People & Planet 2020

NOKIA

Technology and digitalization continue to play a key role in enabling a sustainable future. Our climate commitments are set for the 1.5°C scenario. The critical solutions we create are keeping people connected and enable sustainable industries. Trust, integrity and ethical behavior define how we do business. Our technology is a social good and we strive to ensure it is not misused. We work hard to build a responsible, transparent supply chain. We enable and promote human rights and collaborate with our value chain and beyond. We celebrate an inclusive, diverse world where nobody is left behind.

Letter from the President and CEO

This was a year of many extraordinary and unexpected events.

Think back to the start of 2020. Few people would have anticipated that a new virus only recently identified would spread so rapidly around the world – and with such far-reaching and devastating consequences for health, economies, and life as we knew it.

Yet, few people would also have foreseen a 20 percent fall in global nitrogen dioxide levels between February and June, or an estimated 6.4 percent reduction in carbon dioxide emissions (equivalent to 2.3 billion tons) over the course of the year.

Prior to the pandemic, such dramatic falls in two of the most harmful greenhouse gases would have been thought only likely as a result of major technological breakthroughs in energy or transport. Instead, what it took was unprecedented national lockdowns, widespread closure of workplaces and schools, and an emergency brake on industrial activity and aviation.

Clearly, shutting down normal life permanently is an unsustainable solution to the sustainability crisis we face. The World Meteorological Organization also said that any lockdown-related reduction in emissions would only be a “tiny blip” on the long-term graph, as carbon levels in the atmosphere continued to rise in 2020 but just slightly less quickly.

We need innovative new solutions if we want to achieve a sustained flattening of the curve and meet the UN Paris Agreement target of limiting the rise in global temperatures to 1.5°C by 2050. To achieve that goal, we would have to cut emissions by half every decade for the next 30 years.

The scale of that task is huge, but at Nokia we believe that the technology we create has a crucial role to play in the fight against climate change through cutting emissions and enabling smart solutions.

This year we recalibrated our own climate targets in line with the latest science and committed to cutting emissions across our business by 50 percent by 2030 compared to 2019. We have now delivered zero-emission products to over 150 customers globally. The customer base station sites we modernized in 2020 are now using 54 percent less energy on average. And, together with Elisa, we introduced the world’s first 5G liquid-cooled mobile network base station, which uses up to a third less energy and can reduce carbon dioxide emissions by up to 80 percent per site.

As well as cutting our own carbon footprint and supporting our suppliers and customers to do the same, we saw a glimpse of what a more sustainable 5G-enabled future could look like. Nokia's critical networks made possible digital healthcare, education, public services, and business for more people than ever before. Our technology helped companies to keep operating and millions of employees around the world to shift to remote working. We saw that business was not only possible but perhaps more desirable with fewer polluting car journeys and without unnecessary air travel.

At the same time, we continued to work with our customers to cut waste, improve energy efficiency, and deploy smart solutions by accelerating digitalization and automation in a range of industries, from manufacturing and mining to logistics and transport. A good example was the private 5G network we created for Lufthansa, which allowed the airline to test engine parts with customers remotely in real time using an augmented reality (AR) tool during lockdowns.

We made progress on digital inclusion by connecting the unconnected, with 6.6 billion subscriptions on our customers' radio networks worldwide by the end of 2020. Nokia's community investment programs also helped schoolchildren in rural areas of Kenya to learn remotely during lockdown, and our ongoing partnership with UNICEF in Indonesia enabled direct healthcare support for around 2 million people at the height of the pandemic. Our COVID-19 donation fund supported hospitals, clinics, and people in need in 48 countries, through organizations such as World Vision and the International Committee of the Red Cross.

We remained committed to conducting business ethically and transparently despite the challenges created by COVID-19. We strengthened human rights protections by increasing virtual training on modern slavery and minority rights for our suppliers. We also maintained our focus on ethical business training, which more than 96 percent of our employees completed. In addition, 85 percent of our leaders completed training on navigating bias and building a more inclusive workplace.

Too often, sustainability has been an afterthought, a "nice to have." But for us, sustainable solutions are both a business opportunity and at the heart of our decision-making process. I was particularly pleased to see Nokia being ranked #4 in the Wall Street Journal's top 100 most sustainably managed companies in the world and to be named as one of the best places to work for LGBTQ equality by the Human Rights Campaign.

We do not seek external accolades, but that recognition is an accurate reflection of our ethos and the efforts of our employees to ensure we live up to our environmental and social responsibilities.

There is much we can take pride in over the past year, detailed in this report, but there is also much work still to be done to build a cleaner, greener, and more inclusive world for everyone.

Pekka Lundmark
President and CEO

> "Nokia's critical networks made possible digital healthcare, education, public services, and business for more people than ever before. Our technology helped companies to keep operating and millions of employees around the world to shift to remote working.

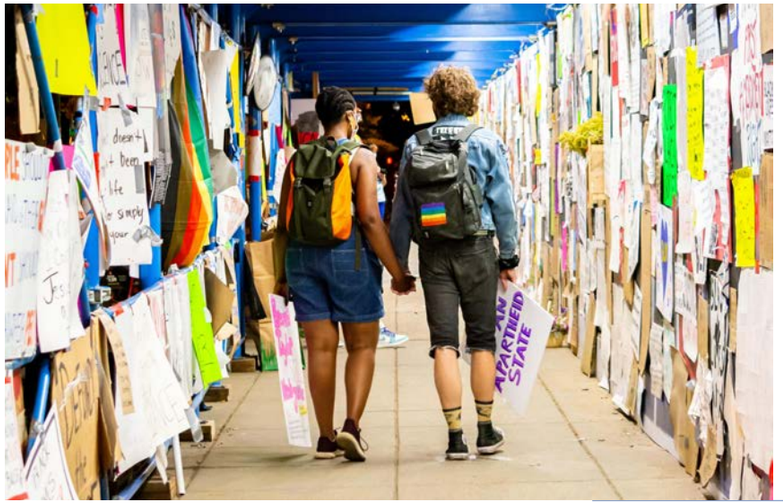
Contents

About this report

The scope of this report is Nokia Group in 2020, including the Networks segment, Nokia Software, Nokia Technologies and Group Common and Other.

In our reporting, we are committed to expanding our transparency and our coverage. Our report is prepared in accordance with the GRI Standards: Core option. As part of our reporting, we also take into account other sustainability reporting frameworks, such as SASB and the UN Global Compact. Our selected key sustainability indicators have been assured by Nokia's independent auditor, Deloitte. This report was published in April 2021 and it is only available in digital format. The report can be found online at **www.nokia.com/about-us/sustainability**, where we have also published supplementary information including the Key ESG frameworks 2020 document that maps our reporting to GRI, SASB and UN SDGs. We have published annual corporate responsibility reports since 1999 and the reports are available in digital format from as far back as 2003 in **our report archive**.

Sustainability and corporate responsibility topics are also discussed in our corporate annual reports, including the annual report on Form 20-F that is filed with the US Securities and Exchange Commission. The Board Review of 2020 Annual Accounts includes non-financial information as required by the Finnish Accounting Act implementing the EU Directive on disclosure of non-financial information. Financial and operational information in this report should be read in conjunction with the information provided in our interim reports and annual financial reports, as well as the risk factors and forward-looking statements included in such reports. For more information on our financial results, operations, and reporting structure, please see **www.nokia.com/about-us/investors**.



Improving lives

Since 2016 over 3.8 million people have benefitted from our community investment programs globally, so we reached our 2025 target of improving the lives of 2 million people ahead of schedule.
Read more

Business with integrity

In early 2021 we were honored to be recognized for the 5th time by Ethisphere as one of the World's Most Ethical Companies® for our commitment to being a trusted, competent, and valued leader in our industry.
Read more

Climate action

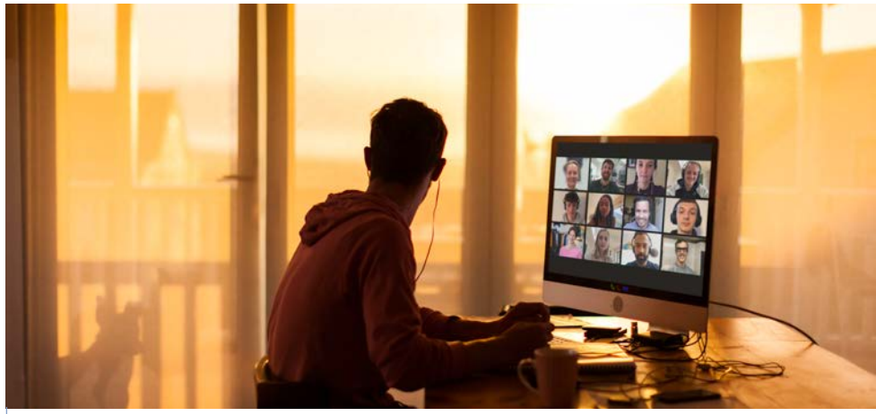
Our recalibrated climate targets were accepted by the Science Based Targets initiative. We commit to cut our emissions across our operations and products in use by 50% by 2030 thus achieving net zero by 2050.
Read more

Addressing human rights

In 2020 we continued to provide anonymized real case examples from our Human Rights Due Diligence work to drive the dialog further.
Read more

Supply chain transparency

Our supplier audit implementation is aligned with the SA8000 methodology and in 2020 we implemented 391 (332 in 2019) supply chain audits of which 51 (91 in 2019) were onsite audits and 340 were (241 in 2019) supplier assessments conducted using the EcoVadis sustainability rating scorecards. **Read more**



Critical connectivity during the pandemic

Connectivity and technology proved its mettle as it brought together people isolated from each other as a result of the pandemic. We adapted our ways of working to ensure that our people remain safe while our operations continue.

Nokia today

We create the critical networks and technologies to bring together the world's businesses, cities, supply chains and societies. We deliver networks for mobile, infrastructure, cloud and enabling technologies.

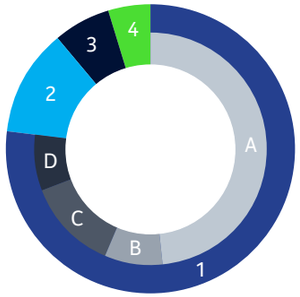
Our customers include communications service providers whose combined networks support 6.6 billion subscriptions, as well as private enterprises and industries, and the public sector all using our solutions to increase productivity and efficiency, and enrich lives.

Through our research teams, including the world-renowned Nokia Bell Labs, we are leading the world to adopt 5G networks that are more energy efficient, faster, more secure and capable of revolutionizing industries, economies, and societies. We are driving the digitalization of industry towards the Fourth Industrial Revolution (4IR). We do this while adhering to the highest standards of integrity and security to contribute to a more sustainable, inclusive and productive world.

In 2020 we delivered net sales of 21 852 EUR million and invested 4 087 EUR million in R&D. We had seven business groups: Mobile Networks, Global Services, Fixed Networks, IP and Optical Networks, Nokia Software, Nokia Enterprise and Nokia Technologies. In October 2020 we announced a new operating model, effective from January 1, 2021. Our new business groups are Mobile Networks, Network Infrastructure, Cloud and Network Services, and Nokia Technologies. For more information see our financial reporting at www.nokia.com/investors.

We have customers in nearly 200 countries. Our technologies transform the way people communicate and connect with each other and things. At the end of 2020, we employed 89 978 people in 116 countries. 3 percent of employees were based at our headquarters in Espoo, Finland. More than a third of our employees work within our research and development (R&D) in Europe, North America, and Asia.

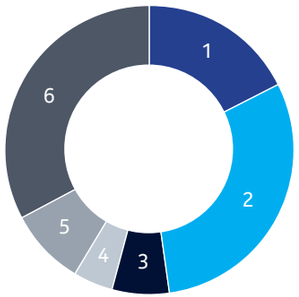
Net sales by business 2020



1	Networks	EUR 16 852m (-7%)
A	Mobile Access	EUR 10 630m (-9%)
B	Fixed Access	EUR 1 759m (-6%)
C	IP Routing	EUR 2 768m (-5%)
D	Optical Networks	EUR 1 695m (-3%)
2	Nokia Software	EUR 2 656m (-4%)
3	Nokia Technologies	EUR 1 402m (-6%)
4	Group Common and Other	EUR 982m (+3%)

The figures are derived from our consolidated financial statements prepared in accordance with IFRS. Year-on-year change is in parenthesis.

Net sales by region 2020

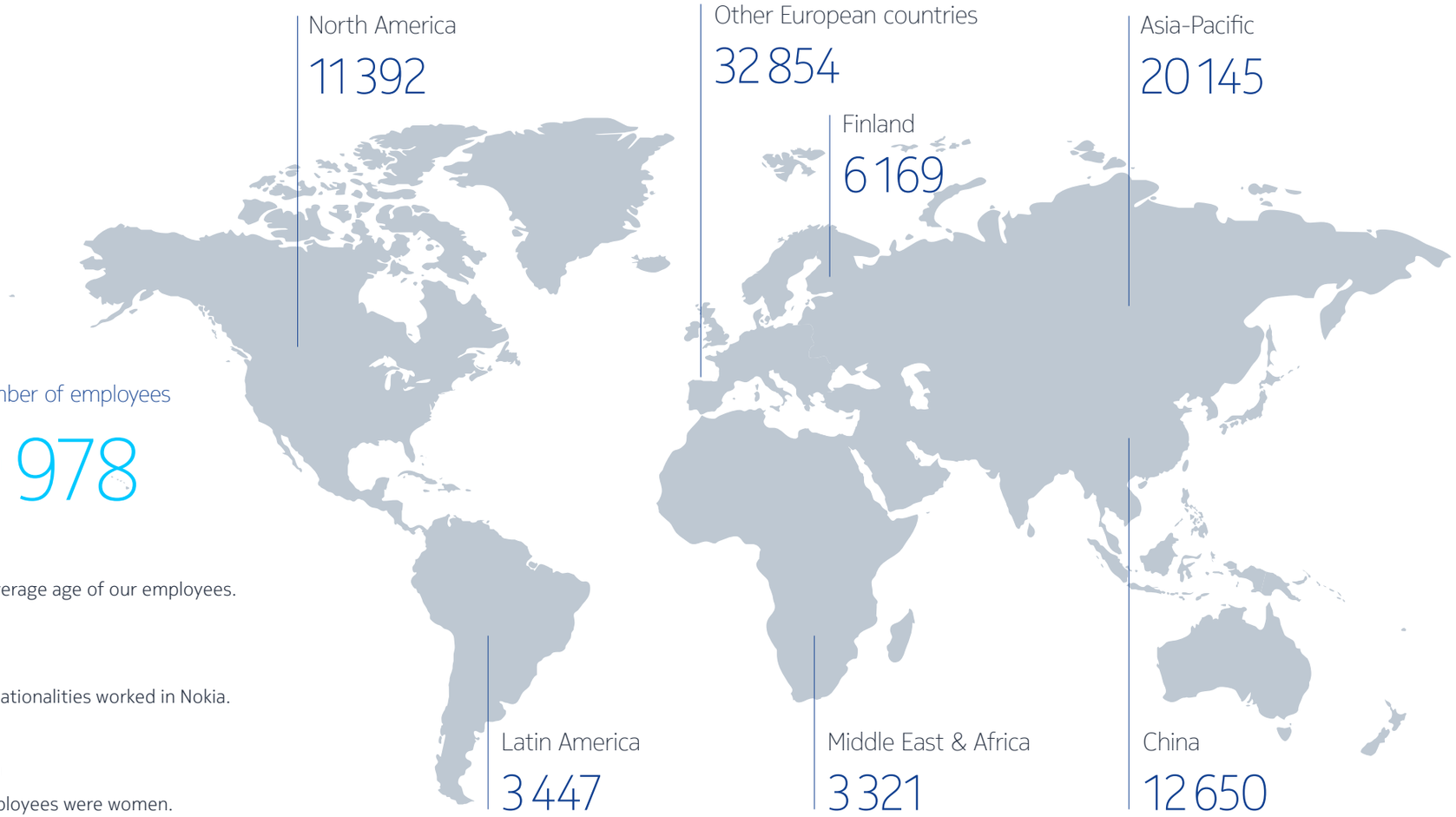


1	Asia-Pacific	EUR 3 847m (-16%)
2	Europe[1]	EUR 6 620m (0%)
3	Greater China	EUR 1 376m (-25%)
4	Latin America	EUR 995m (-32%)
5	Middle East & Africa	EUR 1 893m (1%)
6	North America	EUR 7 121m (+2%)

[1]All Nokia Technologies IPR and Licensing net sales are allocated to Finland.

The figures are derived from our consolidated financial statements prepared in accordance with IFRS. Year-on-year change is in parenthesis.

Our employees in the end of 2020



Total number of employees

89 978

41
was the average age of our employees.

164
different nationalities worked in Nokia.

22%
of our employees were women.

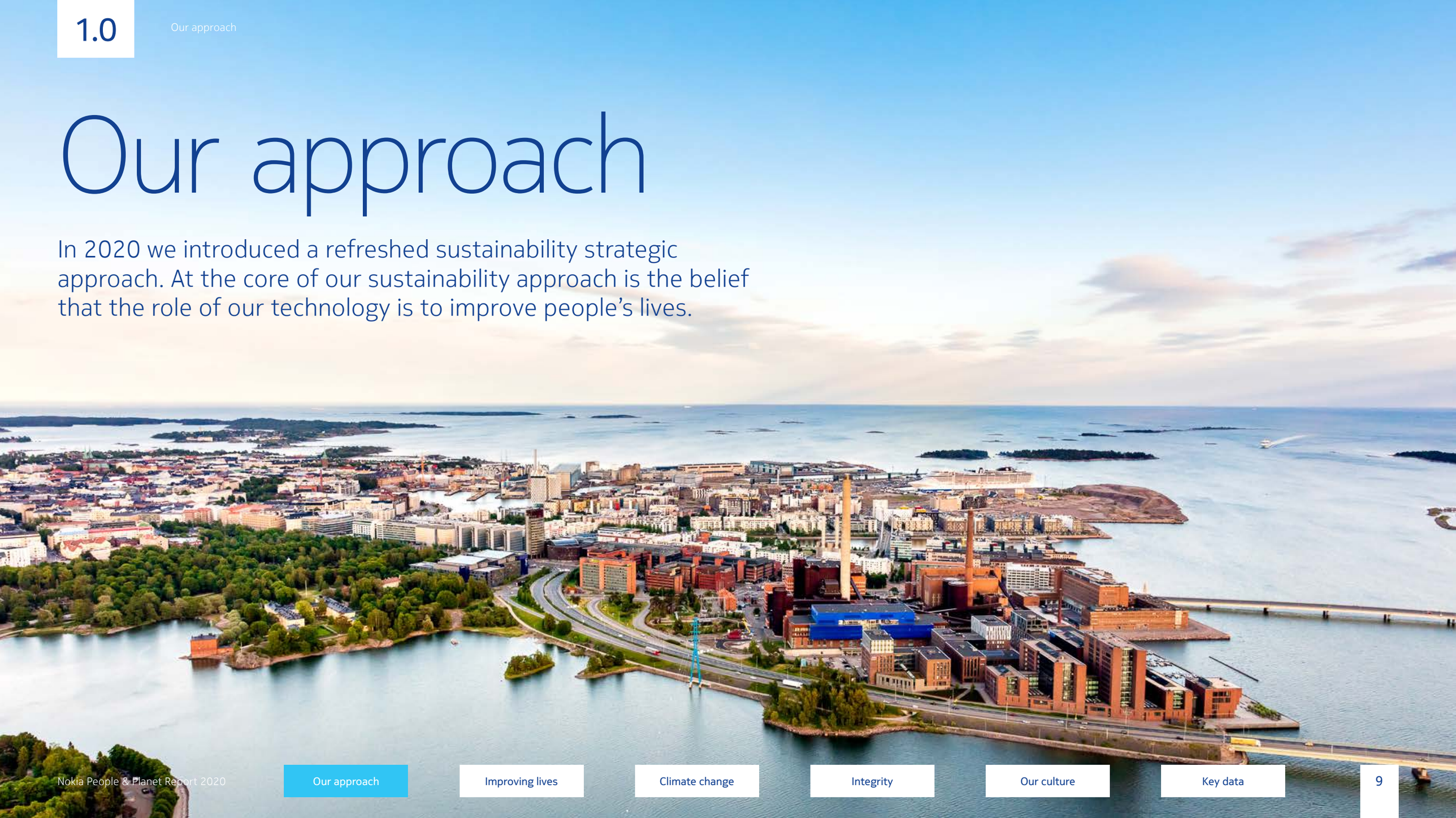
We outsource certain non-core activities and use subcontractors to meet customer needs or volume demands. At the end of 2020, the number of temporary workers (external temporary labor, ETL) used was in the region of 3 000 people. Activities performed by externals, be they ETL or subcontractors, include for example, consultants supporting different tasks in our business groups and support functions, facility service providers, security guards and IT support.

Top ten countries by share of employees

17% India	14% China
10% USA	8% Poland
7% Finland	6% France
4% Germany	3% Russian Federation
2% Hungary	2% Canada

Our approach

In 2020 we introduced a refreshed sustainability strategic approach. At the core of our sustainability approach is the belief that the role of our technology is to improve people's lives.



Sustainability highlights and challenges in 2020

What we did well...

- In 2020, the radio networks we have supplied to our customers supported around 6.6 billion subscriptions worldwide.
- We agreed to cut emissions across our business by 50% between 2019 and 2030. In line with our commitment to a 1.5°C warming scenario this recalibrated science-based target was submitted in December 2020 and accepted in February 2021 by the Science Based Targets initiative.
- We have delivered zero emission products to over 150 customers worldwide. The customer base station sites we modernized used on average 54% less energy (46% in 2019) than those where our customers did not modernize.
- We launched our call to action to ensure that a future society with 5G at its heart is built on the principles of equality, trust, sustainability and people-first as part of our Life in 2030 campaign.
- By the end of 2020, we had secured 145 commercial 5G deals and launched 44 live 5G networks with our customers.
- We were honored to be recognized for our work and disclosure on climate issues with an A List rating from CDP.

What we need to do better...

- We deeply regret the two fatal incidents involving people working on our behalf, although our fatality rate improved overall in 2020. Of these incidents, zero involved our own employees and two involved our contractors or subcontractors.
- Women accounted for 22% of our workforce and approximately 15% of leadership positions. Despite great efforts, we did not reach our 2020 goal of increasing women in leadership positions by 25% (baseline 15.5% in 2016). We have set new targets for diversity going forward. Read more in chapter 1.3 Our targets and performance.

A full listing of recognitions can be found on our **website**.

Our sustainability priorities and impacts

Our core business is connectivity and related activities. Our technology connects people and things, provides access to education, information, better healthcare, and greater opportunity, connecting us to our communities and business. Connectivity enables a more inclusive world and supports a safer environment and healthier planet.

We believe the technology we provide enables both environmental and social benefits to individuals, industries and communities that far outweigh any negative impacts. Our sustainability agenda is built around actions in three core areas supported by well-managed fundamental processes, procedures and activities.

The three core areas are:

1. Climate – enablement, mitigation and adaptation solutions will grow in importance in the battle against climate change
2. Integrity – expectations and requirements for increased ethical behavior, security and privacy will intensify
3. Culture – our ability to attract the best talent and create high-performance, inclusive and diverse teams will increase in significance

These, in turn, all promote our goal to improve lives with the technology we provide. We aim to create value and, where possible, exceed stakeholder requirements and expectations while complying with increased regulatory demands and transparency expectations.

The renewed sustainability approach is a result of a thorough review of our sustainability activities, requirements and achievements with emphasis on impact, scope, focus areas, and targets. The strategic approach is based on a number of factors related to our business and the impact on sustainable development including:

- Global macro trends with an impact on sustainable development. See below and more on our **website.**
- Our regular engagement with various stakeholders. Read more about **working with stakeholders.**
- Requirements and information requests especially from our customers and investors. See our **Awards and recognitions**.
- Our benchmarking of 23 industry peers and leaders in sustainability.

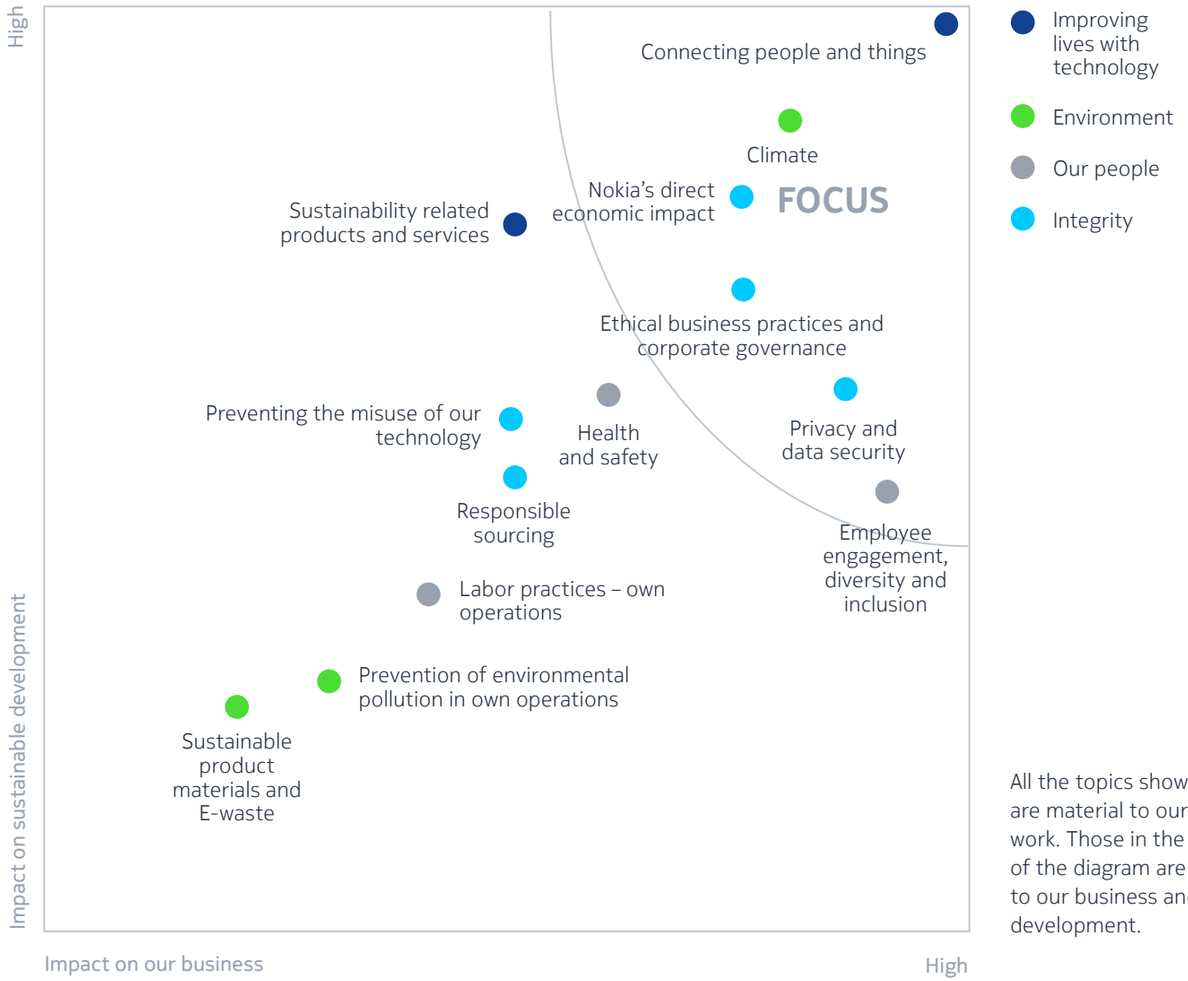
Our strategic approach to sustainability

Fundamental responsible business necessities

- Environmental management
- Circularity
- Portfolio energy efficiency
- Supplier human and labor rights
- Health & safety
- Inclusion & diversity
- Labor practices in own operations
- Ethics & compliance
- Preventing misuse of technology
- Responsible sourcing
- Data privacy & security

- Our corporate strategy and **Code of Conduct**
- Assessments of risks and opportunities through the Nokia Enterprise **Risk Management system**
- Analysis of the economic, environmental and social value we can create throughout our value chain. Read more **here**.
- Analysis of UN Sustainable Development Goals and Targets and their relevance to Nokia. Read more on our **website**.
- International sustainability frameworks such as **SASB**, **TCFD**, the **GRI Standards** and the **UN Global Compact**
- Our long history and experience in sustainability. Download our GRI and SASB index annex **here**

Based on the analysis described above, we have identified 13 material topics which are included in our sustainability scope.



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

Our targets and performance

In 2020, we had a total of 20 external targets for our key sustainability areas. The tables on the next four pages provide the status of those targets at the end of 2020.

- All five of our short-term targets for 2020 were achieved
- Out of the 15 existing long term targets, 6 were achieved in 2020 and 5 were not achieved. In addition, 4 targets were ongoing and on track.

Improving people's lives with technology

Material topic	Target	Achievements in 2020	Status
Connecting people and things	**2022** Helping our customers to connect the next billion measured by number of subscriptions in Nokia radio customers' networks (baseline 2016)	At the end of 2020 the radio networks we delivered to our customers served around 6.6 billion subscriptions worldwide, compared to around 5.5 billion at the end of 2016. **Assured**	Achieved
Sustainability related products and services	**2025** Improve the lives of 2 000 000 persons through our corporate and key regional community investment programs (baseline 2016) focusing our action on gender balance, education and health and on how Nokia products and services improve people's lives.	In 2020, our corporate and key regional community investment programs had around 2 183 300 direct beneficiaries. Since the 2016 baseline, over 3.8 million people have benefitted from our program, therefore we reached the target ahead of time.	Achieved

Our targets and performance

Combatting climate change

Material topic	Target	Achievements in 2020	Status
Climate and our products	**2030** Greenhouse gas (GHG) emission reduction of 75% compared to the 2014 baseline (Scope 3, use of sold products). This target is accepted by the Science Based Targets initiative	In 2020, Scope 3 emissions included in our Science Based Targets were on track. **Assured**	On-going: on track
Climate and our own operations	**2020** Purchase 35% of the total purchased electricity from renewable sources	In 2020, 39% of our total purchased electricity was from renewable sources. **Assured**	Achieved
	2020 Reduce facility energy usage by 3% compared to 2019	In 2020, energy consumption across our facilities decreased by 7% compared to 2019. **Assured**	Achieved
	2020 Reduce GHG emissions from facilities by 4%, compared to 2019 (Scope 1 and 2)	In 2020, GHG emissions from our facilities decreased by 19% compared to 2019. **Assured**	Achieved
	2030 GHG emission reduction of 41%, compared to the 2014 baseline (Scope 1 and 2). This target is accepted by the Science Based Targets initiative	In 2020, Scope 1 and 2 emissions included in our Science Based Targets were on track. **Assured**	On-going: on track
	New target for 2030 Reduce our absolute Scope 1, 2 and 3 GHG emissions by 50% between 2019 and 2030 This target is in line with the 1.5°C global warming scenario and accepted by the Science Based Targets initiative, replacing our previous Science Based Targets for 2030.		
	New target for 2021 Purchase 45% of the total purchased electricity from renewable sources		
	New target for 2021 Reduce GHG emission from our facilities (Scope 1 and 2) by 22% compared to 2019		
Management and prevention of environmental pollution in own operation	**2020** Recycle at least 65% of facility waste	In 2020, we recycled 68% of the facility waste and the total waste utilization rate was 81%. **Assured**	Achieved
	New target for 2021 Divert 70% of facility waste from landfill		

Our targets and performance

Conducting business with integrity

Material topic	Target	Achievements in 2020	Status
Ethical Business Practices and Corporate Governance	**2020** Employee/Line Manager engagement on importance of ethics and compliance: 75% favorable answers targeted	Progress was measured with a question in our anonymous employee compliance and inclusion survey: "My line manager sets a positive example by acting with integrity." In 2020, 89% (88% in 2019) of responding employees gave a favorable response.	Achieved
	2030 Employee/Line Manager engagement on importance of ethics and compliance: 85% favorable answers targeted		On-going: on track
	2020 Ethical Business training (EBT) is completed by 95% of employees	In 2020, the training was completed by 96.2% of Nokia employees. **Assured**	Achieved
Privacy and security	**2020** Our aim for 2020 is that Nokia be recognized as an industry leader in security and privacy	In 2020, we exceeded our target to secure our defined critical information ecosystems by closing 98% of the critical and high vulnerabilities identified in our assessments and audits within 60 days. Although our security Capability Maturity Model (CMM) score increased from 3.1 in 2019 to 3.3 in the interim report for 2020, our second annual assessment was postponed to 2021 so unfortunately this means we did not reach our overall security target set for 2020.	Not achieved
	New target for 2021 Secure our defined critical information ecosystems by closing 95% of the critical and high vulnerabilities identified in our assessments and audits within 60 days		
Preventing the misuse of tehnology	**New target for 2022** Complete our second Global Network Initiative (GNI) assessment, resulting in Nokia deemed to have shown good faith efforts over time to implement the GNI principles in freedom of expression and privacy by the GNI board		
Responsible sourcing	**2020** Comprehensive supplier sustainability risk mitigation (90% of suppliers are assessed with satisfactory sustainability score and 100 on-site audits are conducted per year)	72% suppliers achieved a satisfactory EcoVadis score (74% in 2019) and we conducted 24 onsite Corporate Responsibility audits in 2020 (45 in 2019).	Not achieved
	2020 Establish supplier worker empowerment program (enabling trainings on NokiaEDU and Worker Tollfree Helpline)	We could not open a NokiaEDU training to supplier employees due to technical/privacy issues, but we continued to conduct training through our Corporate Responsibility and Health and Safety trainings and cascading those to be delivered to supplier employees. Several trainings were recorded and published on Nokia website.	Not achieved
	2020 Achieve full traceability to the smelters in our supply chain and their conflict-free status (Nokia Group)	In 2020, 98% of our suppliers had achieved full visibility into the smelters in our supply chain, and for 95% of our suppliers the entire supply chain consisted of smelters that have been validated as conflict-free or active in the validation process. This can be considered as full traceability although we did not reach 100% traceability. **Assured**	Achieved
	New target for 2025 80% of suppliers receive satisfactory sustainability score from supplier performance evaluation (includes performance across our sustainability assessment programs such as EcoVadis, CDP, Conflict minerals)		
	New target for 2030 Our final assembly suppliers reach net zero GHG emissions		
	New target for 2030 Our materials suppliers reduce emissions by 50% compared to 2019 baseline		

Our targets and performance

Our culture - Respecting people

Material topic	Target	Achievements in 2020	Status
Employee engagement, diversity and inclusion	**2020** Nokia to be the employer of choice (in our size) for all of our major hubs in locations around the world and become the best regarded employer in our industry globally	In 2020 we maintained our strong Glassdoor score of 4.1 which positions us as an employer of choice on the market. Also 84% of the review providers indicated they would recommend us to their friends and see our culture and values (4.2), work/life balance (4.2) and diversity and inclusion (4.2) as three of our main strengths.	Achieved
	2020 Foster the spirit of employee volunteerism across the company and increase their engagement	In 2020, our employees contributed around 2 500 volunteering hours in paid working time. Although this is a considerable decrease compared to the target baseline of 8 100 hours in 2016, the average volunteering hours between 2017 and 2020 were 9 500 hours which means we reached the target. The decreased activity in 2020 is most likely explained by the COVID-19 pandemic, which largely halted in person volunteering activities.	Achieved
	2020 Increasing the share of women in leadership by 25% (baseline 2016)	In 2020 we had 15.3% women in leadership positions, compared to the 2016 baseline of 15.5%. While each business group has been able to successfully hire and retain their women employees, the pipeline of women to senior positions is still weak. Most of the women in the company still find themselves in middle management. Hence, we were not able to reach the target. **Assured**	Not achieved
	New target for 2021 We are targeting a minimum of 26% female hires in global external recruits		
	New target for 2021 Direct 30% of our corporate CSR spend towards initiatives focused on empowering diversity		
Health, Safety, and Wellbeing	**2020** 50% of suppliers delivering high risk activity to meet or exceed “H&S preferred supplier” status	In 2020, 22% of our suppliers had reached the "H&S preferred supplier" status. We continue our work on increasing the share of suppliers meeting the "preferred" level.	Not achieved
	2030 100% of suppliers delivering high risk activity to meet or exceed “H&S preferred supplier” status	First we focus on getting 100% of suppliers to “compliant” level (score 3/5). In 2020, 99% of suppliers were compliant and, as this percentage fluctuates between 99% and 100%, we have reached the first phase of the target. Next we are concentrating on suppliers meeting the “preferred” status (score 4/5). In 2020, 22% of our suppliers had reached the "preferred" status. We continue our work on increasing the share of suppliers meeting the "preferred" level.	On-going: on track

The UN Sustainable Development Goals and our business

The United Nations Sustainable Development Goals (UN SDGs) and their targets remain a key framework for our sustainability work. Our priorities are mapped against our most material UN SDGs - SDGs 8, 9 and 13 where we can have the greatest impact, though we believe the technology we provide can positively contribute to achieving all 17 SDGs.

