

Sustainability review 2020

We are proud provider of the most sustainable stainless steel that helps to build a world that lasts forever. However, it's not just about what we do, but how we do it.

Sustainability at Outokumpu

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 customers' first choice in sustainable stainless steel.

However, it is not only what we do, but also how we do it. We are the industry leader in sustainability as according to internal estimates our stainless steel has the lowest carbon footprint of the industry when taking into account all indirect emissions, including raw materials. We also lead the industry in terms of contribution to the circular economy. The recycled content of our stainless steel is more than 90% and we are continuously looking for ways to minimize our environmental impact. We have ambitious goals for our sustainability and we are committed to reach carbon neutrality by 2050 and are well on-track to reach the short-term target of 20% reduction by 2023.

Key initiatives to strengthen the sustainability agenda

During 2020, we took steps to further strengthen our sustainability agenda and our sustainability approach was updated to reflect the growing importance of sustainability and the possibilities it offers to our business. Our sustainability approach can be divided into three themes: mitigating climate change, protecting the environment and responsibility to our people and the society.

Several key initiatives were launched during the year to drive our sustainability approach across the organization. Key initiatives included renewing the environmental performance KPIs, creating a road map to carbon neutrality, launching working groups to strengthen customer cooperation and marketing, as well as developing a stronger sustainability culture through internal communications and an e-learning. Outokumpu has also joined the ResponsibleSteel initiative.

The updated approach is based on a [materiality analysis](#) and a mapping of our key stakeholders – customers, employees, suppliers, and investors – and the topics most relevant to them. We maintain a continuous

As the leading global producer of sustainable stainless steel, we are at the heart of moving society towards ecologically, socially, and economically sustainable solutions.



with further assessment of environmental, social and governance compliance.

Commitment to global frameworks and standards

We are committed to the United Nation's Sustainable Development Goals (SDGs) and our focus was realigned in 2019. [We have selected six SDGs](#) that are the most relevant either through the way we operate or through our products.

Sustainability is integrated into all our operations, activities, and decision making. Outokumpu's operations are guided by our Code of Conduct, Ethical Principles, Corporate Responsibility Policy, and Environment, Health & Safety and Quality Policy. We expect our business partners and suppliers to follow similar standards. All of our policies are available at outokumpu.com.

dialog with our key stakeholder groups to follow emerging sustainability trends and topics within the stainless steel industry. Key topics discussed in 2020 include climate change mitigation with lower carbon footprint, improving energy efficiency, ensuring the safety, well-being, and development of our personnel and strengthening supply chain sustainability

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. No fines or non-monetary sanctions occurred in 2020. ■

Sustainability performance in 2020

Outokumpu has set challenging 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 our sustainability data tool [↗](#)

Continuous performance development

In 2020, 98% of all Outokumpu employees in applicable countries had a regular performance development discussion with their managers.

More on our people [↗](#)

TARGET **100%** / RESULT **98%**

Work-related injuries continued to decline

Our total recordable injury frequency rate (TRIFR, per million working hours) continued to decline and was 2.4 compared to 3.2 in 2019.

More on safety and health [↗](#)

TARGET **<3.0** / RESULT **2.4**

Energy efficiency remained stable

Our target was to improve energy efficiency by 1% annually since 2010. Target was not reached due to restructuring and changes in the company.

More on energy efficiency [↗](#)

TARGET 2020 **12.9%** / STATUS **3.6%**

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 content on a high level

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

More on resource efficiency [↗](#)

TARGET 2020 **90%** / STATUS **92.5%**

Reduced CO₂ emissions intensity

Our target is to reduce our CO₂ emissions by 20% by 2023 compared to the baseline of 2014–2016.

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

TARGET 2023 **20%** / STATUS **17.0%**

Protecting the climate with stainless steel



The keys to reducing our own carbon emissions are to increase our energy efficiency and the use of low carbon energy sources.

Stainless steel helps to combat climate change as it is durable, long-lasting, and recyclable. In addition to offering stainless steel with a low carbon profile, we work continuously to further reduce our carbon profile. Outokumpu is committed to reaching carbon neutrality by 2050.

Stainless steel production is energy intensive. The keys to reducing our own carbon emissions are to increase our energy efficiency and the use of low carbon energy sources. Stainless steel produced by Outokumpu has the lowest total carbon footprint in the industry, helping our customers to reduce their carbon footprints.

Where do our emissions come from?

The greenhouse gas emissions from Outokumpu operations are limited to CO₂ 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. Indirect emissions are caused by the use of electricity. Electricity emissions are 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 of material use such as 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. At the moment, there are no estimation methods for the complex downstream emissions of stainless steel available. [Case studies](#) from consultants indicate CO₂ net savings of steel use from life cycle assessment.

