk	
EMISSIONS	
Solvent emissions VOCs	80 t/a
Particle emissions	13 t/a
CO ₂	530 scope 1+2 kg CO ₂ eq/production (t)
Noise	< 50 dB
INPUT	
Energy	1,500 TJ
Municipal water	281,000 m ³
Raw materials	160,800 t
PRODUCTS	
Tires	150,800 t
WASTE	
Landfill	1,100 t
Utilized	10,000 t
Hazardous	1,000 t
Water into the sewage	281,000 m ³
Storm water	76,300 m ³

EMISSIONS

Emissions from energy production

An independent company annually measures the nitrogen and sulfur emissions from energy production at our factory in Russia. Our nitrogen and sulfur emissions are below the set emission limits.

Carbon dioxide (CO₂)

We calculate our tire production's greenhouse gas (GHG) emissions from raw material purchasing to the disposal of the product in compliance with the ISO 14064 standard. Our Russian factory uses its own power station for generating most of the energy it needs. Therefore, the factory's direct GHG emissions exceed those of the factory in Finland.

We are seeking a 20% reduction in CO₂ emissions by 2020, and a 30% reduction by 2030. The point of reference comprises our 2013 Scope 1 and Scope 2 emissions in relation to production. The actual reduction from 2013 was 44% in 2019, which means that we met and exceeded the target.

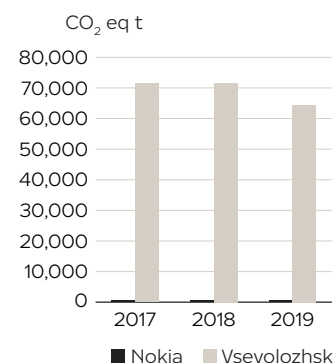
In 2019, our location-based scope 2 emissions were approximately 46,300 tons CO₂ eq. The emission calculation is based on Finland's and Russian's average emissions intensity of grids.

Market-based scope 2 emissions were approximately 24,700 tons CO₂ eq. In Nokia, the emission calculation is based on the suppliers certificate of the actual energy sources used. In Russia, emission calculation is based on emission factors of purchased electricity.

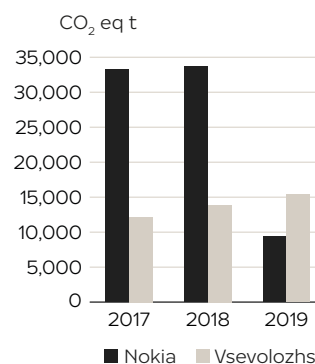
Nokian Tyres wants to contribute to tackling climate change by setting ambitious science-based climate targets. In May 2018, Nokian Tyres joined the Science Based Targets initiative with the aim of setting more precise targets that are assessed and validated by an external organization. Nokian Tyres reached its previously set targets to reduce CO₂ emissions well ahead of schedule. The new climate goals will be linked to the company's value chain as well as the environmental impacts of products. The company aims to achieve validation for its Science Based Targets by May 2020.

Previously, scope 3 emissions had been partly included in our CO₂ emission calculations. In 2018, we started screening downstream emissions and, in 2019, we calculated our scope 3 emissions as required by the Science Based Targets initiative. Year 2018 was chosen as the base year.

DIRECT GREENHOUSE GAS EMISSIONS, SCOPE 1



INDIRECT GREENHOUSE GAS EMISSIONS, SCOPE 2 (MARKET BASED)

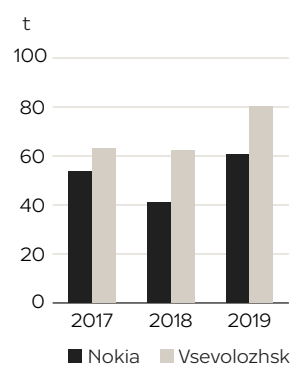


INDIRECT GREENHOUSE GAS EMISSIONS, SCOPE 3

Category	Emissions t CO ₂ ekv.
Purchased good and services	462,600
Capital goods	n.a
Fuel and energy related activities	8,900
Upstream transportation and distribution	20,700
Waste generated in operations	1,700
Business Travel	1,500
Employee commuting	1,800
Leased Assets	500
Downstream transportation and distribution	44,300
Processing of sold products	n.a
Use of sold products	5,415,400
End-of-life treatment of sold products	3,200
Franchises	60
Investments	n.a
Total	5,960,660

n.a = not applicable

VOC EMISSIONS



Volatile organic compounds, VOCs

Solvents or volatile organic compounds (VOCs) form our most significant emissions into air. As the legislation concerning VOC emissions is country-specific, our calculation and reporting of VOC emissions varies by country.

In Finland, we follow the EU VOC Directive, which stipulates that emissions are calculated based on the used solvents. We use solvents in our factory only in the production of heavy tires (also known as industrial tires) and retreading materials for the purpose of improving adhesion. The VOCs from retreading material production and the assembly of heavy tires are collected and conveyed to a catalytic incineration plant. In the summer of 2019, the retreading unit was moved from Nokia, Finland to Sastamala and is now operated by a subcontractor. In Sastamala, we have an incinerator for solvent emissions.

However, collecting solvent emissions from the production of heavy tires poses a challenge. In the production of heavy tires, it is not possible to seal the emission sources in such a way that all emissions could be collected and conveyed for incineration. In Finland, we aim to comply with the total emission limit of the EU VOC Directive, which is 25% of the solvents used. In 2019, the total solvent emissions were 49% of used solvents.

VOC emissions in relation to production increased approximately 51% compared to previous year in Nokia, Finland, and are thus above the level required by the EU VOC Directive. The increase is partially due to moving the retreading unit away from Nokia to Sastamala, which changed the balance in the calculations. In internal analysis the level was still found to be larger than expected, and a new measurement will be organized in March 2020 to confirm the result.

VOC emissions from the retreading production in Sastamala, Finland, were 4,45 tons, which is 18.2% of the use of solvents.

No solvents are used in tire manufacture at our Russian factory. According to the local legislation, emissions are calculated based on usage of raw materials. VOC emissions are generated due to the raw materials used in the processes.

” Our factories have introduced new odor control equipment that represent the best available technology (BAT).

Odor

According to the surveys that we have commissioned the odor emissions are momentary. The mastication process for softening natural rubber causes discharges of compounds during the precipitation and dehydration phases of rubber milk that results in an unpleasant odor in the near surroundings. We use droplet separators for reducing the odors from mastication. Our factories have introduced new odor control equipment that represent the best available technology (BAT). In Vsevolozhsk, the technology covers all the mixing lines, whereas in Nokia the technology is being implemented gradually. We have also managed to lower the number of separate mastication processes, thereby reducing the related odors.

Some odors are generated during the tire curing process. The quantity of the curing fumes released in the process is directly proportional to the amount of cured rubber. The concentrations of individual substances in the fumes are very small.

In 2019, we were contacted once concerning odor emissions from our Finnish retreading unit. In August 2019, the operations of our retreading unit were transferred from Nokia to Sastamala,

Finland. We have received two complaints of both odor and noise from local residents in Sastamala and are working on finding a solution to the problems.

Particle emissions (dust)

Particle emissions are caused by the processing of powdery chemicals in our compound mixing department. The mixing equipment is fitted with effective ventilation and dust collection devices, and the best separation rates achieved by water cleaners exceed 99%. We measure particle emissions with particle concentration and differential pressure gauges. In addition, outside experts carry out regular concentration measurements.

The measured particle concentrations have complied with the permit limits at both of our factories. The dust that passes through the filter system mainly causes an aesthetic inconvenience and poses no harm to the environment or health.

Noise

Our production facilities have noise limits subject to their environmental permits. We regularly track and measure noise emissions. According to the measurements, we are below the noise limits.

Water and wastewater

Our tire manufacturing processes use large quantities of cooling water. In Nokia, we take cooling water from the nearby Nokianvirta river and discharge it back into the river after use. The Russian factory uses municipal tap water for cooling and then conveys it to a wastewater treatment plant. The cooling water has no contact with production chemicals at any stage and, therefore, does not become contaminated.

In Nokia and Vsevolozhsk, we take annual samples from the cooling water and from the wastewater conveyed to the municipal treatment plant in order to verify the water quality. Both the wastewater conveyed into the municipal sewage system and the cooling waters has been practically clean. Our goal is to reduce the consumption of municipal water by 25% by 2020 compared to the 2013 baseline. In 2019, our consumption of municipal water (m³/ton of products) was approximately 38% lower than in 2013.

Materials

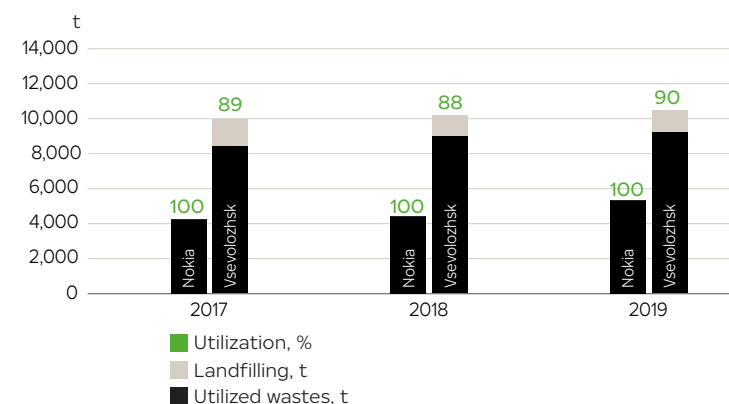
Our production uses high-quality raw materials that contribute to the safety and high quality of our tires. We are continuously exploring the utilization of recycled materials but, in general, recycled materials contain impurities that would degrade our products' safety characteristics. This is why we primarily use virgin raw materials in our production.

WASTE

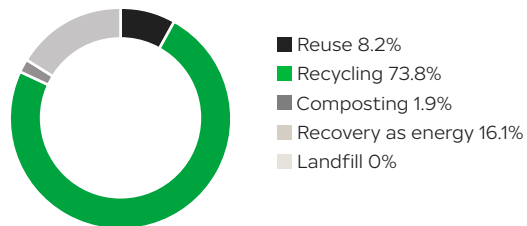
Waste is generated both in our actual production and in the support functions. The generated waste can be roughly divided into three categories: landfill waste or non-recyclable waste, recyclable waste, and hazardous waste.

We weigh all production waste and record the department-specific volumes on a daily basis. For other types of waste, we prepare reports monthly or annually. Information on waste disposal methods and quantities are provided by the waste disposal contractors. We sort the generated waste at our factories in accordance with separate waste management instructions. Most of the production waste is taken directly to reutilization. We store hazardous waste separately at the collection points in containers that carry warning labels.