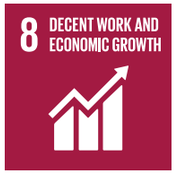
As a result of Nokia's continued program support to UNICEF in Indonesia, in collaboration with the Indonesian government, UNICEF is continuing to develop the SDG Dashboard.

Improving people's lives with technology

Goal 9: In 2020, the digitalization of industry and enterprises took off as the rollout of 5G gathered pace, and the importance of connectivity expanded. We continued to support public safety, smart cities and critical communications, keeping people connected during lockdowns, remote working and school closures. For example, we are working with the city of Leuven, Belgium, where we are providing 5G-ready private wireless for Leuven Digital City Pole project, with the aim of transforming poles into IoT intelligent urban infrastructure, improving quality of life, enhancing safety and aiding business development in the area. Read more about our work with industry and enterprise on pages 25–42 and on our website.

Combatting climate change

Goal 13: The call for climate action remains the most important sustainability issue and we strengthened our response. We innovated and launched new solutions that are more energy and resource efficient, and we worked with mining, ports, agriculture, manufacturing, transport and other industries to enable them to increase efficiency and decrease their emissions. Our updated climate targets provide the impetus and clear goals for our business. 5G will play an important enabling role in the fight against climate change, and in late 2020 research with our customer Telefonica showed 5G to be up to 90 percent more energy efficient in a live network. Read more on this and other climate activities on pages 43–58.and on our website.



Conducting our business with integrity and Respecting our people

Goal 8: We were again acknowledged as one of the World's Most Ethical companies by the Ethisphere Institute in early 2021. In 2020 we carried out a region based internal human rights impact assessment and the Global Network Initiative published its report which included results from our first independent external human rights assessment. See pages 41–62 in this report and our website for more on these topics.

At the end of 2020, we had 89 978 people globally, while our supply chain numbered some 12 000 suppliers. We continued to emphasize diversity and inclusion as well as development and improvement. See pages 59–97 in this report and our website to learn more.

Managing sustainability

Sustainability issues are reviewed regularly at all levels of the company. We have built strong governance structures and processes to manage good ethical business practices and corporate responsibility. Our Code of Conduct provides our requirements and guidance for all employees. The Code is supported by policies and management systems related to responsibility issues. Our key corporate responsibility policies are regularly updated and can be found **online**.

The highest decision-making body in our company after the General Meeting of shareholders is the Board of Directors. In 2020, the Board of Directors reviewed our corporate sustainability status including strategy, targets, performance, key trends and priorities. Special attention was drawn to the increase in disclosure requirements and ongoing climate work. The Board also agreed on the Corporate Community Investment and University donations budget and adjusted focus areas for the year 2021. In addition, the Board received updates on cybersecurity/information security, ethics and compliance, and privacy.

The Board of Directors Review of Nokia 2020 Annual Accounts includes non-financial information which was also reviewed by the Board of Directors' Audit Committee. The Audit Committee also received updates e.g. on conflict minerals, ethics and compliance, cybersecurity, and internal audit and controls reviews. The Board of Directors'

Personnel Committee received update on culture, including diversity.

The Nokia Group Leadership Team is chaired by the President and CEO. The Group Leadership Team reviews and approves sustainability-related policies, strategy, and the annual sustainability report, and reviews other sustainability-related topics when needed. For example, our updated science-based greenhouse gas emission reduction targets were approved by the Group Leadership Team in 2020. Nokia governance meetings and committees where Group Leadership Team members participate and where sustainability-related topics are frequently reviewed include, for example, the Compliance meeting, the Security meeting, the Gender balance steering board, the Sponsorship and Donations Committee, and Human Rights Due Diligence governance council. In 2020, our Chief Marketing Officer (CMO) was responsible for sustainability and the Gender Balance Steering Board at the executive management level. During the year, sustainability-related topics were reviewed during CMO management team quarterly meetings, and more often if needed.

At the operational level, sustainability is managed by the Sustainability team, the Ethics and Compliance team and subject matter experts in business units. The alignment of the sustainability strategy, priorities and the implementation of sustainability activities across Nokia is steered by our Sustainability Council. The Council consists of senior leaders, including management representatives with climate change related responsibilities, from units such as product development, real estate and procurement. The Council also reviews the materiality, targets and overall performance of various sustainability-related topics and gives additional exposure to sustainability risks and opportunities. These responsibilities include the assessment and monitoring of climate-related topics. In 2020, the Council was managed by our Head of Sustainability who reported to the Chief Marketing Officer. The Council typically meets bi-annually, and more frequently upon request.

More information about our corporate governance practices is available in our annual reports and on our **website**.

Risk and opportunity management

Key opportunities and risks are primarily identified against business targets either in daily business operations or as an integral part of strategy and financial planning. Our Enterprise Risk Management covers all types of risks that can affect Nokia, including strategic, operational, financial and hazard risks.

The most important risk factors and the principal factors and trends affecting our operations are discussed in our Form 20-F filing for the year 2020 **here**.

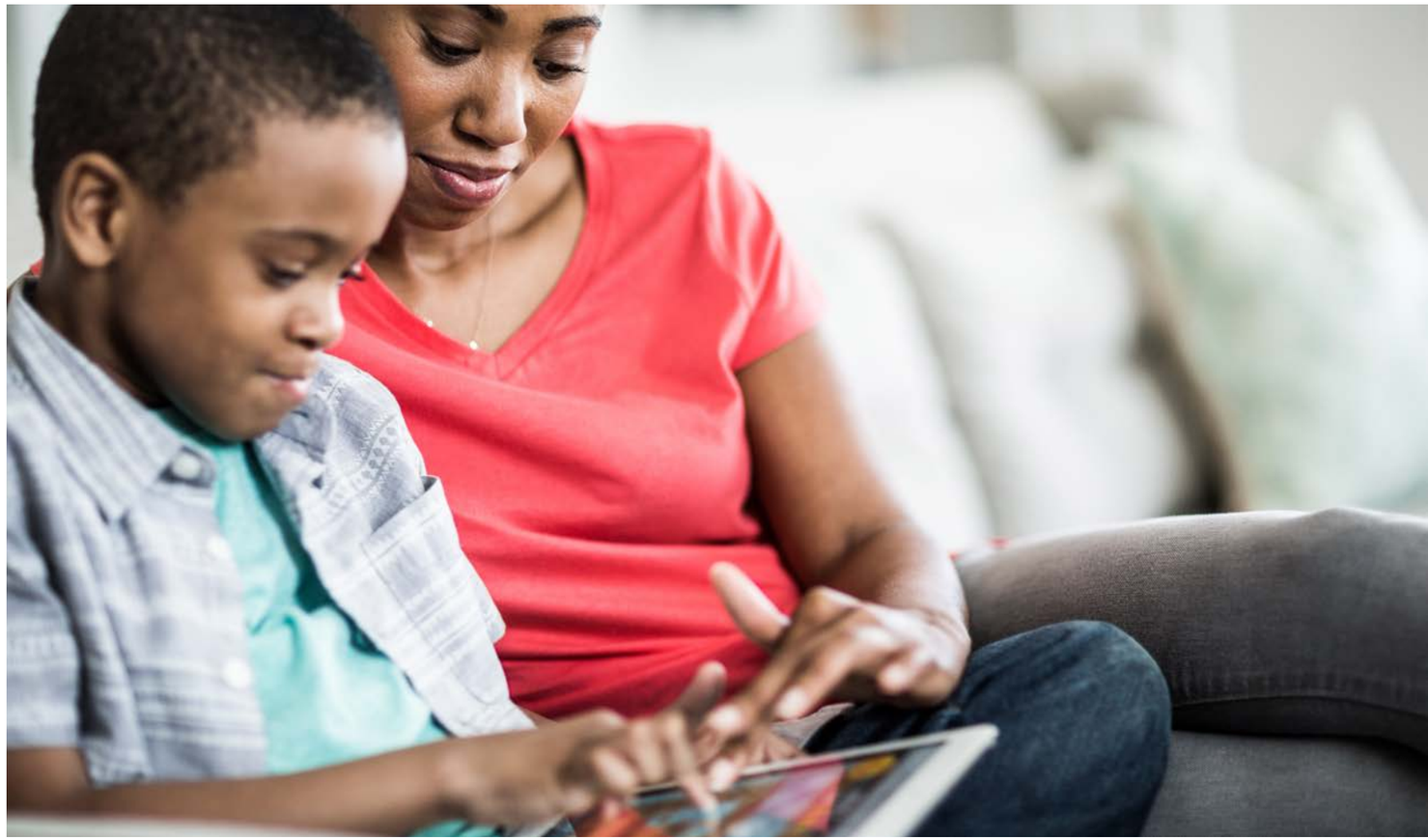
These risk factors include sustainability-related threats such as:

- risks related to product safety, environmental accidents, health and privacy and security, including cybersecurity threats
- risk of potential human rights abuse through misuse of the technology we provide
- risk of potential lack of proper respect for human rights, fair labor conditions, the environment and communities in our operations and supply chain
- risk of non-compliance with regulations or our supplier and customer requirements
- violation of ethical standards, including our Code of Conduct
- labor unrest and strikes
- inability to retain, motivate, develop and recruit appropriately skilled employees
- purchasing boycotts and public harm to our brand
- risks related to issues with tariffs and taxation, including tax disputes
- disruptions in our manufacturing, service creation, delivery, logistics or supply chain caused, for instance, by natural disasters, military actions, civil unrest, public health and safety threats (including disease outbreaks), many of which may be fuelled by the adverse effects resulting from climate change.

For more information on Nokia Enterprise Risk Management, please go to our **website**.

Dealing with the COVID-19 pandemic

Telecommunications is an essential service and one that became even more so as countries progressively locked down and introduced social restrictions to reduce the spread of the virus in the beginning of 2020.



Keeping people connected

The role that connectivity plays in helping improve people's everyday lives has never been clearer and more important, as it has brought together people isolated from each other by the COVID-19 pandemic. The pandemic has also underlined the critical role of connectivity in enabling digital learning and inclusion, and therefore enabling education and participation in work and society to continue. Remote working and schooling, robust delivery of basic services and smart deliveries are just some examples that our connectivity and digitalization solutions have made possible. In 2020 we announced new deals that bring connectivity to rural areas, making sure that for example small businesses, farms and schools are connected.

Keeping every employee safe while ensuring business continuity

As a global business, many aspects of our operations have been impacted by the ongoing pandemic. We have had to adapt our ways of working to ensure that our people remain safe while our operations are able to continue. This has been led centrally by a global crisis and continuity management team with regional and country crisis management teams ensuring local implementation.

Our primary aim has been to limit the likelihood of exposure for Nokia staff and those working for us. This meant that during the very early stages of the pandemic, we moved all our employees

under a temporary work from home policy where their role allowed, leaving only those involved in critical tasks working at our premises. Other actions included restricting travel, imposing self-quarantine requirements on employees returning from trips abroad, prohibiting external visitors from accessing our sites, eventually closing virtually all Nokia sites, and only allowing access to our sites to a small number of people involved in critical work that could not be conducted offsite.

In order to facilitate operations where remote work is not possible, including field teams and factory operations, guidelines and mitigating controls were implemented. As countries have eased restrictions, we have made changes both to the physical working environments and to our procedures for their use, ensuring that physical distancing is maintained and hygiene levels remain high, and that processes are in place for both infection management and contact tracing. We continually update our guidance as the situation develops.

Supporting individual needs

We recognize that the pandemic impacts our employees' work and personal lives in diverse ways. We conducted our 2020 annual salary review cycle as planned and continued to pay incentives to our employees where applicable. We have also continued to pay salary and benefits to employees who cannot work from home and whose work site is closed and ensured additional paid leave and sick leave for employees who are in self-quarantine and cannot work remotely. We maintained frequent contact with our colleagues who were on international assignments and supported them with accommodation, medical coverage and registration at local embassies.

As most of our employees continue to work remotely, we are providing guidance on how staff can maintain a healthy work-life balance and look after their physical and mental wellbeing. For example, our Personal Support Service provides our employees with the opportunity to attend virtual learning events on a broad range of health and wellbeing related topics, as well as professional, confidential support. We introduced separate people management guidelines during the crisis, and we ensure our employees, line managers and senior leaders are updated on the pandemic guidelines via multiple channels: webcasts, newsletters, line manager and Human Resources calls, and a dedicated COVID-19 information hub. We also ran several employee surveys to track how our employees were coping with the pandemic, share experiences and provide an additional channel for feedback or to request guidance and support.

Adjusting our ways of working in 2020

As with all businesses, we had to adapt to large parts of our business working remotely. However, there are elements of our business operations that cannot be completed remotely. This includes the subcontractors conducting the installation and maintenance of customer networks. In addition to establishing the operational controls to keep people safe while working, limiting the need for close contact, restricting social interaction and maintaining social distance, including changes to working in bubbles, we have had to be innovative in how we interact with suppliers and their teams.

We have seen a 51 percent increase in the number of remote site inspections and prestart checks and a 46 percent increase in the number of site acceptances completed through remote means. This has been a necessity in lockdown areas, and in all areas has decreased the number of interactions and kept more people safe.

This of course does not replace face-to-face interaction with suppliers, but our supplier audit program has had to be reduced. In order to mitigate this we have instigated nine remote health and safety awareness sessions for suppliers which have been attended by a total of 335 individuals.

Helping to keep the most vulnerable safe

Amid the crisis, we launched our COVID-19 donation fund in March 2020 and engaged with local organizations such as hospitals, community groups and non-governmental organizations in 48 countries, helping them fight the pandemic and mitigate its impacts. We also continued our longer-term support for the mHealth program with UNICEF in Indonesia, where their own developed real-time big data and Artificial Intelligence platform is allowing policymakers and citizens to understand the levels of physical distancing, movement and mobility at the village level. As a result of the insights from the platform, UNICEF Indonesia has been able to materially assist in the formation of evidence-based policy to fight COVID-19, ensuring a lower disease burden and a brighter future in the country.

Engaging with our stakeholders

Collaboration is key to creating shared value that builds a more sustainable, inclusive and fair society and world. We believe that together we can have a much greater impact on the social, environmental, ethical and economic challenges of our time.

Supporting our customers' sustainability goals

We continued our work with our customers, both communication service providers and enterprises, in a number of key areas of sustainability, including energy and resource efficiency, critical communications, efficient manufacturing, supply chain transparency, modern slavery, and community involvement.

We provide information about our sustainability performance and our operations to our customers on a regular basis. For example, several customers request their allocated share of our Scope 1 and Scope 2 emissions. This data is primarily provided through our CDP climate change questionnaire responses.

Sustainability is an integral part of most sales requests where we provide data and information on topics ranging from climate to ethical business, and responsible sourcing to human rights and more.

We have successfully collaborated with customers on measuring the impact of 5G on energy use, exploring the issue of single-use plastics, identifying potential environmental improvements in our common supply chain, and increasing the dialog and activities around circularity and responsible supply chain. In this extraordinary year we worked even more closely with our customers in ensuring their networks continued to provide robust connectivity and kept people connected.

Working with governmental and multilateral organizations

We collaborate with governments, regulators, trade associations, international organizations, influencers and academia to drive policy environments that encourage investment in digital and broadband technologies. These technologies enable the transformation towards a digital economy and society that will enhance productivity and quality of life on a global scale.

Our approach to governments

We contribute transparently to policy debates fostering a connected society and the adoption of new technologies around the world in accordance with our ethical principles. We do not participate in the political or electoral process through direct donations to political groups.

Our guidelines for dealing with government officials always apply, regardless of the employee's role and the purpose or frequency of interaction. They also apply to interactions with employees of state-owned

Our stakeholders

Stakeholder group	Our approach
Customers	We work closely with our customers on ensuring the products we deliver are energy efficient and sustainable. We collaborate in driving key programs and actions to resolve environmental, ethical, and social issues, and look at ways in which technology and digitalization can enable fundamental positive changes for industry, society and the planet.
Employees	Our people are our greatest asset and we aim to build a culture of trust, respect, diversity and opportunity for all. Read more
Investors	We have regular discussions with our shareholders and the broader investor community on ESG topics including our approach and policies, as well as our opportunities and targets.
Suppliers and Partners	We work with suppliers to drive transparency, sustainability and good ethical and business practice in our long and often complex supply chain. Read more
Industries	We have broad and deep interaction and collaboration with many key industry bodies that are striving for economic and societal development on the national, regional and global level. Read more
Academia	We work with a broad range of academic institutions in areas such as collaborative research, training programs, innovation events, talent development and continuous learning. Read more
Civil society	We engage in dialogue with stakeholders such as community groups and NGOs, and support programs which have long-term impacts and create a sustainable future platform in the target communities. Read more
Cities	We work with cities to drive digitalization and smart development that will provide sustainable living for citizens and sustainable development for businesses. Read more
Governments	We contribute to policy debates fostering a connected society and the adoption of new technologies around the world.

companies and other governmental customers. The basic guidance for interaction with a government official is laid down in our Code of Conduct.

Industry cooperation

We have broad and deep interaction and collaboration with many key industry bodies and international organizations that are striving for economic and societal development on the global, regional and national levels. These include the World Economic Forum (WEF), the G20 through the B20, the UN and its agencies including ITU, the United Nations Broadband Commission, UNESCO and UNICEF, as well as a variety of industry-driven organizations.

We are actively contributing to an honest and fact-based discussion by engaging in forums, working groups and conferences organized by, for instance, the ERT, the GSMA, DIGITALEUROPE, and national associations such as BITKOM.

Cooperation in standardization

We participate in industry organizations' activities to develop standards for digitalization and sustainability, especially those related to 5G. We collaborate with other companies and actively participate in many standardization forums on several topics such as energy efficient telecommunications networks, circular product and supply chain, science-based emission reduction target setting for the ICT sector, ethical use of Artificial Intelligence, spectrum and other regulatory aspects.

> “We have broad and deep interaction and collaboration with many key industry bodies that are striving for economic and societal progress at global, regional and national level.”

Snapshot of our multilateral and industry engagement programs

World Economic Forum

Nokia is a partner of the World Economic Forum, contributing its expertise to deliver on the WEF's promise to improve the state of the world. In 2020, activities focused on how to respond to the pandemic and rebuild the economy sustainably. Concretely, our own experts supported WEF's 5G accelerator and, a new area of engagement in 2020, the Advanced Manufacturing program. Additionally, our engagement resulted in, for example, a publication discussing 5G as the enabler of inclusive long-term opportunities. Read the report **here**.

United Nations Broadband Commission

As UN Broadband Commissioner, our former President and CEO actively engaged in the Special Session of the Broadband Commission held in Davos in January 2020 on financing inclusive meaningful connectivity for sustainable impact. We also supported the Commission's other active working groups. Our new President and CEO Pekka Lundmark has now taken the role of UN Broadband Commissioner and will engage going forward.

B20 Digitalization Task Force

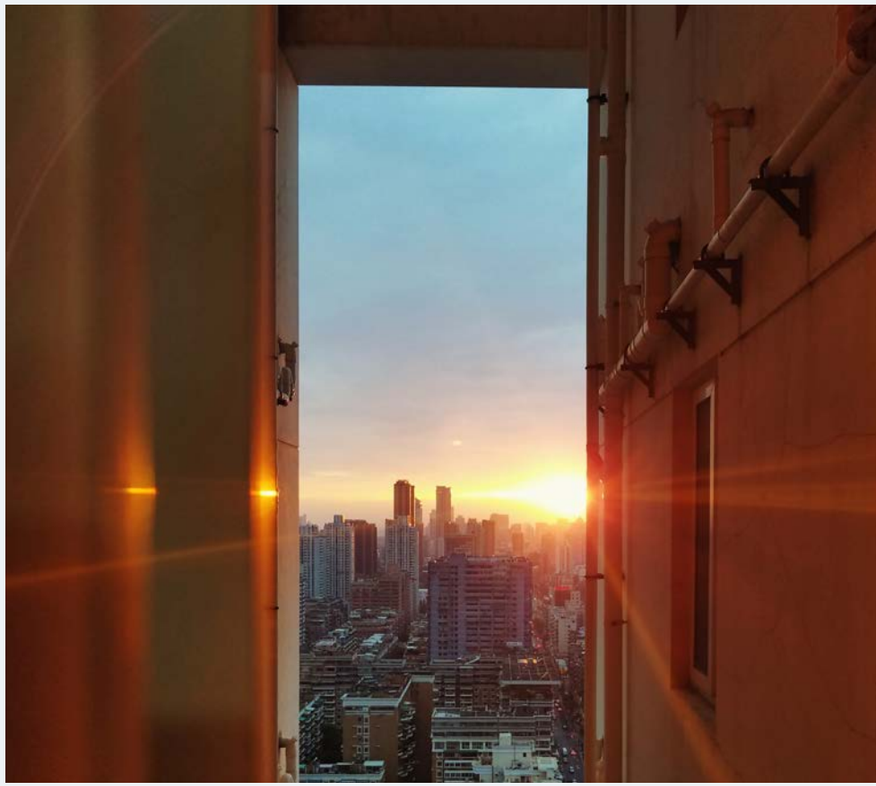
The Group of Twenty (G20) is a forum for international cooperation with the goal to achieve global economic stability and sustainable growth as well as promoting financial regulations. It brings together the world's major advanced and emerging economies. The B20 Digitalization Task Force (DTF) is an official group of the G20 for engaging with the global business community and international policy makers, aiming to develop digital policy recommendations. Nokia is a member of the Digitalization Task Force. Four key pillars have been identified by the DTF: 1) digital infrastructure and cybersecurity resilience, 2) Artificial Intelligence, 3) smart cities, and 4) digital inclusion/skills. The B20 also released a special report to the G20, titled Jump-starting the Global Economy in a Post COVID-19 Phase.

Digital4Development Coalition

We are a founding member of the alliance of European digital companies, Digital4Development Coalition, which works with the EU and African governments to accelerate investment in digitalization projects in Africa. We also support the Finnish Government as it defines its strategy for Africa where digitalization is one of the key pillars.

ITU Virtual Digital World 2020

During ITU Virtual Digital World 2020, we participated in the important debate on entering the 5G era. We predict that 5G-enabled industries have the potential to add USD 8 trillion to global GDP by 2030, as COVID-19 accelerates medium and long-term digital investment and value creation. Our recent Business readiness for 5G report confirms that 5G is a key tool for Industry 4.0 acceleration. It also shows that the 5G-mature companies are likely most advanced in their digital transformation, which in turn has an impact on business performance. 5G adoption represents a great opportunity for operators, enterprises, and industry vendors. Download the report **here**.

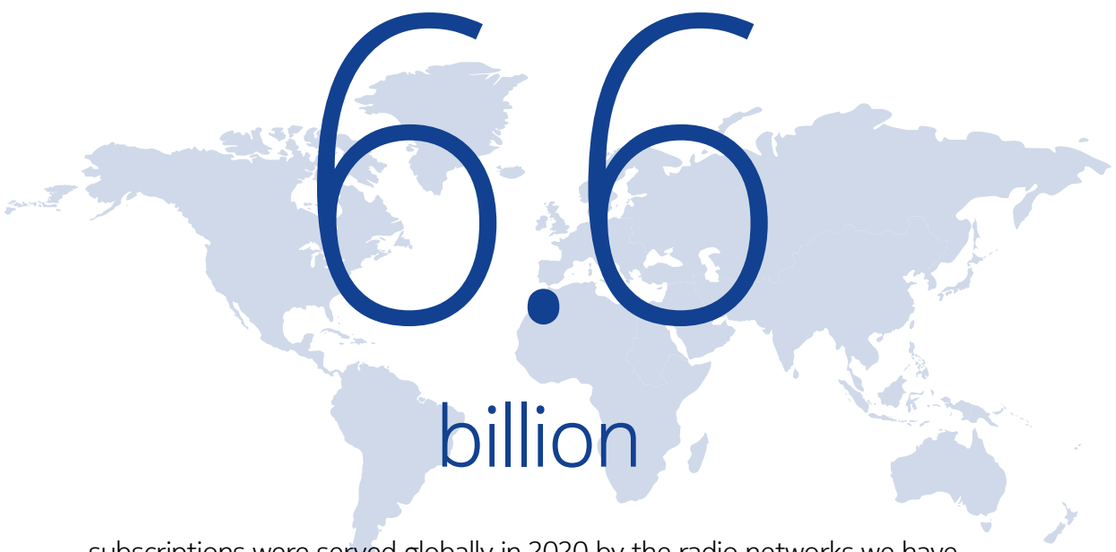


Improving people's lives with technology

The solutions we deliver are an integral part of all our lives and this has never been more evident than during 2020. Connectivity and digitalization keep people connected to their loved ones, life and work.

Highlights

Connectivity and digitalization have the potential to dramatically enable improved economic, educational, health, and environmental opportunites, as well as sustainable productivity.



6.6 billion

subscriptions were served globally in 2020 by the radio networks we have delivered to our customers. We achieved our target to help our customers connect the next billion by 2022 compared to the 5.5 billion in 2016

50 000

We are enhancing the farming practices of 50 000 farmers by establishing smart and sustainable agricultural practices in India together with Vi CSR, the CSR arm of Vodafone Idea Limited

Over 3.8 million

direct beneficiaries of our community investment programs between 2016 and 2020

48

countries where we supported our communities in need through our COVID-19 donation fund. We engaged with local branches of NGOs such as World Vision, UNICEF, Red Cross, and several local hospitals and clinics

Life in 2030

We published our call to action to ensure 5G is introduced on the principles of equality, trust, sustainability and people first

Our economic impact

As a global company we have significant direct and indirect economic impact on our stakeholders. Direct economic impact includes our purchasing of goods from suppliers, dividends paid to shareholders, wages and benefits paid to our employees, as well as financial expenses paid to creditors, income taxes paid to the public sector, and community investments.

The related key performance indicators are listed in the table. We contribute indirectly to the economy in a variety of ways, though our greatest indirect impact comes as a result of the benefits of technology.

Economic impact

Stakeholder group	Impact (EUR million)	2018	2019	2020
Direct economic value generated				
Customers	Net sales	22 563	23 315	21 852
Economic value distributed				
Suppliers	Total purchases of goods and services	14 251	15 051	13 659
Shareholders	Dividends paid	1 081	570	148
Employees	Wages and benefits	8 029	7 360	7 310
Creditors	Net financial expenses	233	346	168
Public sector	Income taxes paid	364	516	280
Communities	Community investments	7	2	6

Numbers include both continuing and discontinued operations. Discontinued operations refer to the sale of the Devices and Services business in 2014 and the sale of the HERE business in 2015.

Our tax payments

In 2020, we paid a total of EUR 280 million in direct income taxes (EUR 516 million in 2019), of which EUR 86 million was paid in Asia-Pacific and EUR 179 million in Europe, the Middle East and Africa. The taxes paid in the Americas region were EUR 15 million. Besides paying direct income tax, we contribute to society in the form of pension contributions, social security contributions, payroll taxes, value added taxes, sales taxes, customs duties, excise taxes, environmental taxes, and other similar duties and fees. As a major taxpayer and collector of indirect taxes and payroll-related taxes, we pay and collect these taxes in accordance with the applicable rules and regulations.

Our tax policy

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

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

Large multinationals are obliged to disclose country-specific information to the tax authorities (so-called country-by-country reporting within the framework of OECD BEPS action 13). We are compliant with these reporting requirements.

We may also seek advance pricing agreements, for example, agreements between taxpayers and tax authorities, to the extent feasible in order to gain mutual understanding and acceptance on the tax treatment of intercompany arrangements. The benefit of such agreements is to remove uncertainty regarding tax treatment, especially in complex business arrangements.

Nokia conducts business in many countries, and in every one of these countries our policy is to operate in an open and cooperative relationship with the tax authorities. Our tax planning is aligned with our business models, and taxes are considered in business decision-making – but only as one of many elements. Our business and location planning is driven by sound commercial needs. We are subject to income taxes in multiple jurisdictions. Our businesses and investments globally, particularly in emerging markets, are subject to uncertainties, including unfavorable or unpredictable changes in tax laws, taxation treatment, and regulatory proceedings, including tax audits. We are compliant with reporting requirements to disclose country-specific information to tax authorities according to the country by country reporting requirements. We will also actively monitor and comply with other regulations in this area.

Indirect economic impact

Our company and its activities also indirectly impact economic development in other ways. We generate business opportunities and employment within our supply chain and enable competence development for our employees. Connectivity is beneficial in many ways and has been shown to increase productivity and economic growth. This year we have also witnessed the criticality of access to broadband connectivity underscoring the GSMA*'s The Mobile Economy 2020 report, which earlier stated that by 2024 the mobile industry contribution to global GDP will stand at USD 4.9 trillion. 5G technologies are expected to contribute USD 2.2 trillion to the global economy over the next 15 years, as a result of the positive enabling effect of technology on asset intensive sectors such as manufacturing and extractives and the professional/financial services sector. Download the report here.

Our own research has found that 5G-enabled industries have the potential to add USD 8 trillion to global GDP by 2030, as COVID-19 accelerates medium and long-term digital investment and value creation. Read the report here.

Connectivity helps to connect the unconnected, providing access to information as well as to financial and commercial services to underserved areas. 5G enables new ways of doing business based on new use cases, some of which are yet to be discovered. Digitalization transforms public service delivery and brings the benefits of innovation to a much broader audience. The ICT industry has a major role to play in technology transfer and human capital development globally. The COVID-19 pandemic only emphasized the role connectivity and technology play. Read more about our COVID-19 response here.

*. The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem.

Connecting people and things

We are building extraordinary networks, software and ecosystems. We are continually reimagining technology to meet society's many challenges and opportunities, making communities smarter and more sustainable, transportation safer, and enterprises more agile and efficient.

We look at how our technology impacts people – enabling them to control and manage their wellness, experiences, choices, and lives, and how they explore and experience the world around them.

Connectivity enables access to education and healthcare, security and safety as well as more energy and resource efficient industries from manufacturing through transportation to utilities and extractives. In 2020, the number of subscriptions globally served by the radio networks we have delivered to our customers was 6.6 billion, meaning we achieved our target to help our customers connect the next billion by 2022 compared to the 5.5 billion in 2016.

The ongoing rollout of 5G, combined with other technologies such as Internet of Things (IoT) and Industrial IoT, Artificial Intelligence and Machine Learning, Big Data and Cloud, together can deliver economic prosperity, opportunity for all people and a healthier planet.

We are focused on the human benefits of technologies.

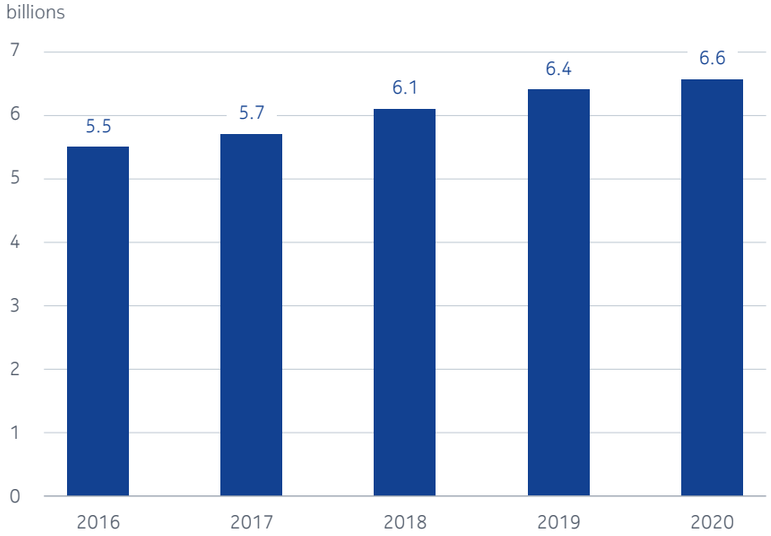
Our call to action, **Flash Forward: Life in 2030**, released in October 2020 provided a seven-point requirement list for a successful Fourth Industrial Revolution and a better, more inclusive future world supported by 5G and other technologies. We believe all parties must:

1. Encourage open dialog on the societal implications of 5G and other new technologies
2. Come together to drive innovations and new use cases
3. Apply sustainable and circular design choices for new technology solutions
4. Advocate for the right to digital inclusion
5. Co-create rules and regulations for the ethical use of technology
6. Agree frameworks for the evaluation of 5G carbon footprint and handprint
7. Use regulation to drive the rapid uptake of technology innovations or new technologies

Technology and sustainable development

The rollout of 5G networks is expected to have some impact on the total energy consumption of mobile networks as 5G equipment is initially added to existing 2G, 3G and 4G sites. The positive news is that 5G technology has been designed to be 100 times more energy efficient than previous radio technologies. 5G provides the first generation of radio technology where we are able to decouple the massive growth in data traffic from the energy consumption growth trajectory. In research undertaken in 2020 with a leading global service provider, Telefónica, we found 5G networks were up to 90 percent more energy efficient per traffic unit than the legacy network.

Number of subscriptions served by the radio networks we have delivered to our customers



We are building out 5G networks with our customers across all continents. The capacity for 5G to enable industry to be more resource efficient, less wasteful and more productive means the Fourth Industrial Revolution (4IR) will be the first truly sustainable revolution. New technology will empower individuals and communities.

5G and digital lives

5G will provide the fabric for a better world. We offer a broad innovative portfolio of solutions to underpin a digital, more sustainable world. By the end of 2020 we had 187 commercial 5G engagements, 145 5G commercial deals in key markets, and had rolled out 44 live 5G networks across the world. In 2020 we announced new customers such as BT, Chunghwa Telecom, Taiwan Mobile, Taiwan Star, Starhub, M1, Orange Belgium, Orange Luxembourg, Proximus Belgium, Proximus Luxembourg and SYV in Finland.

For more information on where we are rolling out 5G and its benefits, go to networks.nokia.com/5g.

There are many benefits of 5G when combined with other technologies and smarter planning. We will see new, even unimagined types of services and greatly improved existing ones to help fight climate change through faster, better and more accurate data. The combination of 5G's low latency, which provides real-time connectivity and massive amounts of data, with sensors and analytics will enable all sorts of smart services that will greatly improve environmental health and public safety.

The drop in greenhouse gas emissions seen during the pandemic with travel curtailed and people working from home could be sustained using 5G-powered AR/VR to make virtual meetings even better. More precise location data with 5G benefits many industries that depend on very accurate timing information, such as autonomous farm robots that can perform continuous weed control with pinpoint accuracy, helping farmers reduce their use of herbicides. Read more about 5G and the sustainable future here.

Some examples of 5G use cases

Weather companies
Weather companies can significantly improve forecasting accuracy, adopt new climatology models, deliver more granular weather forecasts, and deliver intelligent alerts for extreme weather conditions.

eHealth
High-resolution video consultations, assistance robots and smart wearables enabled by 5G all help to increase the efficiency and effectiveness of treatments.

Smart cities
Smart cities could improve living conditions and security with up-to-date traffic and movement insights.