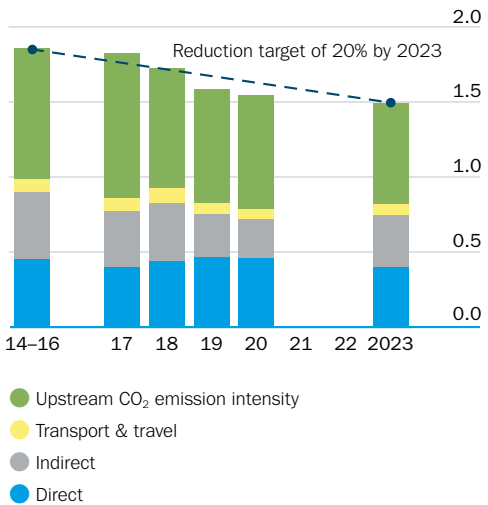
Toward a lower carbon footprint

Our total company carbon profile, including upstream emissions, is the lowest in the industry according to internal estimates. 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 content in our steel and improving resource efficiency are also factors in reaching even lower CO₂eq emissions and reducing upstream emissions.

In 2020, the total specific CO₂eq emissions were reduced by 17.0% compared to the baseline of 2014–2016. The high recycling rate is the main driver to succeed in high reduction of scope 3 emissions. CO₂eq emissions from transport reduced significantly by implementing an intermodal transport strategy and reduced emission factors. Travel restrictions due to the COVID-19 pandemic lowered business travel emissions to a fifth. The emissions allocated to sold ferrochrome were not included in the target report for the stainless steel.

Target for Science Based Target criteria

Outokumpu's CO₂ eq emission intensity, tonnes of CO₂ eq per tonne steel



In 2020, Outokumpu consumed overall 27,655 TJ of primary fuels and electricity with a decrease of 2.3% due to lower production. However, the intensity figure slightly increased by 1.5% to 11.0 GJ per tonne steel due to increased ferrochrome production. [See all data on CO₂ emissions.](#)

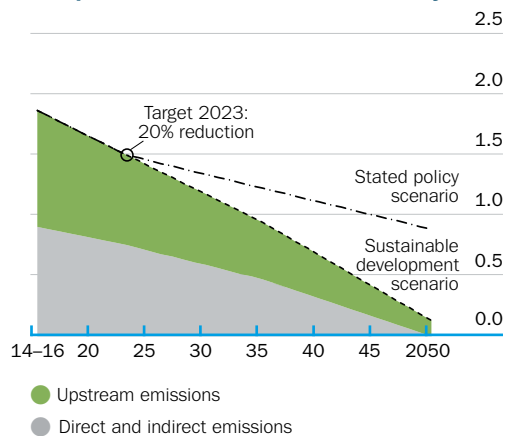
Climate commitment to science-based targets

Outokumpu is committed to the Science Based Targets initiative. 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 well below 2°C compared to the pre-industrial temperature.

Our target is to reduce scope 1, 2, and 3 greenhouse gas emissions by 20% per tonne of stainless steel by 2023 from a 2014–2016 base period. The baseline of the three years was chosen to get the most recent baseline after the restructuring of the company and to avoid the influence of yearly fluctuations. Emission intensity refers to emissions per tonne of produced steel. In recent years, the reporting details were improved. We have now covered 60% of our nickel input by supplier specific emission details.

We also follow the well below 2°C scenario convergence criteria of the steel industry's decarbonization approach: to reduce emission intensity to 0.92 t CO₂ per tonne of crude steel by 2050. Specific electricity emissions follow the electricity decarbonization approach, where the specific emission reduction target is 95% by 2050.

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



Low-carbon roadmap

Outokumpu has prepared a roadmap to reach the set targets. Electric arc furnace is 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, projects have been identified.

In Tornio, the majority of direct CO₂ emissions originate from coke which is used as a reductant in the ferrochrome production. Carbon monoxide is a sidestream 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 CO₂ emissions that are allocated according to the use either in ferrochrome, stainless steel or as outsourced. Replacing part or all coke with carbon neutral reductants would reduce a notable amount of CO₂ emissions in Tornio. In the long run, direct reduction for ferrochrome could replace completely the use of coal-based reductants. This technology requires still research and piloting and no technology is yet available.

The rest of the direct CO₂ 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 or, in some applications, hydrogen. The third option to reduce CO₂ emissions in the atmosphere are the use of Carbon Capture and Storage / Utilization (CCS/CCU). R&D projects have been identified.

For all above mentioned potential projects, both investment and operating costs are higher than for the conventional technologies.

Climate scenario analysis

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 sustainable development scenario analysis in line with the International Energy Agency (IEA) Iron and Steel Technology Roadmap 2020. The translation of the strategies in financial terms considering the transition and physical scenarios is ongoing.