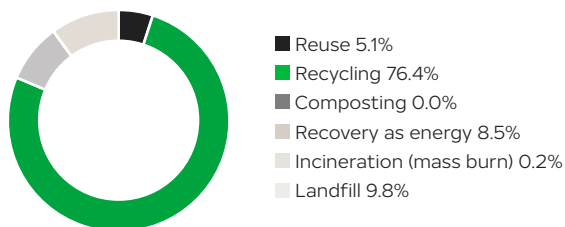
AMOUNT OF WASTES, NOKIA AND VSEVOLOZHISK



WASTES BY DISPOSAL METHOD,
NOKIA



WASTES BY DISPOSAL METHOD,
VSEVOLOZHSK



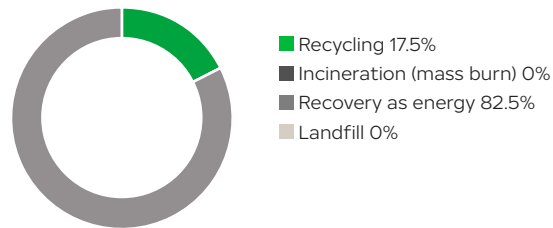
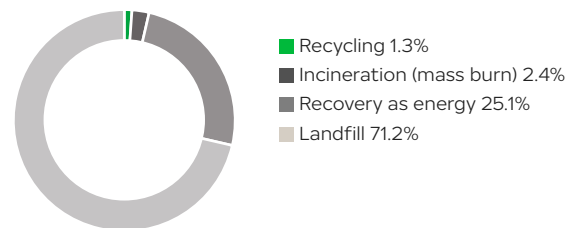
Recyclable waste

The reutilization rate of our production waste has been growing for years. Scrap tires, or tires that do not meet our high standards of quality, are taken to recycling directly from production. Non-vulcanized scrap rubber is generated in the production stages preceding vulcanization or curing. These materials' reuse applications include impact padding, conveyor belts, and other rubber products that have less strict material requirements than tires. Other generated recyclable waste categories include combustible waste, plastics, scrap iron and steel, wood, paper, biodegradable waste, cardboard, glass, and electrical and electronic equipment.

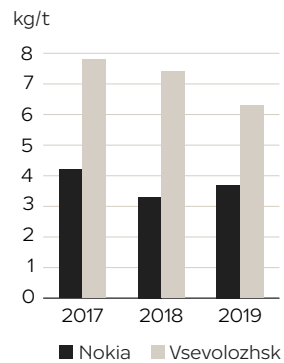
Landfill waste

Mixed waste that cannot be utilized or recycled is taken to a landfill. We aim to further reduce the amount of landfill waste by sending the waste that we generate to recycling and reutilization. Our goal for 2020 is that no waste generated in production is taken to a landfill. In 2019, 100% of factory waste in Nokia and 90% in Vsevolozhsk was sent to reutilization, so we are heading in the right direction.

” Scrap tires, or tires that do not meet our high standards of quality, are taken to recycling directly from production.

HAZARDOUS WASTES BY DISPOSAL METHOD,
NOKIAHAZARDOUS WASTES BY DISPOSAL METHOD,
VSEVOLOZHISK

HAZARDOUS WASTES



Hazardous waste

We take all hazardous waste to an authorized processing plant. Roughly a third of this waste is seal oil from compound mixing machines, whose consumption is directly proportional to the manufactured rubber compound volumes. All hazardous waste generated in our Nokia factory is utilized as energy or as raw materials.

Other locations

Our sales companies and Vianor stores always comply with the local regulations. We sort the waste and deliver it for reuse whenever technologically and economically feasible. The most significant environmental impacts of our locations come from waste and energy consumption. In connection with our group's energy-efficiency audits, we carried out energy efficiency assessments in one Vianor service center and at Nokian Heavy Tyres during 2019. Furthermore, our sales companies and Vianor service centers pay attention to the efficiency of product transports.

RISKS AND OPPORTUNITIES IN LINE WITH THE TCFD

In April 2019, the Quality and Sustainability Department organized a dedicated cross-functional workshop on climate change-related business risks and opportunities. The aim of the workshop was to identify top three climate risks for Nokian Tyres in each of the sub categories: physical, regulatory, market, technology and reputational risks. This was conducted along the recommendations of Task Force on Climate-Related Financial Disclosures.

The workshop was facilitated by environmental experts.

CLIMATE-CHANGE RELATED RISKS

Risk group	Sub category	Examples of concrete risks
REGULATORY	Emerging regulation	Deforestation-related regulation, mostly concerning natural rubber
	Further green labelling	
	Stricter expectations to oversight	
PHYSICAL	Extreme weather events	Disruptions in logistics
	Extreme temperatures	Contamination of raw materials
TECHNOLOGICAL	Climate-related demands for new tire technology	
	Materials technology	Requirements for non-renewable material replacements
MARKET AND REPUTATION	Market changes	Shift from car ownership to mobility-as-a-service i.e. changing customer base
	Reputational risk	Deforestation scandals (natural rubber)

CLIMATE-CHANGE RELATED OPPORTUNITIES

Opportunity group	Sub category	Examples of concrete opportunities
INNOVATION	Raw materials	Innovations with renewable materials
	Recycling	Recycling system for tires still missing in many countries, Scandinavian system can be used as an example
	Climate-friendly tech	Lower rolling resistance
	Energy-efficient production	
PRODUCT RANGE	Competitive advantage	
	EU trial labelling for sustainable tires	Existing focus on sustainable natural rubber, for instance sustainability audits since 2016
	Industrial (heavy) tires	Expertise to provide climate-friendly solutions
ENGAGEMENT	Consumers	
	Policy makers	Increased preparedness for new regulations or incentives
	Shareholders/stakeholders	

MICROPLASTICS AND TIRE ROAD-WEAR PARTICLES

Plastic waste in the oceans and other bodies of water is an environmental problem that is currently being intensively researched. Some publications have brought up tires, or particles from tire and road construction materials, as one of the largest sources of microplastics ending up in oceans and other bodies of water.

Tires use rubber rather than plastic. However, plastic and rubber are both polymers. When looking at micro-polymers instead of only plastics, wear particles from tire and road materials are one of the sources of micro-polymers ending up in the ocean.

Many publications include the dust created during tires' contact with the road – i.e. wear particles from the tire and road surface – under microplastics. Roughly one half of the particles come from the tire and the other half from the road surface. Typically, most of these particles are fairly heavy and land on the roadside, compacting into the soil instead of being carried into a body of water. Some particles, however, are flushed off the road and its surroundings

into ditches, sewage systems and, further, into bodies of water. A study in the vicinity of the river Seine concluded that some 18% of particles ended up in bodies of water and a further 2% were carried into estuaries ([Unice, Weeber, Abramson et al., Characterizing export of land-based microplastics to the estuary, 2018](#)).

When discussing microplastics ending up in the oceans, there are two types of sources: primary and secondary. Primary sources release microplastic particles directly into the oceans, whereas secondary sources release them as a result of the disintegration of larger plastic pieces. According to a report compiled by the EU ([European Parliament: Microplastics: sources, effects and solutions, 2018](#)), the largest group of primary sources consists of the small particles released from the washing waters of synthetic textiles, such as fleece clothing. Wear particles from tire and road materials are the second largest primary source. Together, these primary sources form 15–31% of the microplastics in the oceans.



” Wear particles from tire and road materials are one of the sources of micro-polymers ending up in the ocean.

Secondary sources include larger plastic items, such as bottles and fishing nets that are ground into microplastics over time. These are estimated to form the majority, or 69–81%, of the sources of microplastics in the oceans.

Additional research is required

Nokian Tyres is actively following the studies on this topic and participates in external international studies ordered by ETRMA and other organizations. Reliable field and laboratory tests for understanding the nature, routes of entry, and harmful impacts of the particles are required because many of the current estimates are based on mathematical models and calculations.

As a founding member of Finnish Tyre Recycling Ltd, Nokian Tyres is also involved in a research project that aims to produce information regarding possible sources of microplastics in the operating environment and locations of tire recycling facilities. The project will be executed by Apila Group Oy, and it will take place between May 1, 2019 and March 31, 2021.

In the project, sediment and water samples will be collected from the vicinity of roads and water catchment areas during different times of the year. The sampling will be performed by an independent expert. A method developed by Apila Group Oy Ab will be used for identifying and calculating microplastics originating from tires.

One important aspect of reducing the harmful impacts of driving is how we can prevent particle emissions from traffic or control them by improving the infrastructure. Such areas for improvement could include sewer systems, ditch embankments, or water purification.

” Reliable field and laboratory tests for understanding the nature, routes of entry, and harmful impacts of the particles are required.

RECYCLING

Tire retreading allows the operator to save money, resources, and the environment. A good tire carcass can easily be retreaded two times, which cuts tire costs by approximately 30%. The retreading unit offers retreading for trucks and buses as well as for heavy machinery.

CO₂ emissions are generated during tire production as well as while driving. Retreading has a significant impact on the carbon footprint of tires: manufacturing a new tire results in approximately 220 kg of CO₂ emissions, whereas the figure for retreading is only approximately 40 kg. Furthermore, each retreading operation saves 40 kg of rubber and 70 liters of oil per tire when compared to new tires.

Where do tires end up after use?

Approximately 3.3 million metric tons of used tires are discarded each year in Europe. Luckily for the environment, discarded tires are not worthless and can serve various purposes when reused or recycled. Among other things, the tires can be used in noise barriers along motorways, or as an elastic base material in horseback riding arenas. In the last few years, experiments with rubber pieces from old tires as water filtering material have given good results. Used rubber from tires seems to work well as an absorber of heavy metals from water used in mines, for instance.

The recycling rate of tires in Finland is high compared to many other countries. In Finland, nearly 100% of tires are recycled. In all of Europe, for example, the figure is 95%. The rest of the tires are taken to landfills. The recycling rate of our tires was 77% of our total sales in 2019.

In Russia, the tire recycling rate is low. According to the local legislation, in 2019, our tire recycling had to be equivalent to 25% of our total sales in Russia, and we met that target.

Another way to utilize recycled tires is to combust them for energy, as the heating value of tires is close to that of oil. The use of recycled tires as an energy source has been growing for years and, today, approximately half of the tires recycled in Europe are used in waste-to-energy applications.

In 1995, Nokian Tyres and other companies in the tire industry established the Finnish Tyre Recycling Ltd in order to promote the centralized collection and utilization of tires nationally. As one of the original founders, we are involved in their work of looking for new ways to recycle and utilize tires.



