

# Sustainability review

Outokumpu is a company of good people, working towards a world that lasts forever. Our people and their expertise is what separates us from other companies. Also, our stainless steel has the lowest carbon footprint on the market. Last year, we processed 2.6 million tonnes of recycled steel and 111,000 tonnes of other recycled metals into stainless steel, and our customers saved the world from some 10 million tonnes of carbon dioxide emissions by using our stainless steel.



# Sustainability at Outokumpu

Sustainability is at the heart of our business and integrated in our strategy.



Stainless steel is used in many sustainable applications, like solar power production, because of its superb properties e.g. in durability and recyclability.

Outokumpu's sustainable stainless steel contributes to a world that lasts forever. Sustainable solutions that last forever are needed to solve the challenges created by population growth, urbanization and climate change.

Our product is at the very core of our sustainability approach. Stainless steel is a superb material for sustainable solutions as it is 100% recyclable, efficient and long-lasting. The cornerstone of our business is enabling growth and innovation through sustainable stainless steel solutions, and our vision is to become our customer's first choice in sustainable stainless steel.

However, it is not only what we do, but also how we do it. As the industry leader in sustainability, we provide a full picture of the total carbon footprint of our products taking into account all indirect emissions including raw materials. We also lead the industry in terms of the circular economy. The recycled material content of our stainless steel is more than 90% and we are continuously looking for ways to minimize our environmental impact. Our carbon footprint is the lowest in the industry when all scopes of emissions are considered.

## Updated sustainability strategy

During 2021, we took steps to further strengthen our sustainability agenda, and our sustainability strategy was updated to reflect the growing importance of sustainability and the possibilities it offers to our business. Our sustainability strategy is based on three factors: environmental, social and economic, which all need to be in balance.

As part of the new sustainability strategy, we launched more ambitious goals for our sustainability. Our greenhouse gas emission reduction target was increased, and we committed to the Science-Based Targets initiative's (SBTi) 1.5 °C climate ambition. The commitment translates into greenhouse gas emission reduction of 42% in per tonne stainless steel by 2030 from a 2016 base year covering direct and indirect emissions as well as those of our supply chain. Our long-term target is to achieve carbon neutrality in our own operations by 2050.

## Our reporting is based on material topics

Outokumpu conducts regularly a materiality analysis to map our stakeholders' expectations and to assess our business impact on sustainability. We updated our materiality analysis in 2021 to further improve our focus on the sustainability topics that are most important

## Sustainability at Outokumpu

for our stakeholders and operations. The analysis also guides our reporting on the relevant topics.

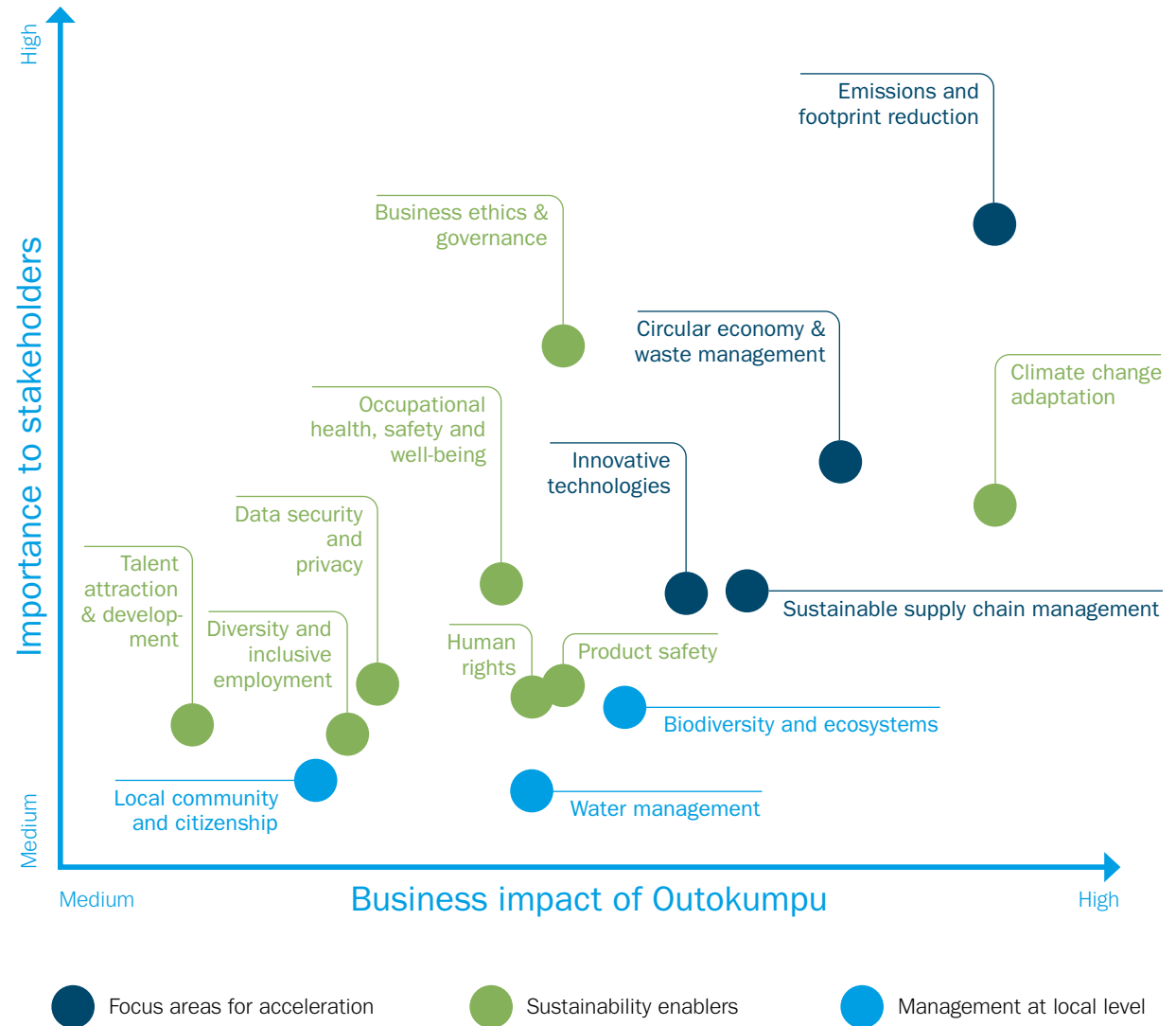
The analysis is applying double materiality, meaning both the impact of and on Outokumpu's business were assessed. As a basis for the materiality analysis, an external advisor conducted an extensive data study of the emerging trends in the steel industry and compared these trends with the material topics of Outokumpu's main peers, customers and suppliers. This analysis was complemented with an overview of material issues found in global sustainability frameworks. Additionally, interviews with customers, suppliers and other stakeholders such as investors, employees and non-governmental organizations were conducted to gain a deeper insight into the relevant stakeholder groups.

Based on the research and internal workshops, a list of 15 most material topics was compiled. The topics were ranked and prioritized based on the stakeholder rankings and the business impact of Outokumpu on these issues.

Four topics were defined as focus areas for acceleration based on alignment with business model and high potential for differentiation. Sustainability enablers have been defined to have lower level of potential for differentiation. Topics defined for management at local level have value creation potential from execution on local operating level.

The selection of material topics covers both inside-out topics that related to corporate strategy as well as outside-in topics that reflect stakeholder concerns. Topics are material when they have the ability to affect Outokumpu's operational results and the company has the ability to control and influence the topic.

### Materiality matrix



### Commitment to global frameworks and standards

Sustainability is integrated into all our operations, activities, and decision making. The most important policies guiding Outokumpu's sustainability management are the Group's Code of Conduct, Corporate Responsibility Policy and the Policy on Environment, Health, Safety and Quality (EHSQ). We expect our business partners and suppliers to follow similar standards. All of our policies are available at [outokumpu.com](https://outokumpu.com).

All of Outokumpu's sites are certified according to quality ISO 9001 and environment ISO 14001 management systems, including energy efficiency targets. The functioning of the systems is monitored by both internal and external audits. These management systems are used to implement sustainability issues on the local level.

Outokumpu complies with international, national, and local laws and regulations, and respects international agreements concerning human and labor rights, such as the International Bill of Human Rights, UN Global Compact and ILO Declaration on Fundamental Principles and Rights at Work. In 2021, Outokumpu began to implement the UN Guiding Principles on Business and Human Rights in its corporate policies.

### Management of sustainability

Outokumpu's Board of Directors approves Outokumpu's sustainability agenda and targets. On the Group level, sustainability is managed by the Group Sustainability Team headed by Vice President – Sustainability who reports to Chief

Technology Officer & Group Sustainability. The Outokumpu Leadership Team regularly follows the progress of Outokumpu's sustainability agenda. The business areas and functions are responsible for ensuring that operations within their own organizations are conducted in a responsible manner and that monitoring, data collection and reporting are duly carried out.

In 2021, Outokumpu established a new ESG Advisory Council to support continuous improvement in sustainability. The council consist of four external advisors:

- Olli Dahl, PhD (Technology), Professor, Environmental Technology, Aalto University
- Lucas Joppa, PhD (Ecology), Chief Environmental Officer, Microsoft
- Sirpa Juutinen, Independent Sustainability Advisor
- Julia Woodhouse, Board member, member of the Audit Committee, Outokumpu

The council's role is to challenge and comment the company's ESG strategy and actions as well as facilitate dialogue between Outokumpu and its stakeholders.

During 2021 an internal, cross-functional ESG core team was also established. The team supports the implementation of the sustainability strategy giving executive proposals and draft decisions to the Outokumpu's management who will then implement necessary actions. The team includes members from Group sustainability, procurement, communications, compliance, HR and safety functions.



### Sustainable Development Goals in our focus

We are a signatory to the United Nation's Global Compact initiative, and we have committed to United Nation's Sustainable Development Goals (SDGs). We contribute to several SDGs either through the way we operate or through our products.

In 2021, our focus on the SDGs was realigned according to our updated materiality analysis. Our main focus is on the following six goals: affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, responsible consumption and production, climate action and partnerships for goals.

[Read more about our impact on the SDGs](#)



### Outokumpu in COP26

Outokumpu was invited to participate in the Vision 2045 summit in connection with the COP26 meeting in Scotland in November 2021. The agenda of the summit was formed around the UN's Sustainable Development Goals.

Based on a new materiality analysis conducted during 2021, Outokumpu updated its focus on the SDGs and selected six goals that are most relevant either through the way we operate or through our products: affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, responsible consumption and production, climate action and partnerships for goals.

"We have a strong track record in sustainability, but we have to also work with our partners and suppliers to enable our work towards a world that lasts forever," says **Stefan Erdmann**, CTO and Group Sustainability.

As a part of our participation, a short documentary film was made to explain how Outokumpu contributes to global sustainability and to the United Nations' Sustainable Development Goals. ●

[See the documentary](#)

# Sustainability performance in 2021

Outokumpu has set ambitious goals and key sustainability performance indicators. The company also follows up and measures other selected economic, social and environmental indicators.

All sustainability figures are available on the sustainability data tool on Outokumpu's website [↗](#)

## Active participation in our employee survey

We achieved our target for the Organizational Health Index survey participation rate.

[More on our people ↗](#)

TARGET **>80%** / RESULT **86%**

## Work-related injuries continued to decline

Our total recordable injury frequency rate (TRIFR, per million working hours) continued to decline and was 2.0 compared to 2.4 in 2020.

[More on safety and health ↗](#)

TARGET **<2.2** / RESULT **2.0**

## Significant improvement in energy efficiency

The improvement in energy efficiency was supported by digitalization projects and higher volumes than the year before.

[More on energy efficiency ↗](#)

TARGET 2030 **3.00** / STATUS **3.15**  
MWh per tonne

## No significant environmental incidents

Outokumpu's target is to have no significant environmental incidents, and the company has had no such incidents for many years.

[More on our environmental impact ↗](#)

TARGET **0** / RESULT **0**

## Recycled material content on a high level

Our stainless steel contains the highest rate of recycled material content in the industry. Recycled material content includes steel scrap and recycled metals from other residuals.

[More on resource efficiency ↗](#)

TARGET **92.5%** / STATUS **90.1%**

## Reduced CO<sub>2</sub> emissions intensity

In 2021, our science-based climate target was updated to align with the 1.5°C climate ambition.

[More on our actions on climate change ↗](#)

TARGET 2030 **42%** / STATUS **15%**

# Working towards a 1.5°C future

Outokumpu contributes to climate change mitigation by offering sustainable stainless steel products that are durable, long-lasting, and endlessly recyclable. We also work continuously to minimize our own carbon profile and have established ambitious science-based targets.

Global megatrends such as population growth and accelerating mobility and urbanization have resulted in increased carbon emissions and climate change. Stainless steel can help to build solutions and infrastructure for a more sustainable world.

Stainless steel produced by Outokumpu has the lowest total carbon footprint in the industry, helping our customers to reduce their carbon footprints. We have committed to reducing our emissions even further throughout the whole value chain.

## Ambitious goals to mitigate climate change

In 2021, Outokumpu launched a new sustainability strategy and more ambitious climate targets to further strengthen our position as the industry leader in sustainability. As part of the new sustainability strategy, Outokumpu increased its greenhouse gas emission reduction target and committed to the Science-Based Targets initiative's (SBTi) 1.5 °C climate ambition.

Outokumpu's updated science-based target is to reduce scope 1, 2 and 3 greenhouse gas emissions by 42% per tonne stainless steel by 2030 from a 2016 base year. This target was approved by the Science Based Targets initiative in December 2021.

Reporting and target setting was further developed, and the new target covers over 95% of scope 1 and 2 and over 95% of scope 3 emissions as required in the new SBTi standard. In the previous target about 80% of scope 3 emissions were included. The target is in line with the short-term Business Ambition of 1.5 degree objectives. In the long-term, Outokumpu is committed to reaching carbon neutrality in own operations by 2050.

## Origins of emissions

The direct greenhouse gas emissions from Outokumpu operations are limited to CO<sub>2</sub> emissions. These emissions come directly from production (scope 1), indirectly from the use of electricity (scope 2) and from upstream emissions mainly from the use of materials (scope 3).

Direct emissions originate from the carbon content of our raw materials and from the use of fuels. Our production has increased by 10.5% compared to baseline, but direct emissions have increased only by 3.5% by improving energy efficiency, replacing fossil fuels with lower emission options, digitalization and the positive impact of high production volumes.

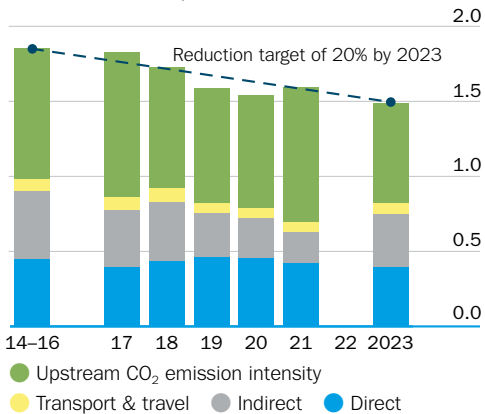
Indirect emissions in scope 2 are caused by the use of electricity and could be reduced



Ice fishing by our Tornio mill in northern Finland. Our climate target is in line with keeping the global warming within 1.5 degrees.

### Target for science-based target criteria

Outokumpu's CO<sub>2eq</sub> emission intensity, tonnes of CO<sub>2eq</sub> per tonne steel

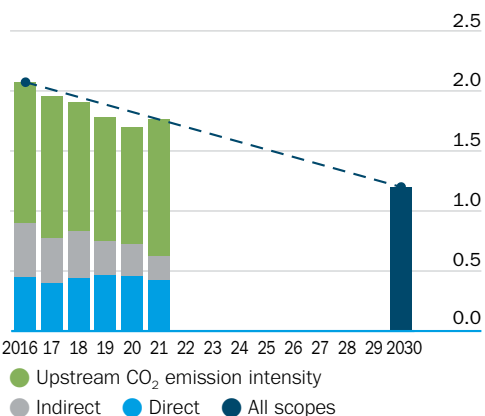


by about 50% with the low-carbon electricity strategy. Scope 3 emissions increased by 7.5% compared to the base year. The increase was less than production increase. Electricity emissions are reported as market-based emissions and also published as location-based emissions with the specific emission factors for electricity published by the country statistics.

Other indirect emissions for steel production are mainly upstream emissions from material use of for example ferroalloys (except ferrochrome which is included in direct and indirect emissions of scope 1 and 2) as well as lime and dolomite, transportation and to a lesser extent from some other scope 3 emissions. Emissions arising from the externally used carbon monoxide and external services are included in scope 3 emissions.

### New approved target for science-based target criteria

Outokumpu's CO<sub>2eq</sub> emission intensity, tonnes of CO<sub>2eq</sub> per tonne steel



The new reporting condition of the SBTi resulted in a recalculation of the baseline and in higher emission intensity figures.

At the moment, there are no estimation methods for the complex downstream emissions of stainless steel available. Case studies from consultants indicate CO<sub>2</sub> net savings of steel use from life cycle assessment.

### Toward a lower carbon footprint

Our total company carbon profile, including upstream emissions, is the lowest in the industry. As stainless steel production is energy intensive, we continuously strive to make our operations more energy efficient and to maximize the use of low-carbon electricity in our operations. Increasing the recycled material content in our stainless steel and improving resource efficiency are key factors in reaching lower CO<sub>2eq</sub> emissions and reducing upstream emissions.

We are also working with our raw material suppliers to decrease our upstream emissions. We are in the process of integrating CO<sub>2eq</sub> emissions into purchase decision making and working on innovations across industries to discover new ways of reducing CO<sub>2</sub> emissions.

In 2021, the total specific CO<sub>2eq</sub> emissions were reduced by 14.3% compared to the baseline of 2014–2016. Key drivers for reduced emissions were the increased energy efficiency and maintaining a high level of recycled material content. Energy efficiency was especially improved with digitalization of processes at our site in Tornio, Finland. Travel restrictions due to the COVID-19 pandemic lowered business travel emissions by 75% compared to pre-pandemic levels.

In 2021, Outokumpu consumed overall 29,300 TJ of primary fuels and electricity with a slight increase due to much higher production. The overall energy intensity improved significantly from 11.0 to 9.9 GJ per tonne crudes steel.