Public safety organizations
Public safety organizations can use environment data to predict and react faster to forest fires, hurricanes and other natural disasters.

Insurance companies
Insurance companies can create more nuanced, accurate risk profiles to price their products and services more effectively. With a range of environmental data, they can better understand risk factors across different geographies, and even different parts of the same city.

> We support the 2025 targets set by the Broadband Commission for Sustainable Development that aim to "connect the other half" in the next five years.

Connected vehicles developers
5G car connectivity enables vehicles to connect to each other, to the infrastructure, to network services, and to other road users such as cyclists and pedestrians. That means roads can be safer, faster, and more energy efficient.

UAV, USV and drone designers
Designers can improve flight path calculations with accurate air pressure and humidity data.

Maintenance, Repair and Overhaul companies
MRO companies can for example use hyperfast wireless connectivity to enable remote engine parts inspection, to save time and cost, as well as improving efficiency and operational performance.

Read more about examples on 5G's many use cases here.

Connecting the unconnected

We have customers in over 100 countries, and the rollout of 5G continued around the world in 2020. We continued to improve connectivity and coverage in many emerging markets and announced new cooperation in countries and territories such as Azerbaijan, Colombia, Iraq, Kenya, Nigeria, Pakistan, South Africa, Sri Lanka, Thailand, the Philippines and Togo.

For example, we are improving connectivity in Africa as part of 2Africa, which will be the most comprehensive subsea cable to serve the African continent and Middle East region. Our Alcatel Submarine Networks (ASN) has been appointed to build the cable, which will deliver much needed internet capacity and reliability across large parts of Africa.

There are still three billion people without broadband internet connectivity, which makes it more challenging to enable their economic welfare and access to basic human rights such as good healthcare and education. Even in the USA, 18 million Americans do not have access to high-speed internet. With the advent of 5G we must ensure the digital divide does not widen between those who have access and those who do not. Rural communities and women are often the most affected by lack of connectivity. In 2020, we published our eBook “How do we create inclusivity in a digital future?” which explores ways in which we can build a better world with broadband technologies. Download the eBook here.

The pandemic highlights many inequalities including the extent of the digital divide. UNICEF estimates that a third of the world’s school children were unable to access remote learning when COVID-19 closed schools. Nokia together with UNICEF, the Kenyan government, local communications service providers (CSPs) and other partners provided an inspiring example of what can be achieved by empowering unconnected and underprivileged children and collaboration. As a result of this shared value project, the first ten schools were connected to the internet in rural and urban settlements across Kenya in late 2020, allowing more than 1 000 children to connect to digital learning via the internet. Read more in the section Making a difference with technology andonline.

Life in 2030

In 2020 we launched a call to action to deliver an ethical and sustainable 5G future, where today’s 5G networks will power tomorrow’s digitized economies and societies. We see 5G transforming our lives in fundamental ways, for example:

Living and working – 5G will cover the densest cities and rural areas alike, allowing everyone access to equal opportunities

Supporting the planet – 5G sensors will make the economy more sustainable, optimizing energy usage and cutting emissions

Strengthening communities – 5G will make it easy for people to stay connected, healthy and safe, regardless of where they’re located

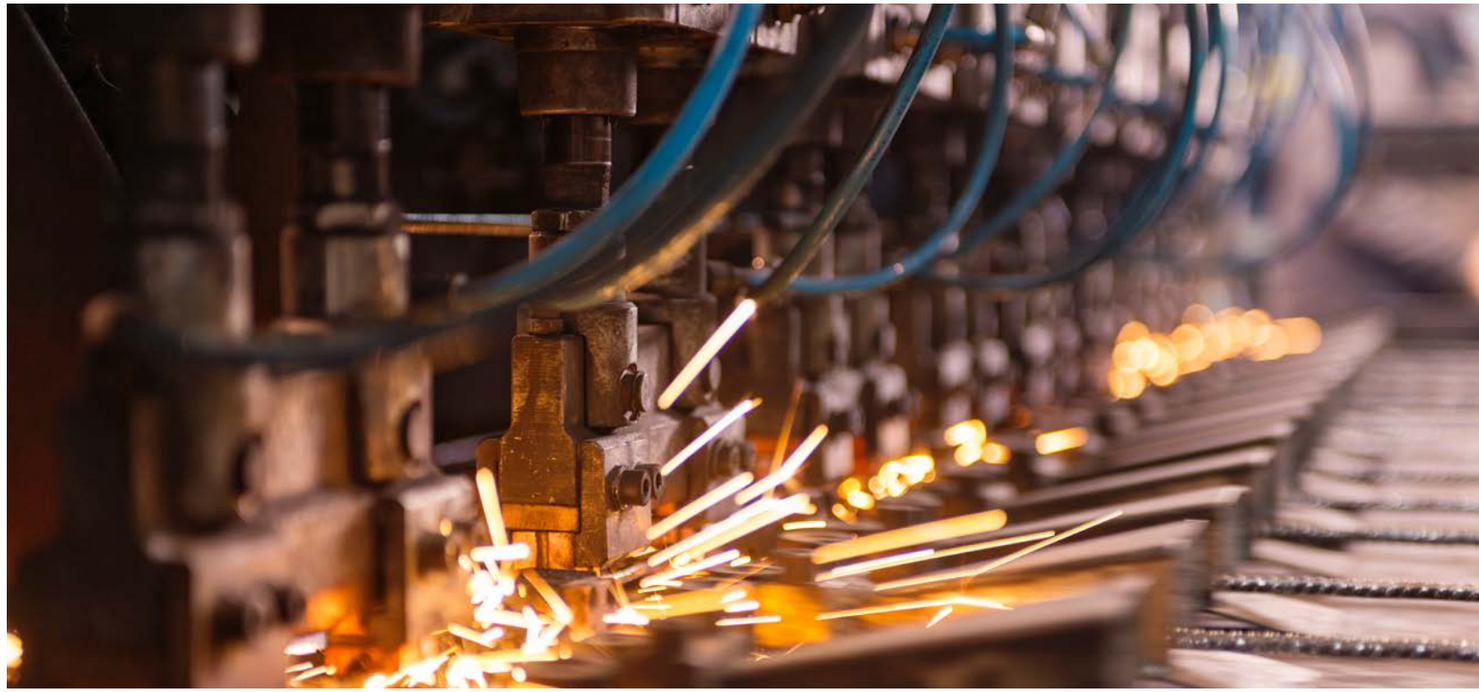
Sustaining the economy – 5G enables new kinds of businesses and drives innovation in all sectors of the economy

Feeding the world – 5G makes smart agriculture possible, boosting yields while conserving water

Download our e-book Life in 2030 here.

Efficiency and digitalization

The Fourth Industrial Revolution (4IR) will be powered by 5G and will provide the spark that lights a revolution of change, enabling more efficient sustainable industry, a significant response to climate challenges and providing alternative consumption options for individuals and communities.



Our approach has been validated in the market with 1 545 mission-critical customers, and our private wireless solutions are currently used by 260 customers globally.

Key areas of industry are the digitalization of the energy sector, the digitalization and automation of the transport sector, the facilitation of healthcare anywhere, the digitalization of communications between people and things, and the implementation of digital production and manufacturing that will decentralize and localize manufacturing while making it more efficient.

The production and use of renewable energy are only set to grow and energy companies need to be ready to better support this development. Making resource industries safer, more efficient and reducing waste is a positive that can be achieved through digitalization. We are working with several mining operators worldwide to deploy private wireless networks based on LTE, with plans to migrate to 5G in the future. As a result, autonomous ore trucks have, for example, been shown to increase productivity by 15 percent and reduce fuel and maintenance costs by 10 percent. In Brazil we provide private LTE wireless services to Vale mining Industry 4.0 project. Our private industrial-grade wireless solutions are enabling many new applications in the mining field, including support for environmental monitoring, video-assisted remote operations and improved worker monitoring and safety.

In 2020 we also enabled a range of customers in the manufacturing, energy and other industries, including automotive and logistics, to be more efficient, less wasteful and potentially helping them improve their climate response and reach their climate targets. Read more here.

In manufacturing, we were selected by Toyota Production Engineering Corporation (TPEC) to deploy an industrial-grade private wireless network at its manufacturing design center in Fukuoka, Japan, to help the manufacturing process to evolve into a more automated operating environment. In Indonesia, we are digitalizing crane monitoring systems for Pelindo 4, by providing LTE wireless connectivity for remote real-time monitoring of the crane performance and operation, leading to greater operational efficiency and improved safety.

In 2020, we deployed a 5G private wireless network for Lufthansa Technik's virtual inspection trial, to accelerate a project that enables remote engine parts inspection for the aviation customers of Lufthansa Technik. The hyperfast network will remove the need for customers to physically attend servicing by providing seamless video access to the engine overhaul shop floor. Read more **here**.

We are also digitalizing our own operations. In 2020, we announced that we have digitalized 100 percent of our 5G network deployments around the world, bringing high quality, agility and transparency to customers globally. Moreover, going digital makes deployments more sustainable as it minimizes the CO_2 footprint by reducing truck rolls and physical documentation. Read more **here**.

Internet of Things (IoT)

Connected devices have an increasing role in our daily lives, from sensor and security systems in smart cities, to control and safety systems in smart homes. Industrial IoT is integral to enabling greater efficiency, security and safety in the utility industry, agriculture, the automotive industry, healthcare and public safety.

We offer our Intelligent Management Platform for All Connected Things (IMPACT) IoT Platform, a horizontal platform covering connectivity management, data collection, device detection and analytics, and business application development, on top of device and subscription management across all industries.

Imagine being able to provide IoT services for agriculture, industry and even connected vehicles from a single platform. Service providers can do that and more with our IMPACT platform.

In 2020, we saw continued momentum for our Nokia Worldwide IoT Network Grid (WING) managed service that provides seamless connectivity across geographical borders and technologies – currently serving more than 12 operators around the world including AT&T, US Cellular, China Mobile IoT, Telecom Argentina or TIM Brazil. We support our customers in various industries from agriculture to ports or consumer appliances.

We joined hands with Vi CSR, the CSR arm of Vodafone Idea Limited, to enhance the farming practices of 50 000 farmers by establishing smart and sustainable agricultural practices in India. We deployed more than 400 sensors over 100 000 hectares of farmland. The smart agriculture-as-a-service solution, which utilizes Nokia's Worldwide IoT Network Grid (WING) solution, will provide data to help farmers improve soy and cotton crop yields, as well as reduce their impact on the environment. Read more about **here**.

Artificial Intelligence

AI and Machine Learning make communications networks more efficient and are becoming part of a wide range of new services over 5G and cloud. In 2020 for example, our Nokia AVA solution helped improve the quality of experience for video streaming and cloud gaming services. We also enabled Taiwan Mobile to **transform their operations** to manage the increased complexity of 5G and IoT. Telefonica UK used Nokia's Experience Center platform to automate decisions and facilitate a move from network to **service-centric operations.** The Japan-based train company and railway operator Odakyu Electric Railway also trialled our **machine vision technology** to improve safety at rail crossings.

In 2020 we launched our AVA Energy Efficiency service, using AI to reduce energy consumption in radio networks. The multi-technology service works with 5G and previous radio technologies, helping Communications Service Providers (CSPs) to decrease their energy usage by up to 20 percent. Read more **here**.

There are also ethical questions around the use of AI and Machine Learning in organizations, which have the potential to create trust issues. These issues relate to the potential to discriminate and to misuse, as well as potential negative effects on how people and machines interact. Collective debate is critical in finding a balance that maximizes the benefit of these technologies for society and minimizes or mitigates any risks. To this end we continued our participation in the EU Commission High-Level Expert Group on AI, where we helped create the European Union's first guidelines for trustworthy artificial intelligence.

Nokia's internal AI Ethics and Governance Advisory Board, set up in 2019, aims to support innovation and enable the development of responsible and trustworthy AI by developing ethical AI principles and guidelines. It leverages internal expertise through specialized working groups and by offering multidisciplinary oversight and guidance. It serves as a forum for internal debate on the right approach to solving ethical dilemmas.

Smart cities and public safety

We continued our work with cities and communities to drive digitalization and smart development that will provide sustainable living for citizens and sustainable development for businesses. In 2020 we announced cooperation with, for example, cities in Austria, Belgium, and Canada.

We provided solutions and platforms, for example for public safety, environmental sensing, and security. Read more information here.

Urban populations are growing and continue to deal with congestion, security, citizen safety, environmental pollution, resource management, infrastructure capacity, and access and supply of services. Cities will need to be digitalized, providing more connectivity and accessibility for all citizens. Digitalization will make cities more efficient and more sustainable by offering better safety and surveillance services, as well as better lighting, parking, waste management and environmental services.

In 2020, we announced cooperation with Greener Acres Canada Inc. in Canada, to advance intelligent urban infrastructure solutions. The initiative will produce smart city green poles from nearly 50 000 tons of e-waste collected annually in Ontario, and work together to develop and upgrade Canada's utility pole infrastructure to smart city green poles that can power smart cities and broadband communications across the country.

We are also working with the city of Leuven, Belgium, where we are providing 5G-ready private wireless for Leuven Digital City Pole project. The project's aim is to transform Leuven digital city poles into IoT intelligent urban infrastructure, improving quality of life, enhancing safety and aiding business development. Read more **here**.

In addition, we signed a networking infrastructure and big data analytics agreement with real estate group Central China Holdings Co. Ltd. Under the contract, we will provide a range of solutions enabling enhanced business, leisure and quality of life in the Henan province. Read more **here**.

We have over 1 500 reference cases in mission critical networks which can, for example, enable first responders to use applications, such as video, for better information and faster response times and provide improved critical service availability and security features. For example, in 2020 Nokia together with EE, part of BT Group, announced an agreement to build an industry-first nationwide 4G LTE Air-to-Ground network for the emergency services across Great Britain. The 4G LTE Air-to-Ground network will provide seamless connectivity between ground operations and air, connecting people, sensors, aircraft and helicopters with the highest security and reliability.

For more cases on how digitalization, 5G and other technologies are improving many facets of life and our planet, visit our **website**. For more information on secure and reliable high-capacity connectivity, visit our **website**.

Innovation and sustainability

Our long-standing commitment to innovation enables our customers to deliver extraordinary, transformative experiences. Working alongside our customers across industries and around the world, we are building future technologies to make Industry 4.0 a reality and enhance virtually every aspect of life.

Nokia Bell Labs leads research in Nokia and conducts disruptive research for the next phase of human existence. Nokia Bell Labs is world-renowned for its profound influence on the evolution of communications and information technologies and consequently how people connect, collaborate, compute and communicate.

2020 saw many sustainability innovation and research highlights from Nokia Bell Labs. For example, Nokia Bell Labs launched **MoveinSaclay** to promote more sustainable mobility by bringing together major public and private participants with the goal of delivering a better, safer experience for people and vehicles on the move. Plans include new mobility services for passengers, cooperative automation projects, a 5G network for connected vehicle tests and a Nokia Bell Labs project focused on cooperative autonomy between vehicle and infrastructure. Also, to further promote safety in transportation, Nokia and Japanese rail operator Odakyu Electric Railway collaborated on AI-based railroad crossing safety trials to improve railway safety.

In an attempt to solve some of the world's most compelling problems, Nokia Bell Labs researchers used AI/ML to mine social media and online information sources such as Twitter, Reddit and Crunchbase for data about broad dynamic trends affecting large communities and entire societies. For example, our researchers studied the correlation of food consumption to wellbeing by publishing the largest-ever dataset of grocery purchases. The dataset includes the purchases of 1.6 million customers of a large UK retail chain during a one-year period that can be used for a wide range of

economic, cultural and health studies related to food consumption. Nokia Bell Labs researchers also developed a tool called MedDL that mines tweets for health data that could have a major impact on health policy, while preserving patient privacy.

We also encourage our communities to take part in innovating with us. In 2020 we again held our **Nokia Bell Labs prize** competition to attract the best minds to help solve some of humanity's greatest problems. We also sponsor the **Millennium Prize** enabling us to promote the value of innovation and technology in creating a better life and raising awareness of the importance of innovation globally. Innovation ecosystems such as the Invent with Nokia platform allow external companies and individuals the opportunity to bring diverse technology and new ideas to our business. Read more at **inventwithnokia.nokia.com**.

In 2020 Nokia Bell Labs was recognized for groundbreaking innovation, receiving the **2020 Technology & Engineering Emmy® Award** for pioneering work on the charge-coupled device (CCD), the digital image sensor embedded in nearly every smartphone and digital camera in the world. The CCD was crucial in the development of television, allowing images to be captured digitally for recorded transmission.

Also, our liquid-cooled base station (BTS) received a Quality Innovation Award in the responsible and renewable innovations category. The base station reduces the energy consumption of a BTS site by 30 percent by replacing air-cooling fans and air ventilation/air conditioning equipment with much more effective liquid cooling for a total CO_2 reduction impact of 80 percent. Additionally, in November 2020, Nokia together with Elisa Corporation were awarded one of 2020's Energy Difference of the Year awards in Finland for the introduction of the world's first commercial 5G liquid-cooled mobile network base station developed by Nokia. Read more **here.**

For information on how we innovate visit **www.nokia.com/innovation**.

Nokia Bell Labs quickly responded to the COVID-19 crisis

- AI experts from across Nokia came together to help the global healthcare community address issues such as sorting through reams of medical journals for information that could help fight the pandemic or finding ways to efficiently distribute patients among overburdened emergency rooms. To encourage their noble and innovative efforts, Nokia Bell Labs hosted a contest granting the Nokia COVID-19 Data Science Award to the best solution.
- Our people combatted COVID-19 by making protective face shields at home.
- Working together, Bell Labs and Nokia Software developed Cognitive Analytics for Public Health, an application that can help slow the virus transmission chain. As new patients are identified, the application automatically notifies all their recent contacts so they can be tested quickly and take other steps to prevent new infections.
- Nokia Bell Labs researchers explored how optical sensors and body area network technologies can be used to detect the next pandemic. By continuously monitoring their wearers' physiological states, these **sensor augmentations** can give people – and the doctors who treat them – perfect knowledge of their health, as well as a means for detecting diseases early, possibly heading off future pandemics before they start.

Making a difference with technology

To have the greatest impact, we must go beyond our own company and industry and collaborate with a broad range of stakeholders, such as academia and non-governmental organizations. Our own employees are central to making this happen, by engaging in volunteering activities and actively promoting programs that have a lasting positive impact on local communities.

Collaborating with universities

Nokia Bell Labs fosters intensive collaboration with the best and brightest minds from the world's top universities and academic organizations to drive a vision of future human needs through its Distinguished Academic Partnership program. It has created a global network of world-leading partners delivering disruptive innovation in technologies such as 5G, AI, advanced materials and Industrial IoT. As well as delivering breakthrough technologies, this network also provides access to cutting-edge expertise to build our talent pipeline. Some highlights from this program in 2020 include:

- strategic research partnerships on future wireless technologies with Aalto University, University of Oulu and TU Dresden have supported a leadership position in key 6G research initiatives;
- achieving exciting outcomes for future industrial automation with partners at TU Munich and Aalborg University;
- Nokia Bell Labs research center with Cambridge University continues to grow its research program gaining a better understanding of how people interact with a new generation of wearable devices; and
- The Secure and Private IOT initiative at CyLab, Carnegie Mellon University has made significant progress in trustworthy platforms for industrial IoT devices.

For more examples of recent research outcomes and more information about the program, please visit our **Distinguished Academic Partners program webpage.**

Our University Donations Program aims to sponsor high quality research in areas that are close to our business interests, such as those relating to Artificial Intelligence (AI) and future 6G, or indirectly, such as with other sectors where ICT and digital communications will play a key role. The program was not run in 2020, but we plan to relaunch the program in 2021.

In 2020 we announced a collaboration with the Indian Institute of Science (IISc), the country's leading institute and university for research and higher education in science and engineering, to establish the Nokia Centre of Excellence (CoE) for Networked Robotics. The CoE will promote interdisciplinary research involving robotics, advanced communication technologies and Artificial Intelligence (AI) to develop socially relevant use cases across areas such as emergency management, agriculture and industrial automation. Nokia student fellowships are to be granted to select students that participate in the development of innovative use cases.

We also announced the launch of the Forge Academy in South Africa, a fully inclusive AI laboratory which aims to train students from various backgrounds with the skills needed in 4IR and the global digital economy of today. Read more in section 5.5 Inclusion and diversity.

Our corporate CSR programs

We support programs which have a long-term impact and create a sustainable future platform in the target communities, while being aligned with the UN Sustainable Development goals. Our corporate CSR priorities are Connecting the Unconnected, Empowering Diversity, and Defending our Climate. In 2020, we focused our corporate CSR efforts on supporting our long-term programs with UNICEF in Kenya and Indonesia. In addition, we provided aid through our COVID-19 Global Donation fund to civil society and other grassroots organizations, supporting them in fighting the effects of the pandemic.

Health workers demonstrate proper handwashing to a child patient at the Bayat Community Health Centre in Klaten, Central Java, Indonesia.

In Kenya, our shared value partnership with UNICEF FInland and UNICEF Kenya, the Government of Kenya and local MNOs was able to successfully connect the first ten schools in fall 2020. Using the Nokia Fixed Wireless Access solution, more children are now able to connect in a fast and efficient way with high-speed and high-capacity broadband needed for remote digital education. Additionally, the program has also piloted the accessible digital textbook, mapped and curated digital Open Educational Resources (OERs) resulting in increased capacity and availability of digital content in the country, and trained over 300 teachers in the use of digital materials in 2020. Read more online.

In Indonesia, we have worked together with UNICEF since late 2017, providing funding for the development of high-impact mobile health (mHealth) programs that save lives. During the pandemic, UNICEF has been able to support the people and government of Indonesia by using much of the assets and learnings from the joint mHealth program supported by Nokia. The pandemic work and data analytics have focused on four key areas: health and nutrition, water and sanitation, education and child protection. For example, data analytics have been used to gather, for the first time, COVID-19 capacity and patient numbers across all public and private hospitals in Indonesia on a single dashboard, to monitor the effectiveness of remote schooling, and to track the availability of WASH services at health facilities and schools.

The program in Indonesia reached an astonishing 2.1 million direct beneficiaries in 2020, particularly through the social mobilization acitivites, where volunteers held counseling sessions for community members with the aim of promoting safe behavior practices during the pandemic and tackling vaccine hesitancy.

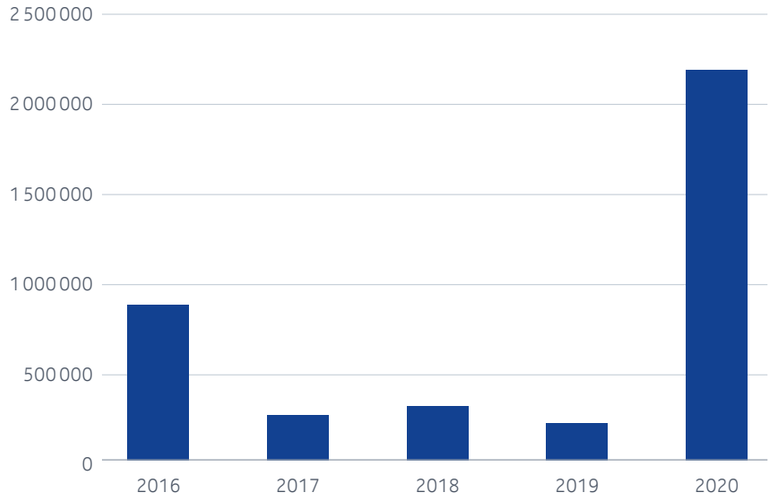
Additionally, as part of the joint program, UNICEF in collaboration with the Indonesian government is continuing to develop the SDG (the United Nations Sustainable Development Goals) Dashboard. The Dashboard provides an intuitive and innovative data portal to support analysis, informed policy choices and reporting on the UN goals at the central and subnational level in the country. Read more **here**.

Amidst the outbreak of the global pandemic, we set up a Global Donation fund to rapidly support our communities in need. Through the fund, we engaged with local branches of NGOs such as World Vision, UNICEF, Red Cross, and several local hospitals and clinics, in a total of 48 countries.

Below are just a few examples of the causes we donated to around the world as part of the fund:

- In Finland, we supported Hope – Yhdessä & Yhteisesti, which provided food aid to underprivileged families, especially children, during the remote schooling period.
- In Poland, our employees set up a shared target to collect money for a nationwide crowdfunding initiative Siepomaga Foundation, to support Polish hospitals in the fight against COVID-19. The donation from the global fund was directed to this same initiative, and together with private donations from employees, it further motivated employees to contribute.
- In Ireland, the fund supported Northside Homecare Services, providing a meals-on-wheels service which offers healthy meals and human interaction for the elderly.
- In Colombia and Peru, we supported local branches of UNICEF to help vulnerable children by providing hand hygiene supplies and knowledge.
- In the Africa and Middle East region, we directly supported hospitals, for example, in Tunisia and Egypt to set up their COVID-19 isolation units and to purchase protective equipment for staff.

Over 3.8 million direct beneficiaries through our CSR programs between 2016 and 2020



Our total CSR program impact

Our CSR activities are divided into corporate, key regional, and local programs. Our corporate level programs are centrally managed and focus on our three key themes. Key regional programs currently cover programs in India and China, and local programs are initiated and run by Nokia offices around the world.

Our collaboration with Corporate Citizenship and Business for Societal Impact (formerly LBG) on impact measurement and data analysis of our community investment programs was continued in 2020.

In 2020, we invested EUR 6.5 million in communities around the world, marking a significant increase from the 2.3 million invested in 2019. The increase is largely due to the addition of COVID-19 related donations and large local donations in key regional areas. 98 percent of the contributions were provided as cash, 1 percent as employee time and 1 percent as in-kind non-cash resources. A large share of total donations, 49 percent, were classified under the theme of Connecting the unconnected. COVID-19 related donations also represented a large portion of total donations spend (46 percent), as we donated over EUR 2.9 million to projects directly addressing COVID-19 and its effects.

In total, our programs reached nearly 2.2 million direct beneficiaries in 2020, women and children being the largest beneficiary groups. Our programs during 2020 supported over 1.9 million people to develop new skills or personal effectiveness, improved the quality of life or wellbeing of over 6 600 people, and contributed to the development of new skills or personal affectiveness of over 1 700 people.

We reached our 2025 target of improving the lives of 2 million people through our community investment programs ahead of time. Our new target for 2021 is to direct 30 percent of our corporate CSR spend towards programs focused on empowering diversity. We will also evaluate how we can encourage key regional and local programs to increase their focus on initiatives which empower diverse groups.

Volunteering

Our volunteering guidelines and supplemental standard operating procedure (SOP) provide support to our employees on charitable sponsorships and donations. All employees are allowed two days per year from their paid working time to engage in volunteering work. In 2020, our employees contributed nearly 2 500 hours of volunteering in paid working time, down from 9 600 in 2019, which is largely due to COVID-19 limiting the possibilities for physical engagement in volunteering activities.

Helping hands, our employee engagement community volunteering program launched in 2019, saw some projects continue into 2020. While adapting to the restrictions brought about by the pandemic, our employees supported a total of 15 projects worldwide in 2020, for example, by introducing coding to children in South Africa, and kick-starting a robotics club for girls in Morocco.

As part of our community investment programs in India, we expanded Smartpur, our project to digitalize villages, to another 160 villages this year and continued with our support for education for out-of-school children in migrant communities.

In China, to assist with the fight against COVID-19, we donated to the China Foundation for Poverty Alleviation to set up the Nokia Shanghai Bell Emergency Fund in February 2020, at a very early stage of the pandemic. The fund was used to buy negative pressure monitoring ambulances and other urgently needed medical devices and supplies for hospitals in Wuhan and other cities in Hubei province. This initiative helped protect hospital workers from being cross-infected by COVID-19 patients.

We also continued our poverty alleviation program in Ninglang county, Yunnan province, for the 18th year by building smart classrooms for local schools. The program aims to bridge the education resources gap between remote areas and developed areas in China, assisting in providing equal education opportunities for local students. In addition, we have 400 employee volunteers to assist 400 children whose families are unable to support their education.

Engaging with our communities on the ground

Our Location Development (LD) is the global program that aims for every location to be recognized locally as Employer of Choice and Hub of Innovation. LD covers location specific improvement actions. Locally, volunteers from each internal organization team up to make it happen. The program focuses on local best employee experience and engagement, interaction with the ecosystem, and ensuring one Nokia culture across business groups and functions locally.

In 2020, despite the COVID-19 situation limiting physical events, volunteers in 34 locations around the world were, for example, highly engaged and delivered more than 350 projects throughout the year, a similar level as in 2019. They carry out acts of kindness throughout the year through humanitarian and crisis aid projects, such as donating medical material and used IT equipment, collecting and donating toys, clothes and other essential goods. They actively contributed to our corporate CSR themes by focusing on programs around diversity and inclusion (110 activities), climate and environment (29 activities), as well as provided aid especially towards schools and children (61 projects).

Children learning about restoration and conservation of urban wetlands in Karnataka, India with WWF.

Examples of projects in 2020

Timisoara, Romania - Donation program of used laptops to schools in disadvantaged areas. As a contribution in the fight against COVID-19, ten laptops were donated to the Modular Hospital in Timisoara.

Poland, Bygdosk - Postgraduate computer science annual program for women who graduated in mathematics, physics, or chemistry - mostly new graduates. The program's goal is to encourage women to take a computer science career path and help the university to offer an attractive program in cooperation with the business school.

India, Bangalore - Lake conservation project collaboration with WWF to rejuvenate urban wetlands. The project is actively based on scientific conservation methodologies such as periodic catchment health assessments, a biodiversity survey, water quality tests, the revival of storm water drains to connect micro and macro wetlands, contour map studies, and the creation of floating islands for re-oxygenation which are new in the ecosystem and few in the country.

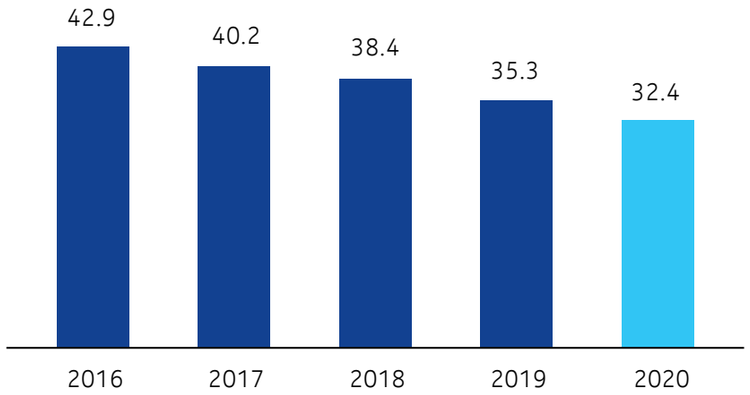
Combatting climate change

Climate change remains the most urgent issue for humanity and the planet and is our shared responsibility. The enabling effect of 5G, digitalization and other technologies means many industries will improve efficiency, drive down emissions and reach their climate goals.

Highlights

Climate change provides by far the greatest challenge of our time and we are at the beginning of the decisive decade. We must act – governments, cities, businesses and individuals. Digitalization will provide one way to achieve global climate targets, but these tools and solutions require innovative cross-sector collaboration to maximize the impact. We continue to play our part in improving energy efficiency and circularity in order to encourage the ICT sector in managing potential increases in its own emissions.

Scope 3 Greenhouse gas emissions from customer use of sold products, Million metric tons CO_2e



Product use time varies between 6 and 15 years, depending on the products. Energy use calculations are based on product group specific ETSI standards wherever standards have been published. In 2016–2020 data has 100% business group coverage of Nokia's Networks business and estimated at least 90% coverage of product portfolio.

In December 2020 we were recognized for our climate disclosure and included on the CDP A List in the climate change category

50%

In 2020 we committed to cut our absolute Scope 1, 2, and 3 emissions by 50% between 2019 and 2030 as part of our science-based climate targets

54%

Less energy was used on average by the networks we modernized in 2020 compared to those not modernized.

Our commitment to climate action

In 2020, as part of our contribution to halting climate change and its effects, we committed to cut our emissions by 50 percent between 2019 and 2030. This is in line with the 1.5°C warming scenario. To help achieve this target requires efficiency improvements in power consumption, continuously driving for more data bits per kilowatt of energy.

In 2020, we also introduced new innovations in our solution offering, aimed at improving energy efficiency and reducing emissions in our customers' networks. We helped other industries achieve their climate goals through digitalization and efficiency.

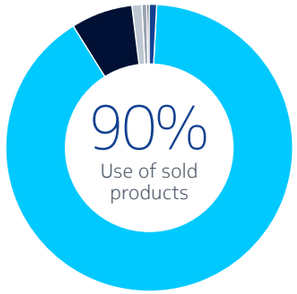
Technology and digitalization will continue to become one of the tools to enable the Fourth Industrial Revolution (4IR), helping drive down emissions across industries, economies and cities. 5G provides the basis of this enablement, supporting new and more efficient ways to use other technologies such as Big Data, Artificial Intelligence, IoT and sensors, and Cloud. Rethinking how we produce, live and consume will also be key as the role of circular practices becomes an ever-increasing requirement to help achieve the 2030 UN Global Goals. We have targets, processes and procedures in place to decrease our own emissions and find new ways to enable other industries and people to reduce their emissions through technology. As we strive for greater digitalization that will help society and industries become more material and energy efficient, we also need to ensure that the digital infrastructure is designed, built and operated with minimum impact on the environment.

As the graphics on this page show, a greater part of our total carbon footprint comes from the use of sold products and from our supply chain. We continue to play our part in improving energy efficiency and circularity in order to encourage the ICT sector in managing potential increases in its own emissions. In 2020 we reset our global climate targets to cut our emissions in half by 2030. That involves a 50 percent

50%

Our new science-based commitment to reduce our absolute Scope 1, 2 and 3 greenhouse gas emissions by 50% between 2019 and 2030.

Our carbon footprint (Scope 1, 2 and 3)



Emission source	Metric tons CO_2e	% of total	
Energy use in facilities and by fleet	379 900	1%	Our Scope 1 and 2 emissions
Use of sold products	32 420 000	90%	Our Scope 3 emissions
Purchased goods and services	2 487 400	7%	
Capital goods	380 200	1%	
Upstream transportation and distribution	255 200	0.7%	
Employee commuting	39 000	0.1%	
Business air travel	13 300	0.0%	

Percentages calculated out of reported, relevant GHG emissions.

decrease in emissions from both our products in use as well as from our operations by 2030. In December 2020 we submitted our renewed target and it was approved by the Science Based Targets Initiative (SBTi) in February 2021.

For our products in use target (Scope 3), we have expanded the product coverage significantly to almost all of our current portfolio. Furthermore, we have also now included emissions from our logistics and the assembly factories in our supply chain based on 2019 data. In our own operations (Scope 1 and 2), progress on our previous target was better than anticipated and we therefore agreed to the new stretch target.

In 2020, we were on track with our original targets aligned with the 2°C global warming scenario. From 2021 onward we will track and report progress against our updated targets.

To manage our climate activities, we have a global Environmental Management System (EMS) which provides the tools to analyze our most significant environmental impacts on an annual basis and to systematically track progress on selected focus areas on a quarterly basis. In selecting the focus areas, we consider current and potential future regulatory and other related requirements, stakeholder interests and requirements, the severity of the environmental impact, related risks and opportunities, and current and potential changes in our business. Our own operations, including all business functions, are certified under the ISO 14001:2015 EMS standard to verify compliance to local and regional regulation and to Nokia's own environmental requirements. In 2020 the coverage of employees within the scope of that certification was 90 percent (85 percent in 2019). Our EMS covers our Networks segment.

During 2020 we also launched a basic interactive employee training module covering environmental priorities.

Climate-related risks and opportunities

The potential effects of climate change are wide ranging, from natural disasters that could affect our supply chain, operations and customers to the impact on the world economy, rising energy prices and greater regulation. We provide products and services globally that have an impact on the environment, as manufacturing, distributing, and operating these products require energy and other resources.