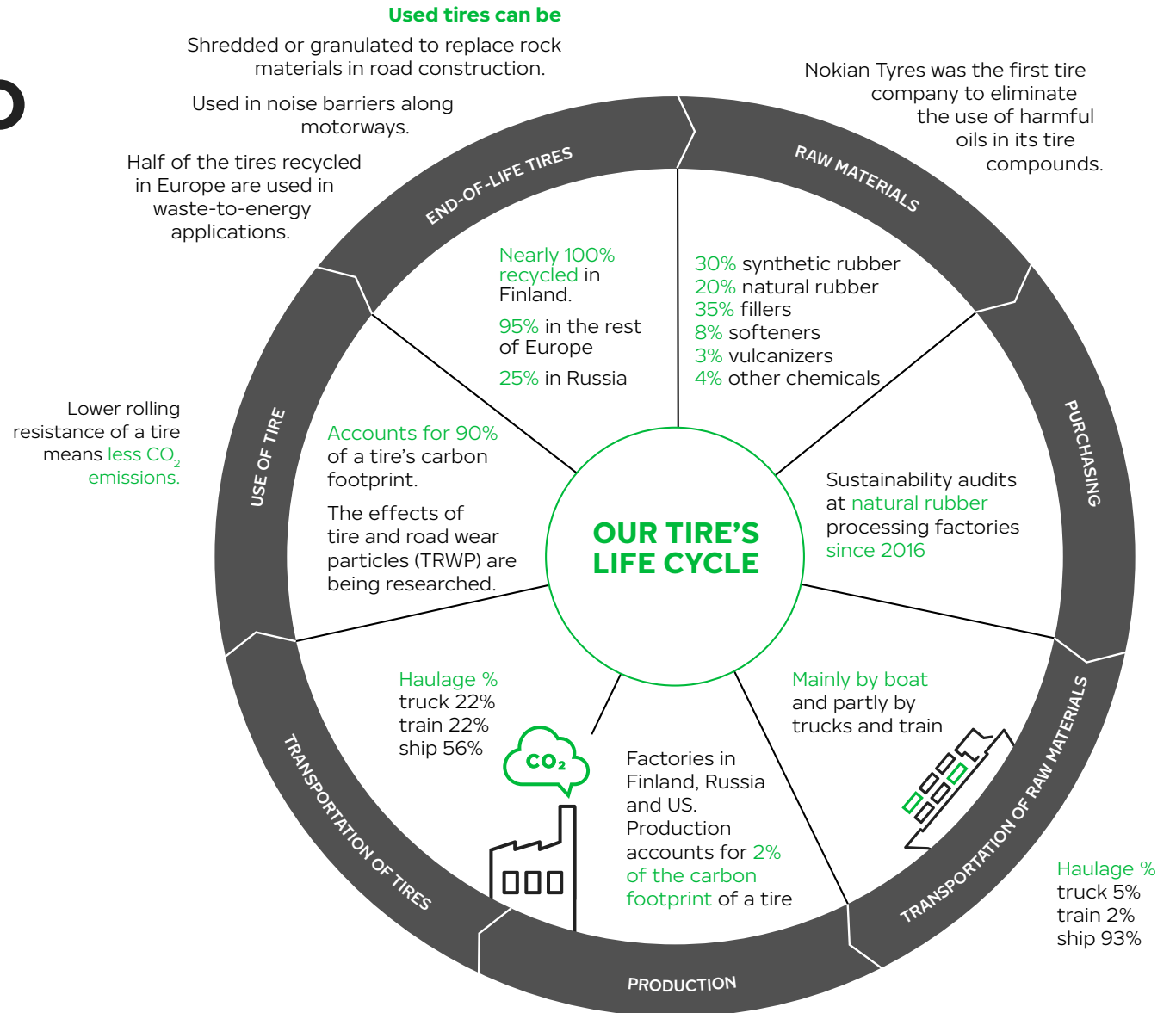
SOLAR PANELS PROVIDE RENEWABLE ENERGY IN DAYTON

In October 2019, Nokian Tyres celebrated the opening of its US factory in Dayton, Tennessee. Commercial production of tires began in early 2020. As part of the sustainability efforts, the factory will be partially powered by solar energy. Solar panels are installed in the parking lot; thus providing shield from the sunshine for the vehicles. The solar array will generate 3 megawatts of electricity to be utilized at the facility.

Sustainability was taken into account already in the construction phase of the factory. The air conditioning, cooling and water systems all represent the latest technology and are designed to save energy and the environment. This also applies to the modern machinery in the factory. Safety was a top priority in the construction phase as well as in starting the production and running the daily process.

FROM RAW MATERIALS TO END-OF-LIFE TIRES

The outset of Nokian Tyres' environmental protection is the life cycle approach. We take responsibility for the environmental impacts of our activities and products throughout their life cycle. Most of the environmental impacts during a tire's life cycle are generated during its use. The life cycle ends, when the tire is crushed and used for instance as construction material.



PEOPLE

We want to empower our people to actively participate and collaborate, to take ownership of their work, and responsibility for everyone's safety.

**nokian
TYRES**

ONE COMPANY, ONE PURPOSE, ONE GLOBAL TEAM

In 2019, we continued changing our way of working towards an energizing working culture and shared values. One of our strategic differentiators is high-performing engaged teams. This means empowering our people to actively participate and collaborate, to take both ownership of their work and responsibility for everyone's safety.

Renewed people processes

Our people management system, Workday, enables us to harmonize our people processes promoting the equal treatment of employees across our organization. In 2019, we renewed several people processes:

1. **Onboarding.** To create a more positive employee experience, our onboarding process was further developed and integrated as part of Workday. It includes a survey for follow-up.
2. **Performance Review.** Renewed global process was implemented in Workday and trainings were organized for conducting reviews.
3. **Annual salary review.** Annual Salary review, which follows the performance review, was done globally for the first time in Workday. This ensures transparency and equal treatment.
4. **Competence evaluations.** At Vianor, we utilized Workday in evaluating the technical competences of service center employees.
5. **People planning.** People planning is part of the annual planning process. It is based on future competence and position needs and was implemented in Workday.
6. **Recruitment.** In recruitment, we focused on developing a good candidate experience. We have renewed the Careers section on our web site. Local process development has been the main focus area.

KEY MEASURES IN 2019

Improved occupational safety: reduced the number of workplace injuries by 51% compared to the 2018 level. Our LTIF was 4.3 (8.3 in 2018).

Renewed our short and long-term incentive plans for 2019 and onwards	Harmonized global people processes
Organized training on Code of Conduct: 93% of personnel completed the course	A total of 92.2% of our personnel took part in a People Review (82.2% in 2018)

TARGETS FOR 2020

Development of a global Human Rights policy, management and processes	Further development of value-based leadership culture with trainings and pulse survey
Strengthening the energizing and flexible working culture with pilot feedbacks and pulse survey	A total of 95.0% of our personnel will take part in the People Review.

HUMAN RIGHTS AND SAFETY ARE THE BASE OF OUR PEOPLE OPERATIONS

Fairness and respecting human rights are the principles in all our operations, whether we are dealing with our personnel or other stakeholders. We want to ensure the psychological and physical safety of our employees. We advance an inclusive and equal working culture and empower our people to be active members in our organization.

In internal assessments we have recognized four human rights related risk areas:

- Right to health
- Right to privacy
- Right to life
- Right to enjoy just and favorable conditions of work

Our Code of Conduct and the related policies and instructions were updated, and they entered into force in December 2018. Since every employee needs to adhere to the Code, we launched an online training for all the personnel. The management team follows the number of people who have conducted the eLearning course.

We treat our employees fairly and respectfully. We are committed to acting in the manner required by the UN's Guiding Principles for Business and Human Rights, and to following the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. We have joined the UN's Global Compact initiative as a supporting member and follow the ethical principles of the initiative.

We value diversity and do not allow any form of discrimination, harassment, or bullying at the workplace. Everyone is responsible for acting fairly and for creating an inclusive, inspiring work atmosphere. Everyone has the freedom of expression, but everyone is also responsible for not insulting others.

Active participation at different levels of the organization and respecting every employee's right of participation are parts of our working culture. Contracts of employment are drawn up in writing and in adherence with the local legislation. We also annually conduct annual market analysis on salaries.



” Everyone is responsible for acting fairly and for creating an inclusive, inspiring work atmosphere.

” We have identified diverse safety cultures, meaning that the ownership of safety varies according to operating countries.

Safety is a choice we make every day

Our goal is to promote occupational health and minimize the number of occupational accidents. Occupational health and safety are an integral part of our daily management and operations. During 2019, we organized a safety campaign to globally communicate our slogan “Safety is a choice”, meaning that everyone is responsible for safety: adhering to occupational safety guidelines, observing defects and shortcomings, and reporting and removing hazards.

We have identified three safety sectors:

- **Technology.** Technical separation of people from energy sources, such as electricity or steam
- **Process.** Processes guiding us to do the right thing
- **Thinking.** Safety in one's own thinking and actions

In order to avoid hazardous situations, we emphasize preventing occupational accidents. We have identified diverse safety cultures, meaning that the ownership of safety varies according to operating

countries. That is why we have invested in communicating our safety thinking globally. We have trained our own managers to train their own teams in safe working. We have found this approach to be more efficient than having employees trained by separate trainers. Developing a safe working culture is a continuous project.

Our goal for 2019 was to reduce the number of workplace injuries by 35% compared to the 2018 level. The result was a 51% reduction. During 2019, Nokian Tyres continued updating the risk assessments for all workplaces and tasks. Opening of the US factory required major safety trainings.

We encourage our employees to make safety observations and carry out safety actions with the goal of 2 safety actions per employee on average – this resulted in over 14,000 safety observations in 2019. This amounts to 2.9 actions per employee.

The data privacy work (GDPR) continued by specifying and further developing the required documentation and processes, for example by updating the Nokian Tyres privacy statements and further increasing the awareness within the company by organizing workshops to assess where data is being stored and how it is dealt with.

A TYPICAL PROBLEM IS TAKING UNNECESSARY RISKS

” Safety often fails in organizations because people have not been empowered to make the right choices. Our improvement in safety is the result of a couple of years of hard work. The main priority has been involving all employees: safety belongs to all of us, from machine operators to top-level management.

A typical problem is taking unnecessary risks without stopping to think. “I’ll just fix this quickly, I don’t need to do the safety locking” - and an accident happens. In April, we addressed this issue by launching the campaign “Safety is a Choice”. By the end of September, the Heavy Tyres unit had spent one year with zero occupational accidents leading to absence. All the hard work bore fruit: in 2019, our LTIF dropped to 4.3.

I encourage all units to spontaneously reward safety actions. This encourages others to improve, too.