[See all data on CO<sub>2</sub> emissions in the sustainability data tool on Outokumpu's website](#)

### Climate commitment to science-based targets

Outokumpu is the only stainless steel company committed to the Science Based Targets initiative (SBTi). The initiative considers companies' greenhouse gas reduction targets science-based if they are in line with the level of decarbonization required to keep the global temperature increase below 1.5°C.

Outokumpu's previous science-based target for 2016–2023 was to reduce scope 1, 2, and 3

greenhouse gas emissions by 20% per tonne of stainless steel from a 2014–2016 base period.

This target follows the well-below 2°C scenario convergence criteria of the steel industry's decarbonization approach and the electricity decarbonization approach, where the specific emission reduction target is 95% by 2050.

Outokumpu's targets were renewed during 2021. This year we report the existing target development to show the performance of last years and the development of the new science-based target for the next decade. The updated science-based target is to reduce scope 1, 2 and 3 greenhouse gas emissions by 42% per tonne stainless steel by 2030 from a 2016 base year.

### Low-carbon roadmap

Outokumpu has developed its roadmap to reach the set targets. Electric arc furnaces, in use at our mills, are the best available technique for stainless steel production. The continuous work to increase energy and material efficiency, the amount of recycled material and the amount of low carbon electricity are currently the main drivers. In addition to these, several other projects have also been identified.

In 2021, an internal instruction for calculating the CO<sub>2</sub> impact of projects was implemented and a total of 190 improvement projects were identified to have an impact on CO<sub>2</sub> reduction.

The expectation of business-as-usual scenario is a 0.5% yearly reduction in energy intensity by implementation of energy efficiency projects. Furthermore, the energy intensity performance

## How are we fighting climate change

Outokumpu committed to a more ambitious Science Based Targets climate initiative to keep global warming within 1.5 degrees. Our head of sustainability Juha Erkkilä explains our climate target.

### By how much have you already reduced the carbon footprint so far?

At the end of 2020 we had already reduced our CO<sub>2</sub> emissions by 17%, so we had nearly reached our science-based target of cutting our CO<sub>2</sub> emissions by 20% from 2014–2016 levels and that is why we decided to increase our ambition. We have reduced our overall CO<sub>2</sub> emissions from 5 million to 4 million tonnes since 2016. Reporting on carbon footprint is not anything new to Outokumpu; we have done it for several decades and reported all scopes since 2016. We have the lowest carbon footprint in the industry, and our customers save our planet from 10,000,000 tonnes of carbon dioxide by using our stainless steel – every year.

### What can you still do?

There is still plenty to be done. Our next step is to further reduce our total carbon footprint by some 30% by 2030 compared to the 2020 level. This target is now being approved by the Science Based Targets initiative, the highest standard in credible climate targets. Outokumpu is the only stainless steel company with an approved Science Based Target which we should be proud of, especially since we have already delivered on these



targets in plan. We can achieve this new target by using recycled materials, further improving energy and material efficiency, increasing the use of renewable and low carbon energy, improving yield, utilizing waste heat, taking into account the carbon footprint of each of our suppliers and selecting the right suppliers, reducing the carbon footprint of transport, replacing coke with biomaterials and liquefied natural gas with biogas and

other fossil-free heating methods such as electrification.

### What about carbon neutrality?

We have said that we will reach it in our own operations by 2050. At the same time, we have also set a reduction target by 2030 for the carbon footprint of our suppliers, and we will work with them to reach that goal. The ways to reach carbon neutrality are essentially the same as those in cutting the emissions by 30%. Using hydrogen – as in the production of carbon steel – is not an option in stainless steel as we are not reducing iron ore in our processes, but we have used electric arc furnaces for years already and are now investigating replacing coke with biomaterials. Coke is the biggest factor in our own direct emissions, it is used as a reducing agent to remove oxygen from chromite ore. We have already developed and tested the use of bio-based materials, and the results indicate that coke could be replaced with bio-based materials that could fit directly into the current production assets – but as said, that is still under investigation. We are also working on carbon-free ferrochrome manufacturing and we are confident that we can make our operations carbon neutral. ●

of cold rolling mills is expected to reach the best performance of the last years by 2023.

The strategy to further reduce CO<sub>2eq</sub> emissions of electricity is to expand the low-carbon electricity supply, invest in renewable energy projects and buy certificates. In 2021, Outokumpu bought guarantees of origin for 0.5% of electricity used in the EU area from the energy producers.

Implementation of higher grade of digitalization shall confirm further yield, energy and material efficiency improvement for the company's operations which directly impacts the CO<sub>2</sub> emissions.

In the Tornio mill, the majority of direct CO<sub>2</sub> emissions originate from coke which is used as a reductant in the ferrochrome production. Carbon monoxide is a side-stream from that reduction process. It is recycled as a heating fuel in ferrochrome and stainless steel production and about one third is sold outside. The use of carbon monoxide creates CO<sub>2</sub> emissions that are allocated according to the use either in ferrochrome, stainless steel or external use. For the short-term target a significant share of fossil coke is to be replaced by bio coke and would reduce a notable amount of CO<sub>2</sub> emissions in Tornio. In the long run, direct reduction for ferrochrome could replace completely the use of coal-based reductants.

Most direct CO<sub>2</sub> emissions come from the use of heating fuels, i.e. natural gas, propane and a small amount of oil. In the long run, these fuels could be replaced either by induction heating or by the use of carbon neutral fuels, such as



biogas. The scenario for the short-term target includes a change to lower emission fuels as replacement of propane by natural gas where reasonable and plans to use carbon neutral bio-fuels in some operating sites.

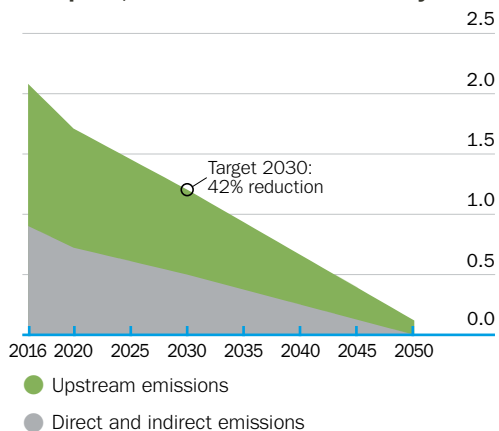
A further option to reduce CO<sub>2</sub> emissions in the atmosphere is the Carbon Capture and Storage/Utilization (CCS/CCU). Studies with external partners are ongoing.

### Indirect and transport emissions

Over 60% of the greenhouse gas emissions correlates to the scope 3 emissions mainly coming from material use as ferronickel, burnt lime and dolomite as well as other alloying elements. Alloying elements are used to generate the different grades and quality of stainless steel. The roadmap follows two strategic approaches.

For the short-term target raw material purchasing is taking the carbon footprint of the

### Outokumpu's emissions scenarios, Scope 1, 2 & 3 emission intensity



supplier into account to align the purchasing to suppliers with lower carbon emissions. The second approach is the increase of recycling as steel scrap and recycled metals from any waste management can replace raw material use. The amount of scrap depends on the availability of suitable scrap. Recycling is followed by the key performance indicator of recycled material content. For the roadmap an increase of recycled material use is estimated and ideally would end up in a mainly circular stainless steel production.

The transition to the low-carbon roadmap also contains projects to reduce the transport emissions. Two projects focus on switching from road transport to electric train transport. Outokumpu cooperates with the communities to realize the projects together. Further transport emissions reductions will be implemented in the short-term target period by using three new vessels that use liquefied natural gas instead of heavy fuel oil.

### Reporting aligned with the TCFD recommendations

Outokumpu acknowledges the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD) and the underlying framework and acknowledges that there are financial impacts in a 2°C or lower transitions scenario. Outokumpu has performed a scenario analysis according to the stated policies scenario and a sustainable development scenario analysis in line with the 1.5 degree ambition of the Science Based Targets initiative. As soon as a steel sector decarbonization approach to net-zero scenario is available it will be taken for further scenario analysis.

Area	Recommended TCFD disclosures	Source of information in reporting
<b>Governance</b>		
Disclose the organization's governance around climate-related risks and opportunities.	a) Describe the board's oversight of climate-related risks and opportunities.	SR 4 Sustainability at Outokumpu; FS 6
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	SR 4 Sustainability at Outokumpu; FS 6-7; GC 15-16
<b>Strategy</b>		
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	SR 6-10 Climate change; FS 11; CG 24
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	SR 6-10 Climate change; FS 11; CG 24
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	SR 6-10 Climate change; FS 11; CG 24
<b>Risk management</b>		
Disclose how the organization identifies, assesses, and manages climate-related risks.	a) Describe the organization's processes for identifying and assessing climate-related risks.	SR 6-10 Climate change; FS 6-7, 11; CG 15-16, 24
	b) Describe the organization's processes for managing climate-related risks.	SR 6-10 Climate change; FS 6-7, 11; CG 15-16, 24
	c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management	SR 6-10 Climate change; FS 6-7, 11; CG 15-16, 24
<b>Metrics &amp; Targets</b>		
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	SR 6-10 Climate change; FS 8
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	SR 6-10 Climate change; FS 8
	c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.	SR 6-10 Climate change; FS 7-8

## Climate change scenario analysis

The stated policies scenario takes into account countries' energy and climate related policy commitments, including nationally determined contributions under the Paris Agreement, to provide a baseline scenario against which we assess the additional policy actions and measures needed to achieve the sustainable development scenario (SDS). The SDS sets out the major changes that would be required to reach the main energy-related goals of the United Nations Sustainable Development Agenda, including an early peak and subsequent rapid reduction in emissions, in line with the Paris Agreement, universal access to modern energy by 2030 and a dramatic reduction in energy-related air pollution. The trajectory for emissions in the sustainable development scenario of IEA is consistent with reaching global "net-zero" CO<sub>2</sub> emissions for the energy system as a whole by around 2070. (Source: International Energy Agency or IEA Iron and Steel Technology Roadmap, 2020)

To translate the steel industry scenarios to the stainless steel production, it is assumed that the emission intensity of the steel sector is the same as the intensity of the stainless steel production, including scope 3 emissions. The target year of the scenarios is set to 2050 in line with the company's carbon neutrality target. The assumption of the SDS includes the possible CO<sub>2</sub> reduction projects at different maturity grades according to the developed carbon neutral road map. It is assumed in the SDS scenario that nickel containing stainless steel grades are produced mainly by recycling. All projects are to be realized

during the journey in addition to the efficiency improvements.

Analyzed scenarios have been estimated under pessimistic, optimistic and realistic implementation of the projects and technologies for the carbon neutral roadmap to 2050. It is expected that compensation or new carbon capture, sequestration and utilization options for some remaining amount of emissions are needed.

## Climate change risks

The climate change risks have been analyzed on today's situation, as well as on medium and long-term time scale. The physical risks were estimated by the Atlas of the Human Planet of the EU's Joint Research Center from 2017 and 2019. According to these sources, our company's operation sites are not exposed to or have mitigated relevant physical risks due to climate change. Extreme weather conditions can have a limited impact on operations. Water risk was further assessed on medium and long-term time scale by the Aqueduct program from World Resource Institute for 2030 and 2040.

Only limited change in the risk categories of operation sites can be observed. Especially the site in San Luis Potosí, Mexico, situated in an arid area, will be under future water risk increase. The water management of this site is in focus and will be further evaluated on future water stress.

The transition risks to Outokumpu are driven by changes to climate policies, which can have adverse impact to Outokumpu's operating environment and financial position as by an

increased price of greenhouse gas emissions and the linked rising electricity price. The risk on realization of lower emissions technology will become effective in the coming years. The risk of losing customers and market share is assessed and included in the risk management system.

In the beginning of 2022, Outokumpu announced that its long-term incentive plans were linked to the company's science-based climate targets.

## Opportunities of a low-carbon society

Climate change is one of the three megatrends driving our business. The life-cycle of a stainless steel solution can have a lower climate impact compared to other materials such as carbon steel. As stainless steel is corrosion resistant and a long-lasting material, it stands out in many applications of renewable energy production such as in high temperature power plants, solar farms, and biofuel plants. This growing market in the transition to a low-carbon society gives Outokumpu the opportunity to increase the revenue.

Continuous increasing of material recycling and energy efficiency as well as change to use lower emission fuel and electricity have significantly reduced the product's carbon profile. This is driving the competitive advantage on high alloy steel with low-carbon footprint that customers are increasingly demanding.

Investors are looking for financing sustainable projects or investing in sustainable companies. The low-carbon profile of Outokumpu's stainless steel enables financial advantages

in investments and the transition to the low-carbon society.

## Emissions trading and fair competition

81% of Outokumpu's all direct CO<sub>2</sub> emissions fall under an emissions trading system (ETS). The main risks of the started trading phase 2021–2030 of the emissions trading system to Outokumpu involves the pass-through costs of allowances to the electricity price. The system has maintained free allocation to avoid carbon leakage. The free allocation decreased according to the lower benchmarks and lower cost pass through factor. Outokumpu forecasts to have adequate amount of the EU emission allowances until the end of this decade. However, future decisions on for example EU ETS including the carbon border adjustment mechanism (CBAM), may have an impact on this forecast.

Allowance prices increased significantly and are expected to further increase especially as the Green Deal of the European Commission requests further greenhouse gas reduction, and the benchmark for free allocation will decrease.

European Commission is preparing carbon border adjustment mechanism and plans to phase out the emissions trading system. The discussed proposal is not considering the stainless steel special conditions as a high price level and the high impact of the scope 2 and scope 3 emissions. There is a high risk that the carbon leakage avoidance measure in the trading system will be removed but not overtaken by the planned carbon border adjustment mechanism for stainless steel industry. ■

# Energy efficiency in focus



In our mill in Krefeld, the waste heat generated during the operation of the bright annealing line is utilized to generate heat in other parts of the mill. It is often small measures for energy efficiency and climate protection which in total contribute significantly to make our production more sustainable.

Improving the energy efficiency of our operations is one of the main drivers to achieve our ambitious climate targets.

Outokumpu's operations are energy intensive. For the recycled steel to melt, it is heated to over 1,400°C. The process requires a high amount of electricity as the best available technique for melting recycled steel is to use electric arc furnaces.

Outokumpu is continuously striving to make its production operations more energy and material efficient. Although the melting of recycled steel and the production of stainless steel consume a lot of energy, stainless steel

enables energy efficient solutions from a life-cycle perspective by saving energy during its use phase.

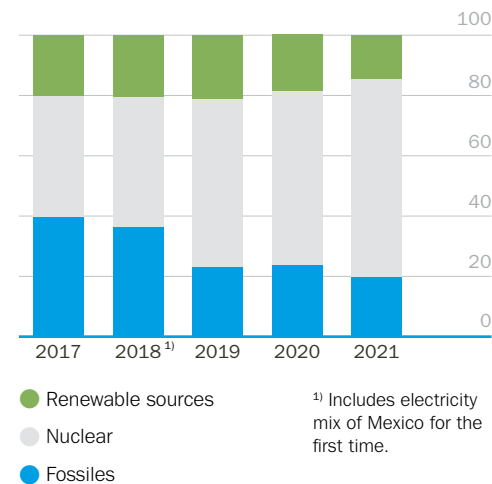
## Energy efficiency improved significantly

In 2021, our energy intensity per tonne stainless steel was reduced by 10%. The improvement of energy efficiency, calculated as a sum of different process steps including ferrochrome, was 2.6% compared to the baseline 2018–2020. The reached energy efficiency improvement corresponds to a yearly saving of 0.18 million MWh in 2021. In 2021, the energy efficiency target was helped by digitalization projects in Tornio and higher volumes compared to the previous year.

Outokumpu's target is to achieve an improvement of energy efficiency by 0.5% each year by 2030, reported as improvement compared to base-period of 2018–2020. In 2021, energy efficiency was 3.15 MWh/t against the target of 3.26 MWh/t. Additionally, cold rolling mills are expected to reach the level of best performance of the last seven years by 2023. The energy efficiency target for 2030 is set to reach 3.00 MWh/t.

The biggest energy-saving potential lies in the optimization of yield. Yield refers to how much sellable products we can make of the metal

## Origin of electricity, %



raw materials added to the process. Energy reduction and efficiency plans are included in environmental management systems at all our sites.

### Toward low-carbon electricity

Outokumpu has centralized energy procurement in order to secure a sufficient energy supply, to ensure predictable, competitive, and stable energy prices, and to optimize the energy portfolio also on low-carbon electricity.

In 2021, 80% of our electricity sources came from low-carbon (renewable and nuclear) sources. Outokumpu participates in several programs that promote the use of low-carbon electricity such as wind power, hydropower, combined heat and power as well as nuclear

power. In 2021, Outokumpu signed two deals to increase wind power in electricity procurement by securing 10-year wind power agreements with Gasum in Finland.

As primary energy sources, we use natural gas, propane, or other fuels, such as diesel. Fossil fuels cover about 80% of our total fuel consumption. Outokumpu does not consume fuels from renewable sources in production processes today, but we utilize our own recovered carbon monoxide process gas which accounts for 20% of our total use of fuel. Process gases and waste heat are also used to heat buildings on sites.

For example, the combined heat and power plant in Tornio produces heat for the Tornio

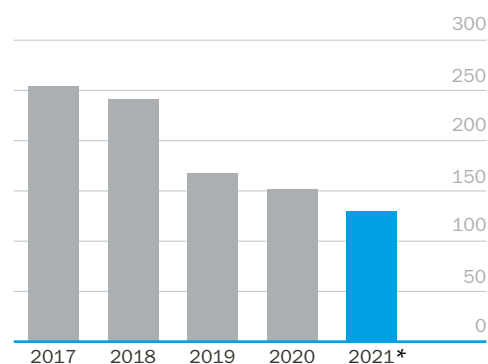
site out of recovered process gases, and in Dahlebrück, Germany, we have our own hydropower plant to generate some 10% of the electricity needed in the production. Outokumpu is a shareholder in a wind power park in Tornio and in the Fennovoima nuclear power plant project in Finland. Fuel switch to lower carbon emission fuels is ongoing. Natural gas is in use at our sites in Germany, Mexico, the US, the UK and Finland. We still have some improvement potential left in Sweden where we are actively studying options for alternative fuels. ■

[See more details in the sustainability data tool on Outokumpu's website](#) 

### Energy used in operations

Gigawatt hours, GWh	2021	2020	2019
Electricity	4,641	4,371	4,490
Carbon monoxide gas	700	625	670
Natural gas	2,106	2,019	2,011
Propane	546	508	562
Diesel, light and heavy fuel oil and other	153	159	186
<b>Energy</b>	<b>8,145</b>	<b>7,682</b>	<b>7,919</b>
Energy use in GJ per tonnes crude steel	9.9	11.0	10.9

### Market-based electricity emission factor, kg CO<sub>2eq</sub>/MWh



\* 0.5% of electricity use in EU market is coming with guarantees of origin from ownerships in power production



### Increasing the share of wind power

In 2021, Outokumpu and Gasum signed two new 10-year power supply agreements for renewable wind power. The contracted wind power energy covers almost entirely the electricity consumption of Outokumpu's Kemi mine. According to the agreement, deliveries will begin in the summer of 2023.