Our most material climate-related opportunities and risks are related to our ability to help other industries reduce their emissions and to constantly improve the energy efficiency of our products in use. We believe that the opportunities our technology provides to our customers, industry and society, and the environmental actions we take in our operations can positively contribute to the fight against climate change. For examples of how we help others increase efficiency, visit our **website.**

Where our own operations are not very dependent on changes in energy pricing or natural catastrophes, climate change can impact our customers and supply chain, as well as the global economy and political and social stability.

We have utilized climate related scenarios to support the review of our climate related risks, opportunities, and related implications to our business. Scenario analysis is an important tool for understanding the strategic implications of climate-related risks and opportunities, and for informing stakeholders about how the organization is positioning itself in light of these risks and opportunities. In our analysis, we have applied global warming scenarios of 1.5°C and 2°C, based on the International Energy Agency's (IEA) 2DS scenario and RCP2.6 (Representative Concentration Pathway) by the Intergovernmental Panel on Climate Change (IPCC).

The results of this analysis have provided information for our risk and opportunity analysis, stressed the need for greater and more urgent greenhouse gas reduction activities and served as a basis for our Science Based Target (SBT) setting. We have also aligned our climate-related disclosures in our CDP* report according to the guidance of the Task Force on Climate-related Financial Disclosures (TCFD). In December 2020 we were recognized for our contributions towards cutting emissions, mitigating climate risks and developing a low-carbon economy and included on CDP's A List in the Climate change category.

*CDP is a global organization that runs a bespoke global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.

Our products and networks

We are developing disruptive innovations for the next phase of human existence. We do this by looking five to ten years ahead and imagining what comes next. We focus on solving difficult problems and big challenges, and then connect the resulting innovations to the current portfolio of products and solutions.

This all then ties into our Future X architecture. Climate change and its effects are part of these big challenges. We believe that digitalization can help businesses and individuals minimize their own environmental impact and therefore do their share in the fight against climate change. This enabling impact of our industry will only increase with new applications and use cases due to the implementation of 5G. Even though this positive handprint of our industry is remarkable, we must also work hard to manage our industry's own footprint. Our responsibility is to ensure that the network infrastructure we design and deliver to our customers works both from the energy and material consumption perspectives, leaving the very minimum environmental footprint.

As the graph on this page shows, according to our life cycle assessment, the use phase of our products remains by far the greatest part of our carbon footprint. In 2020, GHG emissions from sold products were reduced by 8 percent compared to 2019.

Future X architecture contributions in energy efficiency will help reduce the greater part of our carbon footprint, but we also try to maximize the use of our products and services to bring positive impacts through automation, connectivity, efficiency, resource management, and digitalization. Read more on the **Nokia Bell Labs** Future X architecture.

Halving our emissions

Our Science Based Target (SBT) includes emissions from the customer use of our products. Our new recalibrated target is to reduce these emissions by 50 percent by 2030, in line with the 1.5°C warming scenario. This replaces our previous Science Based Targets as of 2021. The new Science Based Target now covers close to 100 percent of the products in our current portfolio. Compared to the earlier target, we have broadened the scope by adding more product groups and emissions from logistics and from the factories including our electronic manufacturing service suppliers.

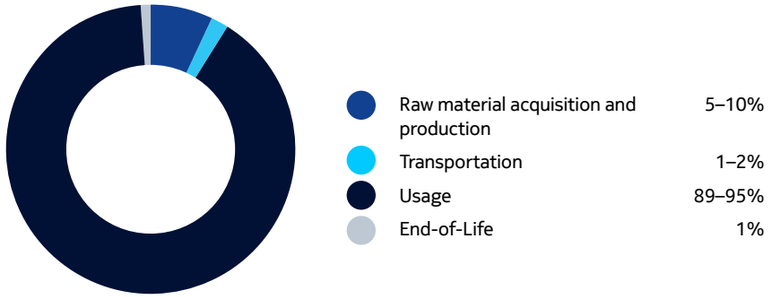
Our original science-based targets were set in 2017 based on the 2°C climate scenario in alignment with the Paris Agreement, and by the end of 2020 we were on track with those targets for products in use (Scope 3 emissions).

Towards zero emissions

5G is a natively greener technology than its predecessor 4G and can potentially provide 100 times more traffic with less energy per bit. This is thanks to the new standardized spectrum with much greater bandwidths and new features such as Massive MIMO that together can enable hundredfold traffic capacity, and features like Lean Carrier which cut power use. In addition, we are going beyond the features standardized in 3GPP* and improving energy efficiency in more ways. As an example, we are developing energy efficiency software features across the portfolio and innovative antenna designs minimizing energy consumption and material use. Beyond its own footprint, 5G is expected to reduce energy use in other sectors of society and industry as it enables new robust use cases. Remote working as a norm is just one example of how 5G will enable more energy efficient daily life for individuals and businesses.

More information on zero emissions is available **here**.

Share of greenhouse gas emissions in different life cycle stages



The chart is based on product life cycle assessments of typical configurations for Mobile Networks, Fixed Networks and Core Optic Networks products. Calculated with constant electricity usage @1kW.

*3GPP is an umbrella term for a number of standards organizations which develop protocols for mobile telecommunications.

5G network energy efficiency

Nokia AirScale Radio Access is a complete radio access solution that helps telecom operators to address the increasing demands for mobile broadband. Innovations such as liquid cooled base stations, new chipset designs and power saving software features based on artificial intelligence, all provide impetus to improve the energy efficiency of 5G networks and thus reduce associated emissions. System-level solutions help reduce power consumption particularly in low traffic. Radio base station resources are generally unused 75–90 percent of the time but can still consume energy. Using power saving techniques in the radio base station, we can drive up energy efficiency across the network. In 2020, our AirScale portfolio deliveries for the first time clearly accounted for the majority of all our macro base station deliveries over the year. The ratio of Massive MIMO products powered with ReefShark System-On-Chip has increased 8 times, enabling a 13 percent reduction in average power consumption of these radio units.

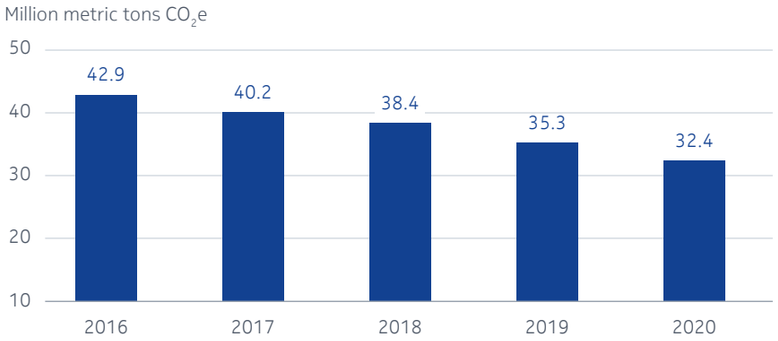
Moreover, with the enhanced energy efficiency improvements, our AirScale radio base station products have up to 69 percent lower energy consumption than our previous generation radio access solution. They also provide more powerful energy saving software features leading to higher savings even in medium-to-busy traffic conditions. Over 150 customers have installed energy efficiency software features on our products. Over 20 percent of our radio products in the field have one or more energy efficiency software features activated.

During 2020 we undertook research with our customer Telefónica which showed 5G networks were up to 90 percent more energy efficient per traffic unit than legacy networks. The research was carried out over a three-month period and targeted the power consumption of the Radio Access Network (RAN) in Telefónica's network. The study utilized our AirScale portfolio including base stations and ReefShark-powered Massive MIMO active antenna solutions combined with actual on-site energy consumption readings in different traffic load scenarios. Read more.

Our Single RAN (SRAN) software solution typically enables 45 percent lower energy consumption compared to the traditional way of having separate 2G, 3G and 4G radio networks. Separate networks require dedicated hardware, software and services and therefore a greater environmental footprint. In 2020 we demonstrated support for 5G in our SRAN solution with commercial availability in 2021.

5G is much more energy efficient than previous network technologies, with several energy-saving features. The energy efficiency of mobile networks can be significantly improved by using 5G power-saving features, by small cell deployments and by new 5G architecture and protocols. 5G has a significant potential for reducing energy compared to LTE by using sleep modes. Read more in our new whitepaper on the Energy efficiency revolution published in 2020.

Scope 3 CO_2e-emissions from customer use of sold products



Product use time varies between 6 and 15 years, depending on the products. Energy use calculations are based on product group specific ETSI standards where ever standards have been published. In 2016–2020 data has 100% business group coverage of Nokia's Networks business and estimated at least 90% coverage of product portfolio.

We continued to develop and offer our zero emissions radio network solutions, including energy-saving software features, and innovations in compact antennas and services. In 2020 we also introduced solutions such as our new AVA Energy Efficiency service which applies Artificial Intelligence (AI) to further reduce energy usage in 4G, 5G and multi-vendor legacy networks. Our digital deployment service offering which removes the need for much of the physical presence and administration of network deployments, and robust power management and distribution solutions also further enhance the energy efficiency of our radio networks.

Early deployments of 5G can potentially lead to increased energy use if 5G is simply added on top of an existing network without the modernization of legacy networks. The networks we modernized in 2020 used on average 54 percent less energy than those that were not modernized. Modernizing a typical legacy base station site to Single RAN can achieve an energy saving of up to 70 percent and reduce its annual CO_2 emissions from more than 70 tons to just 17 tons. Beyond the key reductions in energy use and related emissions, the typical payback time for base station modernization is two to three years. Read more about 5G here.

In June 2020, working with Elisa, a telecommunications operator in Finland, we announced the world's first commercial 5G liquid-cooled base station. The solution can help Elisa reduce the potential CO_2 emissions of its base station by approximately 80 percent in energy and 30 percent in costs. Captured waste heat can also be converted and repurposed as a further benefit. The liquid cooled 5G base station was recognized as one of 2020's Energy Difference of the Year awards in Finland. Commercial availability of our liquid cooled AirScale base station is expected in 2021. Read more.

Optical and fiber brodband networks

In optical networks, the new generation of our Photonic Service Engine (PSE) chipset family underscores our leading position in the industry and our innovation pedigree. The Nokia PSE-3 is instrumental in improving the energy efficiency of our Photonic Service Switch (PSS) platform. Read more online.

In 2020, we also finalized our new in-house designed and developed Quillion chipsets for fiber broadband. This allows us to offer power optimized higher port density (number of lines connected to each port on a line card), integrated energy saving features and higher megabit throughput per unit of energy, an off state, and smarter fan tray control allowing reduced cooling when not needed. This results in a 35 percent power reduction per GPON port and a 50 percent power reduction per XGS-PON port. GPON and XGS-PON are both fiber technologies, the latter providing much higher capacity.

Bell Labs calculated that less than one watt of power is consumed per user on a home fiber network. Our smart Fiber To The Home (FTTH) construction maximizes the reuse of existing infrastructure to reduce direct environmental impact, resource use and costs. It also positively impacts lifetime by applying proper design and engineering rules and strict material selection, such as using recyclable plastics (High Density Polyethylene) instead of PVC for pipes.

New power saving modes in evolving WiFi (WiFi 6) help reduce power consumption by up to 67 percent while scheduled sleep and wake times ensure longer battery life.

Since 2009 we have been reporting product energy consumption annually according to the EU Code of Conduct on Energy Consumption of Broadband Equipment for the products that we place on the European Economic Area (EEA) market. In 2020, power consumption (including in the home) has been reduced by 38 percent while speeds have increased 64 times. Learn more about fiber access here.

Sustainable product design and materials

Our Design for Environment (DfE) approach helps to ensure we create technologies that incorporate environmentally sustainable principles. Life cycle thinking is a key component of this approach. It helps us reduce our products' lifetime environmental impact by improving material and energy efficiency and enables compliance with both regulatory and our own requirements. We provide an environmental product declaration (EPD) to our customers for most of our products. In the EPD we detail environmental data for our products, including material composition, carbon footprint, power consumption and recycling instructions.

When looking at our total carbon footprint from our operations through to the complete life cycle of our products – that is, their design, manufacture, distribution, use and treatment at end of life – we find that our products' energy consumption during use is a priority, as about 90 percent of our total carbon footprint comes from this part of our business. We employ the ISO 14040 /14044 standards as the bases for the life cycle assessments (LCAs) performed on our products.

Our DfE program helps product development teams by setting targets and evaluating energy-saving features with each new product introduction. In 2020, we developed a DfE for Software methodology to help software developers to

significantly reduce the amount of energy used by network equipment by asking developers to consider how their software code affects equipment energy usage. Read more on our **website**. To evaluate the resource efficiency and energy efficiency of the virtualization of network functions, our software developers employ the new Resource Efficiency Rating (RER) and Energy Efficiency Rating (EER) metrics as defined in ETSI standard ES 203 539.

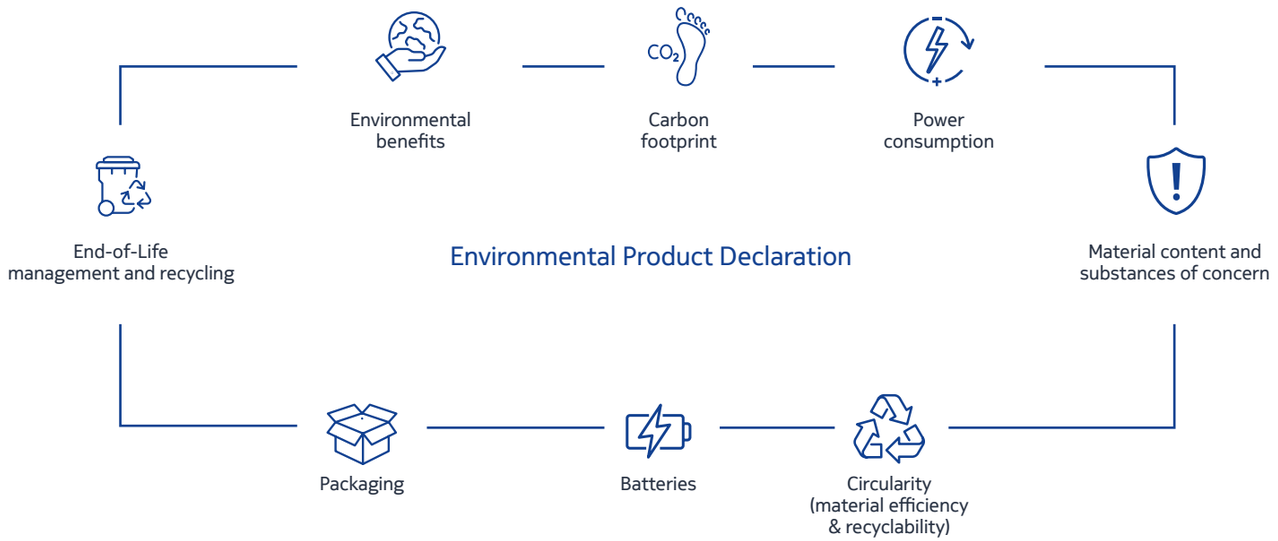
Furthermore, in order to reduce greenhouse gas emissions associated with data center computations, we can match the timing of some compute tasks to the availability of lower-carbon energy. Thus, software developers can consider such a carbon-intelligent computing platform for deployment in large data centers to shift non-urgent workloads to times of the day when wind or solar sources of energy are at their most plentiful.

Materials and restricted substances

Global legislation or regulations ban or restrict several substances considered hazardous to humans and/or the environment. These substances must not be present in our products, components and materials that are selected during the product design phase. Beyond this, future customer and legal requirements may also influence product development choices made today.

Our products, including original equipment manufacturers' (OEMs) product parts, modules and components must meet the requirements stated in the Nokia Substance List (NSL). Suppliers' product documentation must also provide us with a list of any EU REACH candidate substance of very high concern present in a product. Furthermore, products, parts, modules, and components must not contain any substance listed as To be Avoided in our Substance List to the extent technically and economically possible.

We globally restrict the use of ozone depleting substances in products and packaging, as well as in supplier processes per the requirements of EU Regulation (EC)1005/2009 on Ozone Depleting Substances, which implements the Montreal Protocol into EU legislation. Last year, we eliminated four phthalates in accordance with the European Union directive 2011/65/EU (RoHS Recast). The regulation of these phthalates (BBP, DBP, DEHP and DIBP) was in addition to the existing restrictions on lead, cadmium, mercury, chromium (VI), polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs).



We further reviewed and published our latest **Substance List** with minor changes to the requirements while enhancing the explanations.

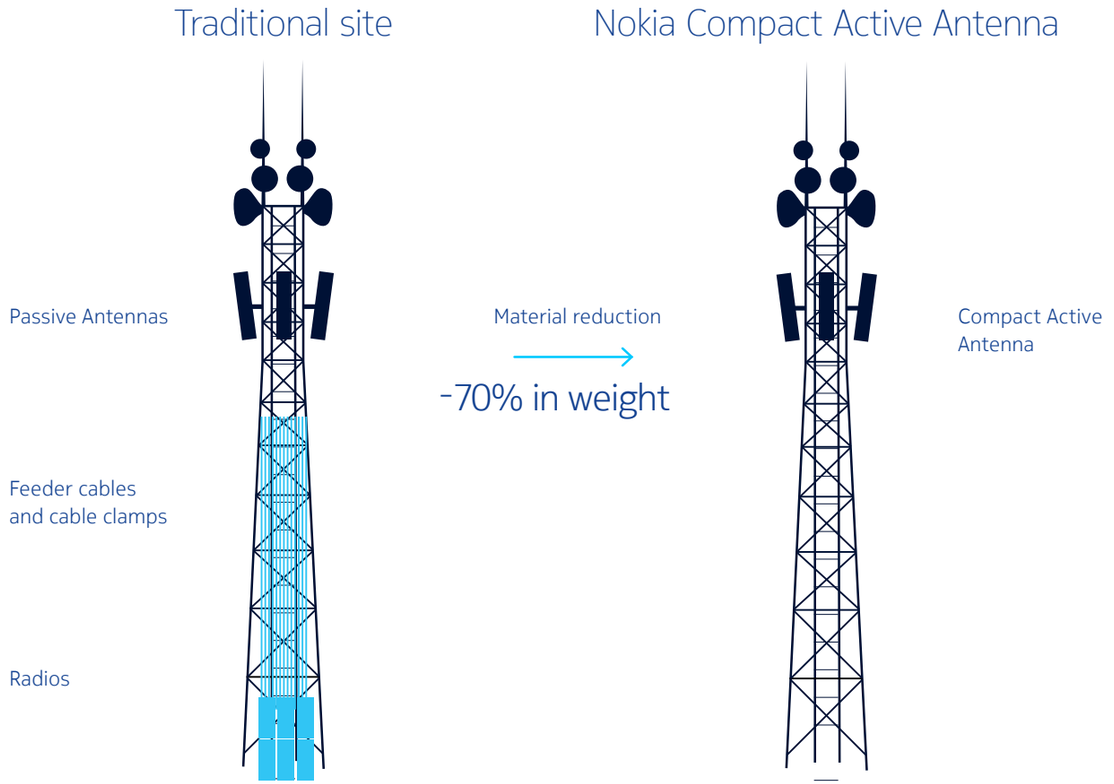
We are committed to comply with all applicable substance requirements from environmental laws and regulations such as the EU RoHS Directive (2011/65/EU), WEEE Directive (2012/19/EU) and REACH Regulation ((EC) 1907/2006). For more information on REACH, please see **Nokia's REACH Declaration**.

In 2020, we increased the level of material content data collection by requesting suppliers to complete a Confirmation of Compliance template when distributing the updated Nokia Substance List. Over 95 percent of suppliers have provided the requested data on NSL compliance, use of RoHS exemptions and presence of REACH Substances of Very High Concern (SVHCs). The data is subsequently reviewed and stored in a dedicated database enabling us to review the impact of expiring RoHS exemptions on our product designs as well as providing the data required to fulfill our obligations to provide information in the SCIP database*.

Material efficiency innovation

Material efficiency includes designing products that use less material and energy while having increased throughput capacity and functionality. This material efficiency is exemplified in a comparison of the Nokia Mobile Networks Flexi Radio with Passive Antenna to its latest generation AirScale Compact Active Antenna. As the graphics on this page show, our AirScale Compact Active Antenna provides a total materials reduction of around 70 percent (804 kg) over the Flexi Radio with Passive Antenna per deployed unit. This includes materials savings in products (base station and antenna) of 41 percent and feeder system savings of 89 percent, with the elimination of long Radio Frequency feeder cables and ancillary cable clamps. These reductions in electronics and cabling result in a product carbon footprint reduction of 85 percent (4058 kg CO_2e).

Innovation in material efficiency Case 3-sector dual band radio site



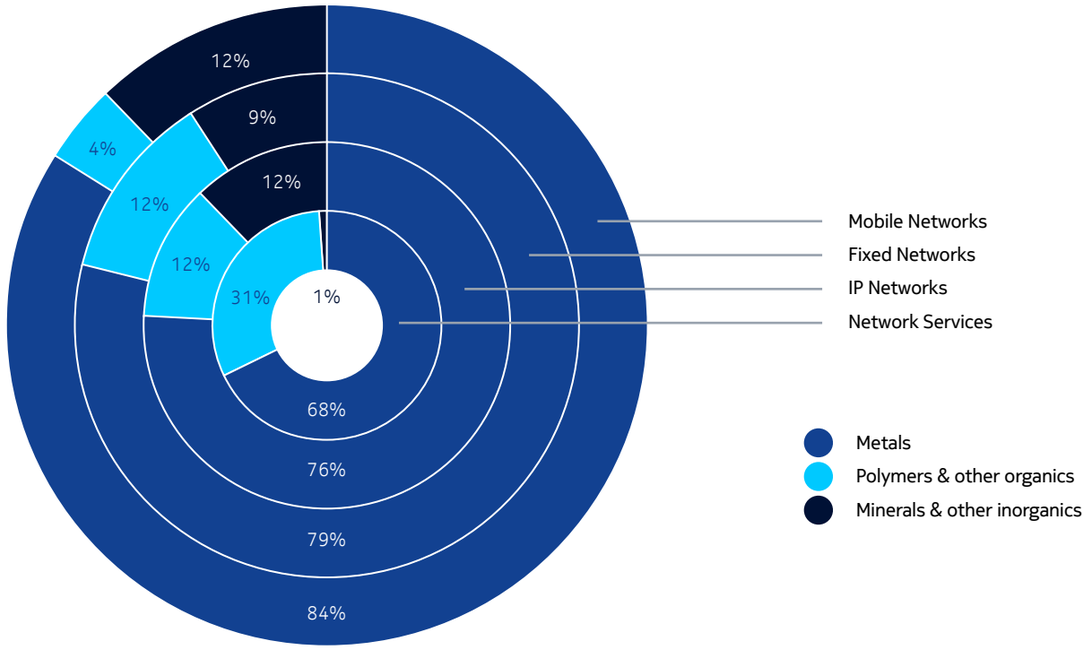
* SCIP is the database for information on Substances of Concern In articles as such or in complex objects (Products) established under the EU Waste Framework Directive (WFD).

Product materials breakdown

Our products are comprised predominantly of metals which constitute more than 75 percent of the total weight in most products. Aluminum is the most significant metal, which is used in sheet metal for cabinets and chassis, and in castings for heat sinks. Alloyed steels are also used for structural parts. Copper and tin are the chief metal constituents in printed wiring boards and cable conductors. Tiny amounts of precious metals such as gold and silver are used in special components such as integrated circuits and as electrical contact finishes on printed wiring boards and connectors.

Plastics such as polycarbonate are used for housings in residential-type products such as the Nokia Home Internet Gateway. Epoxy resins are used for the insulating build-up layers of printed wiring boards. Crystal polymers are used for connector housings. Inorganic materials are chiefly comprised of minerals such as silicate glasses that are woven into reinforcing for epoxy resin-based printed wiring boards. Minute amounts of other organic materials are employed as hardeners, stabilizers and pigments in components.

Material types in Nokia products



Based on product life cycle assessments of typical configurations.

Some of our products are used for as long as 30 years. We have several good practices in place such as a product takeback recycling service. Furthermore, our packaging is already 85 percent renewable and only 15 percent of it is plastics. But we are not stopping there.

As we intend to increase the circularity of plastics used in our products, in 2020, we initiated a number of projects to increase the recycling potential of our plastics through the reduced use of materials containing halogens. In parallel we are investigating the possibilities to mix post-consumer recyclates with virgin plastics to produce product housings. We also engaged a master's student as part of their thesis work to look for alternative materials to replace the plastics that are used in our product packaging.

The total weight percentage of these material types for Nokia Business Group products are shown graphically on this page. As can be seen, metals dominate the materials composition of our products, with network equipment having from 76 percent to 84 percent, and services related to networks having 68 percent metals in their installation and ancillary hardware support assets. Plastics are much less used in our products, with network equipment having from

4 percent to 12 percent, followed by 31 percent for services ancillary assets. The range of 9 percent to 12 percent minerals in our network products consists of the silicate glasses, ceramics and other inorganics within the printed wiring boards.

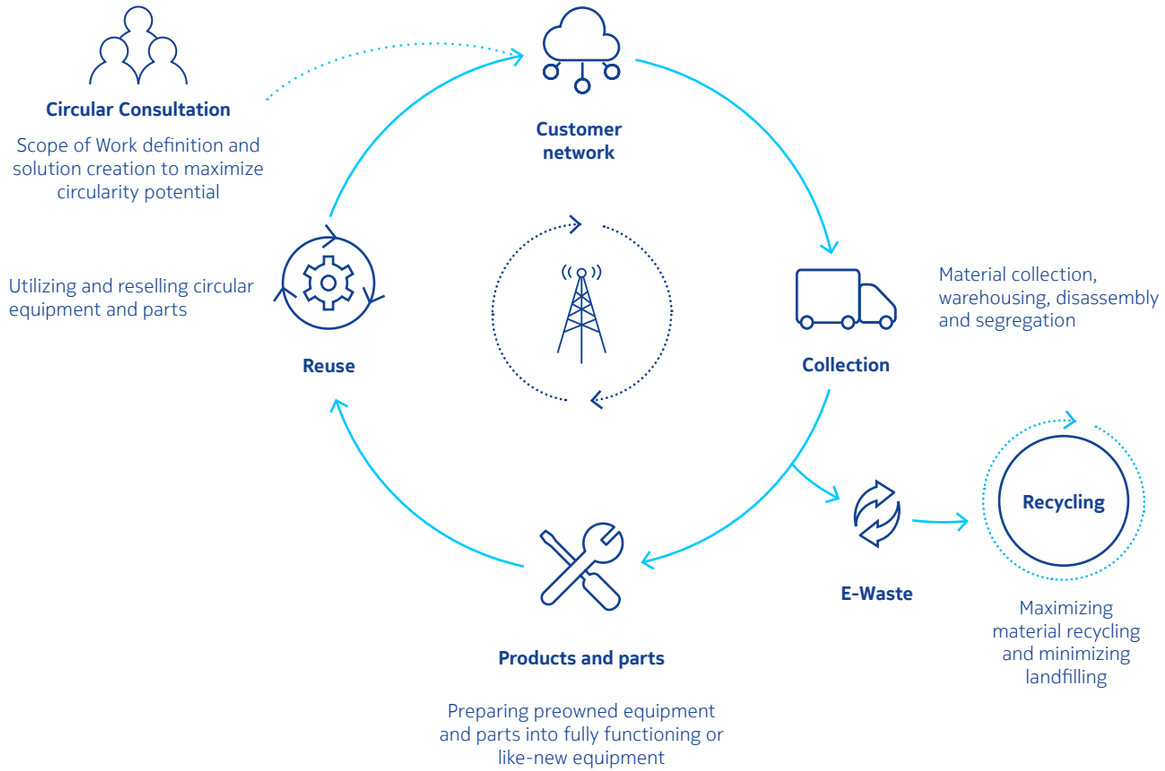
Circular practices and products

Material use has a direct link to climate as around 40 percent of global emissions come from the global use of materials. Today less than 10 percent of materials are treated as circular, so closing the circularity gap is critical in fighting climate change. We embed circularity into everything we do. Efficiency, optimized use of resources and digitalization are key contributors to increase circularity. Traditional ownership of goods is constantly changing to access to services and to the utilization of digital platforms for a sharing economy, all of which can improve circularity.

Our strategy to increase circularity follows the classic waste hierarchy. The first principle of which is always the avoidance of waste, which we do through digitalization, operational efficiency and product life extension. As we are not able to dematerialize everything, good waste management practices are important as well. With all generated waste we first look for options to reuse, followed by material recycling. The last options are recovery and landfill. In order to close the loop, we have also started to study the use of recycled material content in our products.

Circularity develops fast so it requires us to work together with a range of stakeholders to determine standards and frameworks that support our journey to better circularity. Circular economy standards define the terminology and concept details for the aspects included within this broad area. We have been involved in creating telecommunication-specific circular economy standards in the ITU-T (International Telecommunication Union Telecommunication standardization sector) and ETSI (European Telecommunications Standards Institute), providing a common industry view on circularity and

Circular practices and products



sharing best practices. We also joined the JAC forum to contribute to the debate on circularity with our telecom service provider customers and received a best practice in circular economy recognition.

For 25 years, we have had well-established circular practices that utilize the full value of our products. As an original equipment manufacturer, we maintain processes that keep products at their highest value and quality for multiple uses and for the longest time possible through our global services. We take back or acquire excess and obsolete products from customers and markets, and then repair or refurbish these units for inclusion in the product supply chain for customer purchase or our own internal use. Customers can contact our services at asset.recovery@nokia.com. Products that cannot be reused are sent to recycling and recovery to generate raw material for another application or industry. In 2020, we processed 5 870 metric tons of obsolete products and parts. Of this material, we reused 79 400 items with a combined weight of 570 metric tons, sent approximately 5 250 metric tons of old telecommunications equipment for energy and materials recovery, and 50 tons to landfill. Therefore 99 percent of the material content in our products can be utilized and only one percent needs to be sent to landfill.

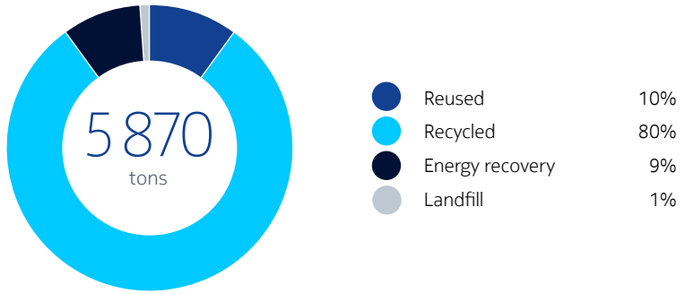
We track the CO_2e emissions that are avoided by the reuse/resale of circular products through our CO_2e Avoidance Dashboard. This CO_2e avoidance is determined by comparing the emissions that result from our new manufacture and our certified circular product processes. For customers globally who invest in circular products in order to support their corporate environmental targets, we can provide data on CO_2e emissions avoided through these purchases. In 2020 we saved 31 600 tons CO_2 through our circular practices.

Recycled material content in products

In 2020 we have taken steps to improve the use of recycled material content in our products to improve our circularity. Firstly, we have worked with our suppliers of cast aluminium parts to fully understand raw material acquisition practices and the potential to increase the recycled content in our components. Our study has shown that 54 percent of the 23 200 million tons of cast aluminum parts used in Nokia products in 2020 do have recycled content in them. This material is from manufacturing waste, as there are still challenges related to material purity when adding post-consumer material into our components. We are also looking to work with others to develop a tracking system for recycled content. In addition, we have worked to increase the circularity of plastics used in our products. This year we have initiated a few projects to increase the recycling potential of our plastics through the reduced use of non-halogen free materials and in parallel investigate the possibilities to mix post-consumer recyclates with virgin plastics to produce product housings.

The latest test results with a Fixed Networks ONT design that uses 60 percent post-consumer plastic in two current ONT housing designs using standard process parameters are encouraging.

Circular practices for obsolete products



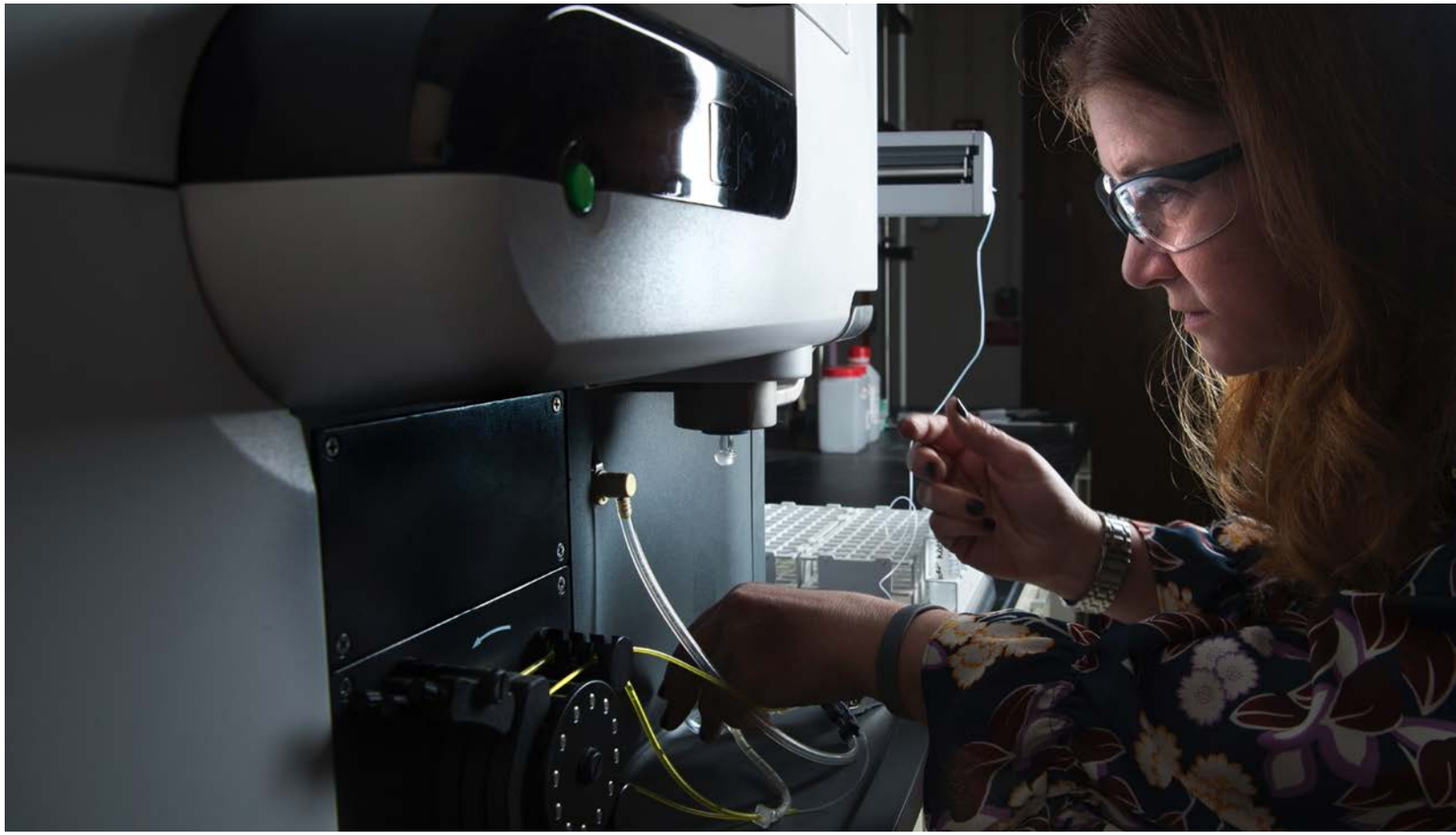
Extended producer responsibility (EPR)

Compliance with relevant environmental regulations is an important part of our environmental policy. Extended Producer Responsibility (EPR) regulatory programs strive to decrease the environmental impact of covered products by making the manufacturer responsible for the entire life cycle of the product, especially end-of-life (EOL) management through product takeback.