Jukka Rikkinen
Head of Safety



ACCIDENT FREQUENCY*

	2015	2016	2017	2018	2019
Lost time incident frequency (LTIF)					
Nokian Tyres Finland	22.3	20.2	8.6	5.3	3.7
Nokian Tyres Russia	3.0	3.0	3.2	5.0	2.0
Vianor	23.9	15.2	12.6	15.0	7.8
The ratio of all listed companies	13.9	11.2	7.5	8.3	4.3
Recordable accident frequency (rec. F)					
Nokian Tyres Finland		24.1	12.6	8.7	8.3
Nokian Tyres Russia		3.0	3.9	5.3	4.0
Vianor		18.7	19.5	21.6	13.9
The ratio of all listed companies		13.2	11.2	11.6	8.2
Recordable accidents					
Nokian Tyres Finland		42	24	18	18
Nokian Tyres Russia		8	11	16	12
Vianor		59	62	72	48
The ratio of all listed companies		109	97	106	82

* Levypyörä (acquired in August 2019) will be included in the safety figures as of 2020.

ABSENTEEISM BY COMPANY

	Nokian Tyres Finland			Nokian Tyres Russia		Vianor Nordic				
	Nokian Tyres (FI)	Nokian Heavy Tyres	NT Tyre Machinery	OOO Nokian China	OOO Nokian Tyres	Nordic Wheels	Vianor Holding Oy	Vianor Oy	Vianor AB	Vianor AS
Sick absences % (total)	2.6	4.2	7.7	3.7	5.5	1.1	0.8	6.8	4.2	5.6

OUR PEOPLE

Our goal is to be a globally attractive employer that is known for its sustainability, leadership, and international working community with teams around the world. We employ some 4,700 people with different skills and backgrounds.

At the end of 2019, we employed a total of 4,730 (-0.8%) own employees. This was the second year when the end-year headcount reporting was based on the data in our global people management system, Workday. We report the number of all employees including also those on a long leave of absence.

The external workforce is mainly used for ad hoc workforce needs. At the end of 2019, we had 43 external workers, most of them working in Finland. During 2019, we employed a total of 1,170 seasonal employees at Vianor. 51.4% of our employees are covered by collective bargaining (52.9% in 2018).

Acquisition brought 100 new employees

In August 2019, Nokian Tyres acquired Levypyörä Oy, a Finnish manufacturer of machine tool rims. The acquisition brought us approximately 100 new employees serving both installation and aftermarket customers in the forestry, agricultural, and earthmoving sectors. The integration project started in August, and key processes in IT, Finance, and HR have been integrated with Nokian Tyres.

The work continues in 2020. As an example, the yearly performance management processes and rewarding practices will be integrated as of January 1, 2020. Harmonization and improving occupational safety will continue throughout 2020.

NUMBER OF WORKFORCE*

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Own employees	2,675	1,554	187	287	27	4,730
Permanent	2,419	1,483	174	286	16	4,378

NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER*

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Total number of new employees	330	109	32	127	1	599
New employee hires rate (total), %	7.0	2.3	0.7	2.7	0.0	12.7
Total number of terminated employees (fixed terms not included)	247	111	27	52	0	437
Turnover rate (total), %	5.2	2.4	0.6	1.1	0.0	9.3

* Detailed statistics on page 58.

” Temporary lay-offs continued during the remainder of the year.

Employee cooperation negotiations in Finland

Nokian Tyres conducted employee cooperation negotiations in September – October 2019, with the aim of adjusting the number of personnel at the Nokia production facility to meet the currently known and anticipated demand. The negotiations concerned employees in passenger car tire production and maintenance as well as production-related test activities at Nokian Tyres' factory in Finland.

Employee cooperation negotiations concerned a total of 500 people. As a result, 41 employees were made redundant. Of these, 11 employments terminated through retirement and other agreed arrangements. Temporary lay-offs continued during the remainder of the year, and will continue for up to a maximum of 90 days in 2020.

We offer support to the persons who were made redundant through personalized outplacement coaching and training.

EMPLOYEES PER EMPLOYEE CATEGORY*

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Number of individuals within the top management	16	1	1	1	0	19
Number of white collar employees	1,087	454	183	123	23	1,870
Number of blue collar employees	1,572	1,099	3	163	4	2,841

* Detailed statistics on page 59.

OUR WAY OF WORKING

Internal job rotation, on-the-job learning, and training solutions are used to support personnel development. Personal People Reviews have a key role in personnel development. The People Reviews focus on managing performance and personal goals and development. In 2019, a total of 92.2% of our personnel took part in a People Review (82.2% in 2018).

In 2019, we renewed our employee survey Drive! to make it more agile and focused. Themes in the survey were energizing the team, collaboration & participation, safety and general leadership and company topics. The results were discussed in renewed participative workshops and managers were trained to facilitate team discussions.

The survey results show strong overall improvement. The response rate was 87.5% (2018: 86.2%). Cooperation with other teams has improved significantly across all personnel groups and this also has a clear positive correlation with engagement. 80% of employees are willing to recommend our company as an employer, which is higher than in companies in general.

The feeling of fair rewarding has improved. However, it is still below the external benchmark driven by production employees in Finland.

Striving towards our company values and objectives has decreased; it is now 83% and below the benchmark, which leaves room for improvement.

Managerial work in our company is generally at a very good level. The closest managerial topics, trust in staff and acknowledgement of good work, have strongly improved and are both clearly above the benchmark.

In 2020, we continue to develop our operations in accordance with the results.

RESULTS OF THE DRIVE! PERSONNEL SURVEY (ENGAGEMENT INDEX)

	2017	2018	2019
Nokian Tyres plc	75.5	75.5	76.9
Passenger Car Tyre Production, Nokia	68.8	70.2	71.0
Passenger Car Tyre Production, Dayton			89.3
Nokian Tyres North America	80.6	74.8	78.1
Nokian Tyres Central Europe	84.5	82.8	73.8
Nokian Tyres Russia & Asia	73.9	73.1	74.8
Nokian Heavy Tyres	68.9	73.3	72.7
Vianor and Nordics	77.6	79.0	81.5
Global Functions	78.3	78.0	77.3

PEOPLE REVIEWS (REALIZATION, %)

	2015	2016	2017	2018	2019
Nokian Tyres Group, %	82.8	86.0	83.4	82.2	92.2

Pay for performance

The Global Total Rewards Philosophy and Guideline was created by our Management Team and Board of Directors during 2018, and it was communicated to all employees in 2019. The objective of the Guideline is to align and harmonize our rewarding practices globally. The Guideline is designed to ensure the fair and equal treatment of our employees, as well as to allow countries and units to provide locally competitive pay to attract, retain, and motivate the best talent. It is based on work complexity assessments, consistent goal setting, and benchmarking of rewarding practices in relevant markets.

Along with the Total Rewards Guideline, we renewed our short and long-term incentive plans for 2019 and onwards. As long-term incentives, we have two share plans that are intended to align the goals of our shareholders and key personnel in order to commit key personnel to the company and its strategic targets, as well as to increase the value of the company. We have a profit-sharing plan for the employees not eligible to participate in the share plans. With these plans, all Nokian Tyres employees are rewarded for the company’s overall performance.

As short-term incentives, there are several different plans in use and all employees are eligible for some of them. These plans are designed to drive the company’s strategy and reward for the achievement of stretching performance goals. Plans are based on performance criteria for the group, business area/unit, team and/or individual.

One aspect of overall rewarding includes non-monetary compensation, which has a clear impact on employee engagement. We are focusing on things such as managerial work and leadership approach, competence development, career opportunities, and working culture, as they are important elements contributing to commitment and long careers.

We have made a significant progress during the past three years, and we will focus on stabilizing our renewed rewarding process. For instance, we are planning to start auditing our benefits globally in order to increase their transparency and consistency.

OUR REWARDING PHILOSOPHY

At Nokian Tyres, we want to drive, recognize and reward high performance and value based behavior to ensure successful long-term execution of our strategy			
Strategic	Performance & value based	Competitive	Transparent & consistent
Ensure successful execution of Nokian Tyres strategy	Drive and reward group, business unit, team and individual performance and customer & value based behavior	Attract, motivate and retain talent by offering competitive total reward packages	Strive for transparency and consistency in reward program design, implementation and communication



AMERICAN EMPLOYEES TRAINED IN RUSSIA

Opening the US factory was a state-of-the-art project for Nokian Tyres on a global level. 48 US factory team members were sent to Russia and Finland for intensive trainings organized by the company's Russian and Finnish specialists.

Extensive training project included topics such as diversity management, intercultural communications, and safety. A cross-cultural project like this required preparing all materials in English and arranging courses, mentors, and interpreters.

The project helped with Nokian Tyres' aim at building one global team as friendships across borders were formed during the training. It was a valuable learning experience on how to accumulate, manage and share knowledge and best practices.

The Drive! 2019 survey provided proof for the project's success: engagement index at US factory was 89.3, being on a very high level inside the Group.

Developing on the job

Our people development philosophy supports our employees' development with an internal job rotation, on-the-job learning, and various development solutions following the 70–20–10 principle: 70% of the development through learning on the job, 20% through learning from others, and 10% through training.

To bring the company's strategy closer to every employee, we have created an eLearning solution known as the "Strategy Learning Journey". It gives an overview of Nokian Tyres' strategy and the way we operate to achieve our goals. It is followed by a Team Challenge game, which helps teams discuss how to achieve our goals.

Global collaboration wherever you are

We launched our new digital collaboration hub in October and organized multiple trainings for all white collar employees.

We improved information and knowledge sharing globally and started to organize regular Leaders calls & Check Point information events. Leaders calls are online info sessions targeted towards Nokian Tyres' key leaders, arranged quarterly after our results are published. These information events cover key figures and strategy implementation status with focus areas for the forthcoming quarter. Check points are internal information sharing events arranged quarterly online to discuss results, strategy and topical matters for all Nokian Tyres people.

Energizing workspaces and flexible working time

Flexible working time and dynamic workspaces are important in developing an energizing work culture at Nokian Tyres. New activity-based workspace pilot was taken into use in 2019. Flexible working time pilots also continued and were extended during 2019. Teams received coaching on the new working and leadership culture as well as new working time practices.

Pilots were followed up with surveys and received very positive feedback. The satisfaction in flexible working time was 4.4 in scale 1–5. Also, 97% felt that workspaces support their various needs during their working day (in 2018, the result was 32%).

Developing our leadership

An energizing, inclusive and participating working culture will demand continuous leadership development. We coach our leaders to enable teams' success, and organized leadership workshops in 2019:

- Leaders' training was piloted in three modules: enabling success, encouraging growth, and involving to inspire.
- The workshop "Being a Global Leader" gathered global function leaders to discuss strategy, collaboration, and agile working culture.
- Global Leading Change concept implementation was continued in 2019 with manager workshops.
- More lean methods together with digital collaboration tools were adapted in the Heavy Tyres unit.

PRODUCTS

A tire needs to save fuel, be produced in an environmentally safe way, reduce road wear and noise – and look good.

IMPROVING ROAD SAFETY IS A PRIORITY

Nokian Tyres improves the safety of its products through continuous product development and testing. We have improved the eco-friendliness of our tires through lowering their rolling resistance. This reduces the fuel consumption of the car and cuts down on CO₂ emissions.