The agreement is a step towards achieving our emission reduction targets. Increasing the share of low-carbon electricity is one of the most important ways to achieve carbon neutrality by 2050.

"With the new agreement, we can further increase the already high share of low-carbon electricity in our production. The wind power agreement is a natural continuation of good cooperation with Gasum. We are currently working together on the LNG terminal in the Port of Tornio, which has enabled us to replace propane in our production with liquefied natural gas," says **Mika Orpana**, Head of Energy and Utilities, General Procurement at Outokumpu. ●

# Operating at the core of the circular economy

Stainless steel is a durable material that fits perfectly into the circular economy. Recycling saves resources, and stainless steel is made of recycled materials. At the end of its life cycle, stainless steel is fully recyclable, without any quality degradation.



Our most important raw material is recycled steel, pictured here in our scrap yard in Avesta, Sweden. Increasing the recycled material content of our stainless steel is the most efficient way for us to reduce our overall environmental footprint.

In a way, our stainless steel mills are significant recycling facilities, producing new products out of recycled steel, recovering and recycling everything reasonable in our production, and finally selling by-products from the manufacturing process to replace natural resources.

### Highest recycled material content in the industry

Recycled steel from both stainless and carbon steel is our most important raw material. Increasing the recycled material content of stainless steel is the most efficient way for Outokumpu to reduce the overall environmental footprint.

The recycled steel content of our stainless steel, defined according to ISO 14021, was 86.3% in 2021. This includes pre- and post-consumer scrap. Including the use of recycled metal from our waste streams, the recycled material content of our products was 90.1% in 2021 against our target of 92.5% for 2021. The result was impacted by the low availability of steel scrap. We aim to reach and maintain the high level of 92.5% until 2023.

One key factor in reaching such a high level of recycled material content is the recovery and recycling of metals from the production processes, e.g. from dust and scales. We

### Waste management

Tonnes	Generated	Diverted from landfill	Landfill
<b>Non-hazardous waste</b>	<b>1,509,257</b>	<b>1,115,902</b>	<b>393,356</b>
Scales	12,697	12,697	0
Slag	336,862	0	336,862
Tailing sands	1,069,265	1,069,265	0
Other waste	90,434	33,940	56,494
<b>Hazardous waste</b>	<b>147,772</b>	<b>76,390</b>	<b>71,382</b>
Steelmaking dust	73,794	56,182	17,612
Oily sludge	9,346	8,543	803
Regeneration & hydroxide sludge	35,334	8,711	26,624
Neutralization sludge	22,919	0	22,919
Other waste	6,379	2,954	3,425

are continuously looking for best ways to recycle the metals of our melt shop dust. Dust recycling increased especially at our site in Calvert, the US. These side streams are either treated on site or by an external facility for recycling in our melt shops. Metal recycling is the main driver of the reduction of the upstream material emissions (scope 3).

In addition to metals, other materials, such as slag formers, acids, and gases, are needed in the production process although they do not become part of the stainless steel products. Some of these input materials are needed to minimize or prevent emissions into the environment. As far as reasonable, these are also recovered and recycled in the process. For instance, the used acids are continuously regenerated for reuse, and the hydrogen from the bright annealing process is recovered in the incineration of the process furnace.

### Recycling as much as possible

In our production, all production material streams are studied carefully to find the means of fully recycling, reusing, or selling them as by-products. Our approach to reaching lower waste amounts is twofold: we aim to reduce the total volume of landfill waste from our own operations and increase the proportion of materials sold as by-products.

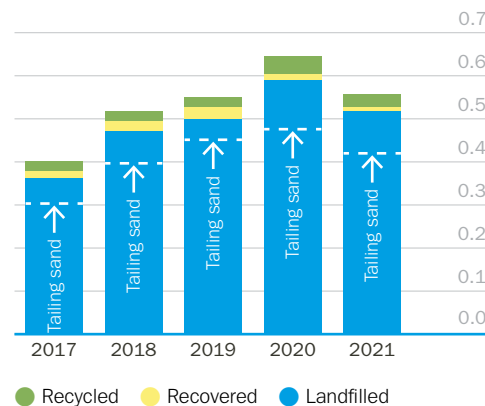
The biggest waste items at Outokumpu are slag that are not used, tailing sand from the mining operation, and sludges, dust, and scales from the stainless steel production. While waste is recycled whenever possible in our own production, our production still generates landfill waste. Therefore, we decided to set a target for waste (other than slag) going to

the landfill to be reduced by 0.5% per year. In 2021, all waste to landfill per tonne stainless steel was reduced from 0.59 tonnes to 0.52 tonnes.

The amount of tailing sands from the mining operation slightly increased in 2021 compared to the previous year, as the production of chrome concentrate increased. Waste management is in our focus and we reuse, recycle and recover as much material as reasonable. Scales and metals from precipitator dust or from slag are recycled and acids are regenerated. Other recovered materials like lime, bricks, and some sludges were mostly used in our melt shops to substitute virgin additive materials like slag formers. Tailing sand is deposited in the pond of the mining area itself.

[Outokumpu's waste management is described in more detail on Outokumpu's website](#)

**Total waste development, tonnes per tonne steel**



### Turning slag into by-products

Outokumpu sold or used 1.24 million tonnes of slag as the main by-product of operations. Slag is an essential material in the steel melting process, and it is made from lime or other natural minerals.

Outokumpu has developed slag-based mineral products for road construction, refractory, concrete production and for water treatment. The use of our slag by-products reduces the amount of landfilled waste, saves virgin materials, and leads to lower CO<sub>2</sub> emissions. For example, in road construction, slag use is an environmentally and economically sustainable solution.

In 2021, Outokumpu established a company-wide working group to develop value-added products of slag and other sidestreams.

In 2021, the use rate (including use, recovery, and recycling) of all slag was 79.0%. The remaining share of slag was sent to landfill. The use rate depends on the local market for construction materials and on the acceptance of secondary material instead of virgin materials.



### Circular economy in action in Tornio

The modern stainless steel industry is a prime example of circular economy in action. In fact, Outokumpu's Tornio mill is Europe's largest material recycling center. Tornio site processes annually over 1 million tonnes of recycled steel, corresponding to around 1.4 million scrapped cars.

"When you buy a new washing machine you may get your old pot back in a totally new form. Your good old friend from the kitchen may have ended up to Outokumpu Tornio mill and been melted into recycled steel and further used by a washing machine manufacturer as part of a brand-new product", explains **Niklas Wass**, Executive Vice President, Operations, business area Europe.

In addition to recycled steel, side streams from the production, such as dust from smelting and scales from rolling are recovered and reused as much as possible.

Other by-products are also utilized to the fullest. For example, the slag generated as a by-product of Tornio's ferrochrome production can be utilized almost completely in road construction insulation or in concrete production.

# Environmental impacts minimized

We aim to reduce our impact on the environment by proactively developing our production processes, energy and material efficiency. Our growing environmental efficiency is based on long-term efforts and continuous improvement.



One of the main attractions in northern Finland is the Tornio river with its thriving ecosystem and economy. It is one of Europe's largest salmon rivers.

The biggest environmental impacts of stainless steel production are dust emissions from melt shop and ferrochrome production processes into the air, water use and discharges from production, use of direct and indirect energy, and the waste created in the production process.

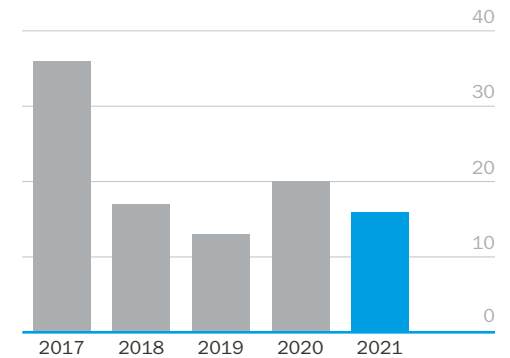
## Environmental compliance

Our environmental network follows closely the environmental performance of our operations, their permit status and legal compliance. The network conducts internal site audits in the production units according to risk screening. Environmental incidents have been reduced continuously. In 2021, there were 16 permit breaches\*, but all were temporary and did not have a significant impact on the environment. Outokumpu reported each incident to environmental authorities, carried out corrective actions immediately or resolved the incidents together with the authorities. No environmental damage was detected.

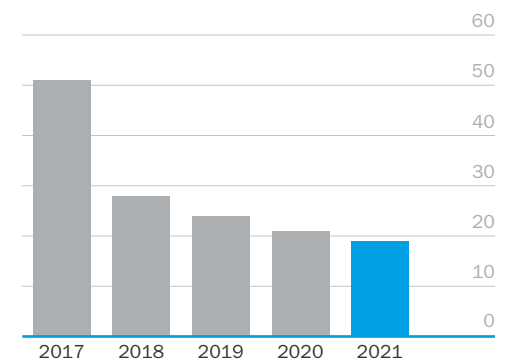
As our main raw material is recycled steel, we take all possible precautionary measures to check the input material for any unwanted content, such as mercury and radioactive contaminated material. In 2021, there were

\* One case was reported after the end of the reporting period.

## Steel melt shop particle emissions, grams/t



## Total amount of environmental incidents at operational sites



Includes all environmental incidents in addition to the permit breaches.

eight sources detected. Five of them could be separated from scrap supply, three were input in the process. All of the incidents were dealt with in accordance with authority guidance and did not cause exposure. We work together with our suppliers to decrease the share of unwanted materials in our production processes. All input material, the liquid steel and waste gas of the melting process, is controlled regarding radioactive contamination.

### Dust emissions remained low

Steel melting and rolling processes generate dust and scales that are collected, treated and, whenever possible, recycled in our own production. For example, raw material metals (chromium, nickel, and molybdenum) are

recovered from dust, sludges, and scales in specialized internal and external recovery plants. Our dust filtering systems are extremely efficient and remove 99% of the particles.

The measured particle emissions from all of our production processes were 230 tonnes in 2021. A large share of the particles, 183 tonnes, were emitted from the ferrochrome production process. However, the emission measurements include high uncertainty causing a remarkable fluctuation in the results year by year. The level of dust emissions from the melt shops is within the limits of environmental permits and in line with BAT levels. No significant further reduction is expected.

### Water withdrawal and discharges

Million m <sup>3</sup>	2021	2020	2019
Surface water	32.3	46.1	45.4
Sea water	13.1	n/a	n/a
Municipal water	1.2	1.1	1.2
Groundwater	2.3	2.6	2.4
Rainwater	1.9	2.4	1.8
<b>Water withdrawal by source</b>	<b>50.7</b>	<b>52.2</b>	<b>50.7</b>

### Water discharges by type and destination

Cooling water out	14.5	13.2	13.4
Wastewater out	21.1	22.1	22.4
Discharge to surface water	13.3	20.9	21.1
Discharge to sea water	6.7	n/a	n/a

### Emissions to water

Metal discharges to water, tonnes	30	44	39
Nitrogen in nitrates, tonnes	1,220	1,070	1,046

### Water is reused as much as possible

Water is used in our production process in annealing, pickling, and cooling. The withdrawal of water is metered and rainwater is estimated by average rainfall and the surface of captured rainwater. It is treated and recycled as much as possible, and only some is discharged to the municipal wastewater system.

All wastewater is treated in the company's own treatment plants or in municipal water treatment systems before it is discharged. The main discharges into water are metals and nitrates. The discharge is measured and supervised by the authorities. Out of the 16 permit breaches that occurred in 2021, six cases were minor non-compliances in wastewater. They were coordinated with authorities, immediately removed and analyzed.

Wastewater treatment depends on the contamination of the wastewater. The water is treated directly in the water circle at the process step and before discharge. According to the needs, treatments are oil skimming, neutralization, flocculation, and sedimentation to extract metals and, when necessary, a Cr(VI) reduction process. Nitrate is often treated in the municipal water treatment to reduce discharge. In these cases, the steel allocated discharge cannot be monitored. The water impact is managed by the municipal treatment operators.

The water used in the production is mainly surface water from rivers and sea and often includes rainwater. The impact of water withdrawal is evaluated at sites where river water is used, and where data on the river

water is available. The impact was screened by the percentage of withdrawn water compared to the river flow on a yearly basis in 2020. None of the sites had an impact on the river, meaning the withdrawal was below 5% at all sites. The river water quality in Avesta, Sweden, remained unchanged with a very limited impact according to an impact study on the river Dalälven.

Outokumpu operates a cold rolling mill in San Luis Potosí, Mexico, in a dry, arid area, where groundwater is a scarce resource for people. The groundwater withdrawal accounts for about 0.27 million m<sup>3</sup> and the freshwater discharge to municipal waste water system was at about 0.07 million m<sup>3</sup>. Water recycling and treatment at this site are especially ambitious to minimize the groundwater impact. According to the water risk assessment, future water stress change will be further evaluated.

### Limited impacts from the mine

Outokumpu operates the only chrome mine in the EU located in Kemi, Finland. We are a member of The Finnish Network for Sustainable Mining, and Kemi mine is committed to the Finnish sustainability standard for mining.

The environmental impacts of the mine are very limited due to the nature of the process. The minerals are in oxide form and very stable with only a minimal amount of sulfur compounds. Chemicals are not used in the beneficiation process, which is based on gravity separation. The Kemi mine is almost self-sufficient with water as it recycles water on site and collects rainwater. The underground mine takes drilling water from old open pits (rainwater), and drilling water is also recycled inside the



underground mining process. All dewatering from the mine is pumped to the closed circuit of the tailings site and concentrator plant on the surface level. Furthermore, a significant amount of 1.0 million m<sup>3</sup> of rain and snow melting waters were collected in the process in 2021. The Kemi mine discharges 2,980,000 m<sup>3</sup> water from the area, including rainwater, whereas the water intake from the municipal supply is only 19,200 m<sup>3</sup>.

During 2018–2021, the Kemi mine carried out a project to increase the resource efficiency of the mine. The project was about the depth extension and building underground mine infrastructure from 500-level to 1,000-level (meters) below surface. The area of the mine site has not been expanded.

The biggest impact on the environment from the mine is nitrates in the discharge water which originate from explosives. However, the amount of nitrates is reduced by natural processes in the internal water recycling system of the mine site. Another environmental aspect is chlorites from underground mine water that originates from natural geological formations. Land use of mining is limited to the existing mining area as mining is underground. Tailing sand is deposited in the tailing ponds of the mine area which will be landscaped as forest when full.

Environmental impact assessment process continued at the Kemi mine in 2021. In the process, the mine is looking to find more sustainable processes related to material recovery.

### Areas of high biodiversity value

Site	Site area in km <sup>2</sup>	% of total owned land
Calvert, US	4.69	18.8%
Dahlerbrück, Germany	0.063	0.3%
Kemi, Finland	9.16	36.7%
Tornio, Finland	6	24.0%

### Biodiversity

Outokumpu is committed to supporting biodiversity and takes it in consideration in its decision-making. The main way for Outokumpu to contribute to maintaining biodiversity globally is through the reduction of greenhouse gas emissions. The production of stainless steel does not occupy or reserve large areas of land or have a significant effect on the biodiversity of the surrounding natural environment. Outokumpu’s production sites are not located in sensitive areas. However, Outokumpu has identified areas of high biodiversity value that are owned by the company or adjacent to our sites. These sites comprise 80% of the total owned land.

Outokumpu’s site in Tornio, Finland is located near Natura protected water areas. No risk to the protection basics of those areas have been identified according to Natura assessment conducted in 2020. The Natura assessment has taken into account the effects of operation on the protection criteria for Natura sites in the vicinity of the Tornio industrial area on the Finnish and Swedish sides. Some very rare biotopes have been found just by the mill area as well as some protected animals, such as a frog species and otters.

The Kemi mine is adjacent to two Natura protected peat and wetland areas but no indication, claim or report of any negative impact of mining activities on biodiversity have been identified. In 2021, a Natura assessment was done to the nearby Kirvesaapa Natura area. The assessment noted that the current production has no significant impacts to the area. Also an ecological survey conducted during 2020–2021 found several different habitat types, vegetation and bird faunas in the nature around the mine area with no impacts from the mine. The Kemi mine cooperates with local ornithological society to monitor the local biodiversity. During 2021, the Kemi mine and Tornio operations have both done fish plantings in addition to permit obligations to increase biodiversity.

In Dahlerbrück, Germany a protected area is partly located on the company’s property. There are e.g. endangered deciduous forests and natural silicate rock biotype with some endangered animal habitats and plant species such as crinkled hairgrass and fern.

In Calvert, Alabama, the US, some 80 hectares of the property is defined as wetland including some restrictions on land use. The site management has identified as a biodiversity aspect that part of the wetland area is home to a wide array of wildlife, like wild turkeys, bears, fox squirrels, gopher tortoises and snakes, among other species. ■



## The rich birdlife makes the Kemi mine area unique

The unique ecosystem of the Kemi mine area has created a diverse environment for different bird species. The area is popular with local bird watchers, and Outokumpu’s cooperation with the local bird watch association Xenus has continued for decades.

The association monitors the birds in the area and organizes various bird tours for its members. “The basin area of the Kemi mine is very rich in birds,” says **Pentti Rauhala**, the association’s long-time member, who has been actively monitoring the birds in the mining area since the 1950s.

“During the breeding season, we visit the area almost daily. You see something great almost every time,” says Rauhala. Various waterfowl, ducks and waders are the most common bird species in the area and, for example, herons nest in the area. ●

# Strengthening our sustainable supply chain

Sustainability is at the heart of our business and our stakeholders require assurance that the materials for their applications are procured and produced in an ethical and responsible manner.