We continued our work on increasing product value recovery at end of life. Based on the Recycling and Reuse Metric that we pioneered with the iNEMI organization, we are now better able to evaluate new product designs with an eye towards improving materials choice, ease of parts and materials liberation, and available recovery technology in countries where the products are sold. Read about the metric here.

Our own operations – energy efficiency, emissions, and circularity

As part of our new Science Based Target (SBT) we aim to cut our Scope 1 and 2 emissions across our operations by 50 percent by 2030 compared to the 2019 baseline. Our original SBT target set in 2017 was to decrease emissions from our own operations by 41 percent by 2030, compared to the 2014 baseline.



At the end of 2020, we were on track to reach the original Science Based Target. We began implementing our new SBT target and reporting on status from the beginning of 2021 and use the 2019 emissions status as its baseline.

In 2020, our Real Estate team maintained its focus on developing and delivering energy efficient facilities in-line with our overall company goals and science-based targets (SBTs). Analysis of facility energy usage indicated that COVID-19 impacted carbon emissions throughout the year. However, even though more employees were working remotely, energy usage associated with building infrastructure requirements and ongoing laboratory equipment operation still occurred. In 2020, purchased electricity consumption across our facilities decreased by 7 percent as compared to 2019. And, 39 percent of total purchased electricity was associated with renewable sources, as compared to 31 percent in 2019. These actions reduced our Scope 2 emissions by over 19 percent from 2019 levels. All real estate markets made considerable contributions to the overall energy saving of 76 000 MWh, representing a 7 percent reduction from our 2019 energy consumption.

A capital investment program of energy efficiency works was undertaken across some of our largest sites including Espoo, Paris, Antwerp, Murray Hill and Bangalore. Projects included chiller replacement, heating system upgrades, uninterrupted power supply (UPS) replacement, heat loss measures and improved efficiency controls. The inclusion of energy efficient equipment in maintenance replacement schedules and refurbishment projects continued across our portfolio, with projects implemented in all areas including heating, ventilation and air conditioning (HVAC) controls, all aimed at reducing our energy use.

Real Estate's improved data collection and reporting process have seen an increase in the number of sites reporting their utility and waste data. For those facilities where actual data is not available, estimates of energy and waste data are calculated according to methodologies specified in our internal Environmental Data Handbook to ensure that 100 percent of our real estate portfolio is accounted for. We continuously strive to increase the number of sites where accurate information is employed and thereby minimize data estimation necessities.

We continue to encourage the consideration of sustainability in the selection, development, management and disposal of our facilities. We also introduced an environmental campaign with our location development team to highlight and share best practices to minimize the environmental footprint of our own sites.

Employee transportation — our car fleet

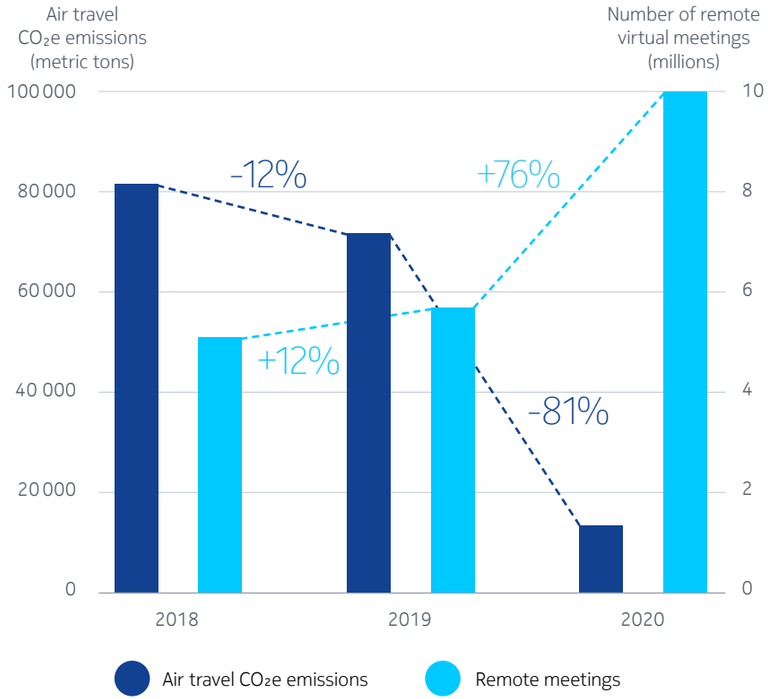
In 2020 our global fleet greenhouse gas emissions decreased by 29 percent compared to 2019. This decrease is mostly because of the COVID-19 pandemic and related restrictions in many cities, which decreased driving significantly. On the other hand, avoidance of public transportation increased car usage to some extent, but the total impact was still a clear reduction of driven mileage.

We have continued developing our mobility offering and launched our Smart Mobility Challenge in Open Ecosystem. Based on the results of the challenge, we now have a good understanding of the appropriate offering and we are now looking at key countries for implementation.

Reducing our travel footprint

Business travel includes flights, rail, rental cars, taxis and public transport. Our reporting is based on the biggest contributor to business travel emissions – air travel – for which we calculate the CO_2e emissions based on the number of miles flown. In 2020, our CO_2e emissions related to business travel dropped to approximately 13 300 metric tons, meaning an 81 percent decrease compared to 2019. A significant part of the decrease is due to the impact of the pandemic resulting in heavily reduced travel. Our experience with virtual meeting technologies was extremely beneficial in helping us focus on using alternative ways to conduct meetings and other business instead of face to

Virtual meetings increased, business travel emissions decreased



face meetings. As a result, the number of virtual meetings increased by an estimated 76 percent compared to 2019.

This huge change in numbers reflects the shift in the way we work because of the pandemic. As the majority of our employees moved to home offices - on average 68 percent of employees during 2020, our commuting emissions decreased by 65 percent compared to 2019. Travel and commuting emissions are expected to grow once recovery from the pandemic begins.

Product transportation and distribution

We aim to save space, reduce packaging materials and maximize transport efficiency, thereby reducing inbound and outbound shipments. The reuse of packaging materials also contributes to reductions in CO_2 emissions from deliveries. In 2020, we reduced the use of new packaging materials by 1 600 metric tons (3 200 in 2019) by reusing transportation packaging.

We look at the most efficient transportation options and in 2020, our Scope 3 GHG emissions related to upstream transportation and distribution of our products stood at around 255 200 metric tons CO_2e, a decrease of 16 percent over the previous year, also affected by the pandemic. We carried out an analysis of the routes/customers that have the greatest emissions and are working on specific reduction targets with our business groups. Furthermore, we are working with the business groups on building a roadmap to achieve the contribution of product transportation to Nokia's new Science Based Targets in line with the 1.5ºC global warming scenario.

In 2020 we further improved our use of railway transportation and reduced material airfreight to factories through localization initiatives. For 2021, our focus will be to continue improving the environmental efficiency of our transportation by collaborating with the biggest contributors and concentrating on the most environmentally detrimental modes of transport.

We also have a marine fleet related to our separately managed undersea cables business, Alcatel Submarine Networks (ASN). In 2020, ASN's GHG emissions increased by one percent compared to 2019.

For information on our environmental and emissions work with our supply chain, please refer to the Responsible Sourcing section on **pages 71–79** of this report.

Waste and water in our operations

We have implemented waste reduction, reuse, and recycling programs across our operations. All electronic waste processing facilities used by our facilities and operations, including Asset Recovery, must undergo a Health, Safety & Environmental (HSE) Liability Assessment.

Our electronic waste can only be shipped to processing facilities that are on an HSE approval list. The requirements for the HSE liability assessment vary based on risk, which is dependent on waste quantity, shipment frequency, waste type/toxicity, waste treatment technology, environmental management systems, location, legal requirements and prior assessments.

Our goal is to maintain the minimum number of approved waste processing facilities needed to meet required services and minimize environmental liability. In 2020, we completed 12 HSE liability assessments of e-waste recycling facilities located in Canada, Chile, Hungary, India, Mexico, Poland, Saudi Arabia, Singapore, the Philippines, the USA and the United Kingdom. These assessments were conducted as desktop studies as site visits were not possible due to pandemic restrictions.

In 2020, the total facilities waste decreased by one percent compared to 2019, and we recycled, reused or recovered energy from 81 percent of all waste.

Plastics

Half of all plastic produced and used in the world is designed to be used only once and then thrown away. In our own facilities, single use plastic is most prevalent in kitchens and restaurants or brought in by employees (such as water bottles, for example). Plastic has had, and still has, a tremendous impact on our way of life and how the world has developed in the last 60 to 70 years.

Following 2019, when we conducted research to study and understand the amount of plastics used every year in our own operations and products, a number of initiatives were launched. A focused trial was executed on one optical terminal in our fixed networks business where we introduced recycled plastic into the product housing, with positive results. These results provide encouragement to extend this practice to other areas where it is technically and economically feasible. Our real estate organization also began working with our service providers to minimize the use of any single-use plastics at our sites, but this activity was put on hold as people started to work remotely due to the pandemic.

We launched an internal crowd sourcing innovation campaign asking people to submit ideas on how to reduce plastics in the company. Teams shared around 50 ideas via our innovation platform, generating 14 000 interactions in our internal channels. Read more on materials in our products in the **Our products and networks** section.

Water

Life cycle assessment (LCA) shows that the predominant amount of water withdrawal results from the generation of electricity used to power our products in our customers' networks. As our products consume electricity during their relatively long design lifetime (ten to 15 years for many of them), our biggest influence on water withdrawal is to reduce power consumption over the product's use time, which is part of our science based targets.

Water utilization within our facilities typically is associated with sanitary use, cleaning and landscaping activities. In 2020, we used 1 299 000 m^3 (1 753 000 m^3 in 2019) of water in our facilities, a reduction of 26 percent over the previous year. This decrease is mostly explained by the fact the majority of our employees were working remotely for most of 2020, due to COVID-19.

We also work with our suppliers on water issues. Learn more from the Responsible sourcing section on **page 76**.

Conducting our business with integrity

Trust, responsibility, and ethical behavior are the foundations on which we operate. Our Code of Conduct unites all our employees around our values and our unwavering commitment to integrity.

Highlights

We aim to act in an honest, ethical, transparent and mutually respectful way with our employees, suppliers, partners, customers and other external parties. Our actions along with strong processes, procedures, and guidelines help us retain our trustworthy reputation and are key drivers for attracting and retaining our workforce and customers.

262

of our key suppliers have set emission reduction targets, out of which 128 were in line with the Science Based Targets

In total we implemented

391

supply chain audits, including

24

in-depth audits on corporate responsibility topics

27

audits against our supplier requirements and

340

supplier assessments conducted using the EcoVadis scorecards

Ethical business and corporate governance

Every employee is held accountable and responsible for upholding our high ethical standards and for conducting business with integrity. We have risen to the challenges of these unprecedented times and demands for connectivity and reliable networks, products, and solutions, while holding steadfast to our most precious asset, our reputation. Our long-standing reputation for acting with unyielding integrity defines us as a company and distinguishes us from many of our competitors.

Code of Conduct

Our **Code of Conduct** (CoC) provides clear and simple direction to our employees and business partners and defines the principles of ethical and compliant business practices, including how we work with suppliers. It is applicable to all our employees, directors and management. We require employees to acknowledge the CoC, which is cascaded to all employees as part of our annual mandatory compliance training. The Code is available online in 23 languages and is accessible from various resources, including a mobile app. We also require our third-party business partners to follow strict requirements based on our Third-Party Code of Conduct. Additionally, a **Code of Ethics** is applicable to the President and CEO, Chief Financial Officer, Deputy Chief Financial Officer, and Corporate Controller.

Our refreshed 2020 CoC promotes trust, personal integrity and ethical decision making. The key principles, practices, and guidelines, along with the ethical decision-making model, in our CoC provide clear guidance to our employees and other stakeholders. Our Code sets forth our expectations for an ethical business approach that protects our valuable reputation.

We are committed to upholding the laws and regulations in all countries where we operate. The CoC includes basic legal guidance and information on ethical behavior and key standards. It includes summaries of the 14 key business policy statements that provide guidance on proper ethical conduct. The 14 policy statements include: Improper payments/Anti-corruption, Conflicts of interest, Fair competition, Privacy, Dealing with government officials, Intellectual property & confidential information, Working with third parties, Trade compliance, Insider trading, Health, safety & labor conditions, Controllership, Fair employment practices, Human rights, Environment, and Operational guidance on third-party screening and corporate hospitality.

Each compliance policy area is the responsibility of one or more subject matter experts. These experts ensure that our policies and procedures remain up to date and in conformity with applicable laws and regulations. They consider new and emerging issues and develop and deliver training and communications on matters within their respective fields. The complete policies and respective Q&As are made available to our employees on the intranet.

Leadership engagement, accountability and compliance oversight

Our commitment to integrity applies to every part of our business, at every level. Our Chief Compliance Officer (CCO) presents separately and independently to the full Board of Directors at least once per year, to the Audit Committee of the Board four times per year, or as needed, and to the Compliance Meeting attendees, which includes Group Leadership members, twice per year. The CCO also regularly meets with the Audit Committee in executive sessions without members of senior management present. Our CCO reports solid line to the Chief Legal Officer (CLO), with dotted line reporting to the Board of Directors.

We have dedicated compliance leaders for each of the company's regions, including the Nokia Shanghai Bell (NSB) compliance team. Another compliance team is focused on supporting our business groups. This ensures that compliance risks are identified and managed both horizontally and vertically. Our entire legal team is responsible for driving compliance in their daily operations and those of their assigned client groups.

Compliance as a business enabler

Our Ethics and Compliance approach focused intently on being more dynamic, strategic, and risk-based in order to continue strong support to the business. Adapting to the unexpected circumstances of 2020 required agility, elevated compliance oversight, and ramping up of virtual support with different stakeholders to ensure program continuity and effectiveness.

In 2020, Ethics and Compliance:

- Quickly adapted to a virtual support model for interfacing with our employees and external third parties
- Further strengthened our Regulatory Excellence team by adding new team members with deep expertise in privacy and competition law
- Elevated the role of compliance oversight for Nokia's Business Groups (BGs) to better support the unique risk profiles of our BGs
- Deployed an Ethics and Compliance chatbot, in conjunction with our revamped CoC, to serve as a 24x7 compliance resource for employees
- Implemented a Remote Sites program to promote the Nokia compliance program and initiatives in locations that lacked a strong gatekeeping presence
- Rolled out four microlearning training modules as a means of providing just-in-time training to specific target audiences
- Launched a unique compliance initiative in NSB China called Project Reflector to:
  1. identify the top three risks associated with China business operations
  2. review and update internal controls and monitoring measures of the top three risks
  3. track the completion status of risk management actions on a regular basis

Open reporting – Global Ombuds Program

Our Ombuds Program fosters and strengthens our company's speak-up culture and reinforces our non-retaliation policy. The vast network of local Ombuds leaders actively promotes the program and serves as a confidential and neutral resource for employees who have compliance questions, concerns, and requests for guidance. The Ombuds network is a critical element in preventing, detecting and addressing wrongdoing by expanding the existing channels currently available for raising concerns.

In 2020 we:

- revamped the Ombuds awareness campaign to better connect with virtual employees
- adopted a new modern slogan, 'Turn2us,' to convey that Ombuds are available to provide support
- assisted employees with roughly 200 questions, concerns, and requests for guidance

85%

of our employees work in locations with an on-site Ombuds Leader

200+

Ombuds Leaders globally

1500+

questions and concerns raised to Ombuds network over past three years

Compliance risk assessment and mitigation

Complex, global organizations need robust risk assessment processes in order to effectively identify and mitigate compliance risks. We employ a multi-faceted approach to compliance risk assessment. We utilize Compliance Control Framework (CCF) reviews – an internally-developed process of evaluating corruption and other risks, identifying gaps in program effectiveness, and crafting remedial measures to enhance compliance at the sites subject to review. A total of ten CCF reviews were conducted in 2020,

some were conducted remotely due to COVID-19, and some country reviews were deferred to 2021. Our CCF reviews are supplemented by Compliance Operating Reviews (CORs), which are deep-dive, leader-led sessions focused on the compliance culture, program, and risks within a particular region or business group. Reflecting the importance of these reviews and demonstrating our belief that leaders own compliance, CORs are attended by senior executives of the company. We also conduct quarterly reviews of compliance risks within the Enterprise Risk Management (ERM) program.

Beyond these structured programs, we regularly monitor data relating to investigations, concern reporting, third parties, and GTE (gifts, travel and entertainment), looking for trends or anomalies that might trigger deeper inquiry. We monitor regulatory and legislative activity, enforcement trends, and the actions of our competitors, suppliers and others. We conduct and evaluate various internal employee surveys to measure culture, leadership engagement, fear of speaking up, and more.

Identifying and assessing risk is only the first part of the equation; more important is what we do with the information obtained and whether we put it to good use. In this regard, we follow the data – developing targeted training and compliance communications, strengthening internal controls, clarifying existing policies and procedures or creating new ones, and working with leaders and employees at all levels to address new, emerging and longstanding risks, and doing so in a practical and sustainable way to enable Nokia's continued success in the marketplace.

Gauging effectiveness

In addition to these varied risk assessments, we engage with employees through anonymous surveys to gauge the effectiveness and understanding of our compliance program. In 2020, our online Employee Compliance and Inclusion Survey included 18 questions, the compliance section addressing tone from the top, compliance program effectiveness, improper payments, conflicts of interest, data protection, confidential information, privacy, and trade compliance. 34 percent of our employees participated, and the overall survey results were extremely positive. For example, roughly four out of five respondents approved of our online compliance training, nearly nine in ten said their manager acted with integrity, and fully 97 percent knew of the multiple ways to report compliance-related concerns.

Employee and other stakeholder inputs are actively and routinely sought to further develop the company's program. We use multiple feedback channels, discussions, and training to drive and enhance the culture of continuous improvement in our compliance program. Our Internal Audit team collaborates with the compliance team in audits and through other inquiries that assess the effectiveness of our compliance processes and controls, including assisting Ethics and Compliance with financial investigations. The Internal Audit team receives all Compliance Control Review reports and takes steps to collaboratively mitigate all risks identified during compliance reviews and investigations.

Similarly, Internal Audit attends the quarterly Ethics and Compliance regional reviews when audit issues are presented and discussed. Internal Audit also engages Ethics and Compliance when ethics-related issues are identified during audits.

Compliance training program

The Ethical Business Training (EBT) module is one of three web-based training courses that was mandatory for every Nokia employee in 2020 (along with modules devoted to the important topics of quality and safety/wellbeing). It includes a review and acknowledgment of our Code of Conduct (CoC) and the related 14 policy areas, a requirement to declare potential conflicts of interest, and a review of key information related to our ethical values and ethics in the workplace. Practical examples and information on policies and laws are included to guide employees through the process of considering potential risks and making ethical decisions. Additionally, line managers received further separate training focusing on the important role supervisors play in promoting a culture of integrity. In 2020, 96.2 percent of our employees completed the EBT module.

In addition to the mandatory annual EBT, we also conducted live training sessions and deployed several targeted web-based trainings; the topics included anti-bribery, competition law, conflicts of interest, privacy, hospitality, third parties, human rights, and sexual harassment. Our targeted training approach is intended to spread awareness on topics that are relative to a specific audience based on risk, function or location. For example, the online competition law

microlearning was available to all employees but specifically was assigned to employees who deal with our customers, competitors, and suppliers, and require an understanding of the key principles concerning compliance with competition and antitrust laws. The competition law training had a target audience of over 5 000 employees in 2020 with a 100 percent completion rate.

In 2020, in spite of COVID-19 circumstances, we delivered a combination of 122 virtual and/or face-to-face sessions, training over 3 900 individuals across the globe, covering business groups, relevant stakeholders, regional groups, including country engagement sessions, and service companies.

We developed a long-term, strategic approach to training by introducing a three-year training roadmap. In conjunction with the three-year plan, annual training plans are reviewed and based on defined compliance topics of importance, new and/or updated policies, identified potential risks and any other key changes to law or regulations that need to be addressed.

Compliance communications program

Compliance communications help employees understand the laws, regulations and policies that apply to their everyday work. In addition to formal training, we annually refresh and deploy both a global and region-specific communication and awareness program to strengthen understanding and to ensure adherence to our Code of Conduct (CoC), policies, and core values.

A personal welcome letter that is sent to our new hires from our Chief Compliance Officer to introduce them to our culture of integrity and our CoC was implemented in 2020. As a result of COVID-19 in 2020 and for as long as circumstances warrant in 2021, electronic versions of welcome letters and CoC booklets replace hard copy versions.

In 2020 our Ethics & Compliance communications program responded to circumstances created by the pandemic. We placed greater effort on staying connected with employees worldwide, leveraged the use of internal social media channels, increased our communications on our global Ombuds program, and conducted various other virtual activities. We developed a new job aid and related talking points on our ethical decision-making model to supplement a library of existing compliance job aids available to managers to assist them in discussing compliance topics with their teams. We also conducted face-to-face and/or virtual meetings and discussion sessions with employees, which were held by regional and market compliance representatives, and we provided various communications on trending compliance topics, including blogs and posts on trust, privacy, disciplinary cases and the impact of COVID-19.

We hosted a global virtual Integrity Day event which allowed our Chief Compliance Officer and compliance team to continue our tradition of celebrating and reinforcing the values and high ethical standards of our company. Our Chief Compliance Officer hosted virtual town halls utilizing the internal social networking functionality of Yam Jam events. Our Integrity Day also included various communications, virtual activities, games and awards. The Integrity Day event included the announcement of compliance award winners in three categories: 20 Compliance Heroes, 10 Ombuds Leaders, and 5 Regional Leaders were recipients of compliance awards in recognition of their exemplary ethical behavior and outstanding contributions to our compliance culture.

Reporting of ethical concerns without fear of retaliation

It is our priority to ensure all employees are empowered to raise concerns and speak up about potential violations of our Code of Conduct. Retaliation of any kind is not permitted, and we take seriously all allegations regarding any form of reprisal and investigate such concerns thoroughly.

How to report a suspected violation of the Nokia Code of Conduct

All stakeholders play a vital part in helping to keep Nokia safe every day. One of the most critical contributions is to report knowledge or suspicion of any unethical behavior or violation of law or Nokia policies.

Reporting channels:
Email to **ethics@nokia.com**
www.nokia.ethicspoint.com
Country-specific **phone numbers**

We offer multiple channels to report ethical concerns, including Legal and Compliance, Ombuds Leaders, HR, a dedicated email address, online portal, mobile app and country-specific phone numbers. Our Business Ethics Helpline allows for anonymous reporting and is open to employees and external stakeholders. We respond to and investigate all concerns promptly and establish remediation plans as needed.

In 2020, our Ethics & Compliance Office received 776 (994 in 2019) concerns of which 329 were investigated as alleged integrity violations; 106 of such integrity allegations were substantiated with cause found after investigations. Specifically, two concerns were received as alleged violations of our anti-bribery policies, involving third parties. One was not substantiated, and the other is an ongoing investigation. During the year, we implemented corrective actions including 16 dismissals and 20 written warnings. While the total number of concerns reported in 2020 decreased compared to 2019, the percentage of integrity concerns reported in 2020 increased compared to 2019, which we attribute to our ongoing efforts to promote reporting channels, the continuing growth of the global Ombuds program, and increased line manager engagement in driving open reporting.

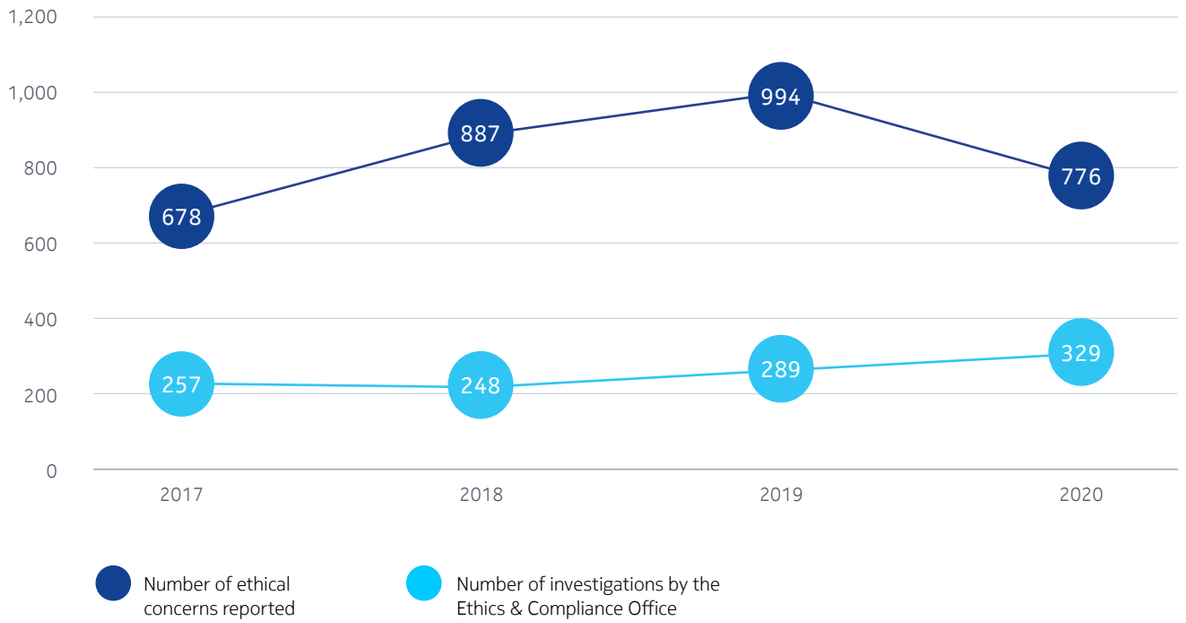
In 2020, there were no significant fines or non-monetary sanctions for non-compliance with laws and regulations related to anti-corruption, product health or safety and security, environment, data privacy or export control laws involving Nokia.

Examples of reported ethical concerns and actions taken in 2020

Issue raised	Our guidance	Actions taken
Employee engaged in pattern of expense abuse that included booking personal travel at Nokia's expense, double reimbursement for cancelled trips and events, as well as questionable and lavish spend on customers.	Nokia Code of Conduct section on Controllership emphasizes that an employee must not misrepresent financial records, including falsifying expense reports.	Allegation was substantiated and employee separated from company. Second employee also disciplined.
Line manager engaged in harassing and victimizing behavior against concern raisers who complained about the manager or alleged that the manager's behavior was inappropriate.	Nokia Code section on Fair Employment stresses that respect is fundamental to Nokia's culture and that discrimination, harassment, and retaliation, in any manner, are prohibited.	Allegations were substantiated, and line manager was reprimanded, received coaching, and will be monitored for progress and compliance going forward.
Employees of an affiliated entity falsified customer documents in the misguided belief that it was justified to ensure proper completion of the scope of work.	Nokia Code emphasizes that our entire business is built on trust, and our business partners and affiliates should follow our Code of Conduct and uphold our ethical values. The Nokia Code section on controllership emphasizes that Nokia classifies and records its transactions accurately.	Allegations were substantiated. Several individuals were terminated, and others were given warnings and counselling as to future conduct.

Above are anonymized illustrative examples of investigations carried out in 2020 by our Business Integrity Group.

Number of ethical concerns and investigations



Ethical concerns reported in 2020 by category

Category	Number of concerns
Conflict of interest	37
Controllership	90
Dealing with government officials	8
Fair competition	9
Fair employment (all HR related concerns)	290
Guidance	113
Human rights	1
Improper payments	9
Insider trading	3
Intellectual property & confidential information	51
Privacy	6
Trade compliance	5
Wellbeing, health, safety and environment	29
Working with suppliers	67
Other	58
Total number of concerns reported	**776**

Anti-Corruption Center of Excellence and Third-Party Program

The Anti-Corruption Center of Excellence (COE) focuses on addressing risks associated with third parties, transactions and events that pose a risk under applicable anti-corruption laws, and Nokia policies in furtherance of such laws.

The COE drives awareness through training and communications and utilizes online tools and a data analytics monitoring program to effectively and proactively mitigate risks. The COE employs a comprehensive, multi-faceted, risk-based approach to efficiently manage and monitor the sales third-party risk management process; the review, approval, and monitoring of gifts, entertainment, hospitality, donations and sponsorships; and the screening of customers through a Know Your Customer screening program.

We have clear and unequivocal anti-corruption policies, supported by standard operating procedures and implementation guidance documents for key corruption-risk areas. Risks and mitigation measures are reviewed with the company's senior leadership, Board of Directors, and the Audit Committee.

We work closely with third parties, including commercial third parties and suppliers, to encourage adherence to the same standards of ethical business across all interactions and to help ensure responsible sourcing and globally acceptable labor practices. For example, sales third parties undergo a thorough screening process during which they are required to acknowledge our Third-Party Code of Conduct, which is available in eight languages. In addition, our third parties go through a mandatory training on the Third-Party Code of Conduct as part of their onboarding process. We also follow a strict no-sales agents rule that prohibits the use of sales agents in virtually all our third party dealings, other than where required by law or in exceptional cases. Our regional and business compliance counsels deliver training and communications to our third parties regarding our expectations on ethical conduct, where necessary.

Competition laws

Nokia is committed to complying with competition laws everywhere we do business. This commitment starts with our Code of Conduct statement on compliance with competition laws, and is furthered by our detailed policies, guidelines, training materials and presentations. We maintain a centralized online repository for our competition law resources, and we closely monitor government legislative, regulatory, and enforcement activity to ensure we remain current and up to date in our policies and training.

Responsible advertising

Advertising at our company must be built on a clear and accurate messaging framework, as set out in our visual and verbal guidelines, with pragmatic statements, grounded in fact, with real proof points, and reasons to believe in Nokia. The use of false or deceptive messages, ambiguity, or aggressive sales techniques are strictly forbidden and against our Code of Conduct and our brand guidance. Our brand guidance is available on brand.nokia.com.

World's Most Ethical Award

We were honored for four consecutive years, and five times overall, by the Ethisphere Institute as one of the World's Most Ethical Companies®. This year Nokia was one of three companies recognized in the telecommunications sector. This award is a testament to our strong ethical business activities and our corporate character, which includes among other things our commitment to human rights, diversity, social impact, risk management and more.

Addressing human rights

We fundamentally believe that connectivity and the technology we provide are a social good that can support human rights and we acknowledge the responsibility that comes with this. Upholding human rights is a complex issue that covers not only the technology we provide, but our partners, suppliers and our own operations. Therefore, we strive to continuously learn and improve, and believe that engaging with the broader stakeholder community to drive dialog is the best way forward.

Our public Human Rights policy addresses our most salient risks related to the potential misuse of the technology we provide. Policies related to other human rights, for example rights relating to fair labor practices, modern slavery and human trafficking, and environmental stewardship are covered by other company policies. See Human Rights Framework table on the right.

We are committed to the Human Rights principles and values laid out in the International Bill of Human Rights (consisting of the Universal Declaration of Human Rights and its related covenants), the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, Organisation for the Economic Co-Operation and Development (OECD) guidelines for Multinational Enterprises and the United Nations Guiding Principles on Business and Human Rights.

Our Human Rights Framework

	Nokia employees	Technology misuse	Nokia supply chain
Human rights impact	Labor rights, Health, Safety, Wellbeing, Decent working conditions, Compensation Impact - Materiality - Risk	Freedom of expression and privacy Impact - Materiality - Risk	Labor conditions, freedom of expression, compensation, health and safety, corruption Impact - Materiality - Risk
Potential risk mitigation	Ensuring decent working conditions Health and wellbeing	Code of conduct Human rights due diligence	Code of conduct for suppliers Audits, assessments and training Health & safety maturity
Grievance mechanisms	Ethics Helpline One in 90 discussions	Ethics Helpline	Ethics Helpline Audits and assessments
Measurement	A great place to work Inclusion and diversity Related targets	Reported and investigated concerns Related targets	Developing health and safety Related targets

In 2020 we conducted a Human Rights Impact Assessment as part of an ongoing program of assessments for various geographies. We updated our website to cover our approach to Human Rights during this extraordinary year of the pandemic. We also published the first in a series of public podcasts focusing on Human Rights with one covering our Human Rights Due Diligence (HRDD) process for our most salient risk of the potential misuse of the technology we provide to our customers.

This HRDD process is pre-emptive. Before any sale is made, the process is used to identify the potential risk level to human rights through potential misuse of our technology. We look at a country's long-term commitment to upholding Human Rights, the intended use of the technology in question and the customer type in order to identify potential risks early in the process and trigger the required HRDD investigation and senior-level approval/denial review where needed. The HRDD triggers are a mandatory part of the sales approval process.

Training, tracking results, communication of findings, checkpoints and triggers for the process are reviewed and, where needed, improved on an ongoing basis.

We aim to be transparent and active by working with key industry stakeholders including, among others, through our continued membership in the Global Network Initiative (GNI). The GNI is a unique multi-stakeholder group involving leading ICT companies, investors, academics and civil society groups. We are a Board member of the GNI and in late 2019 completed our first GNI independent assessment which found we showed good faith efforts over time to implement the GNI Principles on freedom of expression and human rights. The GNI members' assessments are held every three years.

The table on the previous page provides links to information on specifically mentioned human rights topics in relation to the requirements of the French duty of vigilance law. Similar regulatory discussions are ongoing in other countries.

Increasing transparency on the overall narrative

In this year's report we have again included new anonymized case examples from our Human Rights Due Diligence work in 2020, providing insight and examples on the robustness of our HRDD as well as showing "Go," "No go" and "Go with conditions" sales cases (see the table on the next page). We believe these real case examples support greater transparency and help to drive the dialog and narrative further, rather than simply reporting numbers of cases. They also serve to emphasize the importance of looking at the use case rather than a simple list of products.

Of the HRDD cases investigated in 2020, 70 percent were resolved as "Go," 0 percent as "No go" and 30 percent as "Go with conditions." We believe internal training and continued experience with our due diligence processes may have helped sales teams identify cases that would likely be denied and either avoid them completely or structure the offerings to avoid undue risk to human rights. Hence, in 2020, there have been more cases that require conditions attached and no cases which were determined to be a "No go."

> "We look at a country's long-term commitment to upholding Human Rights, the intended use of the technology in question and the customer type in order to identify potential risks early in the process and trigger the required HRDD investigation and senior-level approval/denial review where needed. The HRDD triggers are a mandatory part of the sales approval process."

We also work closely with regulators such as export control to share and discuss our Human Rights Due Diligence for controlled export items.

Human Rights Due Diligence (HRDD) case examples

	Case 1	Case 2	Case 3	Case 4
Country	Extreme risk country	High risk country	Extreme risk country	Extreme risk country
Requestor	Government-owned enterprise	Local telco operator	Government	Multinational telco operator
Request	Surveillance drones with connectivity for remote site monitoring	Location based services for precise location data for emergency calls	Private wireless network for Ministry of the Interior	Standard passive 3GPP/ETSI compliant lawful intercept capabilities for packet core in the telco network
HRDD investigation	The requested solution was for drones with connectivity for surveillance monitoring of remote static sites on private land. HRDD focused on whether there would be any link to the public network with the connectivity or any possibility of misuse, surveillance or monitoring by the drones of public areas outside the enterprise's facilities. The connectivity was a closed private network used exclusively by the enterprise for the drones and would not be connected to any networks open to the public. HRDD checked the location in detail and proposed flight path of the drone surveillance and those areas within flying distance but outside the flight path to see if there was any public habitation or public areas near. There were none and the site was confirmed as very remote.	The requested solution was to enable the operator to collect precise location data and for it to be sent to a control point in the operator network and then sent to authorities when an emergency call had been initiated by a user. HRDD focused on the usecase need and technical setup of how and when the location data would be sent outside the operator network. HRDD confirmed the location data was collected by the operator and sent to the authorities only if and when a user dialled an emergency call and would not be sent in any other case.	The request was to go via a Nokia authorized reseller with the end customer, the Ministry of the Interior. The request was for a private network for the ministry to connect their own personnel. HRDD looked at the usecase and implementation. The network had no connection to the public network and was purely for internal usage.	The requested solution was for an operator to have passive 3GPP/ETSI compliant lawful intercept capabilities for packet core. HRDD checked the usecase and that the requirements and technical solution proposal were standard ETSI/3GPP passive and with no extra customization. The capabilities would not, by themselves, be sufficient for the delivery of the full lawful interception process.
HRDD decision	GO (with conditions)	GO (with conditions)	GO	GO
Policy Principle	Nokia will provide communication systems, drones, video transmission capabilities, networking capabilities and other technology to governmental and enterprise customers for purposes such as public safety, transport, energy and smart city enablement. We will not, however, pursue direct business with intelligence agencies or similar institutions involving or relating to active surveillance or interception of communications.	Nokia will provide communication systems, drones, video transmission capabilities, networking capabilities and other technology to governmental and enterprise customers for purposes such as public safety, transport, energy and smart city enablement. We will not, however, pursue direct business with intelligence agencies or similar institutions involving or relating to active surveillance or interception of communications.	Nokia will provide communication systems, drones, video transmission capabilities, networking capabilities and other technology to governmental and enterprise customers for purposes such as public safety, transport, energy and smart city enablement. We will not, however, pursue direct business with intelligence agencies or similar institutions involving or relating to active surveillance or interception of communications.	Nokia will provide passive lawful interception capabilities to customers who have a legal obligation to provide such capabilities. This means we will provide products that meet agreed standards for lawful intercept capabilities as defined by recognized standards bodies such as the 3rd Generation Partner Project (3GPP) and the European Telecoms Standards Institute (ETSI). We will not, however, engage in any activity relating to active lawful interception technologies, such as storing, post-processing or analyzing of intercepted data gathered by the network operator.