Safety is our first priority, both on the road and in production. Nokian Tyres was the first tire company to eliminate the use of harmful oils in its tire compounds, and the world's first tire manufacturer to have fully introduced low PAH content oils in its production.

Roughly speaking, tire development is divided into three parts:

- material and rubber compound development
- structural development
- tread pattern development.

Tires are developed by combining the best raw materials, components best suited for each purpose, durable, high-performance structural solutions, and the best tread for the conditions of use. In terms of technical characteristics, a car tire is an extremely demanding product that needs to ensure that the driver retains control of the vehicle under all conditions. At the same time, the tire needs to save fuel, be produced in an environmentally safe way, reduce road wear and noise – and look good.

Our leadership and product development are guided by our ethical guidelines, the Environmental, safety and quality policy, and testing policies. We also comply with several requirements concerning noise, studs, chemicals, testing, and tire markings, among other things.

You can read more about managing sustainability in product development [here](#).

KEY MEASURES IN 2019

We reduced the rolling resistance of our tires by on average 8.3% when compared to 2013 (8.2% in 2018).

In 2019, Nordic winter tires that deliver high ice grip amounted to 53% of our entire winter tire range (53% in 2018).

The proportion of tires that are in the rolling resistance category A, B, or C was 92% (91% in 2018).

Of our summer tire products, 100% were in the wet grip category A, B, or C (100% in 2018).

Our premium tires with low rolling resistance and high wet grip correspond to categories A, B, and C of the EU tyre label. The share of ABC tires was 65.1% of all our tires with EU labeling (66.6% in 2018).

TARGETS FOR 2020

We are in the process of setting new sustainability targets for the years beyond 2020, and will be setting a new target for measuring the development of the rolling resistance.

Of our summer tire products, 100% will remain in the wet grip category A, B, or C.

We are investigating the possibility of using recycled carbon black in our tires.

We increase bio-oil contents in our rubber compounds.



The Ivalo Testing Center "White Hell" in Finnish Lapland is where Nokian Tyres tests its winter tires rigorously on snow, ice, and slush.

Our tires go through strict testing

As a tire manufacturer, we must ensure that the tires that we develop, produce, and market are verifiably safe to use, and that they meet the quality requirements and expectations of our customers and end users.

We ensure the technical quality of our products by testing and studying each raw material used in tire manufacturing and by continuously improving our rubber compounds. We also use process controls during production for ensuring the quality of tires. Each finished tire passes through production quality control, which includes the tire's force variation, out-of-round and run-on measurement as well as a visual inspection.

When starting to ship a new product, we use our strict quality requirements for ensuring compliance. Safety is connected to understanding and managing the risks related to tires. We track the safety of our tires throughout the product life cycle. During product development, our tires go through wear and performance testing, for example.

At Nokian Tyres' test tracks in Nokia, Ivalo, and soon also Spain, we test tire behavior on wet and dry asphalt, ice, snow and slush, uphill and downhill as well as corners and

straightaways. The tires are tested during acceleration and braking, in aquaplaning conditions, and on the handling track. The handling test is probably the most important – an experienced driver remains the best indicator of tire quality.

The testing for each product takes into account its purpose and market area. Safety is always the number one priority for Nokian Tyres. However, depending on the market area, we also need to take into account the weather conditions, the driving surface, and other factors.

Product responsibility includes product safety, quality, and compliance. It covers our processes from research and product development to testing, production, and procurement, as well as all of the stages and functions of our supply chain. Our product responsibility also includes product marketing and communication to consumers.

Our group has not had any major product recalls in more than 19 years. Furthermore, Nokian Tyres has not been involved in any legal proceedings regarding product liability. You can read more of our procedure in case of fault [here](#).

LOWER ROLLING RESISTANCE – LESS CO₂ EMISSIONS

The use of fossil fuels accounts for most of human-generated carbon emissions. Carbon dioxide, CO₂, is the most significant greenhouse gas generated by traffic. When a tire rolls against the road surface, energy is lost due mainly to heat build-up; this is referred to as the rolling resistance. The higher the rolling resistance is, the higher the fuel consumption and CO₂ emissions will be. Fuel consumption during driving is the single most significant environmental impact over a tire's service life.

In 2015, we set a goal for 2020 to reduce the rolling resistance of our product range by 7% on average when compared to the 2013 baseline. We reached this goal clearly ahead of schedule in 2017. In 2019, we reduced the rolling resistance further, reaching a reduction of 8.3% on average compared to 2013. Tires with low rolling resistance may save more than 0.6 liters of fuel per 100 kilometers, and thus reduce CO₂ emissions.

As the auto industry is going through a radical realignment, the design of tires is also shifting towards the demands of electric vehicles or EV's. The lower the rolling resistance, the further the EV can go without recharging the battery.

The level of lower rolling resistance tires has settled to around a 90% share of the class A, B, and C tires. The EU tyre label reports fuel efficiency on a scale from A to G. At the moment, class C is the most common fuel economy rating for Nokian Tyres' passenger car tires according to the EU tyre label.

We aim to further develop lowering the rolling resistance of tires. In 2019, the Nokian Tyres research team started working on a concept tire which helps us better understand how to reduce the rolling resistance. The score of the best A-level tires is 6.5 in the EU tyre label system. With the new solutions in compounding and construction design, the rolling resistance of the concept tire can be lowered close to a score of 5.

In the end, eco-friendliness in traffic comes down to a very simple fact: the driver has all the power to make a positive impact. Approximately 90% of a tire's carbon footprint is created during its use. A wise choice of tires, the right tire pressure, and a careful driving style significantly reduce the CO₂ emissions from driving.



” A wise choice of tires, the right tire pressure, and a careful driving style significantly reduce the CO₂ emissions from driving.

RENEWABLE RAW MATERIALS

Alternative raw materials can be roughly divided into recycled raw materials and bio-based raw materials. The aim of both categories is to replace fossil-based raw materials and to enable more sustainable tire manufacturing.

Renewable raw materials are used for improving tires' properties and performance by modifying the compound property balance at varying temperatures. The use of new raw materials requires a great deal of product development efforts and testing in order to find the best combination of properties for a tire. In materials development, the use of renewable materials must not alter a tire's safety characteristics.

Fillers are one of the main raw material groups in a tire. The amount of fillers is around 30% of the tire, meaning that, in theory, it should be possible to increase the bio-based portion of the tire significantly by substituting fossil-based fillers with ones from renewable sources. There are several bio-filler research programs ongoing, but at this time it is difficult to forecast which one of these will produce sustainable material solutions for the future.

The global research of bioelastomers is active, but their commercial availability is still limited in tire industry. Nokian Tyres has an active role in this constantly evolving research and industrialization process. We

are already using bio-oils in our rubber compounds and we continue to research them and to work on increasing the amount of bio-oil contents in our rubber compounds.

Guayule - a European source of natural rubber?

Guayule-based natural rubber is one of the active initiatives that Nokian Tyres is working on. We are currently testing the suitability of different guayule varieties to be cultivated in central Spain, near our new testing center in Santa Cruz de la Zarza.

As guayule originates from the desert, it can survive in very dry and poor soil conditions. It is a plant that does not exploit areas of any other vegetation or food production, on the contrary, it makes use of wastelands. Nokian Tyres is collaborating with local farmers, universities, research institutes, and companies in Spain. Guayule is an opportunity not only for Nokian Tyres but also for the local agriculture and industry.

Currently, natural rubber that is used in tires comes from rubber trees (*Hevea Brasiliensis*), which are growing in areas around the equator. This results in long logistics chains for tire manufacturers located in the north, which is bad for the environment and also costly. If guayule succeeds as an alternative source for natural



rubber, it will shorten the transporting distance and reduce the CO₂ emissions.

Conservation of natural vegetation in tropical areas would be another environmental benefit. The substantial use of toxic pesticides on rubber plantations in Southeast Asia is a problem for the environment. Also, the South American leaf blight (*Microcyclus Ulei*) poses problems for

the cultivation. The majority of the rubber trees in Asia are clones of varieties highly vulnerable to this disease.

Guayule, however, grows in dry areas, and no major plant diseases have thus far been identified as potential problems. It is also hypoallergenic, unlike the normal *Hevea* rubber. This is a relief for many people working in the rubber industry, logistics, and trade.

SUPPLY CHAIN

Sourcing natural rubber in a sustainable way is considered the most critical stage in a tire company's supply chain.



WE TRACK THE SUSTAINABILITY OF OUR SUPPLIERS

The life cycle of our tires begins in a tropical forest, probably on a small farm in Malaysia or Indonesia, filled with natural rubber trees. Natural rubber is a renewable resource and one of the main ingredients of tires. Sourcing natural rubber in a sustainable way is considered to be the most critical stage in a tire company's supply chain.

Our supply chain consists of approximately 2,000 suppliers, including slightly more than 100 raw material suppliers. Most of our supply chain suppliers are located around our factory areas (Nokia, Finland, Vsevolozhsk, Russia, and Dayton, US) and raw material suppliers are located globally. The monetary value of the payments made to suppliers in our supply chain is approximately MEUR 600–700.

The work of Nokian Tyres' procurement unit is guided by the Group's procurement policy, which establishes the general principles of sustainable procurement. As a participant in the UN Global Compact initiative, we follow the UNGC's ethical principles as well as our own. We require that all our raw material suppliers to adhere to our [Supplier Code of Conduct](#), which expects the suppliers to commit to human rights and prohibits discrimination and the use of child labor or forced labor, among other things.

All raw material suppliers must, at a minimum, have an ISO 9001-certified quality

management system in place. In addition, we prefer suppliers with an ISO 14001-certified environmental management system.

We track the sustainability of our raw material suppliers by conducting third-party sustainability audits, and by requiring a supplier sustainability self-assessment from all our new suppliers that are critical in terms of sustainability.

Furthermore, our purchasing personnel conduct smaller-scale supplier visits that include an assessment of the working conditions.

New tool for assessing supplier

In 2019, Nokian Tyres' procurement team developed a new classification model for assessing our suppliers globally, excluding the suppliers of sales companies and our own Vianor chain. The new model was implemented in the fall of 2019 and it includes all the new suppliers. During 2020, the assessment model will be expanded to also include existing suppliers. The assessment has four different categories: quality, sustainability, business/strategic criticality and safety at work.

All new critical suppliers must respond to the Sustainability Self-Assessment Questionnaire, and a risk mitigation plan is created according to the assessment result.

KEY MEASURES IN 2019

We exceeded our target for sustainability audits. By the end of 2019, we had audited all our major rubber processors, covering 90% of our natural rubber purchasing volume.	89.6% of our raw material suppliers have responded to the sustainability self-assessment survey.
73.3% of our raw material suppliers have ISO 14001 certification.	We created a classification model that helps us to recognize suppliers that are critical in terms of sustainability.