Outokumpu's supply chain activities are guided by our Code of Conduct, Supplier Requirements and our Corporate Responsibility Policy. Outokumpu is also committed to the Modern Slavery Act, the United Nations Guiding Principles on Business and Human Rights (UNGP) and we are implementing the UN's Protect, Respect, and Remedy Framework, as well as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas.

## Strict requirements on ourselves and our suppliers

As our customers require a lot from us, we place the most stringent requirements on ourselves, and we require the same from our suppliers. All suppliers and subcontractors are expected to comply with our Code of Conduct and meet our Supplier Requirements, which require our suppliers to respect and protect human rights as set forth in the ILO's Declaration on Fundamental Principles and Rights at Work, the International Bill of Human Rights, and specifically the rights of particularly vulnerable groups, such as indigenous peoples.

Suppliers are required to have processes and policies in place that ensure the health and safety of their employees, the protection of the

environment, and the selection of sub-suppliers that also fulfil our requirements.

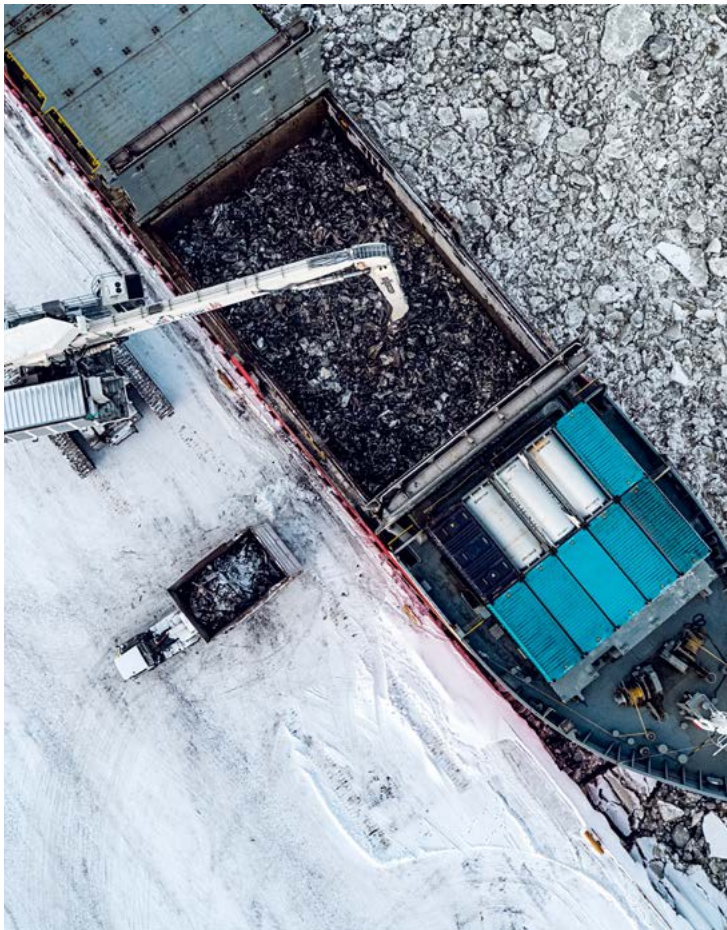
By accepting Outokumpu's Supplier Requirements, our suppliers agree to answering self-assessments and to being audited on site. Outokumpu's suppliers are onboarded and monitored in accordance with our Know Your Business Partner Instruction.

In 2021, Outokumpu had around 6,880 suppliers. In our significant production units, around 50% of the spend was made on local suppliers.

Our procurement activities are divided into general procurement and procurement of raw materials. Raw materials are all ingredients that are in the steel we produce. General procurement purchases everything that is needed for our production activities and everything else we do at Outokumpu.

## A year of accelerated progress

2021 was a year of acceleration for Outokumpu's sustainable sourcing practices. During spring, Outokumpu's Code of Conduct and the Supplier Requirements were updated, adding important sustainability elements and requirements for our suppliers. General procurement engaged in a project assessing their key suppliers with an updated



We are part of a global supply chain by producing stainless steel for leading brands in demanding industries around the globe. Our customers expect us to provide a traceable supply chain and, therefore, we have in place stringent requirements on our suppliers, too.

self-assessment. During autumn, raw material procurement employed a supplier sustainability manager, signed a contract with supplier sustainability assessment platform EcoVadis, extended the supplier evaluation scorecard with sustainability and continued the collection of supplier and product specific CO<sub>2</sub><sub>eq</sub> emission intensities for selected products. Towards the end of the year, resources in the supplier sustainability management team in raw material procurement were increased with three additional positions in the team.

Outokumpu also engaged with an external partner to assess the situation at one of its Brazilian suppliers, after a report published

by the Finnish NGO Finnwatch in February 2021. In addition, Outokumpu conducted the human rights risk assessment in accordance with UNGP together with a third-party advisor, assessing the risks that Outokumpu imposes on human rights, both with its own operations, as well as with its purchasing activities. Read more about the human rights risk assessment in [Human rights management section in this report](#).

## Raw material procurement

Our most important raw material is recycled steel, which primarily originates from Europe

and the US where our melt shops are located. The main alloying element, chromium, originates from our own chrome mine that differentiates us from our competitors. Our mine in Kemi, Finland is the only chrome mine in the EU and we produce ferrochrome for all our steel melt shops and for sale. We are one of the few companies in the stainless steel industry with an integrated production – covering the production from the mining of chromite and ferrochrome production to the melting, hot rolling, cold rolling, and finishing of stainless steel. In 2021, Outokumpu had around 180 raw material suppliers in 52 countries.

## Risk-based approach

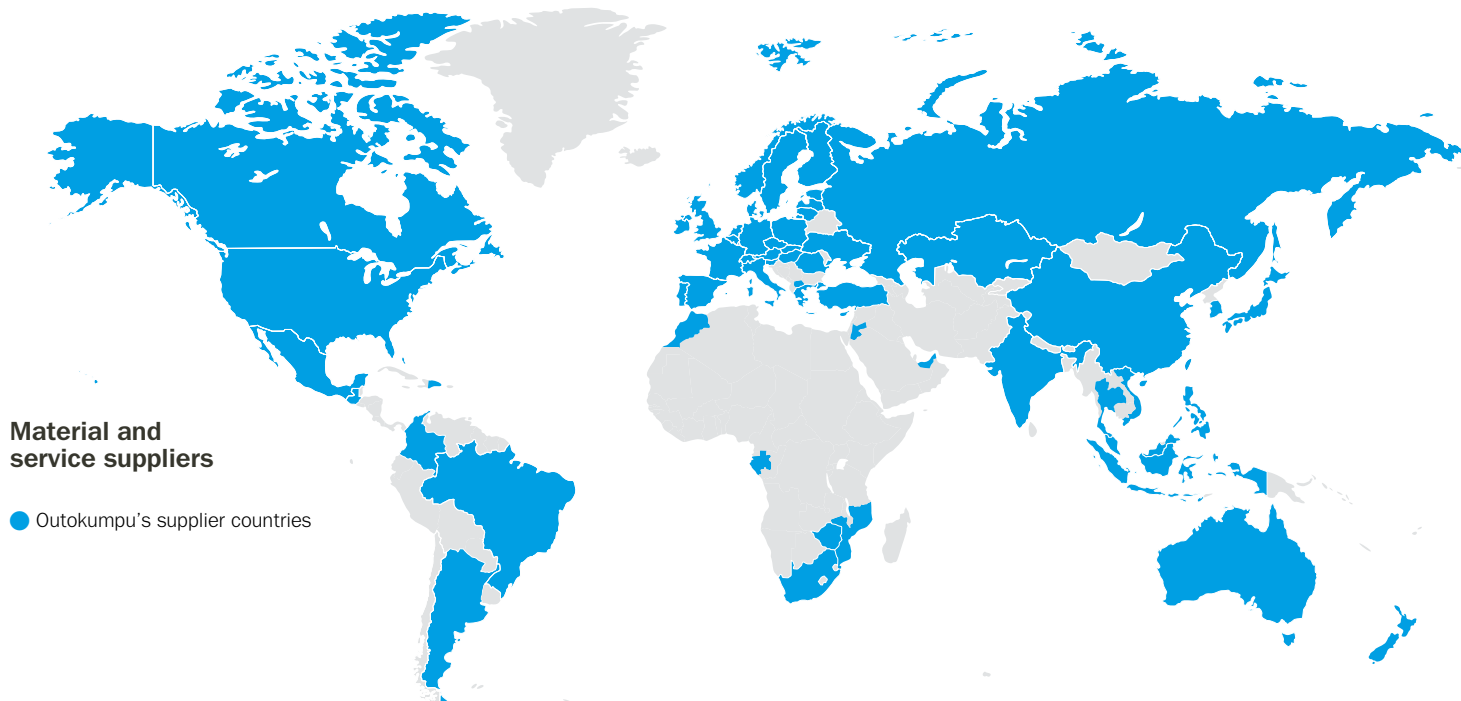
Onboarding and monitoring of raw material suppliers follows a risk-based approach. The countries in which our suppliers operate are mapped against country-based risk indices, against the countries listed in the Dodd Frank Act Section 1502, as well as conflict-affected and high-risk areas (CAHRAs) as [published](#) by the European Union. 100% of our raw material suppliers were assessed with this risk-based approach. In 2021, 21 of Outokumpu's raw materials suppliers operated in countries with an increased risk, covering 22% of the total spend on raw materials.

## Sustainability self-assessments

It is our target to assess all our active raw material suppliers regularly with sustainability self-assessments. In autumn 2021, we partnered with supplier sustainability platform EcoVadis to evaluate the sustainability performance of our raw material suppliers in depth and on a regular basis. 19 suppliers had valid scorecards in 2021, with an average rating score of 51 (scale 1–100), covering 33% of the spend. The suppliers not yet assessed were prioritized for assessment in 2022 using a risk- and spend-based approach.

## Visits, on-site audits, and impact assessments with sustainability focus

Suppliers are selected for visits and on-site audits with sustainability focus based on a number of criteria, including their risk level, their results from the due diligence process during onboarding, their EcoVadis performance, spend and potential sustainability-related incidents.



2021 was still affected by restrictions to traveling due to the COVID-19 pandemic. During the autumn, one supplier was audited by certified Outokumpu personnel due to a radioactivity-related incident. The audit concluded with very good results, highlighting only a few improvement potentials. As a consequence of Finnwatch's report on Outokumpu's supply chain in February 2021, one supplier from Brazil was subject to a focused on-site impact assessment. The assessment was conducted by a third party specialized in sustainability and human rights and accompanied by an Outokumpu representative.

For 2022, several more impact assessments for suppliers in high-risk countries are planned and will be conducted together with third-party experts. Allegations have been raised related to one of our suppliers in Guatemala and the impact assessment has been started in 2021 and will include a visit to Guatemala in early 2022. During the assessment we do not only visit our supplier, but we also engage with external stakeholders, such as the affected communities, NGOs or other institutions.

### Supplier performance evaluation and improvement support

During 2021, 16 of Outokumpu's raw material suppliers were evaluated towards their overall performance, covering 61% of the spend. The average score was 89 (scale 1–100). The evaluation focused on four areas: procurement, quality, technology, and logistics. Towards the end of the year, Outokumpu's raw material procurement extended its supplier performance evaluation. In addition to the four existing areas, the sustainability performance of a

supplier is considered in the evaluation. The sustainability performance is measured with a number of criteria, including the score reached in the EcoVadis self-assessment. The new criteria will be in use from 2022 onwards.

### Conflict minerals

The term "conflict minerals" refers to minerals originating from conflict-affected and high-risk areas. Especially tin, tantalum, tungsten, and gold (the "3TG"), but also cobalt are linked to risks in the supply chain. Those risks include the risk of contributing to or being associated with significant adverse impacts, including serious human rights abuses and conflict. Outokumpu adds tungsten and cobalt to a small number of its products. Outokumpu takes into account the OECD Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict Affected and High Risk Areas. New and existing suppliers of tungsten and cobalt are requested to provide information on their supply chain using the reporting templates of the Responsible Sourcing Initiative. In 2021, all suppliers of tungsten and cobalt provided the reporting templates, and no tungsten or cobalt originated from conflict-affected and high-risk areas.

### Capacity building

During 2021, capacity building in the areas of social and environmental issues within raw material supply chains took place in form of five trainings related to the topics sustainable procurement strategy, CO<sub>2</sub> emissions, supplier management including sustainability, EcoVadis concept, and human rights. 50% of category managers and buyers participated in all trainings, and everyone participated in at least

one of the trainings. The average participation rate was 71%.

## General procurement

General procurement supplies all of the materials and services regarding all of the production sites in Europe. General procurement purchases production consumables, energy and utilities, process and auxiliary equipment, spare parts, general supplies, maintenance, and other services and transportation.

In 2021, the general procurement had approximately 6,700 suppliers in 49 countries. 256 suppliers have been qualified as key suppliers, and they cover over 60% of the total spending.

### Risk-based approach

The general procurement applies a risk-based approach in supplier management. A supplier shall be qualified before they can be approved and added to the Outokumpu supplier portfolio. In the qualification process, the potential risks and/or opportunities are identified and evaluated. This ensures that the suppliers comply with the Outokumpu Supplier Requirements and can provide conforming products or services on a consistent basis.

When introducing a new supplier, the supplier needs to confirm by signing a letter of confirmation that they fulfil the Outokumpu Supplier Requirements, Code of Conduct and ethical principles.

Suppliers from major sanctioned countries as well as countries with limited regulatory

quality, rule of law, control of corruption and environmental performance may cause a higher supplier risk. Therefore, supplier qualification prior to supplier approval and periodic requalification of the existing suppliers in risk countries is required.

Risk countries are defined as major sanctioned countries as per Know Your Business Partner Instruction. Countries are classified as high, medium, or low risk categories. The compliance and sustainability teams are consulted for defining the risk countries.

In 2021, financial screenings for 145 new and existing suppliers were conducted in general procurement. Of the screened suppliers, four are located in medium or low risk countries, which are defined in the Know Your Business Partner Instruction. Screening is always carried out for new suppliers as well as for existing suppliers when risks are identified, for example in a financial credit or management change. In addition, the master data team carries out compliance screening as a part of the onboarding process for all new suppliers, and the compliance team does periodic screenings for all active suppliers as well as conducts case-by-case enhanced screenings, as required.

### Sustainability self-assessments

General procurement makes self-assessments to evaluate suppliers. The self-assessments include auditing the transparency of the supplier's production chain from the suppliers' raw materials to the delivery of finished products and it covers the areas of ethics and sustainability, occupational health and safety, environmental management, quality, supply and production control, supply chain and

supplier management and company management. The self-assessment questionnaire is available on Outokumpu's website.

Self-assessments are carried out for key suppliers on a regular basis as well as for new and existing suppliers when quality, production, sustainability, or similar kinds of risks or claims have been identified. If there have been many claims for the same supplier during a short time period, it is always considered imperative to carry out a self-assessment and an on-site assessment.

In 2021, the general procurement function executed an extensive self-assessment program. Approximately 220 self-assessment questionnaires were sent out to our key suppliers. By end of the year, 182 answers had been received and evaluated. The assessment

reports are shared with the suppliers, and corrective actions for non-conformities as well as improvement opportunities are agreed upon. A remarkable number of good practices were also noted in the evaluations. This was a quantum leap forward in quality and sustainability management with our key suppliers, which is one of the strategic focus areas for 2022. In addition to the key supplier self-assessments, a couple of other self-assessments have been carried out regarding the quality or reputational risk or when a new supplier was introduced in 2021.

### Visits and on-site audits with sustainability focus

Due to the COVID-19 pandemic, no on-site audits were conducted during 2021. As a continuation for self-assessments, on-site

audits will be continued when the pandemic situation allows for it. Suppliers for on-site assessments are selected based on the results of the self-assessments. Both self-assessments and on-site audits are used as continuous improvement tools and for fostering closer and more open relationship between the suppliers and Outokumpu.

### Supplier performance evaluation and improvement support

To drive the continuous improvement of suppliers, the key suppliers' performance is regularly evaluated by scorecards to identify improvement opportunities. Suppliers are assessed by using the following criteria: technology, quality, supply, cost, safety, environment, and financial risk. The performance evaluation is carried out together with

the stakeholders from the production and led by the category manager. The results are used for defining the improvement actions with the supplier. The supplier performance assessment was carried out for 54 key suppliers in 2021, with an average rating score of 3.6 (on a scale of 0 to 5).

### Capacity building

Workshops about the self-assessments have been arranged for the category managers relating to the self-assessments results, evaluation criteria and minimum requirements in the self-assessment categories including ethics, sustainability, and human rights. ■

## Summary of actions in sustainable raw material sourcing taken in 2021 and planned for 2022

### 2021

<b>Commitment to the UNGP</b>	<ul style="list-style-type: none"> <li>• Commitment to the United Nations' Guiding Principles of Business and Human rights (UNGP)</li> <li>• Policy review to reflect this commitment</li> <li>• Renewed Code of Conduct and Supplier Requirements with emphasis on human rights</li> <li>• All personnel trained on the renewed Code of Conduct</li> </ul>
<b>Human rights / UNGP implementation</b>	<ul style="list-style-type: none"> <li>• Human rights risk assessment with Deloitte in accordance with the UNGP completed</li> <li>• Capacity building on human rights in procurement</li> <li>• Engagement of external experts for assessing suppliers' human rights impacts</li> <li>• Identification of high-risk suppliers for on-site assessment program with external experts</li> </ul>
<b>Supplier requirements and onboarding</b>	<ul style="list-style-type: none"> <li>• Renewed Supplier Requirements with emphasis on human rights</li> <li>• Amendment to the Supplier Requirements for raw material suppliers</li> <li>• Integration of sustainability into our supplier evaluation</li> <li>• Review of suppliers' onboarding process and intensified human rights due diligence</li> </ul>
<b>Supplier monitoring</b>	<ul style="list-style-type: none"> <li>• Increased resources in supplier sustainability</li> <li>• Development of incident management process</li> <li>• Engagement of sustainability platform EcoVadis to assess suppliers</li> <li>• Supply chain mapping extended to beyond our direct suppliers</li> <li>• Collection of supplier-specific CO<sub>2</sub> emission intensities for selected raw materials started</li> <li>• Three on site-visits after the ease of travel restrictions</li> <li>• Preparation for next human rights impact assessment including site visit in Guatemala</li> </ul>

### 2022

<b>Human rights / UNGP implementation</b>	<ul style="list-style-type: none"> <li>• Finalization of Human Rights Policy</li> <li>• Integration of human rights risk assessment and due diligence process into existing risk management</li> <li>• Definition of actions for identified salient human rights risks, including learnings from on-site assessment in Brazil</li> <li>• Intensified human rights due diligence to be implemented in the supplier onboarding process</li> <li>• Assessment program for identified high-risk suppliers together with external experts</li> </ul>
<b>Supplier requirements</b>	<ul style="list-style-type: none"> <li>• Development of the Outokumpu Supplier Code of Conduct</li> <li>• Contract review to ensure that all contracts cover sustainability elements</li> </ul>
<b>Supplier monitoring</b>	<ul style="list-style-type: none"> <li>• Continue collection for supplier-specific CO<sub>2</sub> emission data</li> <li>• Increase the number of suppliers into EcoVadis rating system</li> <li>• Evaluate suppliers with new evaluation template including sustainability</li> <li>• Increase number of on-site visits, audits and impact assessments</li> </ul>



## Working in sustainable supply chain

A Finnish NGO, Finnwatch, reported problems with our ferronickel supplier, the Brazilian mining company Vale. Hannah Stratmann, Supplier Sustainability Manager at Outokumpu, takes us through the case.