Responsible sourcing

Our supply chain is a critical part of our own reputation and extended impact. We work with both customers and suppliers to drive transparency, sustainability and good ethical and business practice in our long and often complex supply chain.

We work with our suppliers to remedy, develop and build capability to enable a more sustainable and transparent ecosystem. We engage with our customers to share and drive improvements and knowledge in our common supply chain and collaborate where possible across the ICT industry for greater impact. We continued our collaboration with the Joint Audit Cooperation (JAC) initiative, the association of some of the world's largest telecom operators. We engaged on supply chain efficacy including labor rights issues, energy efficiency, circular economy practices and health and safety improvements as well as auditing best practice. Despite the pandemic, we also collaborated with a major customer on an initiative targeting specific printed circuit board suppliers in China to help suppliers identify potential improvements in energy efficiency within their operations. Read more online.

In 2020 we had business with around 12 000 suppliers, and 80 percent of our total supplier spend was distributed across around 400 suppliers. Our suppliers fall into three broad categories: hardware suppliers for product materials, services suppliers who support the provision of services to our customers, for example, in installation and construction of the networks we sell, and indirect suppliers for everyday goods and services we need to run our business such as IT, software, legal and marketing. Our manufacturing suppliers are mainly based in Asia and services suppliers are based around the world. Our final assembly included our own factories in Finland, India and Poland as well as Flextronics, Foxconn, Jabil and Sanmina supplier sites in Brazil, Canada, China, Hungary, Italy, Malaysia, Mexico, Romania, Thailand, Ukraine, the USA and Vietnam.

In 2020 we updated our Supplier Requirements by adopting Responsible Business Alliance (RBA) Code of Conduct requirements on top of the existing additional Nokia specific requirements. We have also communicated the updated supplier requirements to our suppliers. An overview of these requirements can be found on our website. We encourage our tier one suppliers (for us this includes both our final assembly suppliers as well as materials and services suppliers) to apply and cascade the same requirements to their own suppliers, which we aim to check through audits and EcoVadis documentation audits. Transparency and compliance requirements are firmly applied to all supplier relationships, and gifts or entertainment are neither given nor received beyond nominal value items. We investigate and qualify all suppliers, requiring them to comply with all applicable laws and regulations, and show they share the values stated in our Code of Conduct. Supplier related ethics and anti-corruption related requirements are detailed in our Third Party Code of Conduct. To learn more about our supplier management and related sustainability, visit our responsible sourcing page online.

Supplier coverage in Nokia's sustainability programs

Program	Coverage
Request for Information process (anti-corruption, health & safety and overall sustainability)	100% of supplier spend
Health & Safety maturity assessment	over 97% of relevant supplier base
Responsible minerals program	98% of relevant supplier spend
EcoVadis sustainability assessments	60% of supplier spend
CDP supply chain Climate change	over 61% of supplier spend
CDP supply chain Water security	over 51% of supplier spend

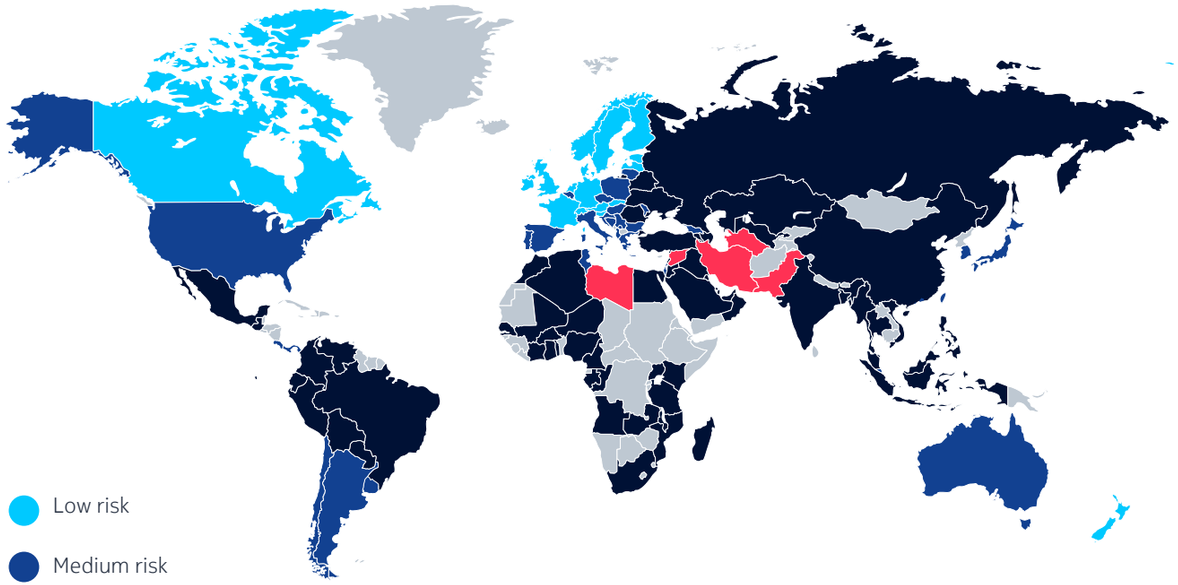
We do not measure percentages for onsite audits as they are risk-based

Our materiality analysis and Enterprise Risk Management help identify potential supply chain risks and we carry out more in-depth analyses to determine all supply chain risks via our dedicated Supplier Sustainability Risk dashboard where we look at various sustainability risks, commodity risks and more on a supplier location level. The outcomes are included in our category strategies related to nature and size, as well as monitoring and performance related requirements. We review category strategies annually with our purchasing category leads, and in 2020 we reviewed 93 of them and had sustainability included in 78 percent. Failing to meet established sustainability requirements will block a supplier from being promoted, for example, from restricted to allowed, or to preferred supplier.

We also maintain a Corporate Responsibility risk map of our suppliers which we update regularly (see the chart on this page). In 2020 we continued our work to raise awareness of modern slavery and the role of technology in combating it and all other forms of forced labor in the supply chain. This work included advocating for greater dialog on modern slavery and human rights through industry events.

Sustainability serves also as an important pillar in our Supplier Performance Evaluations along with Commercials, Quality, Delivery, Innovation, and Relationship). The sustainability score is composed of assessment results from our core programs (CDP, EcoVadis, onsite audits and others). Sustainability is one of the six pillars of our Supplier Performance Evaluation.

Corporate responsibility risk map of our suppliers



This map is an aggregate of a selection of Verisk Maplecroft indices. The chart covers modern slavery, labour, health and safety and environmental risks in countries where we have business with suppliers exceeding a set minimum € threshold. It may not however cover all countries where our suppliers operate. The chart was created based on Verisk.Maplecroft's Global Risks Portfolio.

We have detailed KPIs and public global targets related to supply chain activities, including new supply chain climate targets as part of our 1.5°C climate commitment. In 2020, 67 cases out of a total of 776 concerns raised on the ethics helpline were related to our suppliers. More information on raising concerns can be found on page 65–66 of this report.

Monitoring, assessment and auditing

In 2020 we had to adapt our auditing, assessment and monitoring to the ongoing pandemic situation. This was also an extraordinary year for responsible sourcing and the supply chain. Firstly, due diligence planning required greater agility to adapt to the restrictions, lockdowns and uncertainty brought by COVID-19, both in terms of restricted movement but also in terms of changes in supply chains. For example, in some cases there were fast ramp-ups in various sites and geographies which meant increased working hours for the employees in order to try and keep up with demand. Simultaneously, this required us to emphasize, educate, and continuously communicate more than ever to decision makers in our suppliers the enhanced need to adhere to the Code of Conduct, even in these extraordinary circumstances.

Much of the normal due diligence activities were moved online due to restrictions both on our own auditors as well as strict visitor restrictions at supplier premises based on health guidelines. The number of onsite audits had to be limited to certain geographies. However, while our onsite activities were restricted, we were able to boost our digital activities, ramping up a series of awareness raising webinars on modern slavery, climate, responsible sourcing of minerals, and health and safety among others. These were well received and had high attendance rates.

Our onsite audit program is aligned with SA8000 methodology and includes document reviews, interviews with managers and employees, site visits, inspections of facilities, production lines, and warehouses. Our general audit covers the full set of supplier requirements, including corporate responsibility (CR) requirements, and are often used with new high-risk suppliers or suppliers where there has been significant change in business or location. In addition, we conduct specific in-depth CR audits on our existing suppliers. In 2020, we conducted 27 audits against our full set of supplier requirements and 24 in-depth CR audits. Two of these audits were conducted through our customers' Joint Audit Cooperation (JAC) framework and seven through Responsible Business Alliance (RBA) Validated Assessment Program (VAP) audits which we cross-recognize.

Findings from our indepth audits

Category of findings	Instances of non-compliance	Number of potential risk areas identified	Total number of recommendations for improvement
Child and juvenile labor	1	0	1
Forced labor (contract agreement issues/fine/ deduction etc)	1	0	1
Health and safety	73	25	98
Freedom of association and right to collective bargaining	2	3	5
Discrimination	1	2	3
Disciplinary practices	3	0	3
Working hours	28	6	34
Remuneration	7	4	11
Management systems	27	16	43
Environmental management system	36	10	46
Total	**179**	**66**	**245**

The table is based on 24 Corporate responsibility in-depth audits conducted in 2020.

We spent 46 auditor days conducting corporate responsibility in-depth audits (90 in 2019) at 24 supplier sites (45 in 2019). Countries covered by these audits were China, Morocco and Mexico and reached a total of around 30 047 supplier employees. See detailed findings of the 245 instances of non-compliance and examples of corrective actions taken in the tables on this and the previous page. As a result of the audits, we made 245 improvement recommendations which are addressed through corrective action plans. All nonconformities identified were analyzed by Nokia sustainable procurement team, and included into our training materials in order to continually improve them and learnings were shared in supplier workshops and webinars.

We target to close CR onsite audit findings within six months of audit. Audit closure continues to be a challenge, but improved in 2020 - 67 percent of audits were closed within this time (52 percent in 2019). We continue to emphasize this as an issue which needs constant vigilance and improvement.

As the number of onsite audits was limited in 2020 due to COVID-19 restrictions, we focused more intensely on online assessment of suppliers, completing over 340 evaluations on EcoVadis, including labor, safety and environmental elements. This is 99 evaluations more than in 2019. Moving online also allowed us to focus more on further developing improvement activities with suppliers.

Examples on identified non-compliance and actions taken

Category	Non-compliance identified	Actions taken by supplier
Forced labour	While supplier had policies and procedures concerning the prevention of forced labor in place, they were lacking a monitoring program to ensure their effective implementation.	The supplier has provided a copy of document describing the methodology for monitoring the implementation of the policy. They have also shared monitoring records for one year, demonstrating that no employment-related fees have been levied from employees. All the interviewed supplier workers also stated not having witnessed forced, bonded, involuntary or exploitative prison, trafficked or slave labor.
Supplier management	Contract agreement with the subcontractors providing human resources was missing important CR aspects such as working hours, weekly off-time, salary payment, safety, right to audit etc. Supplier assessment was not yet in place.	Supplier has amended the contract agreement template that includes the working hours, weekly off, leave, payments, occupational health&safety requirements, etc. to be implemented with immediate effect.
Health & safety	There were significant failures related to chemical management, including lack of access control to hazardous waste and chemical storage, and lack of eye wash in the chemical usage area and shower station in the hazardous waste and chemical storage area. Personal protective equipment (PPE) was not available near the chemical storage area.	Supplier has installed a gate to restrict access to the area and prepared a list of employees that are allowed to handle chemicals and get access to the chemicals storage area. They have implemented usage of the stock card to record stock and used chemical status. They installed missing eye washer and shower stations and have provided PPE in the chemical storage area.
Remuneration & benefits	Service agreement of the Lao nationality employees mentions in Clause 6(i) that, if due to project requirement overtime or weekend work is carried out, such work will not be compensated.	Supplier amended contract citing compensation of weekend and overtime work. Such amended policies communicated through email to all the 23 Lao nationalities.
Environment	Sewage treatment plan was found to be not as per the laid-out treatment procedure (only equalization, aeration and membrane bioreactor were in the process). Sludge management (drying, collecting, disposal) was not in place.	Process lay out of the sewage treatment has been modified according to the laid down process. Supplier shared the picture evidence of each section of the sewage treatment.
Working hours	Overtime hours exceed the local regulation, not meeting Joint Audit Cooperation (JAC) requirement of 52 hours or local regulation of 60 hours.	Supplier has Initiated a plan to reduce the overtime hours to meet the regulation. They increased employee skill training, designed automation equipment and improved work efficiency. They revised Attendance management system, defined overtime control requirements and implemented training on the system for manufacturing managers.

This table is based on 24 Corporate Responsibility onsite audits conducted in 2020.

In 2020, 72 percent (74 percent in 2019) of suppliers had a satisfactory score on EcoVadis. All of the suppliers who were below expectation were addressed with improvement requests.

Capability building – driving improvements

In 2020 our supplier workshops were also moved fully online and we ran 25 supplier training workshops on conflict-free sourcing and climate change, modern slavery, environment and a series of workshops concerning health and safety. See supplier workshop participation below.

We require all suppliers, except those with very low environmental impact, to have a documented Environmental Management System (EMS) in place. We require and track that key suppliers and those with greater impacts are certified to ISO 14001. We create environmental improvement programs together to drive improvements in our upstream Scope 3 emissions through the CDP Supply Chain Climate Program. We encourage our key suppliers to report their climate impacts and set carbon reduction targets through CDP and work with them to build improvement programs.

In 2020, 430 of our key suppliers representing over 61 percent of our total procurement spend, responded to the CDPs request to disclose their climate performance information. 262 of them also provided emission reduction targets (an increase of 28 suppliers from 2019), out of which 128 were in line with the Science Based Targets. The total saving from these carbon reduction initiatives was 33 million metric tons CO_2e and around EUR 558 million during the year.

We were again placed on the CDP Supplier Engagement Leaderboard. Our company was in the top 3 percent for our supplier engagement activities on climate change.

204 suppliers also further engaged their next tier in CO_2 reporting. 137 suppliers calculated an allocation of their emissions for us based on the products and services we purchase from them and 76 suppliers provided emissions intensity data. Using a hybrid methodology for calculation, based on supplier information for Scope 1 and 2 emissions, our emissions with participating suppliers totalled 1.1 million metric tons of CO_2e. By scaling up the allocated emissions to 100 percent of our suppliers, we estimated our Scope 3 emissions from our supply chain to be approximately 2.5 million metric tons of CO_2e.

All suppliers below expectation in their CDP performance were addressed with improvement requirements and suggestions on next priorities.

In 2020 we shared our expectation with our suppliers that they reduce their climate emissions by 50 percent by 2030 and moreover specifically to our final assembly partners that they should reach net zero emissions in their Nokia relevant manufacturing part. We expect suppliers to communicate their updated target to us though the 2021 CDP Supply Chain program.

In 2020 we also embedded sustainability as a standalone category in our Supplier Diamond Awards. The winning supplier of the 2020 award demonstrated excellent energy efficiency improvements in their own operations as well as product innovation contributing to reductions in the CO_2 footprint of our base station.

Supplier climate disclosure figures

33 million tCO_2e

EUR 558 million

430
Suppliers disclosed data, >50% of Nokia spend

179
Suppliers purchased renewable energy

204
Suppliers engage their own suppliers

340
Suppliers reported GHG emissions (Scope 1/2)

262
Suppliers have active targets for emission reduction, and 128 of them are in line with the Science Based Targets

73
Suppliers were called to set a science-based emission reduction target

Water – resource management

We earlier identified supplier categories where water may be a material risk and we address them through a water assessment program. In 2020, 275 (237 in 2019) of our manufacturing suppliers representing over 51 percent of total spend, completed the CDP water assessment. Out of the participating suppliers, 97 percent had undertaken a water-related risk assessment for their direct operations and 96 percent identified actual water-related risks in their operations such as flooding, increased water stress or scarcity, drought or pollution incidents, resulting potentially in reduction or disruption in production capacity, increased operating costs and so forth.

57 percent of the suppliers have a water-related policy. 55 percent of the suppliers reported water consumption information and 52 percent water discharge information. There were eight water projects implemented due to Nokia engagement with suppliers in 2020 and 11 percent of our suppliers reported collaborative engagement opportunities with us. 57 percent of the suppliers reported an active target or goal. 18 percent of the responding suppliers also engaged with their own supply chain on water risk. More information, including supplier water risk map relevant to our manufacturing locations, is found **online**.

Developing Health & Safety Maturity

Many of our subcontractors work at height, with electricity, and they need to drive long distances as part of their work on our behalf. We therefore emphasize the importance of health and safety in our supply chain. Our supplier training provides awareness of potential dangers related to their work and ensures the correct safety equipment is used as required.

At the end of 2020, 97 percent of high-risk activity suppliers were covered by our onsite health and safety maturity assessments. 99 percent (99 percent

from 2019) of assessed suppliers met H&S compliant supplier status. Any supplier not meeting H&S requirements were to be phased out or required thorough improvement where we had no alternative. We had 31 supplier-related fatal, critical or high potential incidents in 2020. As part of consequence management related to those incidents, we issued 12 warning notes to our suppliers and terminated business relationships with 3 suppliers. 28 of the incidents were designated high-potential where no one was critically or fatally injured.

Combating modern slavery and forced labor in the supply chain

We do not tolerate slavery, servitude, trafficking in persons, and forced or compulsory labor in our own operations or in our supply chain. In June 2020 we published our annual Modern Slavery statement, with an updated risk map and a full listing of covered businesses. The statement can be found on our corporate website at **www.nokia.com/about-us/sustainability/downloads**.

In 2020 our audits uncovered one case which included a non-compliance related to forced labor. In this instance the auditor found that, while policies and procedures concerning the prevention of forced labor were in place, the supplier was lacking a monitoring program to ensure their effective implementation. As part of audit follow up, the related supplier has been addressed in this case, and remediation actions have been completed.

In 2020 we saw growing concerns around mistreatment of ethnic and other minorities. We have conducted further risk assessment, updated and carried out a training session concentrating on modern slavery for our suppliers globally, and strengthened our Corporate Responsibility auditing guidelines to communicate our requirements concerning the treatment of ethnic or any other minorities and for appropriate actions to be taken. We also set up the related key performance indicators in our existing monitoring programs such as EcoVadis, and will be reporting our annual progress against these indicators:

- actions to prevent discrimination and/or harassment
- actions to remediate discrimination and/or harassment
- reporting on diversity in executive positions - including minorities, vulnerable workers and women
- actions to promote diversity
- collective agreement on diversity, discrimination, and/or harassment
- whistle procedure on labor and human rights issues

Supplier Diversity Program

We have a Supplier Diversity Program which currently focuses on North America and South Africa and focuses on inclusion of suppliers whose ownership/control is 51 percent or greater by persons of diverse classification – primarily ethnic minorities, women, and military veterans. Currently we participate in the related diversity events and industry networks and we actively track our diversity spend in those countries. We include validated diverse suppliers in procurement requests and provide them opportunities to participate in our business. We also conduct training for procurement category managers. We plan to expand our efforts on the topic to other regions in 2021.

Materials traceability and responsible sourcing of minerals

Military conflict, human and labor rights, and environmental impact also remain key risks in the mining, extraction and trade of metals industry that provide key minerals for electronic components. Tracing the materials used in our products and ensuring they are conflict-free is key.

We aim to contribute to a long-term solution to the issue of conflict minerals that ensures responsible and conflict-free sourcing via legitimate trade that brings sustainable improvements in those countries where the risks are greatest. We demand that our suppliers commit to sourcing these key materials from environmentally and socially responsible sources. Our responsible minerals sourcing policy can be found here.

In 2020 we continued our work with the Responsible Minerals Initiative to improve the traceability of minerals and ensure responsible sourcing. Our due diligence approach is aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals.

In 2020, 98 percent of our suppliers had achieved full visibility into the 3TG (tungsten, tin, tantalum and gold or derivatives) smelters in our supply chain, and for 95 percent of our suppliers the entire supply chain consists of smelters which have been validated as conflict-free or active in the validation process. Out of all the smelters and refineries identified as part of our supply chain, 80 percent have been validated as conflict-free or are active in the validation process under the Responsible Minerals Assurance Program. A further 6 percent of smelters were identified where our due diligence efforts have demonstrated that the smelters can be reasonably considered as conflict-free. Those smelters that were not part of the industry assurance program nor evaluated as low-risk were asked to be phased out by our suppliers, since direct engagement with such smelters over the past years has not motivated them to collaborate and therefore we feel there is a high likelihood that they are engaged in potentially non-compliant practices.

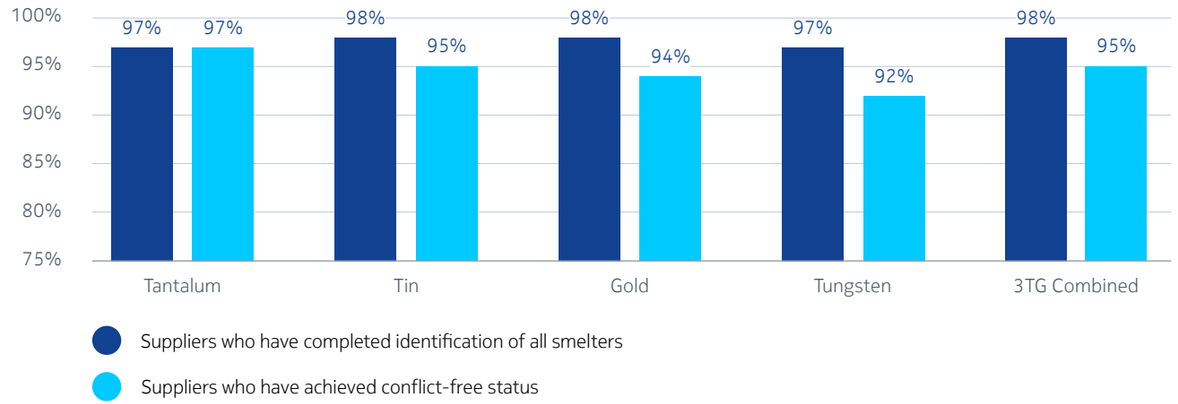
Suppliers not meeting our objective or with no corrective action plan were recommended for phasing out from our supplier pool. The graph on this page shows the conflict-free status of our smelters for each mineral separately and combined for all 3TG smelters. We also processed stakeholder grievances received related to smelter and refinery practices that are in our supply chain through the industry grievance mechanism, as well as direct grievances received. In 2020 there were 63 grievance cases against our smelters.

We also undertook a mapping of cobalt in our components based on material declarations for product parts. We addressed all 59 relevant suppliers about our requirements related to cobalt and engaged them in exercising due diligence over the cobalt supply chain. As a result we have been able to identify 38 cobalt smelters in our cobalt supply chain and we are now encouraging them to go through the Responsible Minerals Assurance Program.

For upstream engagement we have continued our work with the Public-Private Alliance, contributing to the development of in-region programs.

For more information on our responsible minerals due diligence results, please refer to our conflict minerals report available at the end of May 2021 at www.nokia.com/about-us/sustainability/downloads.

Share of suppliers who have completed identification of all smelters and have achieved conflict-free status



Data privacy and security

The protection of customer, employee, or other sensitive data remains a critical issue. We continue to ensure we have dedicated processes in place that focus on technical protection, processes and people.

Technical protection includes, for example, security incident event monitoring (SIEM) by our security operations center (SOC), access management, anti-malware operations, certificate management, log provisioning, network security services, security incident management, server provisioning, software whitelisting and vulnerability remediation.

Process-related controls comprise of business-driven governance, security as part of global business processes, integrated enterprise risk management, active third-party management and a dedicated security program to respond to our customers' security and privacy requirements. Our internal processes help to enforce the proper handling, storage, transmission, and destruction of sensitive or confidential information.

Our key programs to protect and identify critical data include a critical information protection program, focused assessments, a company privacy program, a supply chain security program, a customer security requirements program, a common security controls program, and expanded scope of ISO 27001 certifications.

People-related mitigation of security risks relies on active security culture management, enabling and supporting employee security work, and employment life cycle management. To drive this, we have an internal accreditation program with three tiers. Our security culture program also provides other learning channels such us regular company-wide phishing testing, mandatory e-learning for all employees and targeted campaigns.

Security is an ever-growing concern within the telecommunications industry. We are firmly dedicated to protecting next-generation networks from attacks and are seen as a leader in the provision of network security solutions. We are also active in related research and our latest Threat Intelligence Report can be found here. We are a member of the Cybersecurity Tech Accord and also actively contribute to the broader security community by organizing events such as the annual Nokia Security hackAthons.

For more information on the solutions we provide to our customers related to our products visit networks.nokia.com/solutions/security.

Our breach management process is followed in the event of a breach or attack. The plan focuses on three key elements: detection and analysis, containment, eradication, and recovery, and post incident activities.

We run a response function that consists of three teams – Incident Response Teams (IRTs), the Major Event Team (MET) and the Crisis Management Team (CMT) – depending on the type of incident or crisis. Each team has well defined tasks, and teams carry out training on an annual basis. Teams consist of subject matter experts from all areas of the company. Regular training and internal and external testing on our breach management capability is provided. The testing includes annual internal table-top exercises, as well as annual external outside-in simulated attacks.

As is the case for all international companies with internet-facing services, we face daily attack attempts. We actively and regularly validate our security throughout the year through:

- external and internal security audits
- Group-wide external maturity assessment
- external and internal simulated attacks (red team tests)
- regular Group-wide phishing testing
- external information security risk rating service
- customer feedback
- external and internal ISO 27001 audits for our key delivery sites

All our employees and external contractors are required to take mandatory Information Security e-learning courses every two years. New hires must take an e-learning course when starting and our security awareness and culture Key Performance Indicators (KPIs) are tracked on a monthly level. Furthermore in 2020, many internal organizations

recommended their teams take a voluntary security accreditation module in 2020.

In 2020, we exceeded our target to secure our defined critical information ecosystems and closed 98 percent of the critical and high vulnerabilities identified in our assessments and audits within 60 days. Although our security Capability Maturity Model (CMM) score increased from 3.1 in 2019 to 3.3 in the 2020 interim report, our second annual assessment was postponed to 2021. Also, critical information protection program and employee engagement targets were slightly behind the target in 2020. Unfortunately this means we did not reach our overall security target set for 2020.

Getting privacy right

With the growing complexities provided by today's technology and business environment, enabling strategic and consistent management of privacy ensures we are in a position to make the most of the opportunities ahead. With the arrival of 5G and IoT, in a world where everyone and everything is increasingly connected, cloud storage, big data, and other technology advances, getting privacy right is a necessity.

We have established a comprehensive company-wide privacy program that builds privacy into our processes, products and services. We process personal data transparently and fairly, only collecting personal data that is necessary and retaining such data for no longer than it is needed. We fulfill the data subject's rights where required and we do not disclose personal data to law enforcement or other governmental agencies unless required by law.

We also ensure that all personal data is only accessed by persons with a clear need to know. Should a personal data breach occur, the process is in place to manage and mitigate any related risk to data subjects, including mechanisms to communicate with supervisory authorities if required. To drive and maintain privacy awareness, we designed and deliver a program of awareness training targeting high-risk groups. Employee privacy responsibilities are also covered in our Code of Conduct, and we handle all employee and Human Resources data strictly in line with global and local privacy requirements.

Our privacy management model, set out in our Group–wide Privacy Management Policy, is supported by Nokia Executive Leadership. The model provides clear and internationally acknowledged privacy principles as well as a governance framework to implement sound privacy practices across our businesses. Compliance with the General Data Protection Regulation (GDPR) and other privacy laws as well as commitments to customers, are enforced via our privacy principles. We continue to strengthen our framework to meet changing internal and external needs. We measure and monitor privacy maturity and ambition by undertaking privacy maturity assessments across the business. Thanks to our programmatic approach, we remain in a position of strength to safeguard personal data entrusted to us.

There were no substantiated complaints regarding breaches of customer data in 2020. For the latest information on our security and privacy visit our website.

Our culture – respecting people

Our people are our greatest asset and we believe it is essential that we continuously work on creating a company culture that is inclusive and ensures our people are empowered and enabled to deliver on our company business priorities.

Highlights

We foster common ways of working across Nokia that help people focus on the future, enable psychological safety and empower ownership. We aim for a culture that is guided by our purpose, our commitments and our common ways of working. It is through our people that we deliver on our purpose. Our **Code of Conduct** applies to all our employees.

The share of female hires stood at 25% out of the total hires, compared to 24% in 2019

Our global days of learning gathered

86 000

webcast participants across all sessions (51 percent increase over 2019), and 88 percent stated they would participate in another webcast

85%

of our company leaders out of around 7 200 individuals have completed our Navigating bias with inclusion training

We were awarded Ambassador status by the 2020 Workplace Pride Global Benchmark alongside eight other companies and institutions.

A great place to work

We foster a culture that supports productivity growth, high performance and the wellbeing of organizations and individual employees. It is a culture that is guided by our vision, brand, and values. It is through our people and culture that we shape technology to serve human needs.

Our culture, which stems from our Finnish roots, is key to why our customers and partners choose to work with us. Integrity is fundamental to how we work and what we provide for our customers. We can stand out as a trusted partner who can sustain long-term relationships through a proven ability to foster a level of trust which we work relentlessly to earn and maintain.

We believe our people are our greatest asset and we aim to have a culture that is inclusive and ensures our people are empowered and enabled to deliver on our company business priorities. The market for skilled employees in our business is extremely competitive. Our workforce has fluctuated over recent years as we have introduced changes in our strategy to respond to our business targets and our activities. These changes may in the future cause disruption and fatigue amongst employees. It is imperative that we continue to focus on motivation, inclusivity, creativity and continuous learning to meet challenges.

2020 was a year of turnaround. We focused our efforts on improving operational excellence and structural issues. We focused on selected behaviors to drive the needed turnaround to support the LEAP operational strategy program. These turnaround behaviors were: Drive to create value, Dare to lead and Care for one Nokia. These behaviors were embedded into leadership development and performance management, tracked in a Pulse survey throughout the year as well as part of global communication and employee webcasts.

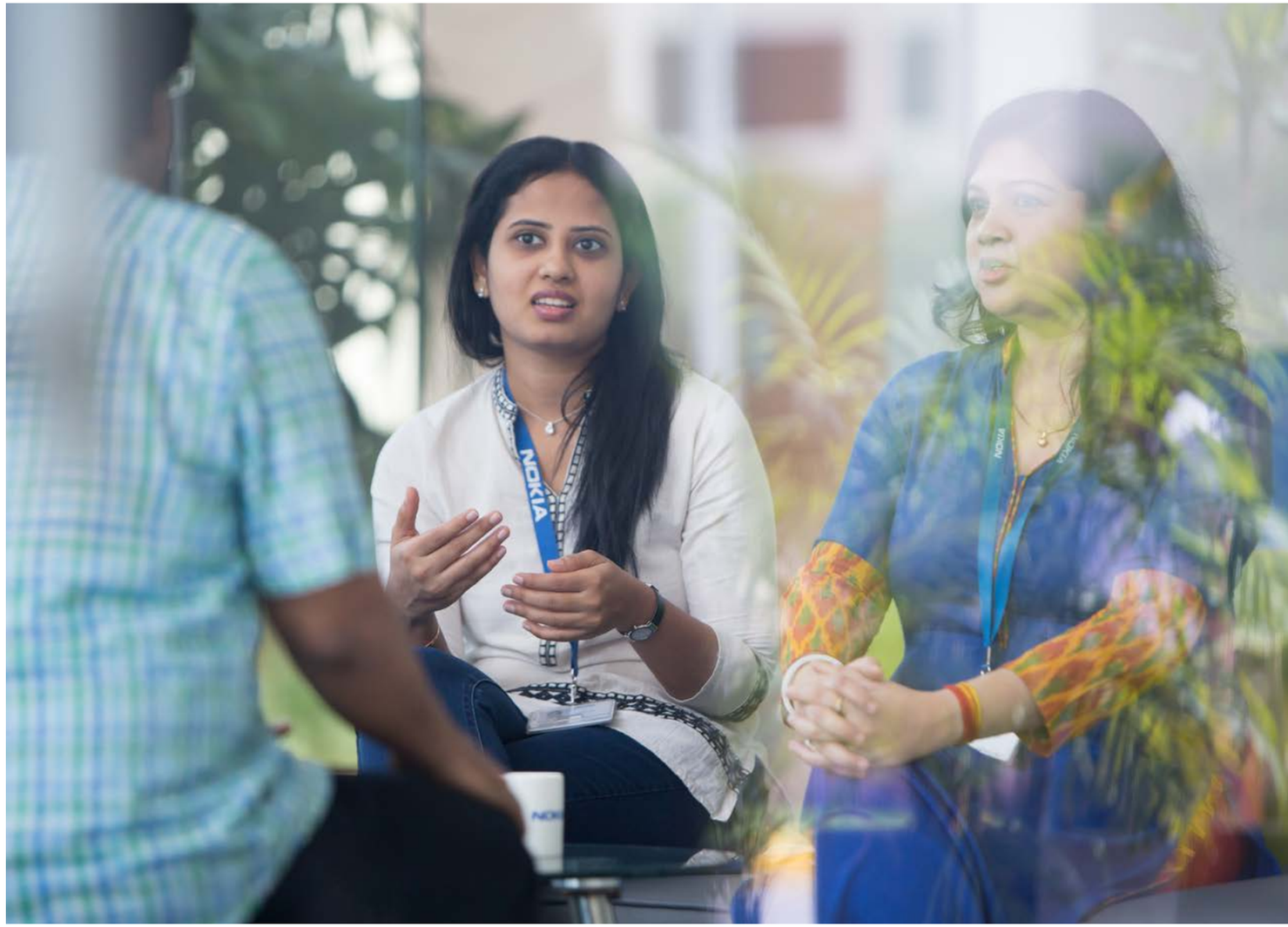
Most business groups and functions used the Change Map survey to steer their change leadership efforts and actions to align with the employees' voice. Global common targets were measured through two topics: Understanding of Nokia's vision for future (target 68 percent, outcome 73.5 percent) and Confidence & trust in the leadership of Business Group/Function Leadership Team (target 56 percent, outcome 68.6 percent).

In addition, COVID-19 led us to quickly come up with new ways to lead and care for each other while working from home. The challenges of continued transformation and caring for employees were supported with a regular all-employee COVID-19 and LEAP Pulse survey, to keep us informed on the levels of progress in LEAP and concerns employees faced due to the pandemic. The survey helped us clearly understand the depth of struggles which were surprisingly few, and define the support that would be most valuable for those in need. Overall 93 percent of our employees felt our efforts to help and communicate were successful.