TARGETS FOR 2020

The new classification model will be expanded to include existing suppliers as well.	We will extend our sustainability audits to include other raw material categories of the supply chain besides natural rubber procurement.	We will create a new policy for sustainable natural rubber procurement.
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SUSTAINABLE SOURCING OF NATURAL RUBBER

Natural rubber is one of the main ingredients for tires. It is the livelihood of hundreds of thousands of families living in countries where the local legislation and working conditions have not been fully developed.

Natural rubber is cultivated in forests, often on small farms. Most of the natural rubber that we use comes from Malaysia and Indonesia.

Traceability remains problematic as the supply chain is fragmented. There are approximately 3–6 million farmers of natural rubber who collect the milky latex or cup lumps and sell them to local dealers. They collect them from several farmers and then sell the latex forward to processing plants. More than 85% of the world's natural rubber is produced on farms smaller than two hectares in size whose daily output may be just a couple of kilograms of latex.

Processing plants purify the natural rubber, process it as specified, pack it for further use, and sell it to the global traders or customers. Nokian Tyres exclusively

purchases rubber, which is being processed in the plants our company has approved.

Nokian Tyres considers cooperation with the industry and other stakeholders to be vital in improving these conditions. The tire industry has made a joint effort to move towards sustainable natural rubber, also as concerns labor rights. In 2019, Nokian Tyres joined the Global Platform for Sustainable Natural Rubber (GPSNR), which is a platform established by WWF, several other nonprofit organizations, rubber traders and processors, and large tire manufacturers.

GPSNR strives to increase the supply and uptake of sustainable natural rubber in the global marketplace. Members of the platform will develop sustainable natural rubber standards, mechanisms and guidance on the implementation, monitoring, and verification of sustainable natural rubber commitments from companies.



Teppo Huovila, VP, Quality & Sustainability, presents the batches of natural rubber imported to Nokian Tyres' factories mainly from Malaysia and Indonesia. Nokian Tyres has conducted sustainability audits to the processing plants since 2016.

HUMAN RIGHTS IN THE SUPPLY CHAIN

NOKIAN TYRES HAS RECOGNIZED TEN HUMAN RIGHTS-RELATED RISKS IN THE SUPPLY CHAIN:

Right to privacy
Right to a family life
Right to health
Right to life
Right not to be subjected to slavery, servitude or forced labor
Right to freedom of movement
Right of protection of the family and the right to marry
Right to enjoy just and favorable conditions of work
Right to an adequate standard of living
Right to education

The human rights assessment has been done to all 32 human rights listed in the UN's document "Relationship between businesses and human rights", which was used as a normative. The rights to health, right to privacy and right to family life have been defined as being exposed to the most evident risks.

In order to improve supply chain sustainability, we started a partnership with an external auditor already in 2016. Our separate sustainability auditing process has been developed together with a consulting company, and it is based on Nokian Tyres' Supplier Code of Conduct and principles that comply with the UN Global Compact goals.

We have set a goal to audit all of our major rubber processor partners by 2020, comprising at least 80% of our natural rubber purchasing volume. The audits enable the processing companies to improve their occupational safety and develop their operations further.

All the audits performed between 2016 and the end of 2019 cover 90% of our natural rubber purchasing volume, which means we have exceeded our target. One supplier was banned because of non-compliance with Nokian Tyres' requirements.

After the audits, we always initiate corrective programs to address the shortcomings identified in the process. The most common problem remains the

same in most of the places: the recruitment of foreign workers. Foreign workers are recruited through a recruitment agency network, and the amount of recruitment costs to the employee can be significant: up to a year's salary. As the agencies are often approved by local governments, it is difficult to improve the process. However, we require our suppliers to improve also on this issue. The suppliers keep requesting support from the local officials, but the progress is slow.

Another common problem is the language and contents of the employment contracts. The contract is not necessarily available in the employees' mother tongue, or the translated content differs from the original.

During 2019, we organized seven sustainability audits. The most common problems were:

- Supplier recruits foreign workers through recruitment agency network and the amount of recruitment costs is approximately 8 months to 1-year salary. Even though the suppliers use local government approved recruitment agencies, the recruitment costs for the employee remain very high.
- The employee contracts are only in local or English language. Especially immigrant workers do not always understand

what they sign. After the audit results from Nokian Tyres, most suppliers have introduced several different language versions of employment contracts. This shows that many things can be improved once an external party reviews the processes and indicates improvements.

In December 2019, we conducted two reaudits. The results showed improvements in the following areas:

- One company had organized training on discrimination, harassment, fair treatment and first aid. Previously none of the employees had received training on any of the topics.
- The other company had implemented hazardous waste management system and since 2018 organizes an environmental performance monitoring twice a year.
- The company had also installed a box for feedback. Letters from 3 employees were received and reviewed by the management. In 2019, management organized training on how to use the box to increase awareness.

REPORTING PRINCIPLES

Stakeholder inclusiveness

In order to achieve the goals outlined in Nokian Tyres' long-term business strategy and to determine our sustainability goals, we have conducted surveys among our five stakeholder groups: customers, employees, subcontractors and suppliers, authorities, and the media. In 2018, Nokian Tyres conducted a sustainability survey, where the most important stakeholder groups defined their individual material topics and risks and opportunities in terms of Nokian Tyres' sustainability. The survey was conducted in eight countries, online and as personal interviews. The surveys are usually conducted every three years.

Sustainability context

"Leader in sustainability" is one of the six differentiators in the Nokian Tyres' strategy. When developing the functions that affect our social, economic and environmental responsibility, we want to go beyond the minimum requirements of the legislation and applicable standards.

This report has been prepared in accordance with the GRI Standards 2016: Core option. This report is also Nokian Tyres' Communication on Progress (CoP) report, which complies with the UN Global Compact (UNGC) requirements. The ten principles of the UNGC are bridged in the GRI Index and our value chain. The Sustainable Development Goals (SDG's) are combined with the Nokian Tyres sustainability goals for 2020 and their progress in 2019.

Materiality

As a result of the sustainability survey in 2018, nine material topics were formed. In the 2019 report, these topics have been identified to represent three current themes: sustainable natural rubber, road safety, and climate change: reducing greenhouse gas emissions. As a result of our on-going materiality analysis and an internal climate-change workshop, this report covers topics raised by peers, stakeholders, and competitors; these include items such as microplastics and the effects of climate change.

” In the 2019 report, our material topics have been identified to represent three current themes: sustainable natural rubber, road safety, and climate change: reducing greenhouse gas emissions.

Completeness

Our nine material topics are:

- ① Responsibility in material choices and promoting the circular economy
- ② Continuous development of the road safety of tires
- ③ Fighting global warming: reducing the rolling resistance of tires
- ④ Reducing greenhouse gas emissions from all operations
– Use of renewable energy and improving energy efficiency
- ⑤ Human rights in the supply chain
- ⑥ Risk management and good governance
- ⑦ Responsible and ethical purchasing policies
- ⑧ High level of safety and health at work
- ⑨ Profitable growth and indirect economic impacts.

We report our impacts on a year-to-year basis, but we also address impacts in the long term: we conducted a climate change workshop aligned with the recommendations of TCFD and included the results in this report.

Accuracy

The majority of the reported environmental data is based on measurements, with the exception of VOC and CO₂ emissions. VOC emissions are a combination of measurements provided by an external consultancy and our calculations. CO₂ emissions calculations are based on energy consumption measurements or estimations, and the calculations are made using general emission factors. In 2019, the emission calculation of the location-based scope 2 emission calculation is based on Finland's and Russia's average emissions intensity of grids. In Nokia, the market-based emission calculation is based on the suppliers certificate of the actual energy sources used. In Russia, emission calculation is based on emission factors of purchased electricity.

Information regarding waste disposal methods and quantities is provided by the waste disposal contactors. Social data concerning our employees and top management is compiled via our HR system Workday. Safety data is compiled via our OHS system Keto.

The majority of the disclosures for economic responsibility are based on our company's financial statements, which are prepared and presented in accordance with the IFRS standards. The scope of GRI environmental responsibility is divided between our factories in Finland and Russia. The disclosures of the new factory in Dayton, Tennessee, US, will be presented in the next report, as the production begins in 2020. The scope of GRI social disclosures is Group-wide, excluding the subcontractors.

In the social responsibility disclosures, the figures for the Nokian Tyres' equity-owned Vianor chain are combined to cover all of the entities in the chain, but the disclosures are calculated according to the same principles as in the previous reports. The reporting covers all the functions of Nokian Tyres plc, excluding the environmental responsibility disclosures and supply chain disclosures of the Vianor service centers.

Balance

In the report, we consistently follow previously set indicators, be they favorable or unfavorable. The emphasis has been put on topics that are material to our business.

Clarity and timeliness

We publish our Corporate Sustainability Report annually on our website. In 2018, the stakeholders raised a proposition to simplify and compact the Corporate Sustainability Report. This has been our guideline for the 2019 report, and we have clarified the topics material to Nokian Tyres' sustainability under the current themes and edited the content accordingly.

Comparability

As the disclosures for our Group's environmental responsibility are mainly compiled and calculated according to the same methods as in our earlier reports, this year's results are comparable to the previous years'. Nokian Tyres is currently setting up new sustainability targets for the years beyond 2020, which may affect the way we report on certain disclosures and topics in the future.

Reliability

The contents of the Corporate Sustainability Report for the 2019 reporting period have been verified by an independent third party. The assurance was commissioned by the executive management of Nokian Tyres plc.