### What happened?

Finnwatch reported problems with Vale's Onça Puma mine in Brazil and criticized our supply chain monitoring. We took the information seriously and immediately started to investigate the issue.

### What have you done during the year to act on the situation?

A lot. Immediately after the report, we decided to let an external partner conduct an independent impact assessment into Vale's Onça Puma mine in Brazil. This assessment was completed during 2021. We also developed and described a process for ESG incidents, to make sure that reported cases are handled with appropriate attention and actions.

On top of that, we have enhanced our entire supplier monitoring. We have reviewed our Supplier Requirements and set a stronger focus on social responsibility and human rights, including the UN Guiding Principles on Business and Human Rights. We integrated sustainability as a criterion in our supplier evaluation and we started to map our supply chain beyond our direct contract partners.

We also conducted the human rights risk

assessment in accordance with the UNGP, together with experts from Deloitte. The assessment focused not only on Outokumpu's own activities, but also on the risks within our supply chain.

### What has the biggest change been?

Maybe the biggest change has been that Outokumpu has now partnered with supplier sustainability platform EcoVadis to evaluate the sustainability performance of our raw material suppliers on a regular basis. The results of the ratings are considered in our supplier scorecards, together with procurement performance, quality, logistics and technology. They are also an input to our on-site audit planning – with easing travel restrictions we are going to pick up our activities in this area.

### Might there be more cases like Vale?

We do have other suppliers in high-risk countries in our supply chain. Therefore, we started last year a human rights impact assessment program to investigate our raw material suppliers in high-risk countries. We

started with Brazil and now continue with Guatemala, with other countries to follow. We will be supported by the external experts that supported us in Brazil.

### Have you visited Vale and the mine?

Yes, we have been in dialogue with Vale and affected people. We have met with Vale, the Xikrin indigenous people and several institutions in Brazil in December 2021, together with an independent expert. We discussed with the Xikrin indigenous people to hear their opinions on the process and learn about their lives and their problems. We also got very positive feedback and were invited back. Actually, we were told that it was the first time that a European customer showed up there and showed interest in the indigenous people directly.

### What is the purpose of these visits?

As a customer, it is our responsibility to ensure that our suppliers have effective processes and actions in place to protect the environment and human rights. If the assessment comes to the conclusion that

the processes and/or mitigation actions of a supplier can be improved, we seek to agree on these improvements together with the supplier. To make sure that the actions are really effective, we may define indicators that can be monitored over time, and we ask our supplier to communicate those indicators to us.

### What remains to be done?

Monitoring suppliers is not a project but continuous work for us. In 2022, we will continue to increase engagement with our suppliers, and I am happy to announce that my team will be strengthened with additional resources. Together we will for example finalize the review of our onboarding process and put a higher emphasis on human rights due diligence. We have also started an human rights impact assessment program for suppliers in high risk countries together with the same independent expert that supported us with the investigation in Brazil. We will for example visit one supplier in Guatemala, where we are also going to investigate the potential impacts of the company on indigenous communities and other external stakeholders. ●

# Proactive focus on safety

At Outokumpu, we operate safely always. We believe that continuous strong safety performance correlates with improved quality and operational efficiency. Everyone at Outokumpu has the right to a safe and healthy working environment.

Taking every step necessary to protect ourselves and our colleagues, we are continuously reducing our accident record year on year. We aim to be the industry leader in safety with the vision of zero accidents.

## Proactive safety measures

Our proactive safety management system, which includes hazard recognitions and Safety Behavioral Observations (SBOs), supports us in striving toward our safety targets. Hazard recognitions and SBOs are utilized to flag potential risks and unsafe acts and behaviors before they lead to accidents. Lessons from past incidents are shared with other sites in the monthly Safety Call hosted by the CEO.

Our daily work is guided by common safety principles, standards, guidelines, and our ten Cardinal Safety Rules. Safety audits are performed regularly according to a standardized audit program.

Our safety network which comprises of every site safety manager and is coordinated by the Group safety function meets monthly to ensure up-to-date safety topics are communicated effectively and best practices are shared and adopted.

## Quarterly safety themes

In late 2020, quarterly safety themes were launched at Outokumpu. Each quarter, a specific theme is selected, highlighting the most important issues in safety. The quarterly themes reflect the areas in safety where we have the most room for improvement. These focus areas have been determined based on analysis of previous accidents and their causes.

By setting out improvement objectives for the specific themes each quarter, sites can review their practices and share findings and best practices with other sites. Sites are also encouraged to come up with ways to involve employees to highlight the importance of each theme and cascaded key learnings throughout the organization.

In 2021, the first quarter safety theme was hand safety, as hands and fingers continue to be the body parts with most injuries. The theme for second and third quarter focused on contractor control. The theme was introduced over the summer maintenance period where outputs of the theme could be implemented and measured to gain maximum effect. The safety theme for the fourth quarter focused on reviewing our acid handling procedures to incorporate all acids and the hazards and



Oihana Ramos started as Outokumpu's Head of Health and Safety at the end of 2021. "My experience in safety is originating from the mills, working side-by-side with operations and maintenance. Safety has always been the main priority also in my previous roles."

**Work-related injuries\***



\* Per 1 million working hours.

risks associated with managing dangerous substances.

**Improved safety despite the COVID-19 pandemic**

In the start of the pandemic in 2020, Outokumpu took several rigorous safety measures on the Group level to mitigate the negative effects of the COVID-19 pandemic on people and operations. The implemented measures were proven to be effective with very limited impact on our operations while maintaining the health and safety of our employees.

During 2021 and with the roll-out of the vaccinations, the focus in the management of the pandemic was transferred from the Group-level crisis management team to local crisis teams who implement site-specific rules and instructions according to the regulations and recommendations of local authorities.

**Work-related injuries by region, accident and employee type**

	Group	BA Europe	BA Americas	BA Long Products	BA Ferro-chrome	Employees	Contractors
TRIFR <sup>1)</sup>	2.0	2.2	1.8	1.1	3.3	2.0	2.3
LTIFR <sup>2)</sup>	1.3	1.5	1.0	0.0	2.2	1.2	1.3
Total recordable injuries <sup>3)</sup>	45	26	11	2	6	33	12
Fatalities	0	0	0	0	0	0	0
Lost time injuries	28	18	6	0	4	21	7
Restricted work injuries	2	1	0	0	1	0	2
Medically treated injuries	15	7	5	2	1	12	3

<sup>1)</sup> Total recordable injury frequency includes fatalities, lost time injuries, restricted work injuries and medically treated injuries, per million working hours.

<sup>2)</sup> Lost time injuries including fatalities and lost time injuries, per million working hours.

<sup>3)</sup> Includes fatalities, lost time injuries, restricted work injuries and medically treated injuries.

In Germany and the Calvert site in the US, Outokumpu established vaccination centers for our employees during 2021. In Calvert, the center offered vaccines also to the neighboring communities in the rural area where access to vaccines was limited.

**Safety performance**

Outokumpu uses total recordable injuries per million working hours of employees and contractors (TRIFR) as the main safety performance indicator. Group TRIFR declined from the previous year and was 2.0 against the target of <2.2 (2.4). Group LTIFR (lost time injuries per million working hours) was 1.3 against the target of <1.2 (1.4).

The rate of all work-related accidents (total recordable injuries and first aid treated injuries per million working hours) was 11.9 (13.7).

Proactive safety action frequency was 8,185 (5,353). This includes reported hazard observations, SBOs, and other preventive safety actions per million working hours.

**Health and wellbeing**

Outokumpu encourages its employees to take care of their physical health by offering various exercise benefits and discounts to sports and well-being services. Different health support programs are also run across our sites. In addition, occupational hygiene measurements are being carried out at the Outokumpu sites to ensure a healthy working environment.

The number of occupational diseases diagnosed in the Group was 0 (2020: 0). The total absentee rate was 3.1% (3.3%). ■



**Hand safety in focus**

Quarterly safety themes for 2021 were launched with the theme of hand safety, as hands and fingers continue to be the body parts with most injuries. For example in 2020, over half of all recordable accidents involved injuries to wrists, hands or fingers.

As a part of the theme in 2021, all sites implemented the Hands Are Not Tools program. For example, in Krefeld, Germany, the program was started by identifying the ten most hazardous manual tasks that could lead to hand injury. For these tasks controls were put in place immediately to lower the risk, while technical solutions were planned to replace manual tasks with automated processes to eliminate the risks completely.

As a part of the safety theme, other sites came up with their own safety innovation as well. In Tornio, Finland, operators produced their own safety videos demonstrating how to prevent hand injuries with new tools. In Calvert, the US, team members were encouraged to focus on hand safety at home too and discuss the theme with their families. To support the discussions at home, a handout for children to fill in could be printed. Top 15 submissions were selected and given gift cards as a prize. ●



# Building the best work environment



Even during the pandemic, approximately 70% of our team members have continued to work at our mills. Working in a closed bubble has become routine.

2021 was heavily impacted by the continuing pandemic and the strong rebound in demand. We are looking ahead to how we can develop the company going forward and promote diversity, equity, and inclusion. We want everybody to feel comfortable and engaged to work at Outokumpu.

## A year of closed bubbles and remote work

During the pandemic our priority has been to ensure the health and safety of our team members. Countless actions have been taken, starting with global and local guidelines on social distancing, hygiene and cleaning, travel bans as well as limiting face-to-face meetings and visitor access.

Thanks to the continuous effort and commitment of our operators – working in several shifts 24/7 – our mills have been running at high capacity throughout the year, and we have been able to deliver top-quality stainless steel to our customers. Working in a closed bubble and restricting social contacts has become routine at our mills, even with a heavier workload and very strong demand for stainless steel – approximately 70% of our team members have worked continuously at the mills.

To protect our employees and business and avoid further infections, we have encouraged remote work whenever possible. Towards the end of the year, we prepared for a hybrid working model, which aims for a balanced combination of office work and remote work and emphasizes trust and flexibility.

The company's premises are the primary place of work for all personnel. However, employees, whose tasks are suitable for remote work will have the possibility to work remotely. We want to be as flexible as possible but also maintain the good elements of working together, acknowledging that face-to-face work in the office is important for workplace well-being, team spirit, collaboration and connecting to company and its priorities. We have created a common framework for remote work for our operations; however, as the situation varies by country, local guidelines are to be followed.

## Building more dialog during the pandemic

To map the personnel's views on future steps for the company, internal webinar discussions were hosted by members of the Outokumpu Leadership Team in the second quarter. Altogether 19 company-wide virtual sessions were arranged in English, Finnish, Swedish, and German. These Our Way Forward webinars were very well received, attracting over 1,000 team members to discuss the progress of our strategy as well as market development. Team members were also able to share their views on how work should be organized in practice after the pandemic when we take the company forward together. We started the webinars with team members working in the office. The plan









## Bringing our Ways of Working to live

Amidst the COVID-19 restrictions, at our sites we have engaged our teams to bring our Ways of Working to live through team discussions. In Degerfors, Sweden, kicking off our Ways of Working in practice included conducting a series of workshops with teams in shifts, where we asked: “What do our Ways of Working mean for your own team?”

During the workshops, all six elements of Ways of Working were communicated, and participants were encouraged to work on examples from their daily work.

“We have had good initial discussions with operators. The workshop is a good opportunity for employees to reflect on what Ways of Working mean for them. The participants have been active and contributed to the discussion,” said **Albin Karlsson**, who heads the team at the cutting lines. ●

## Outokumpu Ways of Working

	<b>We operate safely. Always.</b>	We work safely, comply with our cardinal safety rules, assess potential risks and take appropriate actions to mitigate them.
	<b>We leverage the power of one Outokumpu.</b>	We work together, share and combine our knowledge, across functions and regions to create best value for our customers.
	<b>We deliver.</b>	We live up to our promises with clear roles and clear accountabilities. We have a passion for continuous improvement.
	<b>We grow people and value diversity.</b>	We foster diversity and create work environment that allows all team members to contribute and develop.
	<b>We act sustainably.</b>	We are driven by creating sustainable impact, environmentally, socially and economically.
	<b>We are a trusted partner.</b>	We are a reliable and trusted partner towards all our stakeholders, our customers, employees, investors and the communities we operate in.

is to continue staff meetings at the production facilities as the pandemic eases.

### Embedding Ways of Working into daily work

Our Ways of Working steer our journey toward our vision of being our customer’s first choice in sustainable stainless steel. We have outlined the Outokumpu Ways of Working to clarify and define the way we need to work together.

To embed the Outokumpu Ways of Working into our daily work, our teams have been empowered to start discussions on what the Ways of Working mean in our every-day business and to observe how we conduct ourselves in relation to these six fundamental elements. By creating a joint understanding of how we work together, and especially recognizing behavior supporting our Ways of Working, we are better equipped to evaluate necessary areas of improvement.

For example, in relation to being a trusted partner, special attention was paid to compliance in line with the launch of our renewed Code of Conduct. To raise knowledge and awareness of ethics and compliance topics and to start discussions on ethical dilemmas that we might face during our daily activities, we introduced ethics and compliance-related case scenarios that managers can go through and discuss with their teams. These case scenarios covered, for instance, sustainable business practices and the importance of knowing our business partners.

Going forward, our teams will work together to identify improvement areas and recognize successes. By emphasizing the significance of changing conducts and behaviors in relation to the productivity and well-being of team members, we are encouraging our team leads to recognize also small changes, ideas, and

actions to improve the alignment in our Ways of Working.

### Long-term development in organizational health

Our global employee survey Organizational Health Index (OHI) was conducted in September–October 2021. The OHI survey is an important part of Outokumpu’s development towards a truly high-performing organization, and we will continue the work to improve our results in organizational health. Moreover, these regular surveys support our Ways of Working by creating a common understanding concerning our consistency in our daily behaviors and actions.

Our employees’ thoughts and feedback are important in creating our future together, as our ambition is to build the best work environment for all of us at Outokumpu. Our world-class participation rate – even during

the pandemic – demonstrates the strong engagement of our team members with the company. With a response rate of 86% and over 19,000 open-ended answers, the survey makes visible our employees' views all over the world and provides a comprehensive picture of the company to develop both organizational health and performance.

The overall company score in the survey was 68. After two exceptional years, we consider the overall result positive, although slightly weaker than in 2019. Looking further back, we can see great improvement in our organizational health, as our index score started at 50 in 2016. With a score of 68 in 2021, we are still in the second quartile against all industry benchmarks.

However, across our sites, business areas, functions and locations, the differences in the results have increased. The result in the business area Europe was slightly weaker than in 2019, and also in the business areas Ferrochrome and Long Products the results decreased, whereas in the Americas both response rate and the result improved. Group functions' results are substantially better compared to the site results.

The OHI survey encourages us towards long-term development and addresses underlying issues which must be understood before shifts in behavior and culture can be realized to drive organizational health. Even small changes in mindset or behavior can have a great impact and they are needed to improve our organizational health: everyone's input is necessary.

To support our teams in their discussions regarding the results of the OHI survey, we have created a new online game. When discussing the results and defining the necessary development actions, we stress that change is not a top-down exercise. Organizational health improves efficiently and sustainably when you drive it from top to bottom, bottom to top and side to side.

As before, with the help of the survey results we will identify our strengths and development areas. To drive improvement, a number of initiatives will take place according to the local areas which need development. As a whole, the OHI survey of 2021 provides a baseline for future development and, based on the survey findings, we will develop our people strategy for the coming years.

### Promoting diversity, equity, and inclusion

Our new sustainability strategy launched in May takes us further with our environmental, social, and governance (ESG) foundation. Sustainability is integral to our strategy, including global activities on diversity, equity, and inclusion. During 2021, we prepared activities for the following years to promote diversity, equity, and inclusion within the Group at all levels globally.

We take pride in the diversity of our team, which is made up of people living across several continents and of many different nationalities, cultures and backgrounds, religions, genders, sexual orientation, and age groups.

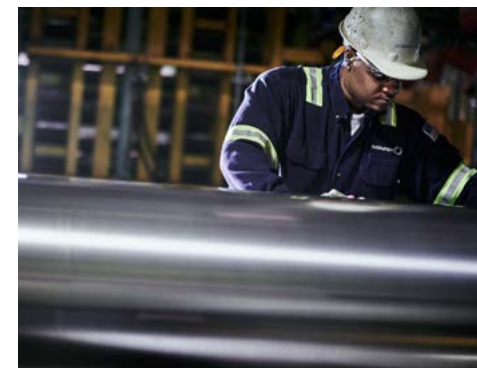
For example, in the Americas we have established a Diversity, Equity, and Inclusion initiative to ensure our team actively reflects diversity and to provide a work environment that promotes equality and inclusion. The initiative is led by the Americas Management Team. The aim is to attract and retain the best talent through growth and development while yielding positive results in the organization's success measures. To increase transparency, we share the demographics for our recruiting efforts with our Team Member Networking Groups.