With a change in our leadership in 2020, we took the opportunity to refresh our view on the employee experience. For day one of Pekka Lundmark's tenure as our President and CEO, we launched a global survey that asked whether employees felt pride in working for Nokia, and whether they felt the working atmosphere enabled them to give their best. The survey garnered over 50 000 responses in July. 88.7 percent of employees stated they feel pride in working for our company, while 75.1 percent agreed that the working atmosphere enabled them to give of their best. All key findings from the CEO survey have been shared with employees and they have also been referred to as important input for the transformation and Nokia's 2021 plans to further improve on how we work and operate.

People development

Given the ongoing competition in the market, it remains critical to identify, develop, and retain skilled employees in our business. We therefore continually develop not just our culture, but also refresh our talent management activities, performance support, and career development.



Our performance and talent management approach, called Nokia People Focus, enables the company to have a strategic and integrated framework for company goals, individual performance, talent management, career development, reward and recognition. Regular manager-employee dialogs (1 in 90 Dialogs) focus on five key areas: goals, feedback, wellbeing, development and coaching.

Our approach to talent development starts with all employees and development of top talent. Personal development is key to retaining and engaging our employees and developing their skills.

Performance management and culture

In 2020, our aim was to seamlessly integrate performance management into our continued business transformation. To reach that aspiration, as a part of the quarterly 1 in 90 Dialog conversations,

we guided all employees to discuss and evaluate how they demonstrate turnaround behaviors within their roles. We also enabled learning paths through development actions taken by employees.

Annual Development Review and performance feedback culture

We encourage managers to recognize performance, celebrate achievement and talk about employees' potential and career aspirations as well as plan for their development in the coming year. The Annual Development Review process is well understood and positively perceived. It is highly automated and covers all employees.

Through communication and training, we have continued to draw attention to the importance of regular, ongoing and transparent performance feedback. As a part of our transformation initiative, we have encouraged everyone to give and get feedback. Inclusive, timely, developmental and multi-dimensional feedback will continue to be one of our key focus areas in 2021.

Future talent growth

In 2020, we continued our investment in identifying rising talent, high potentials and executive successors. The focus on talent and succession management was to prepare rising talent, high potentials and executive successors for positions with a larger scope, senior leadership roles and future critical roles. The targeted development of successors towards executive roles resulted in robust pipelines and high successor utilization rates.

We also turned to the future through the design of a global talent and succession management approach aimed at increasing the objectivity of talent identification. The new process weighs demonstrated experience, knowledge and behaviors against the potential to develop skills viewed to be critical to deliver the next generation of our business strategy. The design also includes a new development curriculum to enable experts, leaders and executive successors to win and lead in the digital economy by strongly emphasizing experiential learning (staffing to critical business projects, cross business group rotations, industry exposure), opportunities for visibility, coaching, and mentoring, as well as continuous learning and networking.

Leadership development

We continue to invest in our leaders at all levels through our instructor-led programs and online platforms which offer, for example, branded solutions from Harvard ManageMentor and Spark. Many of our instructor-led programs were impacted by COVID-19 and repurposed to be delivered virtually.

With COVID-19, 2020 was an accelerant to more open leadership. Leaders had to adapt the way they lead, engage and support their teams. We put emphasis on supporting leaders in these new circumstances with a focus on leading virtual teams, online workshops, experience sharing and discussions, as well as on creating five 5-minute Guides (Leading Virtual Teams, The Daring Leader, The Driving Leader, The Caring Leader and The Healthy Leader). Each guide focused on themes such as trust, accountability, procrastination and time management, virtual communication and tools, psychological safety, wellbeing and mental health.

In parallel, we supported our company-wide turnaround program LEAP and the accompanying turnaround behaviors by designing the Lead2LEAP workshop concept with gamification elements. The aim was to engage participants with methods to share, discuss and feel involved in exploring behaviors such as trust, feedback and listening, team collaboration and accountability. We have reached over 500 of our leaders in the interactive workshops, resulting in rich, insightful conversations and great feedback.

We continued to invest in developing coaching skills which we believe are enabling skills for leaders to engage with employees. One of the fundamental leadership development learning solutions is the Coaching for Success (C4S) course which has been redesigned to fit the virtual environment. In an online context, it has helped our leaders improve their listening and questioning techniques, and move to a more supportive, empathetic leadership style. We have had over 170 line managers complete the C4S virtual course in 2020. The Coaching 4 Success cohorts have met in community calls, refreshing their skills and addressing topics related to change, pandemics, psychological safety and building trust.

We have kept our internal coach community active through regular sessions, and in cooperation with

Wellbeing and Health, have helped get coaches ready to support with lockdown, virtual teams, creating a safe environment and mental health. We have nearly 300 internal coaches who are made available to all employees.

We have also helped leaders as well as leadership teams with our well-known assessment tools including the Korn Ferry 360° feedback. 179 personal 360° feedback assessments were provided. We also provided 752 employees with Insights profiles – a psychometric tool to increase self-awareness, trust and collaboration.

The Mentor Directory has been revamped to make Nokia Mentors more accessible and better known. The introduction of the mentoring curriculum has led to a growing community of mentors ready to help personal development, experience sharing and learning from subject matter experts.

2020 leadership development figures from aspiring leaders to executives

In 2018, we introduced Harvard ManageMentor, and in 2020 we saw 76 percent growth in visitors, 139 percent in visits and 432 percent in lesson completions (YoY) with over 7 700 visitors and close to 13 000 active users for all time. Harvard ManageMentor Spark, introduced in 2019, is already incorporated into several Talent programs. Additionally, over 2 300 employees accessed a wide selection of self-paced leadership online solutions in 2020 and over 3 800 for all time. Major effort was placed on training leaders on Accelerated and Transformational Leadership virtual live programs covering various time zones in 2020, with 1 265 dedicated virtual workshops (ten cohort programs) for 430 unique participants. In addition, 1 129 individuals attended our corporate leadership instructor led development programs in 2020.

Chatbot in Human Resources digitalization and AI opportunities

In the context of our digitalization strategy, process automation and machine learning, we switched the HR chatbot strategy to gain more internal ownership and efficiency. The initiative aims to improve the HR chatbot solution on Microsoft Azure, enhance content and expand the deployment of the HR chatbots globally in 2021.

In line with the chatbots already deployed in Finland, Germany, the USA and globally, this new strategy will provide faster and easier access for our employees and line managers to receive support on a broad set of simple HR topics.

NokiaEDU

NokiaEDU is the company's learning organization that offers learning solutions to our customers, partners and employees. In 2020, we recorded 3.5 million learning hours for our employees (1.7 million training hours/1.8 million sharing hours), an increase of 16 percent compared to 2019. We also provided training to our customers and partners, which in 2020 totalled 437 000 training hours, a decrease of 35 percent compared to 2019.

Consistent with our digitalization strategy and in response to the COVID-19 pandemic, about 94 percent of training was technology-enabled. Virtual instructor-led training accounted for 43 percent of all training, compared to 23 percent in 2019.

Our training not only instructs how to operate and maintain our products, but also includes more general technology training on topics such as 5G and Internet of Things. Overall, NokiaEDU learning solutions received a user satisfaction score of 97.4 percent in 2020 (97.6 percent in 2019).

Learning Index

The Learning Index is an innovative tool designed to reinforce a culture of learning by enabling employees to monitor their commitment to continuous learning and information sharing. In 2020, we saw a 44 percent increase in Learning Index points compared to 2019. The Learning Index is now used by 67 600 of our employees.

Competence development

We partner with our Business groups to enhance employee competencies in business-critical areas, including Artificial Intelligence, Machine Learning and more. More than 12 500 of our employees are participating in Nokia's Workforce Strategy, a comprehensive initiative designed to build a future fit workforce. The program will expand in 2021 to include additional organizations and job roles across the company.

5G certification

In February, we launched a first-of-its-kind certification program to help industry professionals gain a broad understanding of 5G technology. The Nokia Bell Labs Certification Program offers two levels of certification – Associate and Professional – that deliver essential knowledge covering everything from the basics of 5G networks to professional level planning and design. In 2020, more than 20 000 customer and employee registrations have been recorded for the program. More professional-level courses and certifications will be released in 2021.

Global Day of Learning

Our Global Day of Learning (GDOL) 2020 is the company showcase event in support of its commitment to a culture of learning. This year's theme was Learning in a fast-changing Nokia, where leaders and subject matter experts discussed a variety of topics related to knowledge and skills development. The half-day event totalled 85 959 webcast participants across all sessions (51 percent increase over 2019), and 88 percent stated they would participate in another GDOL. The 2020 event also included a session on the company sustainability strategy and approach to Human Rights.

Ensuring decent working conditions and fair employment

We uphold high standards of ethics and rights in our own internal activities and aim to treat all our employees in a way that satisfies internationally recognized ethical and responsible business practices, as well as customers, investors, partners and the relevant legislation, whether global or local.

A management framework for labor conditions

Our **Code of Conduct** is the basis for our labor conditions and is underpinned by our Global Human Resources Framework and local employment laws, policies and practices. We adhere to the United Nations Universal Declaration of Human Rights and the United Nations Global Compact. Wherever we operate we meet and often strive to exceed the requirements of labor laws and regulations. We publish information related to policies and guidelines on our intranet.

We are aligned with key elements of the social accountability standard SA8000. Our policies, Standard Operating Procedures (SOPs), and Code of Conduct are implemented to cover our employees and are also applied to our suppliers.

Our policies cover child labor, forced labor, freedom of association and collective bargaining, non-discrimination, humane treatment, working time, disciplinary practices, compensation and occupational health and safety.

Zero tolerance for child and forced labor

We have zero tolerance and strictly forbid any form of child labor and all forms of forced, bonded, or imprisoned labor in both our own operations and our supply chain. Potential remediation is planned based on SA8000 recommendations. See more in **Conducting our Business with Integrity**.

The identity and age of candidates are checked at hiring to ensure that the terms and conditions of employment are in accordance with local legislation as well as with internationally accepted labor standards. Proof of identity and age are part of minimal vetting standards.

Freedom of association and collective bargaining

We respect the right to collective bargaining and freedom of association. Collective bargaining agreements are local, and in most countries where we have collective bargaining agreements, employees who have chosen not to be members of a union are also covered. Employees can choose freely to join, not join, or leave unions and associations and select their representatives based on local and international practices. We encourage active, open communication and dialog with employees and/or their representatives.

In countries where local works councils operate, we work with them as needed. We communicate regularly with employees directly as well as in meetings such as the European Works Council (EWC) in Europe. Employees and management prepare and participate in the annual EWC plenary. We offer free elections for employees to choose union representatives. The majority of production employees were represented by an independent trade union or covered by collective bargaining agreements.

Employee representatives are entitled to participate in trainings that are a necessity in order to take care of employee representative duties and to increase their awareness of trade union rights and obligations. Additionally, employee representatives can use company infrastructure during the workday. See more on our **website**.

Non-discrimination

We do not tolerate discrimination. We prohibit discrimination based on any personal attribute. See more under **Inclusion and diversity**.

Working time

We do not permit our people to work more than legally allowed. We define regular working hours in accordance with local laws. Young workers from 15 to 18 years old or as specified by local legislation are not permitted to carry out work that may be hazardous, unsafe, or unhealthy, are not allowed to work night shifts, and have a maximum daily working time of eight hours. We provide guidance through the worktime standard operating procedure and guarantee the minimum one day off in every seven days in our production operations.

Disciplinary practices

We appreciate that our employees conform to good conduct and practice, but we also ensure we have appropriate disciplinary processes in place where needed. Our Disciplinary standard operating procedure (SOP) helps ensure consistent and fair treatment to all employees. Where local law or collective agreements differ from the SOP, we apply local law or applicable collective agreements. All forms of physical, mental, or verbal abuse, or harassment are unacceptable.

Compensation

We pay at least the minimum wage or the appropriate prevailing wage, whichever is higher, comply with all legal requirements on wages, and provide any legally or contractually required benefits. Part-time or temporary workers are not excluded from employee benefit plans due to company policy or benefits practice. Pay practices are regularly reviewed to align pay with performance, experience, and skills required for every position.

Our reward programs contribute to our business success by balancing market competitiveness and affordability based on a total reward approach. These are performance driven (both on an individual and company basis), flexible, and fair. The key elements of our compensation structures are annual base salary, incentive/bonus programs, recognition programs and long-term incentives. We have an employee reward and recognition program, Recognize Excellence, which allows employees and managers to recognize individual performance, and acknowledge the contribution of colleagues.

Share in Success

We continued our employee share purchase program called Share in Success. Eligible employees are given one free matching share for every two shares they purchase and continue to hold for 12 months. We aim to include as many employees as possible, subject to local laws and regulations. In 2020, 30 percent (34 percent in 2019) of the eligible population in 71 countries chose to participate in the program. In 2021, we aim to expand the program to cover a total number of 73 eligible countries (out of the 123 countries where we operate).

Recruitment

Our approach aims to ensure that we treat all candidates fairly and with respect. In 2020, to support our hiring managers in making fair decisions during the hiring process, we promoted and recommended participation in training modules on Moving Beyond Bias and Navigating Bias.

Candidates do not pay for recruitment costs. As recruiter we carry all recruitment costs and none of our vendors charge candidates for recruitment costs. The recruitment of new talent is key to implementing our strategy, supporting youth employment, and enhancing our contribution to the communities in which we are present through our traineeship programs. We also encourage and support internal development of our whole global employee population by promoting all non-executive job vacancies internally first, for a period of ten working days, prior to inviting external applications. In 2020, 42 percent of hires were internal, compared to 49 percent in 2019.

We take our Glassdoor reputation seriously and are proud to score among the best technology companies. In 2020 we maintained our strong positioning of 4.1 (scale from 1 to 5) which positions us as an employer of choice on the market. Also 84 percent of the review providers indicated they would recommend us to their friends and see our culture and values (4.2), work/life balance (4.2), and diversity and inclusion (4.2) as three of our main strengths. Learn more at **www.glassdoor.com/nokia**.

More information on recruitment and careers can be found at **www.nokia.com/careers**. Or visit us on **LinkedIn**, **Facebook**, **Twitter** @NokiaCareers.

Providing support during restructuring

The business environment we operate in is challenging. The landscape remains tough and we are facing continuous price pressure from our competitors as the opportunities of the 5G era unfold. In order to reach our goals and maintain best-in-class cost leadership, we must move faster and accelerate our strategy execution. To achieve these goals, the company announced a cost savings target to be reached by the end of 2020. Delivering against this commitment has required that we reduce the number of employees that we employ. These reductions are never easy. Throughout the process, we have made it a priority to provide support for those employees and to treat them with dignity and respect.

We have put in place extensive measures to limit the impacts of restructuring (including reorganizations leading to headcount reductions), such as:

- employees affected by restructuring are entitled to severance packages which are often higher than local statutory minimum;
- with the ongoing COVID-19 situation, we tried to mitigate the impact for employees affected by restructuring in Q2 and after that where legislation required;
- we support and encourage redeployment activities for impacted employees to find new job opportunities in the company, including retraining as necessary;
- we offer career counselling and job search support outside the company; and
- we offer employees continued training opportunities to maintain and develop their skills and competencies to meet the anticipated changes in business, markets, and the technology environment in which we operate.

Inclusion and diversity

Inclusion and diversity are a source of value creation and sit at the core of the way we do business. Diversity encompasses the full range of differences and similarities represented by Nokia people. Inclusion unlocks the power of diversity. As a company we take both a structural and a behavioral approach to inclusion and diversity.

We believe that inclusive people and teams demonstrate higher collective intelligence: better decision-making, problem solving, innovation capability and customer encounters.

Back in 2018, we defined the inclusive behaviors that our employees would need to excel in. These include:

- The ability to empathize with and appreciate another's point of view, development of one's emotional and social intelligence and listening and sharing skills, which lead to increased trust and psychological safety
- The willingness to include people and teams in discussion, co-creation and decision-making
- Respect for diversity and willingness to turn it into a strength. Diversity means both diverse identities - such as gender, race/ethnicity, age, nationality and ability - and learned diversity such as functional, experiential, educational and social diversity.

Inclusion and diversity agenda

Building on the inclusive behaviors, our Inclusion and Diversity agenda rests on three foundational pillars:

- Structural inclusion
- Inclusive leadership skills
- Growth and support of under-represented groups

We continuously work on identifying and removing systemic barriers and ensuring bias-free decision-making. As a cornerstone of our commitment to equal treatment, we continue to annually monitor pay equity and fund special remediation increases as necessary. To ensure that the unexplained pay gap which was first closed in 2019 stays closed, we consistently address decisions, practices, and processes which might cause the unexplained pay gap to reopen. For example, we have put measures in place that aim to avoid inheriting the former pay gap of new hires, and we ensure objectivity through the use of graduate offer matrices globally.

We work on fair and open talent acquisition processes throughout the recruitment pipeline. We monitor talent and performance evaluation practices as well as promotions on a monthly basis. We conduct exit surveys to better understand reasons for leaving the company. The feedback collected is used to improve employee experience. Gender data, specifically, is part of the monthly Nokia Business Review discussions between the business leaders and the CEO.

We have also kicked off a project on inclusive language use and technology terminology to make sure our technology and customer documentation and training content does not use exclusive terms.

Tracking behaviors and leadership

To assess and follow behavioral progress, we developed a company-specific Inclusion Survey which has run for two years. This data-based approach allows us to hear the voice of employees, and is used to adjust the company inclusion and diversity agenda and design a plan to address any challenges.

27 000 employees responded to our 2020 survey, and key data and findings of the survey include :

- The average inclusion score was 7.6 on a scale of 1 (least) to 10 (highest).
- Employees indicated that the top three reasons for inclusivity were that they felt respected, it was easy to ask for support, and they could be their authentic selves
- 13 percent of employees indicated that they experience exclusionary behaviors from their colleagues or leaders
- The main reasons given as creating feelings of exclusion are related to differences in hierarchy levels or seniority, to people's legacy organization background, and to not working in the same location as their manager

The survey outcome and results are transparently communicated throughout the organization and they are sources of information for action planning both in business groups and regions.

Influencing manager mindsets

The findings of the 2019 inclusion survey ignited the design of a company-tailored manager training program. The workshops Navigating Bias with Inclusion addressed:

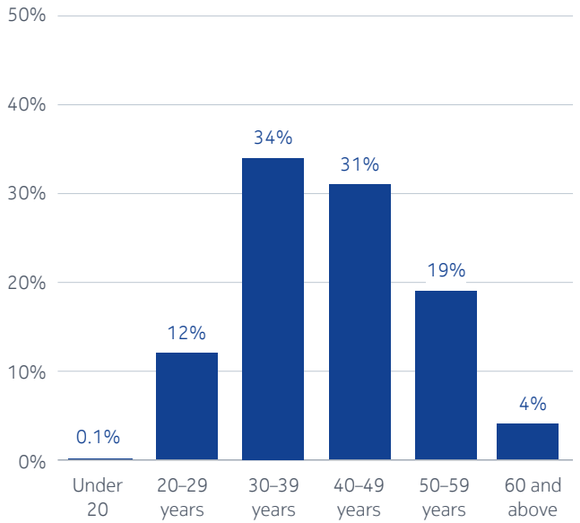
- The unconscious and conscious bias which can affect managers' actions especially when they make people-related decisions
- Mitigation and avoidance of stereotyping, biased mindsets
- Inclusive leadership and how leaders act as role models for company inclusive behaviors
- Consequences of exclusion and how to use inclusive leadership skills to create a more safe work environment

In 2019 and 2020, we trained 84 internal trainers from the business units, Ombuds community and HR people. By the end of the year, 85 percent of our company leaders (out of around 7 200) had completed the training. This highly interactive and engaging two-hour virtual training reached a favorability rating of 97.5 percent.

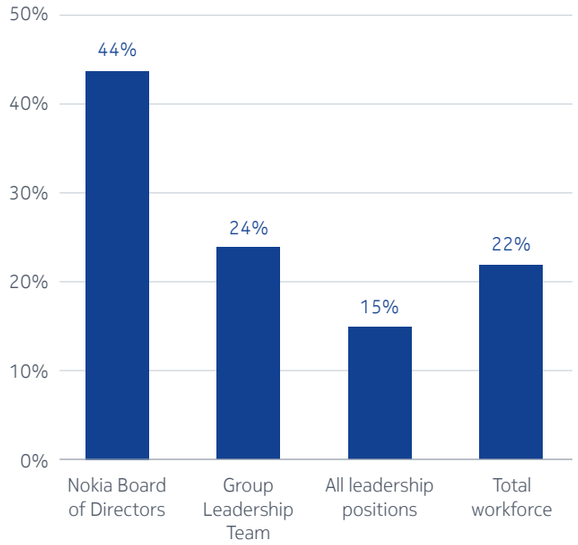
Gender diversity

The diversity of our Board of Directors consists of a number of individual elements, including gender, generation, nationality, cultural and educational backgrounds, skills and experience. In 2020, our board represented 44 percent females and 56 percent males. 15 percent of our leadership positions were held by women, and in total, women accounted for 22 percent of our workforce.

Average age range of Nokia employees in 2020



Share of women in 2020



Back in 2016, we set a target to increase the percentage of women in senior leadership by 25 percent by the end of 2020. Each business group has been able to successfully hire and retain their women employees. However, the pipeline of women to senior positions is still weak. Most of the women in the company still find themselves in middle management. Hence, we were not able to reach the target. Although this gender diversity target expired in 2020, we are committed to become a more diverse and inclusive company and continue our efforts to identify and address gaps affecting our employees, customers, and local communities. For more information on new targets, see **Our targets and performance**.

To strengthen developmental efforts, we piloted a new, virtual, Group-level women leadership development program – Accelerate Women Leaders – with a strong focus on manager education and sponsorship. On top of this, each business group and region have launched their own women development programs, many of them in close collaboration with StrongHer, our global employee network.

For example, Mobile Networks launched a program for talented women of all ages and at all levels, including practical training as well as coaching and mentoring by 18 of our senior leaders – men and women. This two-year program is targeted to over 120 women from three continents and 12 countries and aims to change perceptions and to address any bias towards women professionals in the company.

A regional example is provided by the Middle East and Africa region, where Nokia women and United Nations Women have combined efforts in four collaboration projects to strengthen gender parity in the private technology sector and in decision-making positions. The projects were designed in the second half of 2020 and are planned to continue throughout 2021 with the vision of a long-term partnership with UN Women and leveraging the program to other markets.

The concept foresees, for each project, execution of a pilot in a Middle Eastern or African country. The outcome and proof of concept is planned to be then implemented in other countries.

- Pilot Tanzania: Address cervical cancer and uterine fibroids
- Pilot Kenya: STEM education for girls and families in school and at home
- Pilot Saudi Arabia: Increase the number of females in Nokia and STEM in the Middle East
- Pilot South Africa: Address gender-based violence

Broad-Based Black Economic Empowerment

In South Africa we are committed to good governance practices, transparency and compliance with all Broad-Based Black Economic Empowerment (BBBEE) codes of good practice. We have an obligation to promote Black Economic Empowerment (BEE) Programs, and also to ensure alignment to our group diversity programs. Hence through our BEE plan, we always commit to achieving specific BEE deliverables and actual target percentages for each deliverable.

Starting in November 2020, powered by Nokia, the Forge Academy in South Africa launched a fully inclusive artificial intelligence laboratory which will prepare students from all walks of life with theoretical, laboratory and on-the-job training for their participation, and to become entrepreneurs in the Fourth Industrial Revolution and the global digital economy.

This three-year journey is broken into three phases. As a first step the company supports Forge Academy to become the blue ribbon 4IR Academy in South Africa and Africa. By releasing our industry standard training on technology to complement current courses, all programs are being SAQA (South African Qualifications Authority) and MICT (Media, Information and Communication Technology Sector) accredited. Furthermore, we have also partnered with Edu Excellence, the Finnish advisory on best teaching practices and content development, in the South African context. The next step will be to completely enable the Academy with an E2E Future X Network to support hands-on testing and application development. The last step will focus on incubation and start-up support. Read more.

Collaboration with Nokia's employee resource groups

Employee resource groups (ERGs) keep us on the pulse of the under-represented groups of employees. We currently have 12 active ERGs within the company.

In 2020, the ERGs contributed to the business and inclusion and diversity in many ways. Here are some highlights:

- We started discussions with the ABLE (Advancing Black Leadership and Excellence) group, following George Floyd's death in the USA, on how to better develop and support the community in North America. ABLE and the North America Talent Acquisition team are preparing a campaign towards students identified as Black/African American and/or members of the Diversity National Society of Black Engineers (NSBE), across universities in the USA.
- EQUAL! is our LGBT+ Employee Resource Group which provides education and support for our employees who are lesbian, gay, bisexual, transgender and other related groups (LGBT+) or who have family, friends, or colleagues who are LGBT+. With the leadership of its executive sponsor, our Chief Legal Officer Nassib Abou-Khalil, EQUAL! expanded the OUT Leader program focusing on LBGT+ talent, with 14 participants across locations and varying business roles. The program consists of three engagement elements: OUT Forum virtual events bring senior guest speakers from customers, partners and suppliers onto the virtual stage, mentorship by our company

leaders, and group projects aiming at advancing inclusion and diversity in the **workplace**.

- StrongHer, a global network open to all genders standing up for equal opportunity with a focus on challenges faced by women, strengthened the deployment of its Charter for Managers program which enable our line managers to explicitly walk the talk on gender balance and to publicly commit to take gender inclusive actions. Again in 2020, StrongHer organized more than 200 local events around the globe. Given 2020's unusual workplace situation, StrongHer extended and scaled up virtual events allowing safe and global attendance.
- Women leadership focused Greenhouse's annual theme, "Personal Branding - How to stand out from the crowd," drew an audience of 160 people to its main webinar event.
- Supported by Mission Handicap, @TalentEgal and IDEAL we gave voice to two unique professionals, Stephane Foucault and Anderson Carreira on the International Day of Persons with Disabilities. In Germany, our quota of disabled employees was 5 percent in 2020.

Bloomberg Gender Equality Index and Workplace Pride Global Benchmark

Bloomberg included Nokia for the third time in a row in its Gender Equality Index (GEI) in 2020. The GEI framework includes metrics on the female leadership and talent pipeline; equal pay and gender pay parity; inclusive culture; sexual harassment policies; and pro-women brands. This benchmark makes our gender data available on our company's investment profile and tracks our performance and positioning amongst other companies who are committed to gender equality similarly to us.

Committed to more equal and inclusive workplaces, we landed at a score of 64.73 percent in 2021 compared to an average score of 66.32 percent for the 38 technology companies (included in the overall list of 380 companies). Compared to the previous ranking, we dropped slightly due to low representation of female talent in middle and senior management roles. The benchmark also indicates the need to further strengthen our policies and benefits that contribute to an inclusive work environment.

In 2020, for the first time we were awarded Ambassador status by the 2020 Workplace Pride Global Benchmark alongside eight other companies and institutions. Highlights this year included a high score in the workplace awareness category, up 35 percent from 2019 thanks to our OUT Leader mentoring program and our dedication to keeping employees informed about anti-LGBT+ legislation in our training.

We also rose 30 percent from 2019 to score for our expertise and monitoring of critical indicators such as career growth for our LGBT+ employees. The standout score though was a brilliant 85.7 percent in a new category called societal impact, for proudly declaring our support in mainstream and LGBT+ media, through network events, taking leadership on boards of LGBT+ organizations and developing strategies to engage audiences external to our company.

Human Rights Campaign Foundation awarded Nokia a score of 100 percent on the 2021 Corporate Equality Index and with this award HRC designated Nokia as a Best Place to Work for LBTQ Equality. This Index is a US national benchmarking tool on corporate policies and practices supporting equality for lesbian, gay, bisexual, transgender and queer employees.

Two trailblazing company honorees on Ada Lovelace Day

Ada Lovelace is considered to be the world's first computer programmer and Ada Lovelace Day is becoming a special day at Nokia. For two years we have used to celebrate the talented women in our company within the science, technology, engineering and mathematics community.

In 2020, we nominated two honorees with extraordinary achievements – ION Researcher Paola Galli, who has made a remarkable journey in the field of silicon photonics, and Nokia Bell Labs CTO Partner, Anne Lee, who is an accomplished telecom veteran and Bell Labs Fellow since 2005 with over 30 years' experience. Read more **online**.

Strengthening our health and safety performance

Health and safety remains a key priority for Nokia. Group Leadership representatives set the strategic direction and policy. Senior leaders demonstrate strong commitment by participating and leading various risk and opportunity reviews held throughout our global markets.

Nokia has a broad range of programs targeted at continuous improvement to address job-related health and safety risks when installing and maintaining equipment and providing services and solutions to our customers. We deliver training, conduct analysis and assessments, and implement consequence management. Our key standards Working at Height, Rigging & Lifting, and Driving and Electrical are implemented with non-negotiables for effective controls to manage risk on a global scale in all markets. Incident management, and reporting and investigation programs encourage all employees and contractors working on our behalf to report all incidents including near misses and high potential incidents for investigation.

Our assurance and governance programs have built in checkpoints to measure effectiveness. We have agreed metrics and key performance indicators designed into all levels of our programs and business processes to assure and manage risk in critical areas such as supplier qualification and project management where high-risk activities are delivered. Market operational reviews and internal and external audits provide the visibility and accountability needed to improve performance and reduce risk. In addition, regular reporting, communication of recovery plans and action management are in place to ensure effective program management. We see the highest risk in the health and safety of our contractors who, for example, work at height, drive, or work with electricity. Thereby, we have set stringent key performance indicators related specifically to supplier Health and Safety Maturity Assessment (SMA) qualification and High-Risk Project Assessment (HRPIA) to ensure contractors are capable of delivering work safety on our behalf and projects have risk procedures and controls in place.

Our H&S management system is globally certified and based on the internationally recognized ISO 45001 standard. Coverage within the scope is comprehensive across the business and includes networks business groups, network services and installation, customer operations and supporting corporate functions which successfully transitioned from OHSAS 18001 to ISO 45001 this year. Our framework was audited in numerous locations and certified by third party Bureau Veritas. Having had H&S global management system, audits, certifications in place and demonstrating

continuous improvement year over year, this positions the company as an effective leader in global H&S management systems and programs worldwide.

Our health and safety performance

In 2020, there was no (one in 2019) work-related fatal incidents involving our employees. However, we regret the two (six in 2019) work-related fatal incidents resulting in the death of three (six in 2019) contractors or subcontractors. Any such serious incidents while carrying out work on behalf of Nokia are unacceptable.

By the end of 2020, 97 percent of suppliers delivering high-risk activity had been assessed using our H&S Maturity Assessment Process and 99 percent of the assessed suppliers met H&S compliant supplier status. We also carried out impact assessments on 96 percent of all high-risk projects. 99 percent of those projects were found to meet our minimum non-negotiable requirements.

More information on our Health & Safety programs can be found online. Our health, safety and labor conditions policy was updated in January 2020 and can be found here.

We strive to be the industry leader in Health and Safety, and we have been awarded the VPC Health & Safety Vodafone Procurement Company Award 2020. This is the third time our accomplishments have been recognized – our first two awards were given in 2015 and 2018 – and it demonstrates our relentless and continuous focus on health & safety.

We design products that transmit and receive radio frequency (RF) energy. Our Nokia RF exposure statement can be found here.

Wellbeing

As the majority of employees moved to a temporary work from home policy due to the COVID-19 pandemic in 2020, we have been adjusting to a new virtual operating mode on a longer-term basis. As individual circumstances were very different, the wellbeing focus was on supporting employees to cope with the situation both mentally and physically. Although we already had a good wellbeing framework in place, the crisis that has come as a result of the pandemic put a spotlight on all aspects of wellbeing; from practical home working advice and ergonomics, to guidance and support for mental wellbeing.

Our Good Day at Work program supported line managers and teams as they adapted to remote work. A combination of e-learnings and virtual workshops enabled teams to have conversations about wellbeing and work-life balance in a structured, actionable way. Employees were able to discuss expectations and set boundaries while creating an environment where everyone takes an active role in influencing the way in which their team operates on a day-to-day basis. Over 300 employees have participated in the workshops to date with further sessions planned.

Our Wellbeing at work. Find your balance program helps employees discover what good looks like for them in relation to their working environment, mental wellbeing and team engagement. The aim is to support employees so they can understand what impacts their ability to perform effectively, to balance periods of stress with recovery and to engage with team colleagues, guiding them to the relevant support if they need it.

> “Nokia demonstrated continuous high focus and commitment despite the tough situation with all of the markets. Nokia embodies our desire for a fatality- and injury-free future.
>
> **– Gary Cooper, Head of Technology of the Vodafone Procurement Company (VPC)**

Our Personal Support Service (EAP) continues to provide employees and their family members with confidential professional support and guidance on a range of emotional, practical and work-life issues, including the opportunity to attend virtual learning events on a broad range of health and wellbeing related topics. Almost 2 000 cases have been supported during 2020, in over 30 languages. Support included a range of services, from clinical counselling and support for work-life issues, to mindfulness coaching and manager consultations. Webinars and learning events addressing a broad range of health and wellbeing topics were hosted in multiple languages throughout the year, attended by approximately 3 000 participants in total.

Key data and reporting principles

Data reporting principles

Scope and boundaries

The sustainability data presented in this report covers Nokia Group, including Networks business, Nokia Software, Nokia Technologies and Group Common and Other. The report contains limited information on our undersea cables business, Alcatel Submarine Networks (ASN), and our antenna systems business, Radio Frequency Systems (RFS). This report covers the calendar year 2020 and where available, trend data since year 2017. Information dating back to 2003 is available on our website.

Newly acquired companies will be included in the reporting scope when they have been legally consolidated and integrated into Nokia systems. Exceptions to the reporting scope for certain indicators are specified in data table notes. When adjustments have been made compared to earlier reports, they are specified in data table notes.

Assurance

Our selected indicators have been assured by an independent auditor of Nokia, Deloitte Oy. The indicator selection is done based on our materiality analysis, target setting and specific stakeholder needs. Please see more information on the Independent Practitioner's Assurance Report on pages 114–115.

Environmental data

We have an internal document Environmental Data Handbook, where we record, for example, data boundaries, data collection methodologies, used tools, and emission factors. Below we explain key information from the Handbook. All environmental data is presented in rounded numbers. Year-on-year comparison for all environmental data is calculated with non-rounded values.

Resource utilization

Energy data covers stationary and mobile sources combustion of fuels and consumption of electricity, heat, and cooling in facility operations, as well as combustion of fuels in the marine fleet. Water data covers withdrawal of water from municipal sources in facility operations and the share of recycled water, which is recycled both for sanitary purposes and for irrigation. Waste generation covers hazardous and non-hazardous waste generated in facility operations. In addition, we separately report packaging waste, which is reused in our distribution hubs operated by service providers, and the amount of equipment collected at the end-of-life.

Energy, water, and waste consumption data is typically collected from facility-level responders, obtained from invoices or metered data. For facilities with no data availability, usage of 2020 data is estimated employing annual intensity factors based on kWh/m² (electricity and natural gas), m³/m² (water) and kg/m² (waste), as calculated from the reporting sites, thereby accounting for 100% of Nokia facilities. In 2020, these estimation procedures accounted for less than 5% of electricity and natural gas usage, less than 1% of operational waste generation and less than 15% of water withdrawal, when compared to total withdrawal, respectively. Subleased areas, covering 7% of the total site area in 2020, are not covered in reporting from 2019 onwards. Intensity factors used for estimating missing facility data were changed in 2019. Prior to 2019 water and waste estimations were done based on employee headcount, but from 2019 onwards they have been done based on facility area (m²).