PERFORMANCE IN FIGURES

CLIMATE AND ENVIRONMENT

	2017	2018	2019
Emissions into the air			
Direct greenhouse gas emissions, Scope 1, CO₂ eq t			
Nokia	612	610	467
Vsevolozhsk	71,522	71,646	64,475
Indirect greenhouse gas emissions (market based), Scope 2, CO₂ eq t			
Nokia	33,269	33,653	9,345
Vsevolozhsk	12,177	13,895	15,386
Indirect greenhouse gas emissions (location based), Scope 2, CO₂ eq t			
Nokia	18,144	19,157	12,026
Vsevolozhsk	27,569	30,863	34,280
Others (own Vianor, warehouses, sales companies)			11,297
Greenhouse gas emissions intensity ratio Scope 1 + Scope 2/production tonne, CO₂ eq t/t			
Nokia	0.66	0.63	0.19
Vsevolozhsk	0.55	0.53	0.53
Indirect greenhouse gas emissions, Scope 3, t CO₂ ekv.			
Purchased good and services			462,600
Capital goods			n.a
Fuel and energy related activities			8,900
Upstream transportation and distribution			20,700
Waste generated in operations			1,700
Business Travel			1,500
Employee commuting			1,800
Leased Assets			500
Downstream transportation and distribution			44,300
Use of sold products			5,415,400
End-of-life treatment of sold products			3,200
Franchises			60
Investments			n.a
Total			5,960,660
n.a = not applicable			

	2017	2018	2019
NOx and SOx emissions, Vsevolozhsk, t			
NOx	70.9	66.6	42.1
SOx	0.8	0.8	1.8
VOC emissions, t			
Nokia	53.7	41.0	60.5
Vsevolozhsk	63.1	62.2	80.4
Energy use			
Energy consumption within the organisation, TJ			
Nokia	613	643	624
Vsevolozhsk	1,563	1,605	1,510
Energy intensity, GJ/production t			
Nokia	11.8	12.1	12.1
Vsevolozhsk	10.2	10.0	10.0
Water			
Cooling water, Nokia, 1,000 m³			
Withdrawal, Nokianvirta river	7,367	7,588	6,552
Discharge, Nokianvirta river	7,271	7,548	6,530
Total water withdrawal, municipal water, 1,000 m³			
Nokia	62.8	61.0	67.4
Vsevolozhsk	276.5	303.2	287.7
Water discharge, sewage, m³			
Nokia	158,866	100,921	89,020
Vsevolozhsk	242,678	272,089	280,998
Raw materials			
Renewable raw materials, kt			
Nokia	11.1	12.2	12.0
Vsevolozhsk	38.1	38.8	39.4
Non-renewable raw materials, kt			
Nokia	41.8	44.9	43.2
Vsevolozhsk	125.2	131.8	121.4
Percentage of materials used that are recycled input materials, %			
Nokia	6.8	6.7	5.6
Vsevolozhsk	8.0	8.5	8.7

PERFORMANCE IN FIGURES

	2017	2018	2019
Waste			
Hazardous wastes, kg/t			
Nokia	4.2	3.3	3.7
Vsevolozhsk	7.8	7.4	6.3
Hazardous wastes by disposal method, Nokia, %			
Recycling	21.5	17.5	17.5
Incineration (mass burn)	0	0	0
Recovery as energy	78.5	82.5	82.5
Landfill	0	0	0
Hazardous wastes by disposal method, Vsevolozhsk, %			
Recycling	1.2	2.2	1.3
Incineration (mass burn)	26.4	10.3	2.4
Recovery as energy	29	31.1	25.1
Landfill	43.4	56.2	71.2
Wastes by disposal method, Nokia, %			
Reuse	8.4	7.9	8.2
Recycling	79.1	74.8	73.8
Composting	0.9	2.5	1.9
Recovery as energy	11.6	14.8	16.1
Landfill	0	0	0
Wastes by disposal method, Vsevolozhsk, %			
Reuse	11.8	8.7	5.1
Recycling	70.5	75.7	76.4
Composting	0	0	0.0
Recovery as energy	3.3	3.5	8.5
Incineration (mass burn)	3	1.2	0.2
Landfill	11.3	10.9	9.8

	2017	2018	2019
Total waste by disposal method, Nokia + Vsevolozhsk*			
Reuse			
t	1,611	1,330	1,003
%	10.8	8.4	6.1
Recycling			
t	10,884	11,898	12,435
%	73.1	75.4	75.5
Composting			
t	42	131	103
%	0.3	0.8	0.6
Recovery as energy			
t	862	1,162	1,812
%	5.8	7.4	11
Incineration (mass burn)			
t	317	122	23
%	2.1	0.8	0.1
Landfill			
t	1,180	1,132	1,085
%	7.9	7.2	6.6

* Information of waste disposal methods are provided by the waste disposal contractors.

PERFORMANCE IN FIGURES

PEOPLE

RESULT OF DRIVE! PERSONNEL SURVEY (ENGAGEMENT INDEX)

	2017	2018	2019
Nokian Tyres plc	75.5	75.5	76.9
Passenger Car Tyre Production, Nokia	68.8	70.2	71.0
Passenger Car Tyre Production, Dayton			89.3
Nokian Tyres North America	80.6	74.8	78.1
Nokian Tyres Central Europe	84.5	82.8	73.8
Nokian Tyres Russia & Asia	73.9	73.1	74.8
Nokian Heavy Tyres	68.9	73.3	72.7
Vianor and Nordics	77.6	79.0	81.5
Global Functions	78.3	78.0	77.3

PEOPLE REVIEWS (REALIZATION, %)

	2015	2016	2017	2018	2019
Nokian Tyres Group, %	82.8	86.0	83.4	82.2	92.2

ABSENTEEISM BY COMPANY

	Nokian Tyres Finland			Nokian Tyres Russia		Vianor Nordic				
	Nokian Tyres (FI)	Nokian Heavy Tyres	NT Tyre Machinery	OOO Nokian Shina	OOO Nokian Tyres	Nordic Wheels	Vianor Holding Oy	Vianor Oy	Vianor AB	Vianor AS
Sick absences % (total)	2.6	4.2	7.7	3.7	5.5	1.1	0.8	6.8	4.2	5.6

ACCIDENT FREQUENCY*

	2015	2016	2017	2018	2019
Lost time incident frequency (LTIF)					
Nokian Tyres Finland	22.3	20.2	8.6	5.3	3.7
Nokian Tyres Russia	3.0	3.0	3.2	5.0	2.0
Vianor	23.9	15.2	12.6	15.0	7.8
The ratio of all listed companies	13.9	11.2	7.5	8.3	4.3
Recordable accident frequency (rec. F)					
Nokian Tyres Finland		24.1	12.6	8.7	8.3
Nokian Tyres Russia		3.0	3.9	5.3	4.0
Vianor		18.7	19.5	21.6	13.9
The ratio of all listed companies		13.2	11.2	11.6	8.2
Recordable accidents					
Nokian Tyres Finland		42	24	18	18
Nokian Tyres Russia		8	11	16	12
Vianor		59	62	72	48
The ratio of all listed companies		109	97	106	82

* Levvpyörä (acquired in August 2019) will be included in the safety figures as of 2020.

PERFORMANCE IN FIGURES

TOTAL NUMBER AND RATE OF NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER BY GENDER, AGE GROUP, AND REGION

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Total number of new employees	330	109	32	127	1	599
Number of women	51	37	20	24	0	132
Number of men	279	72	12	103	1	467
Number of under 30 years old	85	59	6	38	0	188
Number of 30–50 years old	191	49	23	66	1	330
Number of over 50 years old	54	1	3	23	0	81
New employee hires rate (Total), %	7.0	2.3	0.7	2.7	0.0	12.7
Percentage of women, %	1.1	0.8	0.4	0.5	0.0	2.8
Percentage of men, %	5.9	1.5	0.3	2.2	0.0	9.9
Percentage of under 30 years old, %	1.8	1.3	0.1	0.8	0.0	4.0
Percentage of 30–50 years old, %	4.1	1.0	0.5	1.4	0.0	7.0
Percentage of over 50 years old, %	1.1	0.0	0.1	0.5	0.0	1.7

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Total number of terminated employees (fixed terms not included)	247	111	27	52	0	437
Number of women	36	30	14	9	0	89
Number of men	211	81	13	43	0	348
Number of under 30 years old	54	50	4	20	0	128
Number of 30–50 years old	146	58	20	23	0	247
Number of over 50 years old	49	3	3	11	0	66
Turnover rate (Total), %	5.2	2.4	0.6	1.1	0.0	9.3
Percentage of women, %	0.8	0.6	0.3	0.2	0.0	1.9
Percentage of men, %	4.5	1.7	0.3	0.9	0.0	7.4
Percentage of under 30 years old, %	1.1	1.1	0.1	0.4	0.0	2.7
Percentage of 30–50 years old, %	3.1	1.2	0.4	0.5	0.0	5.2
Percentage of over 50 years old, %	1.0	0.1	0.1	0.2	0.0	1.4

TOTAL WORKFORCE BY EMPLOYMENT TYPE, EMPLOYMENT CONTRACT AND REGION, BROKEN DOWN BY GENDER

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Total workforce on 31.12.2019	2,705	1,561	187	293	27	4,773
Women	408	226	71	45	8	758
Men	2,297	1,335	116	248	19	4,015
Total number of own employees	2,675	1,554	187	287	27	4,730
Women	408	219	71	42	8	748
Men	2,267	1,335	116	245	19	3,982
Number of supervised workers	30	7	0	6	0	43
Women	0	7	0	3	0	10
Men	30	0	0	3	0	33
Total number of seasonal employments in Vianor during 2019	1,170	0	0	0	0	1,170
Permanent	2,419	1,483	174	286	16	4,378
Full-time, %	97.9	100.0	95.1	97.9	100.0	98.5
Part-time, %	2.1	0.0	4.9	2.1	0.0	1.5
Women, %	15.4	12.2	34.6	14.4	25.0	15.2
Men, %	84.6	87.8	65.4	85.6	75.0	84.2

PERFORMANCE IN FIGURES

COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER AND AGE GROUP

	Nordic	Russia and CIS	Central and Eastern Europe	North America	The rest of the world	Total
Number of individuals within the top management	16	1	1	1	0	19
Number of women	6	0	0	0	0	6
Number of men	10	1	1	1	0	13
Percentage of women, %	37.5	0.0	0.0	0.0	0.0	31.6
Percentage of men, %	62.5	100.0	100.0	100.0	0.0	68.4
Number of under 30 years old	0	0	0	0	0	0
Number of 30–50 years old	7	1	0	0	0	8
Number of over 50 years old	9	0	1	1	0	11
Percentage of under 30 years old, %	0.0	0.0	0.0	0.0	0.0	0.0
Percentage of 30–50 years old, %	43.8	100.0	0.0	0.0	0.0	42.1
Percentage of over 50 years old, %	56.2	0.0	100.0	100.0	0.0	57.9
Number of white collars	1,087	454	183	123	23	1,870
Number of women	256	144	68	27	6	501
Number of men	831	310	115	96	17	1,369
Percentage of women, %	23.6	31.7	37.2	22.0	26.0	26.8
Percentage of men, %	76.4	68.3	62.8	78.0	74.0	73.2
Number of under 30 years old	78	88	30	14	2	212
Number of 30–50 years old	688	344	127	69	17	1,245
Number of over 50 years old	321	22	26	40	4	413
Percentage of under 30 years old, %	7.2	19.4	16.4	11.4	8.7	11.3
Percentage of 30–50 years old, %	63.3	75.8	69.4	56.1	74.0	66.6
Percentage of over 50 years old, %	29.5	4.8	14.2	32.5	17.3	22.1
Number of blue collars	1,572	1,099	3	163	4	2,841
Number of women	147	75	3	16	2	243
Number of men	1,425	1,024	0	147	2	2,598
Percentage of women, %	9.4	6.8	100.0	9.8	50.0	8.6
Percentage of men, %	90.6	93.2	0.0	90.2	50.0	93.8
Number of under 30 years old	416	348	0	50	2	816
Number of 30–50 years old	805	714	2	78	2	1,601
Number of over 50 years old	351	37	1	35	0	424
Percentage of under 30 years old, %	26.5	31.6	0.0	30.6	50.0	28.7
Percentage of 30–50 years old, %	51.2	65.0	75.0	47.9	50.0	56.3
Percentage of over 50 years old, %	22.3	3.4	25.0	21.5	0.0	15.0