In 2022, to support creation of a work environment that allows all team members to contribute and develop, we will conduct a global inclusion survey and create awareness of the topic throughout the organization. We want all team members to feel welcome and that they are equally heard and have equal opportunities. We believe that by making this company as diverse as possible, we encourage different points of view, different talent, and benefit from different life experiences, thus making us a much stronger organization.

### Improving leadership

We believe it is essential that leaders are equipped to perform at the top level in their role. To make this possible, we are improving our leadership by implementing the Leadership Pipeline program. Our Step-Change in Leadership Excellence program develops leaders at all levels, bringing clarity to the expectations of the role and pushing accountability forward in the organization in a coherent way.

During the Leadership Excellence program leaders practice how they can create value in leadership roles and what the main responsi-



## Strengthening marginalized voices

To shed light on underrepresented groups and provide a positive platform to ensure these underrepresented voices are amplified we have implemented a Diversity, Equity, and Inclusion initiative in the Americas.

The goal of the initiative is to ensure that our team actively reflects the diversity in the communities we serve and offer a work environment that promotes equality and inclusion. To provide an outlet for strengthening marginalized voices, networking groups were created to focus on African American, Latin and Hispanic, and female team members. The groups welcome all employees who are passionate about the cause, regardless of their ethnicity and gender. Together the groups work toward the common goal of engaging and empowering team members to use their voices in a proactive way. ●

bilities are in leading people, whether they are leading other individuals, other leaders, or a function. Empowerment is linked with leadership development activities, incorporating the idea of helping others to succeed and gaining results through others. This mindset generates more role clarity, well-being, and tools to focus on adding value.

Across our organization, management teams have participated in multiple Team Excellence workshops, in which the teams learn to function as a cohesive unit, with a clear team purpose and vision, aligned priorities and key deliverables in alignment with the company strategy. This Team Excellence program is part of our Step-Change in Leadership Excellence program, and it will be offered to teams also during 2022. So far, over 20 teams have participated in these Leadership Excellence workshops, supporting team improvement activities globally.

The associated Leading Leaders and Leading Others training modules enable individual leaders to complete the transition into the leadership role that needs to be executed to add the most value to their team and the organization. The Leadership Pipeline methodology is also implemented in our License to Lead shift-leader program, which is targeted at first-line managers in operations.

By investing in leadership development and strengthening our leadership capabilities, we can significantly impact our business performance and organizational health. To assess the effects of the extensive leadership training, we plan to conduct an external assessment on impact measurement.

## Developing our talents and future leaders

The key target of our talent management is to ensure we remain competitive and flexible in how we promote and develop our future leaders. The ambition of this initiative is to ensure we have enough successors within Outokumpu. We have established several processes and programs to build and future-proof our talent and succession pipeline and to secure our competitive advantage in the future.

Our talent management team has defined the roadmap for the coming years, and our more rigorous talent management process aims at ensuring that we attract and hire, develop, and deploy graduates who have the potential to go beyond the role that they are carrying out today, and who have the drive to grow internationally. In our international and process-driven organization, key roles require international and cross-functional experience accompanied by excellent leadership skills.

We have established extensive programs and development opportunities to grow our talents and different talent pools: young talents, those with high potential, and top leadership. For example, our global Form your Future program sets the basis for international career growth at Outokumpu, whereas our International Talent Project initiative provides young talents with an opportunity to work on important projects in cross-functional and global teams along with a possibility to grow their networks and understanding of the company and stainless steel across borders and functions.

During 2021, we have continued to improve and harmonize our HR processes to bring

about efficiency and a better end-user experience for managers and employees. As part of this process, a harmonized recruitment process was launched in Europe & APAC at the beginning of the year. The process was designed to help us work more efficiently, increase productivity, and provide a better experience for our recruiting managers and candidates. The harmonization translates also into process improvements and greater clarity.

## Building capabilities

Despite the on-going COVID-19 restrictions and limited options for arranging face-to-face training sessions, we continued with training and coaching efforts to further increase the skills sets of our team members to enable the best execution of our goals. Again, we were able to maintain a fair number of training and development measures despite the social distancing restrictions and travel guidelines.

Building on the experience, training, and materials from the previous year, we supported our own subject matter experts and managers by enhancing their virtual training skills. We have also recognized the need to support teams and team members working and meeting remotely, especially those in the matrix organization. The provision of tools and support will carry on into 2022.

During the year we continued to train and certify colleagues across our sites as Lean Six Sigma Green Belts and Black Belts to support and facilitate continuous improvement in our operations. For example, in Terneuzen, the Netherlands, we applied lean and agile methods and practices in Green Belt training,



## Growing talent

International Talent Project initiative provides our young talents with an opportunity to demonstrate their strengths and capabilities, practice working in cross-functional and international teams, and grow their networks.

All talents are matched with a challenging business project outside of their own function. Taking talents out of their comfort zone and letting them work in areas new to them allows to gain new perspectives and grow their experience.

The teams worked passionately, and from start to finish virtually, on their projects, participating also in project management training. In October, participants finally met face-to-face and shared the outcomes of their projects with other participants, project leads, and senior leader sponsors. All teams received good feedback and the project outcomes will be implemented in respective functional areas. ●



## E-bikes offered to employees in Finland

The well-being of our employees and protection of the environment are important for Outokumpu. When both aspects can be combined, we don't hesitate to take action.

During 2021, Outokumpu decided to support employees in Finland to acquire bicycles as an employment benefit, which is supported by the government. Specifically, e-bikes were made available to order for employees. The bicycle can be used for commuting between home and work but in the spare time too.

The acquisition of bicycles also supports Outokumpu's sustainability goals and our commitment to reducing carbon emissions.

Cycling and outdoor activities refresh the mind and increase endurance both at work and in leisure time. Commuting helps to achieve the minimum amount of health exercise recommended and reduces daily sitting. It also reduces CO<sub>2</sub> emissions when replacing commuting by car. ●

starting with online sessions for theory training as well as coaching sessions.

As our Code of Conduct was revised in 2021, our employees were trained on the topic during the year. To encourage our team members to improve their project management skills, we offer several options to get acquainted with methods and tools for running projects and managing change successfully. We are also piloting a program for young and internationally-oriented production workers, and we are building a global onboarding program for new joiners.

In Sweden, we trained approximately 1,400 people in relation to our digital transformation project Chorus, including the ERP renewal. The training sessions on the tools and processes, for instance, were completely virtual, and the attendance rate was over 90%.

In 2021, a total 91% of Outokumpu employees participated in training sessions and programs. The amount of training days continued to be lower compared to pre-pandemic levels, despite the significant increase in online training, but in 2021 we saw an increase compared to 2020. During the year, the overall number of training and development days amounted to 12,301 (2020: 9,978) and 98,411 hours (2020: 79,825). Average training hours per employee was 10.5.

### Setting and achieving targets

The core of our performance management is the My Performance Commitment process (MPC). The systematic MPC process ensures the setting and achieving of individual performance and behavior targets aligned with

## Our people by region

	2021	2020	2019
Finland	2,394	2,517	2,502
Germany	2,043	2,326	2,555
Sweden	1,794	1,888	1,975
The United Kingdom	469	502	560
Other Europe	750	747	727
<b>Europe</b>	<b>7,450</b>	<b>7,980</b>	<b>8,319</b>
The United States	1,011	1,010	1,064
Mexico	804	786	859
South America	80	84	87
<b>Americas</b>	<b>1,895</b>	<b>1,880</b>	<b>2,010</b>
<b>Asia/Rest of the world</b>	<b>50</b>	<b>55</b>	<b>61</b>
<b>Group total</b>	<b>9,395</b>	<b>9,915</b>	<b>10,390</b>

This table presents the number of personnel, while elsewhere in the report we use full-time equivalent personnel.

the company strategy. It also provides tools to discuss development needs and to ensure managers and employees understand their tasks and how they contribute to business targets and the strategy.

In 2022, we will incorporate our Ways of Working and the Leadership Pipeline methodology in the behavior evaluation of My Performance Commitment development discussions to ensure consistent behavior and provide tools for managers to assess performance and development as well as to ensure high-quality and consistent leadership.

The My Performance Commitment process is documented in our common HR platform. In 2021, 98% of employees in applicable countries had a regular performance development discussion with their respective manager. The remaining 2% are mostly on parental

or other long-term leave. In countries where local contracts or regulations do not make it possible to have performance development discussions, Outokumpu follows the local procedures.

Outokumpu's remuneration principles and framework was largely unchanged from the year before: incentive plans remained the same. Salary budgets were set at very moderate market-based levels observing the overall market situation. For the excellent work and stretch during the year of 2021 we are rewarding all our employees with an extra payment along local agreements. Our long-term incentive programs continue to focus on emphasizing shareholder value creation and ownership culture and setting a performance culture through the Group and business area-level target setting. The commitment to our strategy is reflected in the incentive programs

within Outokumpu. In 2022, we will introduce sustainability targets into our incentive plans.

### Simplified and delayed organization

As part of cultivating a lean and agile organization, de-layering and reorganization of the organization continued in 2021. We have built a simplified and flat structure with clear roles and responsibilities, thus creating a high level of individual accountability. We aim to have an organization with people and teams who are capable of reacting quickly and adapting to the changes in the market environment.

In 2021, the number of employees decreased by 506 globally, after Outokumpu completed employee negotiation processes at the end of 2020. The target was to create cost savings by restructuring and reducing the total employee headcount by up to approximately 1,000 mostly by the end of 2021. As a result of the negotiations, Outokumpu reduced the employee headcount by 250 in Finland, 230 in Germany, and 170 in Sweden, with further personnel reductions in the company's European and Americas based operations. The total targeted employee headcount reduction of 1,000 was almost reached by the end of 2021, with 90% of the measures completed. Outokumpu's aim is a full-time equivalent number of personnel below 9,000 during 2022.

After personnel negotiations, we support our employees in finding new roles where possible. People can receive transition assistance, which takes the form of job search, CV writing, interview skills and options for training.

To ensure a greater understanding of the company and the competitive situation in which we operate we are committed to informing and consulting our employees and their representatives. In Europe, continuous collaboration with the personnel takes place in a joint consultative body, Personnel Forum, which is an information channel between our personnel and corporate management. Personnel Forum appoints the Group Working Committee, which is responsible for the cooperation between management and employees. In the committee, eight members represent employees and four represent the management. Normally, Personnel Forum meets once a year. However, in 2021, we were not able to arrange Outokumpu Personnel Forum due to the pandemic. Additionally, the Group Working Committee was heavily affected by COVID-19, and the committee was able to convene face-to-face only once, in November 2021. The other three official meetings were held virtually, and these were arranged in February, May, and August.

Outokumpu's working hours, minimum notice periods, vacation times, wages, and other working conditions are consistent with the applicable local laws. Outokumpu maintains a consistent policy of freedom of association. All Outokumpu employees are free to join trade unions according to the local rules and regulations. In 2021, 78% of the Group's employees were covered by collective agreements (2020: 79%). In total, 16 days in 2021 were lost due to strikes (2020: 2,496). ■



### Meet the third stainless generation

The manufacturing of stainless steel is a great profession. Some of our team members have this skill in their bloodline.

**Samuel Öfverberg** worked as a summer trainee on the slitting lines at our Tornio site. In the same cold rolling plant where his father works, and his maternal grandfather before them, while his mother works in our Finance team. "On a railroad a stone's throw away from our home I've seen coils since I was a kid but now it's been great to see for myself how stainless steel is produced – and how my family has earned our bread for decades. It is fascinating!"

**Toni Niskala** spent the summer of his life at our cold rolling plant in Tornio driving a forklift to load containers for the shipping of coils and sheets to our customers. His grandfather worked for decades in the cold rolling plant in maintenance – also the specialty of Toni's father, who works on the rolling, annealing and pickling line 5. "It's been nice to see that I can handle a task that requires great precision, whether my shift is at night or day. Also, my workmates are the best." ●

# Stakeholder engagement

Our biggest impact in the world is stainless steel that we produce and our expertise in it – a sustainable product with a long service life. We recognize that our operations have an impact both on a local level and to a wider society.



Before focusing on stainless steel, Outokumpu had several mines. In 2021 we continued to monitor our own mine sites, taking samples according to our obligations as well as on a voluntary basis. Our team and local authorities visit here one of the old mines in Hammaslahti, Finland.

We are a reliable and trusted partner towards all our stakeholders, our customers, employees, investors, suppliers and the communities we operate in. Maintaining a dialogue with different stakeholder groups is an important aspect in Outokumpu's vision to be the first choice in sustainable stainless steel and for understanding what our stakeholders expect from us. Outokumpu conducts regularly materiality analyses to keep up-to-date on our stakeholders' expectations, and the latest one was conducted in 2021, and continues regular dialogue with its various stakeholders.

Read more about our suppliers in the [supply chain section of this report](#).

## Customers

Outokumpu is known in the market for the high quality of its products as corrosion resistance, the widest product portfolio on the market, and our technical expertise in stainless steel. Outokumpu has a strong customer base spread across the globe and balanced over a range of industries. Together with our customers, we find new application areas where stainless can make a positive impact. Our customers construct buildings and build infrastructure, produce energy, and manufacture appliances and cars, for instance. Most of our customers are located in areas where we have our own production in Europe and in the Americas. We have also a global sales and service center network covering all the main continents. Our web shop serves our customers in Germany, Italy and their neighboring countries.

Customers are more and more interested in environmental aspects and carbon footprint of their products and their entire value chain. Outokumpu has the lowest carbon footprint and highest recycled content in the industry. Our customers save our planet from 10,000,000 tonnes of carbon dioxide by using our stainless steel – every year. All our products have independently certified environmental product declarations so that our



## Calvert adopted a stretch of highway

Sustainability is at the core of all our operations, and in Calvert this goes beyond the mill. Taking care of our local community is a big part of who we are at Outokumpu. Our Americas team has started two new programs that allows team members to help take care of our local environment to keep it clean and litter-free but also enhance the beauty of Alabama.

Outokumpu has partnered with Alabama PALS to adopt a mile of the stretch of Highway 43 leading to our mill, and each month team members volunteer to clean the highway of any trash and debris. A new on-site recycling program began this year to encourage recycling everyday items like plastics, paper and aluminum. ●

customers can calculate the carbon footprint of their products.

Outokumpu collects feedback from its customers as a part of sales process. Our customers are mostly satisfied or very satisfied with their business relationship with us and considered a quick reaction to requests, understanding customer needs and easy reach our strength. Our one improvement areas is delivery performance which we have not been able to improve during 2021 with the market rebounding from the COVID-19 lows. In 2021, customer cooperation continued mainly with new remote forms, but towards the end of the year we were also able to resume some travelling and face-to-face meetings with customers when allowed by the local pandemic situation and even exhibit in a fair for the first time in two years.

### Communities

Outokumpu's production sites are often located in relatively small towns, so we are a significant member of those communities and, in many cases, one of the few big private-sector employers in the area. We recognize that our decisions might have a major impact on communities, our personnel and local suppliers and service providers.

Our sites have regular discussions with local community representatives on employment, environment, energy, or sponsoring. In addition to the community officials and representatives, we maintain continuous cooperation with local schools and universities, NGOs, our neighbors, and other companies. Ongoing permit processes or other environmental issues are discussed with local stakeholders. We

organize open-door events at our production sites for neighbors. Based on feedback and participation in the recent years, these events have been successes. Our mills received a lot of good and constructive feedback as well as some helpful ideas on how to reduce environmental impacts on the surrounding communities. In 2021, cooperation continued mainly remotely because of the pandemic to safeguard both our employees and the communities we operate in.

Based on the dialogue with neighboring communities and discussions with authorities in connection with environmental permit processes, no significant negative impacts on local communities have been identified.

Many of our production sites have long and interesting histories: some of our sites in Finland, Germany, Sweden and the UK have been in use by the metal industry and integral parts of their local communities for decades or even centuries already. For example, in Avesta, Sweden, the renovation of our former, centuries-old production site Koppardalen, received excellent feedback for preserving local cultural history.

In the past, Outokumpu has operated mines both in Finland and elsewhere. At the beginning of the 2000s, the company decided to focus on stainless steel. Currently, Outokumpu operates only one mine, the Kemi chrome mine, which is an integral part of our stainless steel production. In 2021, Outokumpu continued to monitor its old mine sites, both those where the company still has obligations and those where they have ended. Outokumpu visited most of the company's old mines at least once,

taking samples according to the obligations as well as on a voluntary basis. In 2021, two minor environmental permit breaches were observed: in Hammaslahti annual average of leachate pH value and in Kotalahti annual average of leachate iron concentration didn't meet the environmental permits' requirements.

[Information on old mines](#)

[List of Outokumpu's operating sites](#)

### Non-governmental organizations

Non-governmental organizations or NGOs are important stakeholder groups for Outokumpu as they can provide an external view on how large companies like Outokumpu are impacting the nature and society and what are the expectations towards us. This type of dialogue has been very fruitful to bring understanding to both sides of the table on the urgency, actions and policies around climate change. One recurring topic are ongoing permit processes and other environmental issues which are continuously discussed with environmental NGOs.

In February 2021, a Finnish NGO Finnwatch published a report which critically assessed Outokumpu's supply chain sustainability monitoring and the company's purchasing. For us, the Finnwatch report was an important reminder of the importance of responsibility throughout our supply chain, and we continued dialogue with Finnwatch throughout the year. During 2021, we took countless actions to further develop the monitoring of the suppliers and to increase the transparency of its sourcing. We partnered with supplier sustainability platform EcoVadis to evaluate





## Environmental bridge

The city of Södertälje in Sweden needed to replace a wooden bridge that had reached its end of life – after only 20 years of use. The city now wanted a bridge with long service life and minimal maintenance, as closing the highway for repairs is expensive.

Stål & Rörmontage, a Swedish company that works closely with Outokumpu, has developed an interesting concept called the Environmental Bridge – essentially, a maintenance-free bridge with a lifetime of well over 100 years. They have now installed six of these bridges in Sweden, including the one in Södertälje made of Outokumpu’s Forta LDX 2101 duplex stainless steel.