Waste generated at our facilities is handled directly by vendors, by landlord vendors and local authorities. The level of accuracy varies, and we aim to report the most accurate data. Where specific weights are not available, to ensure maximum coverage we employ estimation and extrapolation methods. Utilized waste includes waste that has been either reused, recycled, or the energy from it has been utilized. Non-utilized waste has been either sent to a landfill or incinerated without energy recovery. Composting of biowaste is recorded under recycling. The definitions for what is reported under hazardous and non-hazardous waste have been made on a global level to keep corporate reporting simple. For example, all discarded batteries and electric and electronical waste (WEEE) are reported globally under hazardous waste, although only different sub-categories of WEEE are defined hazardous in different countries. The actual waste treatment is always done according to local legal requirements. Reported waste data is rounded to hundreds of metrics tons. We ensure the total waste amount rounds correctly and summed sub-metrics match the total. This might lead to small rounding exceptions with the sub-metrics.

Our carbon footprint

Our approach to measuring greenhouse gas emissions follows the Greenhouse Gas (GHG) Protocol (www.ghgprotocol.org) developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). We use the following three standards:

- The Greenhouse Gas Protocol, A Corporate accounting and reporting standard
- GHG Protocol, Scope 2 guidance, An Amendment to the GHG Protocol corporate standard
- Corporate value chain (Scope 3), Accounting and reporting standard, Supplement to the GHG Protocol corporate accounting and reporting standard.

The GHG Protocol defines three scopes of CO_2e emissions:

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

Greenhouse gases

We report the emissions as CO_2e as per GHG Protocol's guidance. GHG Protocol is including six groups of greenhouse gases related to the Kyoto Protocol: Carbon dioxide (CO_2), Hydrofluorocarbons (HFCs), Methane (CH_4), Nitrous oxide (N_2O), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF_6). CO_2 equivalent (CO_2e) is the universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of CO_2.

Operational boundaries and emission calculation

We use the operational control approach for setting organizational boundaries for our GHG emissions inventory. We use emission factors available at the end of the reporting year. From 2018 reporting onwards we follow the GHG Protocol recommendation to use IPCC 5th Assessment Report (AR5) GWP100 values. These values do not include climate-carbon feedbacks. Some emission factor data sources still use GWP100 values from AR4 as a data source of their emission factors. The expectation is that all data sources will start to use AR5 values in the coming years. Where we use emission factors developed by the International Energy Agency, OECD/IEA, the emission calculations have been prepared by Nokia and do not necessarily reflect the views of the International Energy Agency.

Scope 1 emissions

Direct CO_2e emissions from Nokia facilities include GHG emissions resulting from the combustion of oil and gas within Nokia facilities, along with minor direct releases of GHGs associated with refrigerant leakage from facilities' cooling systems. Emissions are calculated by using emission factors published by United States Environmental Protection Agency (EPA).

Direct CO_2e emissions from our mobile fleet are tracked by obtaining information from country-specific leasing suppliers, which are consolidated into one system. Emissions calculation is based on actual driven mileage and official CO_2 emission value per km of each car make and model. Applicable emission factors are sourced from car manufacturers. As an exception, in the USA emissions are calculated based on driven mileages and actual fuel consumption. In the case that the distance travelled is not available from the leasing supplier, the budgeted annual mileage in the leasing contract is used for calculation. Direct CO_2e emissions from our marine fleet are calculated based on the fuel type and fuel usage of marine vessels. Alcatel Submarine Networks maintains a listing of all owned and leased marine fleet vessels with associated fuel consumption. Marine fleet emissions are calculated with EPA emission factors.

Scope 2 emissions

Indirect CO_2e emissions include emissions from purchased electricity, heating, and cooling. As per GHG Protocol definitions, the location-based accounting method quantifies Scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries. In our case, location-based emission factors are obtained from EPA eGrid for the USA and for all the other countries we use IEA Emission factors developed by the International Energy Agency, OECD/IEA.

The market-based accounting method quantifies Scope 2 GHG emissions based on the emissions

emitted by the generators from which the reporter contractually purchases electricity bundled with instruments, or unbundled instruments on their own. In our case, applicable market-based residual emission factors are employed for sites located in Europe (obtained from the Association of Issuing Bodies (AIB)), the United States and Canada (obtained from Green-e). Those sites that purchase certified renewable electricity are assigned an emission factor of zero based on the quantity of green energy employed. If supplier-specific emission factors are not available, location-based emission factors are applied.

GHG emissions associated with purchased steam and heat are calculated employing the applicable EPA emission factor, which is based on the assumption that natural gas was used to fuel a boiler exhibiting an efficiency of 80%. GHG emissions associated with purchased chilled water and cooling are calculated employing the same country emissions factors as electricity, based on an assumed efficiency of 100%. Emissions avoided due to the purchase of renewable energy are verified utilizing Guarantees of Origin (GOs) and Green Tariffs in Europe, as well as International Renewable Energy Certificates (I-REC) in China.

Scope 3 emissions

For relevant Scope 3 categories, the calculation methodology for estimating emissions is described. For non-relevant Scope 3 categories, an explanation is provided.

1. Purchased goods and services: emissions are reported based on data collected with CDP Climate Survey from Nokia's biggest suppliers, and directly from our final assembly suppliers, representing 46% of total purchase spend in 2020 (55% in 2019). We use a hybrid method, using emissions allocated for Nokia by the suppliers and also intensity based (GHG/€) allocation, where allocated emissions were not available, or allocation was not reliable based on different internal quality measures. Collected data is then multiplied to cover 100% of spend. In 2020 calculation we included only suppliers' Scope 1+2 emissions, not Scope 3 emissions, which were reported only by a small share of respondents. Suppliers providing transportation services for products are excluded as "emissions from transportation and distribution" are reported in a separate Scope 3 category. 2020 disclosure is based on the latest CDP data representing suppliers' year 2019 emissions. We recognize that this emission category includes a lot of uncertainty, as suppliers have different qualities in their own reporting and in allocating emissions to Nokia, and due to the extrapolation Nokia does for data to represent 100% of Nokia spend.
2. Capital goods: the relevance of emissions from this category to be included in the Scope 3 inventory is assessed each year, as capital goods purchases vary from year to year. The threshold for inclusion is 0.5% of total Scope 1+2+3 emissions. Emissions from capital goods are based on financial data on property, plant, and equipment additions during the reporting year and estimated by using the GHG Protocol Scope 3 Evaluator tool.
3. Fuel and energy related activities not included in Scope 1 and 2: not presently being assessed, because emissions are by calculation less than 0.1% of total Scope 3 emissions.
4. Upstream transportation and distribution: Data includes emissions from inbound and outbound logistics. Data is based on the top 18 (19 in 2019) logistics supply partners (LSP) delivery data (ton-km) and transportation mode. Reporting is done with real weight, by using EPA's CO_2e emission factors. Upstream emissions include emissions from transportation paid by Nokia.
5. Waste generated in operations: not assessed annually because in our Scope 3 screening , these emissions were calculated to represent less than 0.1% of our total Scope 3 emissions.
6. Business travel: emissions are reported for business air travel, which has the biggest impact out of all business travel modes. Travel information is obtained from our assigned Travel Agencies. Supplied data includes distance travelled, delineated by flight distance ranges and cabin class. Data from travel agencies is consolidated in a system which is used to calculate emissions from air travel. Emissions factors are obtained from EPA.
7. Employee commuting: We conducted an employee commuting survey in 2018. Survey results are a representative sample from several countries. Those results are extrapolated to represent commuting of all

employees for 2018–2020 emissions. For 2020, share of commuting methods was adjusted based on allowed occupancy at Nokia sites during global COVID-19 lockdowns. 2017 emissions are reported based on a worldwide survey conducted at former Alcatel Lucent in December 2015. Since no employee commuting survey had been conducted for the combined Nokia company, the results of the previous survey were extrapolated, based on 2017 Nokia headcount.

8. Upstream leased assets: not presently being assessed as leased vehicles and facilities are presently assessed in Scope 1 emissions.
9. Downstream transportation and distribution: not assessed annually, as the share of transportation and distribution paid by the customers is so small that emissions of this category were below 0.5% of total Scope 3 emissions.
10. Processing of sold products: not considered relevant because processing is not required for sold Nokia products.
11. Use of sold products: The calculation formula is following: Σ [total lifetime expected uses of products (hours) x number of products sold in reporting period x product power consumption (kW) x emission factor for electricity (kg CO_2e/kWh)]. Data covers products from Nokia's Network business groups. Product use time varies between 6 and 15 years, depending on the products. Energy use calculations are based on product group specific standards, e.g. by ETSI, wherever standards have been published. The objective is to have a product coverage above 80%; in 2020 we are above 90%. Calculations are so far based on assumption that all products are powered by grid electricity. Since 2018, we have been using the IEA's latest world average CO_2 equivalent emission factor. Earlier, we used the IEA's latest four-year world average CO_2 emission factors.
12. End-of-life treatment of sold products: not considered relevant. Based on an LCA done by Nokia for a typical Nokia mobile network product (urban base station site in Europe), the use phase accounts for over 84% of global warming potential, production (supply chain and own operations) for 14%, logistics for 2% and end-of-life treatment rounds to 0%. End-of-life treatment emissions are not significant either in other Nokia product categories.
13. Downstream leased assets: not presently being assessed because emissions are by calculation less than 0.1% of total Scope 3 emissions.
14. Franchises: not applicable, as Nokia does not have franchises.
15. Investments: not applicable, as this category is designed primarily for private financial institutions.

Reported emission data is rounded to hundred metric tons. We ensure the total Scope 1, 2 and 3 amount is rounded correctly. This might lead to small rounding exceptions with the sub-metrics.

People data

Year-end headcount is as published in financial reporting. Some personal and transactional job related detail data is, however, not included in Nokia's central HR databases. In 2020, the number of employees whose individual detail data was not tracked centrally was 5 071 (5 375 in 2019, 5 374 in 2018, and 3 055 in 2017). We use external temporary labor (ETL) for certain non-core activities and/or subcontractors to meet customer needs or volume demands. Activities performed by ETL or subcontractors include for example consultants supporting different tasks in our business groups and support functions, facility service providers, security guards and IT support. Externals are not covered in any of Nokia employee data; they are included in the responsible sourcing section. At end of 2020 the number of external temporary workers used, for example, to cover sickness was in the region of 3 400 people.

Hiring and attrition rates are calculated against the average at month-end permanent headcounts. Number of new employee hires includes "Hire, Rehire & Convert from Contractor/External transactions activity" and excludes merger and acquisition activity. Employees with permanent contracts include internal employees not having data indicating employee is on a fixed-term contract or a trainee. The definition of Line Manager is a manager with one or more subordinates. Nokia's executive management board is the Group Leadership team. Senior management is defined as individuals having job grade 13+, and leadership is defined as individuals having job grade 12+.

Training and education data is obtained from the NokiaEDU department. Training provided for externals is not included in the employee-related numbers but reported separately. One training day includes seven training hours. The average number of all training hours per employee also includes training arranged by Business Groups or external parties, and training records approved by a Line Manager.

Mobility data is obtained from the HR department's databases and includes long-term assignments. Occupational health and safety data is obtained from the Health, Safety, Security and Environment (HSSE) department. The indicator name defines, whether the data covers Nokia employees and or contractors and sub-contractors. Cut-off day of incident reporting is in early January. There can be some cases, especially from contractors, reported after the cut-off day. Nokia's HSSE organization puts most effort on prevention of critical and fatal incidents and we realize lost-time incidents data may not be as accurate as the aforementioned data.

Community investments include contributions as cash, value of time and value of in-kind. In 2017 cash has represented minimum 95% of the total contributions, around 90% in 2018, 84% in 2019 and 98% in 2020. The number of beneficiaries includes beneficiaries from corporate and key regional programs. Related to monetary contributions, since 2017 we have also been able to track part of local programs in addition to global and regional ones.

Ethics and compliance data

Data on reported concerns and investigations are obtained from the Business Integrity Group as recorded in the Case Management Tools, and included to the best of the team's knowledge.

Management systems data

Reported information about our management systems coverage is status as of year-end, and the scope of the data is our Networks segment. Multiple buildings on the same site are counted as one site, whereas buildings classified as carparks, restaurants and warehouses are excluded from the calculation. The percentage of employees covered by the certifications is available from 2018 onwards. Nokia acquired Alcatel-Lucent in 2016, which has impacted our certification coverage as the approach to certification of the two companies was very different at the time of acquisition. Nokia took the approach of implementing global management systems and certifying, under one certificate, almost all locations to the management system standard. Former Alcatel Lucent held multisite certificates for these management system standards but did not cover all locations within those certifications. The management systems were merged and all current Nokia business operations and processes are in line with globally defined standards and processes. In addition to large offices, a portion of our headcount is distributed at multiple locations such as small sales, project, and field offices in customer premises, and in the majority of these facilities we have very little to no control over the building or space.

Supply chain management data

Data on audits and supplier assessments are obtained from the Procurement Quality Office. The EcoVadis platform is utilized in metrics related to EcoVadis assessments and the CDP platform related to climate change management. Conflict-free smelter information is reported through the Conflict Minerals Reporting Template (CMRT), consolidated to the Master Template and compared against Responsible Mineral Initiative's audit program lists.

Financial data

Financial indicators covered by this report are as published in the Group's Annual accounts for 2020 and included in Nokia's audited financial statements. Please see Auditor's report from page 212 onwards in our Annual Report; Nokia in 2020.

Environmental data

	2017	2018	2019	2020	Year-on-year change 2019–2020[1]	2020 data assured	Notes
GHG emissions (metric tons CO_2e)							
Scope 1 GHG emissions (Direct emissions from facilities and mobile sources)	**143 500**	**134 500**	**125 000**	**116 300**	**-7%**	●	3
GHG emissions from fuel combustion in facilities (stationary and mobile sources)	33 600	29 000	20 800	19 500	-6%	●	2
Emissions from Hydro-Fluoro-Carbon (HFC) refrigerants in facilities	400	600	300	600	98%	●	
Emissions from fuel combustion in car fleet	34 300	32 000	29 600	21 000	-29%	●	
Emissions from fuel combustion in marine fleet	75 200	72 900	74 300	75 200	1%	●	
Scope 2 GHG emissions, Market-based (Indirect emissions from purchased electricity and heat)	**446 900**	**364 900**	**327 200**	**263 600**	**-19%**	●	3
Emissions from purchased electricity	423 400	347 300	311 300	245 900	-21%	●	
Emissions from purchased cooling	12 000	7 900	8 200	10 900	32%	●	
Emissions from purchased heating	11 500	9 700	7 700	6 800	-12%	●	
Scope 2 GHG emissions, Location-based	**482 800**	**436 900**	**421 900**	**380 200**	**-10%**	●	3
Emissions from purchased electricity	459 300	419 400	406 000	362 500	-11%	●	
Emissions from purchased cooling	12 000	7 900	8 200	10 900	32%	●	
Emissions from purchased heating	11 500	9 700	7 700	6 800	-12%	●	
Total Scope 1 and 2 GHG emissions, Market-based	**590 400**	**499 400**	**452 200**	**379 900**	**-16%**	●	3
Total Scope 1 and 2 GHG emissions, Location-based	**626 300**	**571 400**	**546 900**	**496 500**	**-9%**	●	3
Scope 3 GHG emissions (Indirect emissions)	**42 660 700**	**44 673 500**	**39 276 200**	**35 595 100**	**-9%**		
Emissions from purchased goods and services	1 428 500	5 284 000	3 063 000	2 487 400	-19%		4, 7
Emissions from upstream transportation and distribution	298 500	384 300	303 600	255 200	-16%		4
Emissions from capital goods	499 900	398 200	417 000	380 200	-9%		
Emissions from business air travel	98 000	81 500	71 700	13 300	-81%		5

Environmental data

	2017	2018	2019	2020	Year-on-year change 2019–2020[1]	2020 data assured	Notes
Emissions from employee commuting	135 800	118 400	110 900	39 000	-65%		6
Emissions from use of sold products	40 200 000	38 410 000	35 310 000	32 420 000	-8%	●	4, 10
Total Scope 1, 2 and 3 GHG emissions, Market-based	**43 251 100**	**45 172 900**	**39 728 400**	**35 975 000**	**-9%**		3
Total Scope 1, 2 and 3 GHG emissions, Location-based	**43 287 000**	**45 244 900**	**39 823 100**	36 091 600	-9%		3
GHG intensities and miscellaneous GHG information							
Total Scope 1 and 2 GHG emissions per net sales, Market-based (metric tons CO_2e/EUR million)	26	22	19	**17**	**-10%**		
Total Scope 1 and 2 GHG emissions per net sales, Location-based (metric tons CO_2e/EUR million)	27	25	23	**23**	**-3%**		
Car fleet emission intensity (gCO_2e/vehicle-km)	139	135	129	114	-11%		
Emissions avoided due to purchased renewable electricity (metric tons CO_2e)	90 000	129 700	145 900	169 500	16%		
Biologically sequestered carbon (metric tons CO_2e)	0	0	0	0			7
Other air emissions (metric tons)							
Ozone Depleting Substances (ODS), as ODP	-	0	<0.01	<0.01	214%		
Criterai air pollutants	54	64	36	31	-14%		
Volatile Organic Compounds (VOC) emissions	1	2	1	1	-9%		8
NOx	26	31	18	16	-14%		
SOx	4	4	1	<0.5	-46%		
Total Particulate Matter (PM) emissions	2	3	1	1	-16%		
Other criteria air contaminants	20	25	15	13	-12%		
Energy consumption							
Energy consumption in Nokia facilities (GWh)							
Electricity, total	1 039	1 005	961	893	-7%	●	
Heating, total	51	43	34	30	-12%	●	
Cooling, total	24	17	27	34	27%	●	

Environmental data

	2017	2018	2019	2020	Year-on-year change 2019–2020[1]	2020 data assured	Notes
Fossil gas, total	154	141	111	101	-9%	●	
Fossil oil, total	17	11	2	1	-51%	●	
Biofuel, total	0	0	0	0	0%	●	
Total energy consumption in facilities (GWh)	**1 285**	**1 217**	**1 135**	**1 059**	**-7%**	●	
Direct energy	170	153	113	102	-10%	●	
Indirect energy	1 115	1 064	1 021	957	-6%	●	
Renewable energy	209	269	302	351	16%		
Renewable electricity	209	269	302	351	16%	●	
Renewable electricity share of total electricity (%)	20%	27%	31%	39%	8 pp	●	
Total energy per net sales (MWh/EUR million)	56	54	49	48	-1%		
Energy consumption in Nokia fleet (GWh)							9
Marine fleet (Fossil oil use)	286	278	285	289	1%		
Energy consumption outside of Nokia (GWh)							
Energy consumption of sold products	77 760	78 090	71 790	66 500	-7%	●	4, 10
Water consumption							
Total water withdrawal (thousands m³)	**2 305**	**1 791**	**1 737**	**1 285**	**-26%**	●	10
Total water withdrawal per employee (m³)	23	18	18	14	-22%		11
Water withdrawal by source (%)							
Municipal water supply	100%	100%	100%	100%	0 pp		
Recycled/reused water (thousands m³)	**26**	**20**	**17**	14	-16%		
Recycling/reuse % of total withdrawal	**1.1%**	**1.1%**	**1.0%**	1.1%	13%		
Total water use (thousands m³)	**2 331**	**1 811**	**1 753**	1 299	-26%		

Environmental data

	2017	2018	2019	2020	Year-on-year change 2019–2020[1]	2020 data assured	Notes
Circular economy							
Waste within Nokia operations (metric tons)							12
Total waste	**15 000**	**13 600**	**8 000**	**7 900**	**-1%**	●	12
Reuse	1 500	200	<50	<100	297%	●	12
Recycle	8 200	6 000	3 400	5 300	60%	●	12
Energy recovery	2 300	400	500	1 000	89%	●	12
Landfill	3 000	7 100	4 100	1 500	-63%	●	12
Incineration without energy recovery	0	0	0	0	0%	●	12
Total non-hazardous waste	**13 000**	**13 000**	**7 500**	**7 200**	**-3%**	●	**12**
Reuse	1 500	200	0	0	0%	●	12
Recycle	6 400	5 400	3 000	4 900	67%	●	12
Energy recovery	2 300	400	500	900	76%	●	12
Landfill	2 800	7 000	4 000	1 400	-65%	●	12
Incineration without energy recovery	0	0	0	0	0%	●	12
Total hazardous waste	**2 000**	**600**	**500**	**700**	**45%**	●	12, 13
Reuse	<50	<50	<50	<100	297%	●	12, 13
Recycle	1 800	600	400	400	4%	●	12, 13
Energy recovery	<50	<50	<50	<100	512%	●	12, 13
Landfill	200	<50	<50	100	265%	●	12, 13
Incineration without energy recovery	0	0	0	0	0%	●	12, 13
Hazardous waste by types							
Electronic waste from facilities	1 800	600	400	400	6%	●	12
Other hazardous waste	200	<100	<100	200	367%	●	12
Waste utilization rate %	**80%**	**48%**	**49%**	**81%**	**32 pp**	●	

Environmental data

	2017	2018	2019	2020	Year-on-year change 2019–2020[1]	2020 data assured	Notes
Equipment returned from customers (number, metric tons)							4
Reuse (number of items)	68 000	56 100	56 300	79 400	41%	●	
Reuse (metric tons)	-	-	-	570		●	
Recycle (metric tons)	2 580	4 100	4 000	4 700	20%	●	
Energy recovery (metric tons)	120	160	330	550	64%	●	
Landfill (metric tons)	20	20	30	50	61%	●	
Product packaging in hubs (metric tons)							
Reuse	3 700	4 200	3 200	1 600	-50%		4, 14

Notes

"-" means we do not have data available for that particular year or scope.

1. Year-on-year change is expressed as percentage change (%) when the indicator value is in general number format. When the indicator value is in percentage format, the change is expressed as percentage points (pp).
2. Includes CO_2e from all GHGs (CO_2, CH_4 and N_2O).
3. Nokia uses internally market-based (not located-based) values for example in target setting and if only one value is given without further definitions, it's the market-based.
4. Data covers Nokia's Networks business.
5. 2017 data includes Nokia Group but not Comptel.
6. Based on total headcount reported in financial reporting.
7. Biologically sequestered carbon (i.e. carbon dioxide emission from burning biomass/biofuels) and emissions from fermentation are not relevant for Nokia as we do not burn or fermentate biomass or biofuels on-site.
8. VOC source is from fuel combustion. No significant quantities from solvents and halogenated hydrocarbon, so these emissions are not relevant and not consolidated.
9. Energy consumption is presented only for marine fleet, as energy consumption data from Nokia's vehicle fleet is not available.
10. No significant quantities of heavy metals discharges into water, indicator not relevant and not consolidated.
11. Years 2017–2018: Based on average headcount calculated from monthly site-specific headcount statistics from facilities database. This calculation procedure results in a different total headcount than the total headcount as of December 31 (disclosed in the Social indicators section of the report). Years 2019–2020: based on total headcount reported in financial reporting.
12. Due to the changes in Nokia's waste estimation methodology for 2018 data figures for 2017 are not directly comparable.
13. Non-hazardous waste categorization checked for 2020 data and updated also for 2019 data.
14. 2017 and 2018 data includes part of the hubs. 2019 and 2020 data includes all hubs.

People data

	2017	2018	2019	2020	Year-on-year change 2019–2020	2020 data assured	Notes
Employment							
Number of employees, year-end situation	102 761	101 203	94 723	89 978	-5%		
Share of employees with full-time contract	99%	99%	99%	99%	0 pp		
Share of employees with permanent contracts	98%	96%	97%	97%	0 pp		
Number of new employee hires	9 430	8 849	4 493	4 961	10%		
Rate of new employee hires, %	10%	10%	5%	6%	1 pp		
Female share of new hires	24%	23%	24%	25%	1 pp		
Total number of leavers	10 033	9 998	11 318	9 572	-15%		
Total attrition rate	10%	11%	13%	12%	-1 pp		
Attrition rate of voluntary leavers	6%	5%	6%	5%	-1 pp		
Percentage of open positions filled by internal candidates	59%	51%	49%	42%	-7 pp		
Average length of service (in years)	11	11	11	11	0 %		
Number of long-term expatriates worldwide	397	334	180	137	-24%		
Diversity & Equal Opportunity							
Share of women within workforce	22%	22%	22%	22%	0 pp		
Share of female line managers	17%	16%	16%	16%	0 pp		
Share of women within senior management	13%	13%	13%	14%	1 pp		
Share of women within leadership	15%	15%	15%	15%	0 pp	●	
Share of women on the executive management board	13%	14%	22%	24 %	1 pp		
Share of women in the Board of Directors	30% (3 of 10)	40% (4 of 10)	40% (4 of 10)	44% (4 of 9)	4 pp		
Number of nationalities in the executive management board	8 (of 15)	8 (of 14)	10 (of 18)	9 (of 17)	-10%		
Share of non-Finnish in the executive management board	93%	93%	83%	76%	-7 pp		
Average age of employees at year-end	41	41	41	41	0%		
Number of nationalities within workforce	-	166	166	164	-1%		1

People data

	2017	2018	2019	2020	Year-on-year change 2019–2020	2020 data assured	Notes
Training & Education							
Total amount of training days provided by Nokia EDU to employees	234 300	309 400	242 800	239 00	-2%		
Total amount of training days provided by Nokia EDU to customers and suppliers	119 800	110 000	95 800	62 400	-35%		
Average number of all training hours per employee	16	34	34	33	-2%		
Number of attendees in corporate leadership programs	3 526	3 862	3 191	1 129	-64%		
Occupational health & safety							
Near miss incidents reported (including contractors)	417	454	362	237	-35%		
Lost-time incidents of employees	41	39	14	16	14%		
Work-related fatal incidents involving employees	0	0	1	0	-100%	●	
Work-related fatal incidents involving contractors or subcontractors	5	1	6	2	-67%	●	
Community investments							
Total value of contributions (EUR million)	6. 84	6.53	2.26	6.50	187%		
Number of direct beneficiaries	254 100	304 200	206 900	2 183 300	956%		

Notes

1. Nationalities data cover 87% of the headcount. Data is not available for 2017.

Ethics & compliance data

	2017	2018	2019	2020	Year-on-year change 2019–2020	2020 data assured	Notes
Total number of ethical concerns reported	**678**	**887**	**994**	**776**	**-22%**		
Conflict of Interest	55	55	69	37	-46%		
Controllership	71	74	88	90	2%		
Dealing with Government Officials	2	0	1	8	700%		
Fair Competition	5	9	2	9	350%		
Fair Employment (all HR related)	231	336	416	290	-30%		
Guidance	141	186	164	113	-31%		
Human Rights	2	2	1	1	0%		
Improper Payments	11	13	11	9	-18%		
Insider trading	-	-	-	3			
Intellectual Property & Confidential Information	31	59	54	51	-6%		
Privacy	0	8	7	6	-14%		
Trade Compliance	6	5	5	5	0%		
Wellbeing, Health, Safety and Environment	23	24	27	29	7%		
Working with Suppliers	40	58	64	67	5%		
Other	60	58	85	58	-32%		
Number of investigations by the Ethics & Compliance Office	257	248	289	329	14%		
Number of allegations substantiated with 'cause found' after investigation	127	92	106	106	0 %		
Number of employees given a written warning on grounds of violation of Code of Conduct	45	16	30	20	-33%		
Number of employees dismissed on grounds of a violation of the Code of Conduct	47	24	32	16	-50%		
Percentage of employees completing Ethical Business Training	86%	95%	97%	96%	-1%	●	

Supply chain management data

	2017	2018	2019	2020	Year-on-year change 2019–2020	2020 data assured	Notes
Supplier audits and assessments							
Number of Corporate responsibility (CR) onsite audits (focused on labor conditions and environment) against Nokia Supplier Requirements and SA8000	72	75	45	24	-47%	●	
Closure rate of non-conformities identified at CR-audits, within audit closure target time	58%	52%	52%	67%	15 pp	●	
Number of on-site system audits against Nokia Supplier Requirements	47	38	46	27	-41%	●	
Number of suppliers assessed in EcoVadis	274	251	241	340	41%		
Share of active suppliers rated “satisfactory” or above on their assessment of sustainability by EcoVadis	71%	74%	74%	72%	-2 pp		
Share of relevant suppliers delivering high-risk activity covered by our H&S Maturity Assessment	>90%	100%	97%	97%	0 pp	●	
Share of suppliers assessed by our H&S Maturity Assessment process meeting ‘H&S compliant supplier’ status	81%	89%	99%	99%	0 pp	●	
Number of suppliers assessed on their climate impact based on their CDP reporting for Nokia	292	314	404	430	6 %		
Number of suppliers that set GHG emission reduction targets in CDP	153	187	234	262	12 %		
Materials traceability							
Share of suppliers that have achieved full visibility into the smelters in our supply chain	90%	97%	96%	98%	2 pp	●	
Share of smelters that have been validated as conflict-free or are active in the validation process (out of known smelters in Nokia supply chain)	83 %	84 %	82 %	80 %	-2 pp	●	

Managements systems data

	2017	2018	2019	2020	Year-on-year change 2019–2020	Notes
ISO 9001 certified quality management system, % of sites covered	61%	68 %	63 %	60 %	-3 pp	
ISO 14001 certified environmental management system, % of sites covered	52%	57 %	56 %	53 %	-3 pp	
ISO 45001 certified occupational health and safety management system, % of sites covered	46%	56 %	54 %	52 %	-2 pp	
ISO 9001 certified quality management system, % of employees covered	-	93%	93%	94%	1 pp	1
ISO 14001 certified environmental management system, % of employees covered	-	83 %	85 %	90 %	5 pp	1
ISO 45001 certified occupational health and safety management system, % of employees covered	-	78 %	79 %	85 %	6 pp	1

Notes

1. After the acquisition of Alcatel-Lucent in 2016, comparable data to calculate the percentage of employees covered was not available for 2017.

Financial data

	2018	2019	2020	Year-on-year change 2019–2020	Notes
Net sales, EUR million	22 563	23 315	21 852	-6%	1, 2
Operating profit (loss), EUR million	(59)	485	885	82%	1, 2
R&D expenses, EUR million	4 777	4 532	4 087	-10%	1, 2

Notes

1. Numbers include Nokia Group continuing operations.
2. Financial indicators are included in the audited financial statements. Please see Auditor's Report from page 212 onwards in our annual report "Nokia in 2020"..

Independent practitioner's assurance report

To the Management of Nokia Corporation

We have been engaged by the management of Nokia Corporation (business identity code 0112038-9, hereinafter also "the Company" or "Nokia") to provide a limited assurance on the selected sustainability disclosures in the Nokia's People & Planet Report 2020 for the reporting period of January 1, 2020 to December 31, 2020. The assured information is indicated in the Key data and reporting principles section of the Company's People & Planet Report 2020 (hereinafter "Selected sustainability information").

Selected sustainability information

The scope of our work was limited to assurance over the information summarized below. The information covers Nokia Group (continuing operations), as indicated in the People & Planet Report 2020. We have not been engaged to provide assurance on any information relating to prior reporting periods or any other information in the People & Planet Report 2020.

Environmental indicators

- Scope 1 greenhouse gas (GHG) emissions, by sources (metric tons CO2e)
- Scope 2 GHG emissions, market based and location based (metric tons CO2e)
- Combined Scope 1 and 2 GHG emissions: Progress against 2030 Science-based target
- Scope 3 GHG emissions: use of sold products (metric tons CO2e). 2020 emissions and progress against 2030 Science-based target.
- Energy consumption within Nokia, by types of energy (GWh) and change to 2019 (%)
- Renewable electricity amount (GWh) and share of total electricity consumption (%)
- Water withdrawal in facilities (m3) and change to 2019 (%)
- Waste amount within Nokia by treatment type (metric tons) and utilization rate (%)
- Energy savings achieved in 2020 due to network modernization
- Voluntary product takeback from customers: Weight by treatment type (metric tons) and number of returned equipment reused/refurbished

Social indicators

- Number of fatal work related incidents involving employees and number of fatal work related incidents involving contractors and subcontractors
- Number of concerns raised/received as alleged violations of our anti-bribery policies, involving third parties, and the number of such concerns substantiated
- Share of employees who have completed the Ethical Business Training (%)
- Share of women within leadership (%)
- Share of high-risk projects with impact assessment completed, and share of those projects meeting our minimum non-negotiable requirements (%)
- Share of cases coming to Human Rights Due Diligence (HRDD) process resolved as "go", "no go" and "go with conditions" (%)

Improving people's lives indicators

- Number of subscriptions Nokia's radio networks customers provided service for

Supplier indicators

- Number of forced labor non-compliance instances found in supplier audits
- Share of suppliers delivering high-risk activity assessed by using Nokia Health & Safety Maturity Assessment Process and share of assessed suppliers meeting "H&S compliant supplier"-status (%)
- Share of smelters that have been validated as conflict-free or are active in the validation process (out of known smelters in Nokia's supply chain) (%)
- Share of suppliers who have full visibility into smelters in our supply chain (%)
- Number of system audits against Nokia Supplier Requirements
- Number of corporate responsibility onsite audits (focused on labor conditions and environment) against Nokia Supplier Requirements and SA8000 and share of closed non-conformities (%)

Management's responsibility

The Management of Nokia is responsible for the preparation of the Selected sustainability information in accordance with the Reporting criteria as set out in the Company's own documented standards and GHG Protocol (hereinafter also "the Reporting criteria"). This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of the Selected sustainability information that are free from material misstatement, whether due to fraud or error, selecting and applying appropriate criteria and making estimates that are reasonable in the circumstances.

Assurance provider's responsibility

Our responsibility is to express a limited assurance conclusion on the Selected sustainability information based on our engagement. We conducted our assurance

engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised).

ISAE 3000 standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance whether any matters come to our attention that cause us to believe that the Selected sustainability information has not been prepared, in all material respects, in accordance with the Reporting criteria.

We did not perform any assurance procedures on the prospective information, such as targets, expectations and ambitions, disclosed in the Selected sustainability information. Consequently, we draw no conclusion on the prospective information. Our assurance report is made in accordance with the terms of our engagement with Nokia. We do not accept or assume responsibility to anyone other than Nokia for our work, for this assurance report, or for the conclusions we have reached.

A limited assurance engagement with respect to responsibility related data involves performing procedures to obtain evidence about the Selected sustainability information. The procedures performed depend on the practitioner's judgment, but their nature is different from, and their extent is less than, a reasonable assurance engagement. They do not include detailed testing of source data or the operating effectiveness of processes and internal controls, and consequently they do not enable us to obtain the assurance necessary to become aware of all significant matters that might be identified in a reasonable assurance engagement.

Our procedures on this engagement included:

- Interviewing senior management of the Company;
- Conducting interviews with employees responsible for the collection and reporting of the Selected sustainability information and reviewing of the processes and systems for data gathering, including the aggregation of the data for the Selected sustainability information;
- Reviewing internal and external documentation to verify to what extent these documents and data support the information included in the Selected sustainability information and evaluating whether the information presented in the Selected sustainability information is in line with our overall knowledge of corporate sustainability at Nokia;
- Performing analytical review procedures and testing data on a sample basis to assess the reasonability of the presented Selected sustainability information;
- Conducting an interview with Nokia's sites in Finland and India through a video conference;
- Assessing that the Selected sustainability information has been prepared in accordance with the Reporting criteria.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Our independence, quality control, and competences

We have complied with Deloitte's independence policies which address and, in certain cases, exceed the requirements of the Code of Ethics for professional accountants issued by the International Ethics Standards Board for Accountants. We have maintained our independence and objectivity throughout the year, and there were no events or prohibited services provided which could impair our independence and objectivity.

Deloitte Oy applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. This engagement was conducted by a multidisciplinary team including assurance and sustainability expertise with professional qualifications. Our team is experienced in providing sustainability reporting assurance.

Conclusion

Based on the procedures we have performed, nothing has come to our attention that causes us to believe that Nokia's Selected sustainability information for the reporting period ended December 31, 2020 is not properly prepared, in all material respects, in accordance with the Reporting criteria.

Our assurance statement should be read in conjunction with the inherent limitations of accuracy and completeness for sustainability information.

Espoo, April 1, 2021
Deloitte Oy

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