Composition of the Board	8
Number of women	2
Number of men	6
Percentage of women, %	25.0
Percentage of men, %	75.0
Number of under 30 years old	0
Number of 30–50 years old	2
Number of over 50 years old	6
Percentage of under 30 years old, %	0.0
Percentage of 30–50 years old, %	25.0
Percentage of over 50 years old, %	75.0

PRODUCTS

LOWERING OF ROLLING RESISTANCE COMPARED TO 2013, %, IN AVERAGE

	2017	2018	2019
NT passenger car tires with EU labeling	7.0	8.2	8.3

SUPPLY CHAIN

	2017	2018	2019
Percentage of Nokian Tyres' raw material suppliers with ISO 14001 certification	71.0	72.0	73.3
Percentage of Nokian Tyres' raw material suppliers who answered the sustainability self-assessment survey	85.0	86.8	89.6

GRI + UNGC CONTENT INDEX

GRI Standard		Location	UNGC	Disclosure
GRI 102: General disclosures				
Organizational profile				
102-1	Name of the organization	3		
102-2	Activities, brands, products, and services	3		
102-3	Location of headquarters			Nokian Tyres plc Pirkkalaistie 7 37100 Nokia Finland
102-4	Location of operations	3		
102-5	Ownership and legal form	3		
102-6	Markets served	3		
102-7	Scale of the organization	3		
102-8	Information on employees and other workers	39–40	3, 6	
102-9	Supply chain	50	1, 2, 4, 5, 10	
102-10	Significant changes to the organization and its supply chain			No significant changes.
102-11	Precautionary Principle or approach	20–21	7	
102-12	External initiatives	14–15		
102-13	Membership of associations	www.nokiantyres.com/company/sustainability/fundamentals/our-stakeholders-and-memberships/		
Strategy				
102-14	Statement from senior decision-maker	4		
Ethics				
102-16	Values, principles, standards, and norms of behavior	7, 9–10, 12	10	
Governance				
102-18	Governance structure	www.nokiantyres.com/company/investors/corporate-governance/		
102-20	Executive-level responsibility for economic, environmental, and social topics	www.nokiantyres.com/company/investors/corporate-governance/the-groups-management-team/		
102-21	Consulting stakeholders on economic, environmental, and social topics	www.nokiantyres.com/company/sustainability/fundamentals/materiality-analysis-of-nokian-tyres/		Annual General Meeting
102-22	Composition of the highest governance body and its committees	www.nokiantyres.com/company/investors/corporate-governance/board-of-directors/		
102-23	Chair of the highest governance body	www.nokiantyres.com/company/investors/corporate-governance/board-of-directors/		

GRI Standard		Location	UNGC	Disclosure
102-24	Nominating and selecting the highest governance body	www.nokiantyres.com/company/investors/corporate-governance/annual-general-meeting/		
102-25	Conflicts of interest	Financial Review 2019		
102-26	Role of the highest governance body in setting purpose, values and strategy	www.nokiantyres.com/company/investors/corporate-governance/board-of-directors/board-cg/		
102-27	Collective knowledge of highest governance body	Financial review 2019		
102-30	Effectiveness of risk management processes	www.nokiantyres.com/company/investors/corporate-governance/mechanisms-of-internal-control--internal-audit-and-risk-management/		
102-35	Remuneration policies	www.nokiantyres.com/company/investors/salaries-and-remunerations/		
102-36	Process for determining remuneration	www.nokiantyres.com/company/investors/salaries-and-remunerations/		
Stakeholder engagement				
102-40	List of stakeholder groups	www.nokiantyres.com/company/sustainability/fundamentals/our-stakeholders-and-memberships/		
102-41	Collective bargaining agreements	39		
102-42	Identifying and selecting stakeholders	www.nokiantyres.com/company/sustainability/fundamentals/our-stakeholders-and-memberships/		
102-43	Approach to stakeholder engagement	9-10		
102-44	Key topics and concerns raised	www.nokiantyres.com/company/sustainability/fundamentals/our-stakeholders-and-memberships/		
102-45	Entities included in the consolidated financial statements	Financial review 2019		
102-46	Defining report content and topic Boundaries	53-54		
102-47	List of material topics	54		
102-48	Restatements of information	39, 53-54		
102-49	Changes in reporting			No changes.
102-50	Reporting period			January 1, 2019 - December 31, 2019
102-51	Date of the most recent report			February 28, 2020
102-52	Reporting cycle			Annually
102-53	Contact point for questions regarding the report			media@nokiantyres.com
102-54	Claims of reporting in accordance with the GRI Standards	53-54		
102-55	GRI content index	60		
102-56	External assurance	64		
Management approach				
103-1	Explanation of the material topic and its Boundary	53-54		
103-2	The management approach and its components	7, 9-10		
103-3	Evaluation of the management approach	www.nokiantyres.com/company/sustainability/fundamentals/managing-sustainability/		

GRI Standard		Location	UNGC	Disclosure
GRI 200: Economic Standard Series				
Economic performance				
201-1	Direct economic value generated and distributed	14		
201-2	Financial implications and other risks and opportunities due to climate change.	16, 29		
Anti-corruption				
205-2	Communication and training about anti-corruption policies and procedures	7	10	
GRI 300: Environmental Standard Series				
Materials				
301-1	Materials used by weight or volume	55		
301-2	Recycled input materials used	27, 55		
Energy				
302-1	Energy consumption within the organization	22		
302-3	Energy intensity	22		
Water				
303-1	Water withdrawal by source	22		
Emissions				
305-1	Direct (Scope 1) GHG emissions	23	7, 8	
305-2	Energy indirect (Scope 2) GHG emissions	23	7, 8	
305-3	Other indirect (Scope 3) GHG emissions	23		
305-4	GHG emissions intensity	55	8	
305-5	Reduction of GHG emissions	23	8, 9	
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	55	7, 8	
Effluents and Waste				
306-1	Water discharge by quality and destination	26	8	
306-2	Waste by type and disposal method	27	8	
Environmental compliance				
307-1	Non-compliance with environmental laws and regulations	20, 24		

GRI Standard		Location	UNGC	Disclosure
GRI 400: Social Standard Series				
Employment				
401-1	New employee hires and employee turnover	39, 58	6	
Occupational Health and Safety				
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	38		
Training and Education				
404-2	Programs for upgrading employee skills and transition assistance programs	41		
404-3	Percentage of employees receiving regular performance and career development reviews	41	6	
Diversity and Equal Opportunity				
405-1	Diversity of governance bodies and employees	59 www.nokiantyres.com/company/investors/corporate-governance/board-of-directors/diversity-policy-for-the-board-of-directors/	6	
Human Rights Assessment				
412-1	Operations that have been subject to human rights reviews or impact assessments	52	1, 2	
412-2	Employee training on human rights policies or procedures	7	1, 2	
Supplier Social Assessment				
414-2	Negative social impacts in the supply chain and actions taken	51-52	1, 2	
Public Policy				
415-1	Political contributions	16	10	
Customer Health and Safety				
416-1	Assessment of the health and safety impacts of product and service categories	45-46	7	
Company and industry specific GRI				
NT1	Extent of mitigation of the environmental impacts of products and services	45-48		New sustainability goals for beyond 2020 are under evaluation. They will determine also the company specific GRI's set in the report of 2018.
NT2	Reducing the rolling resistance of tires	47, 59	7, 8	New sustainability goals for beyond 2020 are under evaluation. They will determine also the company specific GRI's set in the report of 2018.

INDEPENDENT ASSURANCE REPORT

Translated from the original Report in Finnish language

To the Management of Nokian Tyres plc

At the request of the Management of Nokian Tyres plc (hereafter Nokian Tyres) we have performed a limited assurance engagement on the corporate responsibility information for the reporting period 1.1.–31.12.2019 presented in Nokian Tyres' Corporate Sustainability Report 2019 (hereafter sustainability information).

Management's responsibility

The Management of Nokian Tyres is responsible for the preparation and presentation of the corporate responsibility information in accordance with the GRI Sustainability Reporting Standards, and Nokian Tyres' internal reporting guidelines (hereafter the reporting principles).

Assurance Provider's responsibility

It is our responsibility to present an independent conclusion on the sustainability information based on our work performed. We do not accept nor assume responsibility to anyone else except to Nokian Tyres for our work, for the assurance report and for the conclusions that we have reached.

We have conducted the assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 'Assurance Engagements Other than Audits or Reviews of Historical Financial Information'. The ISAE 3000 standard requires compliance with ethical requirements as well as planning and performing the assurance engagement to obtain limited assurance on whether the corporate responsibility information has been prepared, in all material respects, in accordance with the reporting principles.

Assurance Provider's independence and quality assurance

We comply with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the IESBA (International Ethics Standards Board for Accountants). We apply ISQC 1 (International Standard on Quality Control) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Limitations of the engagement

In a limited assurance engagement, the evidence gathering procedures are more limited than in a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the Assurance Provider's judgment, including an assessment of the risks that the corporate responsibility information would not, in all material respects, comply with the reporting principles. We have planned and performed our engagement to obtain sufficient and appropriate evidence on which to base our conclusion.

We have performed, among others, the following procedures:

- An update of our knowledge and understanding of Nokian Tyres' material sustainability reporting topics, organization and activities,
- An assessment of suitability and application of the reporting principles regarding the stakeholders' needs for information,
- Interviews with senior management to understand Nokian Tyres' corporate responsibility leadership,
- Interviews with personnel responsible for gathering and consolidation of the corporate responsibility information to understand the systems, processes and controls related to gathering and consolidating the information,

- Reviewing sustainability data from internal and external sources and checking the data to reporting information on a sample basis,
- Performing recalculation of information and reviewing the underlying data which is the basis of narrative disclosures related to the data,
- Visited Nokia and Vsevolozhsk sites and reviewed reporting practices.

Our assurance report should be read in conjunction with the inherent limitations of accuracy and completeness for sustainability information. This independent assurance report should not be used on its own as a basis for interpreting Nokian Tyres' performance in relation to its principles of sustainability information.

Conclusion

Based on our work described in this report, nothing has come to our attention that causes us to believe that the sustainability information has not been prepared, in all material respects, in accordance with the reporting principles, or that the information is not reliable, in all material respects, based on the reporting principles.

Helsinki, 24 February 2020

Ernst & Young Oy

Terhi Mäkinen
Partner, Authorized
Public Accountant

Jani Alenius
Leader of Climate Change
and Sustainability Services

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