“Miljöbron, as we call the Environmental Bridge in Swedish,” says **Lars-Åke Persson**, Marketing Director at SRM, “offers very substantial benefits in terms of both the environment and public finances. To have a bridge that lasts much longer than traditional structures made of either carbon steel or wood, and has lower maintenance costs and lower environmental impact in terms of painting and coatings, is clearly beneficial to society.” ●

the sustainability performance of our raw material suppliers on a regular basis, updated our Supplier Requirements and Code of Conduct, and reviewed our policies, terms and conditions and actions according to the UN Guiding Principles on Business and Human Rights. Outokumpu also set up its own advisory council on environmental, social and governance topics.

## Associations, memberships and public affairs

Outokumpu is a member of international organizations and confederations, including International Chamber of Commerce (ICC), Eurofer, International Chromium Development Association (ICDA), EUROALLIAGES and EUROSLAG and is actively involved in and supports their work. Outokumpu provides relevant information to decision-makers and experts relating to the development of the business environment and legislation.

Outokumpu also participates in the work of trade organizations and is a member of industrial federations and associations in Germany, Sweden, Finland, France, Italy, the Netherlands, the UK, the US and Australia. These cooperation organizations advance industry views and contribute to national legislation. Outokumpu is a member of the Sustainable Mining network in Finland and committed to the Finnish Sustainable Mining standard, based on the Canadian initiative Towards Sustainable Mining.

Our public affairs practice is to communicate via industrial associations like Eurofer towards governing bodies and regulators. In these organizations, Outokumpu participates in different working groups whose aim is to

provide expertise to help decision-makers. In these forums, members share best practices and obtain benchmark data relating to, among other things, the environment, R&D, product life cycles, product and chemical safety, and occupational safety. Members also contribute their own data for use in official industry or authority reports, such as ICDA’s safety and sustainability reporting. In 2021, Outokumpu’s membership fees and other contributions to the associations amounted to EUR 2.0 million.

## Sponsoring and support

In sponsorships, Outokumpu prioritizes connections to stainless steel, sustainability, talent, and education. Outokumpu also makes discretionary donations for the common good as a responsible corporate citizen. These donations are approved by the Leadership Team or by the Board of Directors. Local sponsorship follows the same guidelines, and locally we have sponsored for instance artworks by donating stainless steel, significant local projects, and sports associations. Outokumpu does not take part in or otherwise support political activities, whether they are local or national. In 2021, Outokumpu spent approximately 180,000 euros in sponsoring.

Outokumpu supports research related to its field of industry and maintains close cooperation with educational institutes. Apprenticeships have been offered to local colleges and student placements have been made available in the form of one-year programs, and schoolchildren and local students have been introduced to our operations.

Outokumpu has also been among the founders of a number of national technology, research

and educational funds. These funds support and promote university-level research and teaching and business opportunities. Examples of these type of funds are the Technology Industries of Finland Centennial Foundation and the Fund for the Association of Finnish Steel and Metal Producers.

## Investors and shareholders

Outokumpu’s share is a so-called people’s share in Finland, with households and private persons owning more than a quarter of the shares outstanding. The largest shareholder Solidium Oy, an investment company owned by the Finnish state, reduced its ownership in Outokumpu during the year and owned at the year-end 15.5% of the shares outstanding. The share of international institutions increased to 31.7% in 2021.

In May, Outokumpu completed a private placement of 40,500,000 new shares to institutional investors and raised EUR 209 million. Deleveraging and strengthening the balance sheet are the key targets of Outokumpu’s new strategy, and the company used the proceeds of the directed share issue to prepay loans from financial institutions. The directed share issue was completed to strengthen our balance sheet and to reduce our net debt. The reduction of net debt, prepayment of the more expensive loans, and improved credit rating significantly decreased Outokumpu’s financial costs, which benefits all our shareholders.

Outokumpu continued the regular and active communication with the investors and analysts throughout 2021. One of the key topics we discussed with the investor community has been the strong COVID-19

**Principal shareholders on December 31, 2021**

	Shares	%
Solidium Oy	70,793,208	15.50
Varma Mutual Pension Insurance Company	17,133,403	3.75
Ilmarinen Mutual Pension Insurance Company	12,010,453	2.63
The Social Insurance Institution of Finland	9,298,652	2.04
Elo Mutual Pension Insurance Company	5,112,988	1.12
State Pension Fund	4,400,000	0.96
Mandatum Life	3,940,232	0.86
Danske Invest Finnish Equity Fund	3,610,000	0.79
Säästöpankki Kotimaa – Equity Fund	3,565,110	0.78
Nordea Life Assurance Finland Ltd.	2,892,912	0.63
Equity Fund Evli Finland Select	2,150,000	0.47
Säästöpankki Small Firms – Equity Fund	2,096,815	0.46
Säästöpankki Interest Plus – Equity Fund	2,087,784	0.46
Helander Hannu-Jukka	1,984,470	0.43
Sinituote Oy	1,643,560	0.36
OP Life Assurance Company Ltd.	1,467,550	0.32
OP-Finland Small Firms Fund	1,447,691	0.32
Nordea Bank Abp	1,307,556	0.29
Nordea Pro Finland Fund	1,283,306	0.28
Baan Roelof Ijsbrand	1,237,567	0.27
	<b>149,463,257</b>	<b>32.72</b>
Nominee accounts held by custodian banks	143,428,839	31.39
Treasury Shares	4,302,471	0.94
Other Shareholders	159,679,881	34.95
<b>Total</b>	<b>456,874,448</b>	<b>100.00</b>

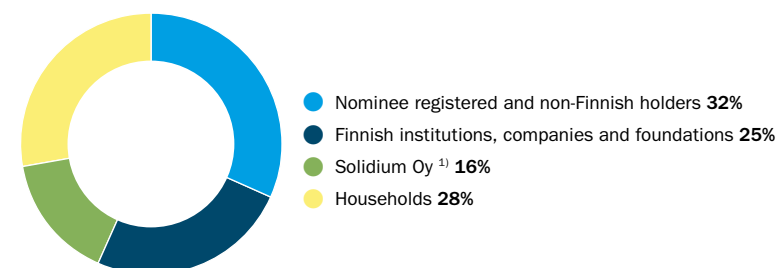
rebound and exceptionally favourable market environment, including the strong demand for stainless steel and increased prices. Other key topics in the discussions have been the progress of our strategy execution, directed share issue completed in May 2021, topics related to the balance sheet, capital allocation, Asian imports and trade defense measures.

Due to the ongoing and prolonged COVID-19 pandemic, almost all meetings and road shows were virtual, as was the Capital Markets update held in May 2021. Outokumpu also held its Annual General Meeting in its headquarters in Helsinki, Finland in March under special arrangements. During the year, Outokumpu arranged eight virtual roadshows in Europe and

in the US and met investors at three virtual industry seminars and conferences. In total, 72 one-on-one meetings and conference calls were held with our investors during the year.

Outokumpu's shares are listed on the Nasdaq Helsinki Large Cap list under the trading code OUT1V and incorporated into the Finnish book-entry securities system. In addition to Nasdaq Helsinki, Outokumpu's shares are also traded on various alternative platforms.

The total share capital was EUR 311 million at the end of the year 2021. All shares in Outokumpu carry equal voting and dividend rights. During 2021, the total number of shares outstanding increased by 40,500,000 as a

**Shareholders by group on December 31, 2021**


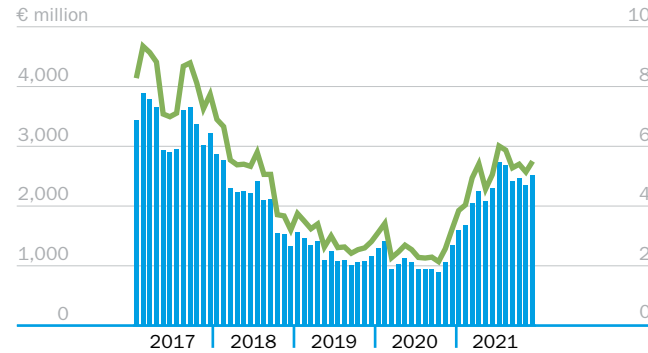
<sup>1)</sup> Solidium Oy is wholly owned by the Finnish state

result of the directed share issue completed in May. On December 31, 2021 the total number of Outokumpu shares was 456,874,448, and Outokumpu held then 4,302,471 of treasury shares (Dec 31, 2020: 4,372,236 shares).

In 2021, Outokumpu's share price was EUR 6.01 at its highest and EUR 3.36 at its lowest (2020: EUR 4.44 at its highest and EUR 2.08 at its lowest). The share price closed at EUR 5.50 at the end of the year, so it increased 70.8% from the closing price of 3.22 at the end of 2020. The market capitalization was EUR 2,513 million at the end of the year, compared to the EUR 1,341 million in the end of the previous year.

During 2021, the average daily trading volume in Outokumpu shares on Nasdaq Helsinki was 3.5 million shares. 880 million Outokumpu shares were traded in total on Nasdaq Helsinki during the year, and they represented a value of EUR 8,734 million (2020: 1,101 million shares with a value of EUR 5,325 million). ■

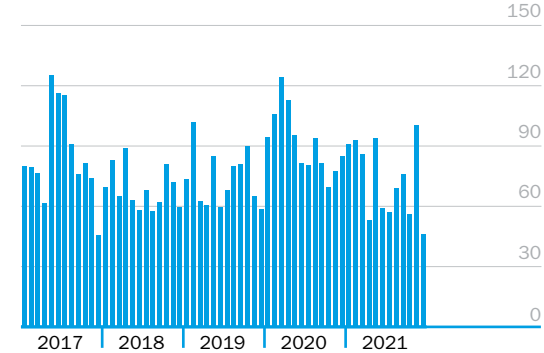
### Market capitalization and share price development



● Month-end market capitalization, € million — Share price, €/share

Source: Nasdaq

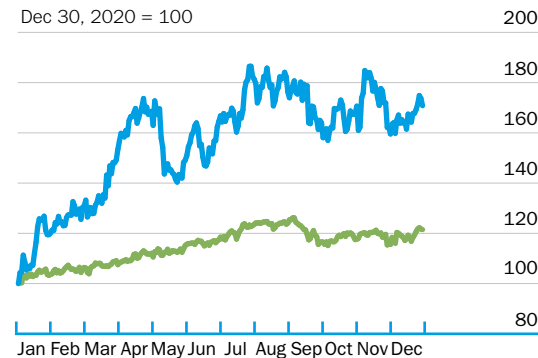
### Monthly trading volume, million shares



Includes trading on Nasdaq Helsinki.

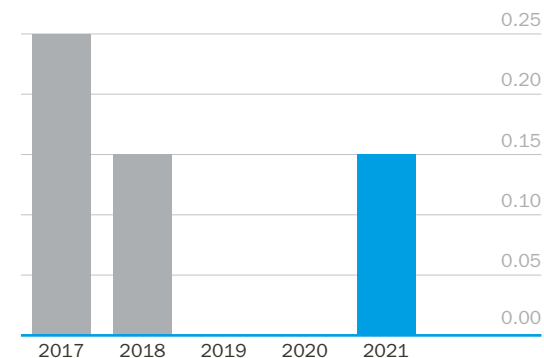
Source: Nasdaq

### Outokumpu share price development in 2021, %



— Outokumpu  
— Nasdaq Helsinki

### Dividend/share, €



The dividend for 2021 is a proposal by the Board of Directors.

# Research and development

R&D, as part of the Technology and Group Sustainability team, ensures that our partners inside and outside of Outokumpu receive exceptional value through leading technical expertise. Shaping the future by developing breakthrough innovations as well as enabling a sustainable future is part of the R&D mission.

## Launch of R&D strategy

In 2021 a new R&D strategy was introduced, building on the Outokumpu strategy and Outokumpu Ways of Working. R&D Must Win Battles are “Sustainable production process technologies” and “Future products and customer applications”, which are addressed with eight R&D programs. The R&D team continued working in the three R&D centers located in Avesta in Sweden, in Krefeld in Germany and in Tornio in Finland focusing on execution of the R&D programs. In 2021, Outokumpu’s R&D expenditure totaled EUR 14 million, 0.2% of net sales (2020: EUR 21 million and 0.4%, 2019: EUR 17 million and 0.3%).

## Sustainable production process technologies

In 2021 Outokumpu joined a three-year research program Towards Carbon Neutral Metals (TOCANEM) financed by Business Finland. The research program is an important step in Outokumpu’s roadmap towards carbon neutrality. It enables Outokumpu to study and develop necessary technologies needed to reach ambitious climate targets and to support Outokumpu’s industry leading position in sustainability. Within this program fundamental research necessary for implementing and

developing technologies that will help Outokumpu to reduce CO<sub>2</sub> emission is ongoing. The utilization of BioCoke instead of fossil coke for FeCr production is one key topic, as well as optimized pickling processes to avoid or minimize use of hazardous hydrofluoric acid (HF). In order to accelerate our process development and to improve the process capabilities modeling tools are widely used.

## Future products and customer applications

Megatrends drive stainless steel demand growth and motivates R&D to develop new steel grades and improve existing grades for new applications. The focus is lying on the Pro product family for demanding end-use and offering sustainable solutions for high customer satisfaction. To expand our product portfolio of high-alloy materials, Therma Alloy 800/800H and 800HT were developed to market launch. In order to develop stainless steel materials for cost efficient solid oxide cell technologies Outokumpu joined a three year research project with partners along the value chain and universities. The project is financed by Sweden’s innovation agency Vinnova.

## External research collaboration

Outokumpu has an extensive network of external R&D collaboration partners, including

top class universities and institutes, technology suppliers and customers. Outokumpu actively participates both national and international collaborative R&D projects and programs. For instance, Outokumpu is involved in European Partnership for Clean Steel – Low Carbon Steelmaking in Horizon Europe funding program. ■

## On board! Towards carbon neutral metals

Outokumpu has joined a three-year research program, Towards Carbon Neutral Metals (TOCANEM) as part of a consortium of multiple metal industry companies and universities in Finland. The research program is an important step in Outokumpu’s roadmap towards carbon neutrality.

**Juha Erkkilä**, Head of Sustainability at Outokumpu, says: “The program supports fundamental research necessary for implementing and developing technologies that will help Outokumpu to reduce CO<sub>2</sub> emission intensity across all direct and indirect scopes. Teaming up with a consortium will allow the use of the best research resources and



provide access to technologies outside of our current capabilities.”

The project is part of the implementation of national and EU level low-carbon roadmaps. In Finland, the largest CO<sub>2</sub> reduction potential in the industrial sector lies in metals production. ●

# Ethics and compliance

Outokumpu is committed to conducting business with high integrity. Responsible and ethical business practices concern everyone at Outokumpu. To secure this commitment, Outokumpu has a group-wide ethics and compliance program in place. The program is a key tool in building a sustainable ethics and compliance culture and helping employees to comply with laws and regulations as well as internal rules and to make sound, ethical decisions as part of their daily work.



During 2021, the implementation of all elements of the ethics and compliance program continued efficiently in close co-operation with the leadership, business areas, and group functions. The roles and responsibilities of ethics and compliance governance bodies were reviewed and partly updated, which included extending the network of compliance contact persons and establishing a new global network to further drive the implementation of Outokumpu's data protection program. Furthermore, interaction with management teams and managers in business areas and group functions was emphasized through trainings and engaging communications.

Outokumpu's Code of Conduct is the core element of Outokumpu's ethics and compliance program, as it sets the standards for what

is the right thing to do. That means acting honestly, responsibly, and in an ethical manner in everything we do. The revision of the Code of Conduct was finalized in 2021, and the emphasis was especially placed on Outokumpu's commitment to the UN Guiding Principles on Business and Human Rights. The revised Code of Conduct was launched in May 2021 with mandatory Code of Conduct eLearning for all Outokumpu employees. The eLearning was completed by 89% of Outokumpu's employees in 2021. In addition, engaging Code of Conduct-related webinars and other internal and external communications were made to various stakeholders.

Outokumpu adheres strictly to competition laws and regulations and is continuously putting significant efforts into this area. In

2021, multiple actions were taken to remind and educate employees about the importance of competition law rules. As part of this work, process improvement was made and documentation updated, various training events were held and communications concerning the competition law rules were made globally. The senior management of the company was closely involved in these activities, highlighting the importance of complying with competition laws and regulations as well as enhancing the company's policies on this topic.

During 2021, actions were also taken in the other identified key risk areas. Outokumpu has a Know Your Business Partner Instruction detailing the main principles and rules related to establishing and monitoring relationships with business partners and managing risks related to such parties. In 2021, specific trade compliance-related communications were delivered, and Know Your Business Partner eLearning was conducted again for all administrative employees. The eLearning achieved a completion rate of 100%. Third-party risks were further mitigated by process improvements and organizing training events on the topic of trade compliance for targeted groups. Further emphasis was also placed on data protection through process improvements, the update of documentation, and trainings. In

addition, engaging communications on various topics regarding ethics and compliance, such as anti-corruption, were delivered throughout the year.

Ethics and compliance risks, including risks related to corruption, are assessed and reviewed annually and described in the Key risks section in the Annual report. Information regarding our misconduct reporting can be found in the review by the Board of Directors, Corporate Governance statement, and on the website. ■

\* The completion rate of the Code of Conduct eLearning has been calculated based on the number of employees to whom the training has been assigned to, which differs from the headcount figures elsewhere in this report.

## Doing the right thing

Anna-Maija Heinonen, Head of Compliance, talks about the meaning of responsible and ethical business practices.

### It is said that Outokumpu conducts business with high integrity. What does this mean?

Acting with a high level of integrity is crucial for Outokumpu as a trusted partner. Trust is the key in conducting business in a responsible and ethical manner. Our customers and other stakeholders trust that we are playing by the rules and making sound, ethical decisions when working with them. They trust us and it is critical that we keep that trust by acting in the right way. At Outokumpu, responsible and ethical business practices are everyone's responsibility and every single act matters.

### What have been the key achievements within ethics and compliance during 2021?

We have worked efficiently to further implement Outokumpu's ethics and compliance program in close co-operation with leadership, business areas and group functions. In 2021, we have especially emphasized that responsible and ethical business practices are owned by everyone at Outokumpu. In order to foster this message throughout the organization, we have held various training events on different topics regarding ethics and compli-

ance, such as competition law compliance, provided engaging communications, such as through ethics and compliance-related case studies, and strengthened the discussion on the importance of ethical decision-making as part of our daily activities. We have also worked closely with several functions, such as with the sustainability team on ESG topics and with the internal audit on the review and update of Outokumpu's internal investigations operating model in light of the EU Directive on whistleblower protection. In addition, a remarkable effort on this topic has been the revision and launch of our Code of Conduct for all Outokumpu employees globally.

### What has changed in the Code of Conduct?

The revised Outokumpu Code of Conduct was launched successfully, both internally and externally, in May 2021. The revised Code of Conduct reflects Outokumpu's current business practices, stricter global compliance requirements, and our commitment to various international declarations and principles, such as the UN Guiding Principles on Business and Human Rights. In addition, the updated Ethical Principles have been fully integrated into the Code of Conduct and the whole



document has been organized on the basis of Outokumpu's new Ways of Working. Furthermore, we have emphasized the responsibility of managers, added case examples, and highlighted the importance of speaking up in case there are any concerns.

### How has the revised Code of Conduct been taken by the employees?

The Outokumpu Code of Conduct is applicable to all employees, and we also expect that suppliers comply with our Code of Conduct and Supplier Requirements. It has been great to see that Outokumpu's employees have been actively part of the revision and launch of the Code of Conduct globally, and how meaningful they see responsible and ethical business practices and our Code of Conduct. It has also been a significant effort to get employees trained on the Code of Conduct. Again, this has been achieved through joint efforts and close co-operation with colleagues from various functions at Outokumpu. ●

# Human rights at Outokumpu

Outokumpu is committed to conduct its business with high integrity. We respect and promote human rights and conduct business in a safe, sustainable and ethical manner.

## Salient human rights issues

Affected human rights: Risks related to:	Right to equality	Health & safety	Right to rest and leisure	Right to environment	Freedom from discrimination & other rights related to minorities	Freedom from slavery	Children's rights	Indigenous rights
Supplier monitoring and on-site assessments	■	■	■	■	■	■	■	■
Truck drivers' working conditions	■	■	■	□	□	□	□	□
Human trafficking in trucks or other parts of the supply chain	■	■	□	□	□	■	□	□
Workplace attractiveness	■	□	□	□	■	□	□	□
Greenhouse gas emissions of our own and suppliers' operations contribute to climate change	□	■	□	■	□	□	□	□

■ Human right affected  
□ Human right not affected

Human rights are addressed in several publicly available company documents: Outokumpu's Code of Conduct, our Corporate Responsibility Policy, our Supplier Requirements, and our Modern Slavery Statement. A stand-alone Human Rights Policy and a Supplier Code of Conduct are in preparation and expected to be published during 2022.

Outokumpu is committed to the UN Guiding Principles on Business and Human Rights (UNGPR) and fully honours internationally recognized human rights as set forth in the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. Outokumpu promotes diversity and condemns discrimination and intolerance of all kinds. Outokumpu complies with international labour treaties and condemns all forms of forced labour or use of child labour. There is a freedom of association at Outokumpu.

Outokumpu also expects its customers and suppliers to respect internationally recognized human rights, and they must strive to avoid causing or contributing to adverse human rights impacts through their own activities and seek to prevent or mitigate adverse human rights impacts linked to their operations through business relationships.

The CEO has the most senior level of oversight and accountability for human rights in Outokumpu. Responsibilities are cascaded down via the Chief Technology Officer, who represents sustainability in the company's leadership team to the VP – Group Sustainability who is responsible for the management of ESG risks. In 2022, the integration of human rights risk management into the existing risk management of Outokumpu will be led by the Head of Supplier Sustainability Management, as most of the identified high human rights risks are connected to Outokumpu's sourcing activities.

### Learnings and development in 2021

In 2021, Outokumpu committed to the UNGP. In addition to investigating the potential human rights impacts of a supplier in Brazil after the report by Finnish NGO Finnwatch, we started to implement the UNGP by drafting a human rights policy and conducting a human rights risk assessment to identify our potential and actual impacts on human rights and our most salient human rights issues. A second case of potential human rights infringements at one of our suppliers in Guatemala was brought to our attention towards the end of the year, which confirmed the urgent need for effective management of human rights risks.

### Identification of salient human rights issues

In 2021, we carried out workshops with internal stakeholders to identify the most salient human rights risks. In addition, external experts also reviewed Outokumpu's public and internal documents. Also, the report of Finnwatch on Outokumpu's human rights

due diligence and the views of the supplier and the indigenous community affected were considered in the process.

The identified human rights risks were rated based on their scale, reach and remediability to be able to make a prioritization based on their severity, as well as on their probability to occur. As a result of the human rights risk assessment, we identified the most salient human rights issues.

### Management of salient human rights issues

Management of salient human rights issues requires the involvement of stakeholders. When analysing the results of the human rights risk assessment, it was found out that many actions had already been done to prevent human rights infringements, especially related to for example safety and environmental protection. In 2022, the salient human rights risks will be checked for existing mitigation actions that need to be linked to the human rights risks. Risks without or with insufficient mitigation actions will be defined and implemented.

### Risks related to salient human rights issues

#### Supplier monitoring and on-site assessments

As can be seen, most of Outokumpu's salient human rights issues are linked to sourcing activities, which includes both the production of the materials purchased, as well as their transport. If supplier monitoring and on-site assessments are conducted insufficiently, all listed salient human rights are at risk. Another

important area is the due diligence that our suppliers conduct on their suppliers and business partners. For example, if this due diligence is insufficient, there is a risk that sub-suppliers of our suppliers are involved in money laundering, terrorist funding or corruption, infringing the right to equality and our strict zero-tolerance policy for these types of misconduct.

#### Truck drivers' working conditions

In our business, goods need to be transported. This is valid for the materials that we purchase, the materials that we sell, as well as transport between our own production sites. Truck driver's working conditions and the potential infringement of their right to equality and their right to rest and leisure are an issue that many companies, including Outokumpu, face.

#### Human trafficking in trucks or other parts of the supply chain

Not only truck driver's rights are an issue than many companies face, but also human trafficking in international truck transport is a topic that needs to be addressed. Human trafficking is a world-wide problem that comes in many shapes and sizes, harming adults and children in countries rich and poor alike. Therefore, also for us in Outokumpu it is important to pay attention to this risk, as also trucks that transport Outokumpu's raw materials and finished products could be misused for this purpose.

#### Workplace attractiveness

Outokumpu is a stainless-steel producer with an own ferrochrome mine. Traditionally, the


steel and mining industry is a male-dominated one. There is a risk that females or minorities may feel uncomfortable or fear that Outokumpu is not an attractive place to work at.

### Greenhouse gas emissions of our own and suppliers' operations contribute to climate change

Both our own operations, as well as the operations of our supplier emit greenhouse gases, which contribute to global warming and climate change. Climate change and its increasing frequency of extreme weather events, natural disasters, raising sea levels, floods, heat waves, droughts, desertification, and water shortages threaten human rights, for example the right to life (health & safety), and the right to environment.

### Access to remedy

All stakeholders can raise their concerns to Outokumpu in various ways, including through our SpeakUp channel. SpeakUp is an externally operated channel to report breaches of the Outokumpu's Code of Conduct or other misconduct. This can be done confidentially and anonymously, if allowed by the local laws and regulations. The channel is available through our website and can be used in several different languages.

[Read more about human rights management at Outokumpu](#) 



# Scope of the report

Outokumpu has published its sustainability review as part of the Annual Report 2021. Sustainability information is also available at [www.outokumpu.com/sustainability](http://www.outokumpu.com/sustainability).

Outokumpu Oyj reports on the material developments of continuing sites and changes in 2021 as part of the Annual Report. The reported data includes all continuing sites. Additional information is published on the company's website. The Annual Report 2021, including Sustainability Review, was published in March 2022.

Outokumpu's report has been prepared in accordance with the GRI Standards: Core option according to the GRI Standards reporting requirements. The materiality assessment from 2021 and continuous communication with stakeholders were the basis for the decision on material topics and relevant disclosures.

[Full GRI disclosure](#)

The independent practitioner's assurance report on the limited assurance conclusion is available on page 43 in the Sustainability Review. The Financial Statements 2021 have been audited, and the auditor's report is available after the Financial statements.

## Measurement and estimation methods

### Economic responsibility

Most figures relating to economic responsibility presented in this report are based on the consolidated financial statements issued by the Outokumpu Group and collected through Outokumpu's internal consolidation system. Financial data has been prepared in accordance with International Financial Reporting

Standards (IFRS). Outokumpu's accounting principles for the Group's consolidated financial statements are available in note 2 to the consolidated financial statements.

All financial figures presented have been rounded, and consequently the sum of individual figures may deviate from the presented aggregate figure. Key figures have been calculated using exact figures. Using the GRI guidelines as a basis, economic responsibility figures have been calculated as follows:

#### Direct economic value generated

Direct economic value generated includes all revenues received by Outokumpu during the financial year. The sources of revenue include sales invoiced to customers, net of discounts and indirect taxes, revenues reported as other operating income (including gains from the disposal of Group assets), and revenues reported as financial income, mainly dividend and interest income.

#### Economic value distributed

Operating costs include the cost of goods and services purchased by Outokumpu during the financial year. Employee benefit expenses include wages and salaries, termination benefits, social security expenses, pension and other post-employment and long-term employee benefits, expenses from share-based payments and other personnel expenses. Taxes paid to the government include income taxes. Deferred taxes are excluded from the figure. Payments to providers of capital include interest costs on debt and other financial

expenses during the financial year. Capitalized interest is deducted from this figure. The dividend payout is included in the payments to providers of capital according to the proposal by Outokumpu's Board of Directors.

Community investments consist of donations to and investments in beneficiaries external to the company.

#### Local suppliers

In this report, vendors are defined as local if they are located in the same country as the Outokumpu location. Significant locations for suppliers are production units that have a melt shop, ie. Avesta, Sweden; Calvert, the US; Sheffield, the UK and Tornio, Finland.

#### Environmental responsibility

Outokumpu's climate change target is based on science and approved by the Science Based Target initiative. The target includes CO<sub>2eq</sub> intensity of direct and indirect emissions of electricity and upstream emissions. Emissions are consolidated on production control.

CO<sub>2eq</sub> emissions of electricity are calculated and monitored by the emissions factor of Outokumpu's electricity mix of 130 kg CO<sub>2eq</sub>/MWh (2020: 152 kg CO<sub>2eq</sub>/MWh), given by the electricity supplier for the used electricity and calculated as weighted average. It includes 0.5% of electricity use in EU market which is coming with guarantees of origin from ownerships in power production. In addition, the location-based electricity emissions are disclosed. They are calculated by the published country-specific emissions factors of the

electricity generation of 2019 or 2020 if available.

CO<sub>2eq</sub> emissions outside the company (scope 3), except electricity, are covered by more than 95%. They are calculated as follows:

- For alloys: by emissions factors of the life-cycle assessment of relevant association. Emission factor of ferronickel was calculated with 30% from supplier specific emissions and 70% of LCA e-factor published in 2021. Emissions of sold ferrochrome are not allocated to the stainless steel production of the company.
- E-factor for lime and dolomite are calculated with 63% from supplier specific emissions. For used gases, electrodes and coke: by emissions factors of ISO 14404.
- For upstream emissions of light fuel oil: by emissions factors of WorldSteel Association.
- For internal and product transport: by typical distances and type of transport with the well-to-wheel emissions according a study (EEA/ACC/18/001/LOT1) of the European Environmental Agency for the European transport and with the published e-factors of US EPA for US transport.
- For business travel: for the cars, trains and flights by CO<sub>2eq</sub> reports of the service provider.

Upstream transport was assessed on data of environmental product declaration of 2020 but excluded from scope 3 emissions.

## Scope of the report

The recycled content according to ISO 14021 (recycled steel content) is calculated as the sum of pre and post consumer scrap related to crude steel production. Additionally, we report on the recycled material content including all recycled metals from treated own waste streams entering the melt shop.

Energy efficiency is defined as the sum of specific fuel and electricity energy of all processes calculated as energy consumption compared to the product output of that process. It covers all company productions: ferrochrome with 15%, melt shop, hot rolling and cold rolling processes. Used heat values and the consumption of energy are taken from supplier's invoices.

Water withdrawal is measured for surface and sea water, taken from municipal suppliers and estimated for rainwater amount.

Waste generation details on company's typical waste categories of hazardous and non-hazardous classification are reported on webtool data. In 2021, waste is reported as generated, diverted from landfill and landfilled. Information on onsite and offsite treatment and landfill were not available. Waste treated is counted as landfilled waste.

Customers' CO<sub>2</sub> savings are calculated with the difference of world's stainless steel footprint of 6.12 tonnes CO<sub>2eq</sub> per tonne crude steel with 40% scrap recycling and 30% of nickel pig iron production and Outokumpu's footprint of 1.77 tonnes CO<sub>2eq</sub> per tonne steel and company's production.

## Social responsibility

### Health and safety figures

Health and safety figures reflect the scope of Outokumpu's operations as they were in 2021.

Safety indicators (accidents and preventive safety actions) are expressed per million hours worked (frequency). Safety indicators include Outokumpu employees, persons employed by a third party (contractor) or visitor accidents and preventive safety actions. A workplace accident is the direct result of a work-related activity and it has taken place during working hours at the workplace.

### Accident types

- Lost time injury (LTI) is an accident that caused at least one day of sick leave (excluding the day of the injury or accident), as the World Steel Association defines it. One day of sick leave means that the injured person has not been able to return to work on their next scheduled period of working or any future working day if caused by an outcome of the original accident. Lost-day rate is defined as more than one calendar day absence from the day after the accident per million working hours.
- Restricted work injury (RWI) does not cause the individual to be absent, but results in that person being restricted in their capabilities so that they are unable to undertake their normal duties.
- Medically treated injury (MTI) has to be treated by a medical professional (doctor or nurse).

- First aid treated injury (FTI), where the injury did not require medical care and was treated by a person themselves or by first aid trained colleague.
- Total recordable injury (TRI) includes fatalities, LTIs, RWIs and MTIs, but FTIs are excluded.
- All workplace accidents include total recordable injuries (TRI) and first aid treated injuries (FTI)

### Proactive safety actions

Hazards refer to events, situations or actions that could have led to an accident, but where no injury occurred. Safety behavior observations (SBOs) are safety-based discussions between an observer and the person being observed. Other preventive safety action includes proactive measures.

### Sick-leave hours and absentee rate

Sick-leave hours reported are total sick leave hours during a reporting period. Reporting units provide data on absence due to illness, injury and occupational diseases on a monthly basis. The absentee rate (%) includes the actual absentee hours lost expressed as a percentage of total hours scheduled.

### Employee benefit expenses

Employee benefit expenses include wages and salaries, termination benefits, social security expenses, pension and other post-employment and long-term employee benefits, expenses from share-based payments and other personnel expenses.

### Training costs

Training costs include external training-related expenses such as participation fees. Wages, salaries and daily allowances for participants in training activities are not included, but the salaries of internal trainers are included.

### Training days per employee

The number of days spent by an employee in training when each training day is counted as lasting eight hours.

### Bonuses

A bonus is an additional payment for good performance. These figures are reported without social costs or fringe benefits.

### Personnel figures

Rates are calculated using the total employee numbers at the end of the reporting period. The calculations follow the requirements of GRI Standards. The following calculation has been applied e.g.

Hiring rate = New Hires / total number of permanent employees by year-end

Average turnover rate = (Leavers + New Hires) / (total number of permanent employees by year-end × 2)

### Days lost due to strikes

The number of days lost due to strikes is calculated by multiplying the number of Outokumpu employees who have been on strike by the number of scheduled working days lost. The day on which a strike starts is included. ■

# Independent practitioner's limited assurance report

To the Management of Outokumpu Oyj

We have been engaged by the Management of Outokumpu Oyj (hereinafter also the "Company") to perform a limited assurance engagement on Selected sustainability information for the reporting period 1 January 2021 to 31 December 2021, disclosed in Outokumpu Oyj's Sustainability Review 2021 and in Outokumpu Oyj's online sustainability tool available on Outokumpu's website.

## Selected sustainability information

The scope of our work was limited to assurance over the information summarized below. The information covers Outokumpu Oyj, as indicated in the Outokumpu Oyj's Sustainability Review 2021 and in Outokumpu Oyj's online sustainability tool. We have not been engaged to provide assurance on any information relating to prior reporting periods or to any other information in the Outokumpu Oyj's Sustainability Review 2021 and in Outokumpu Oyj's online sustainability tool.

The economic, social and environmental sustainability indicators covered within the scope of assurance include Topic-Specific Disclosures as well as General Disclosures. The Topic-Specific Disclosures are a combination of GRI Standards Disclosures and the Company's own disclosures. The assured indicators disclosed within the Outokumpu's Sustainability Review 2021 have been identified in the Company's GRI Standards Content Index, which is available on the company's website. All of the disclosures in the online sustainability tool have been assured.

## Management's responsibility

The Management of Outokumpu Oyj is responsible for preparing the Selected sustainability information in accordance with the Reporting criteria as set out in Outokumpu Oyj reporting instructions described in Outokumpu Oyj's Sustainability Review 2021 and the GRI Standards of the Global Reporting Initiative. The Management of Outokumpu Oyj is also responsible for such internal control as the management determines is necessary to enable the preparation of the Selected sustainability information that are free from material misstatement, whether due to fraud or error.

## Practitioner's independence, other ethical requirements and quality control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence

and due care, confidentiality and professional behavior.

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

## Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Selected sustainability information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". The Standard requires that we plan and perform the engagement to obtain limited assurance about whether the Selected sustainability information is free from material misstatement.

## Independent assurance report

In a limited assurance engagement, the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other information in the Selected sustainability information. The procedures selected depend on the practitioner's judgment, including an assessment of the risks of material misstatement of the Selected sustainability information.

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

- Interviewing a representative of senior management of the Company.
- Conducting three video interviews with sites in Finland, Sweden and the United States of America.
- Interviewing employees responsible for collecting and reporting the selected information on sustainability indicators at the Group level.
- Assessing how Group employees apply the reporting instructions and procedures of the Company.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.
- Considering the disclosure and presentation of the Selected sustainability information.

### Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Outokumpu Oyj's Selected sustainability information for the reporting period ended 31 December 2021 are not properly prepared, in all material respects, in accordance with the Reporting criteria.

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

Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Outokumpu Oyj for our work, for this report, or for the conclusions that we have reached.

Helsinki 2 March 2022

**PricewaterhouseCoopers Oy**  
Authorised Public Accountants

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