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. The Sustainable Development Scenario 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" CO₂ emissions for

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the energy system as a whole by around 2070. (Source: International Energy Agency (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. This approach goes for the company beyond the science-based target convergence criteria for the sector decarbonization approach. The target year of the scenarios is set to 2050 in line with the company's carbon neutral target. The assumption of the Sustainable Development scenario includes the possible CO₂ reduction projects at different maturity grades according to the developed carbon neutral road map. Additionally, an initiated metal recycling project in Tornio will decrease the related scope 3 emissions although some direct and indirect emission increase will be connected to that project. It is assumed in the SDS scenario that nickel containing stainless steel grades are produced fully by recycling. All projects are to be realized during the journey in addition to the efficiency improvements.

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. Water risk was further assessed on medium and long-term time scale by the Aqueduct program from

World Resource Institute for 2030 and 2040. Limited risks are detected in that evaluation.

Only very limited change in 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.

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 carbon steel, for example. 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.

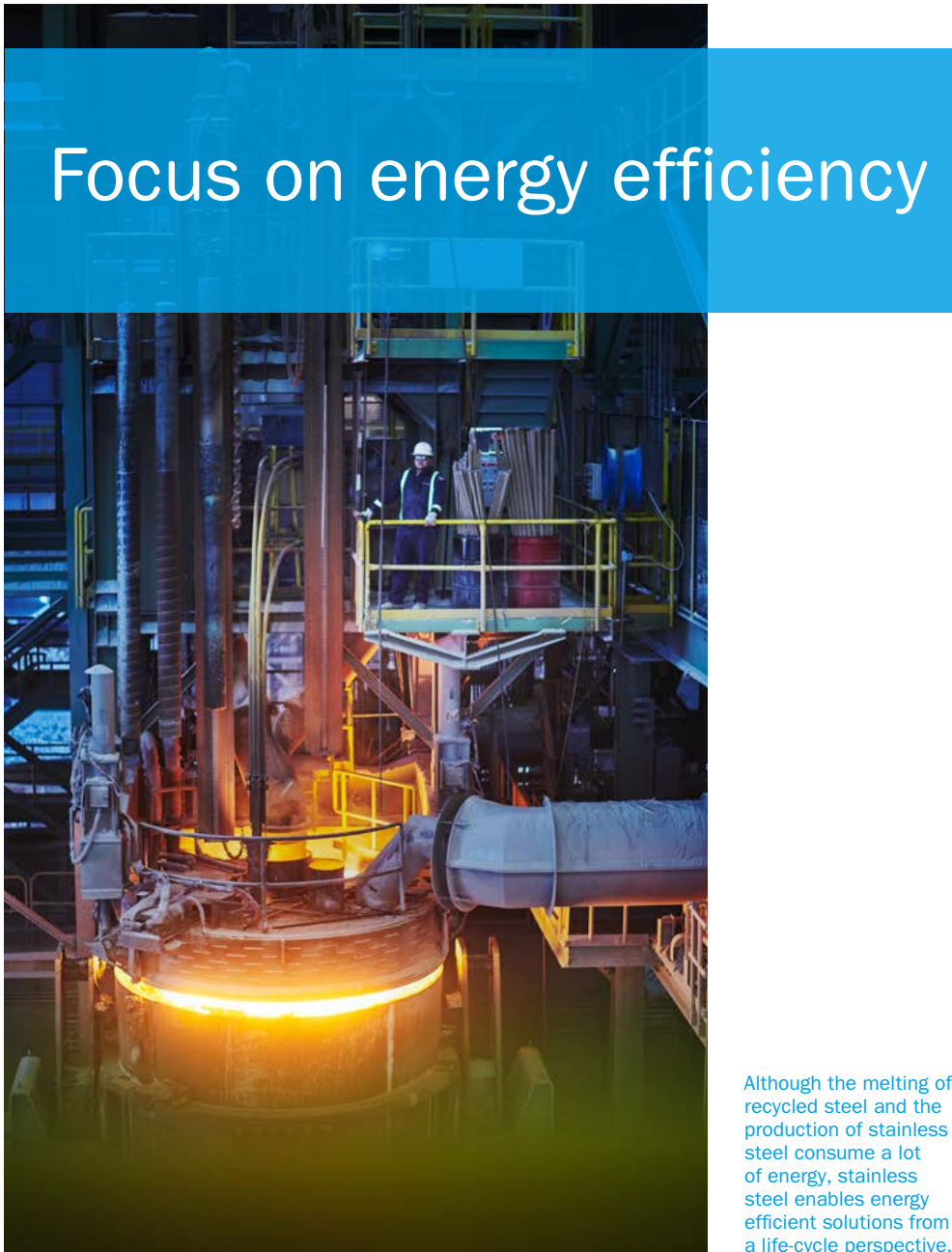
Continuous increasing of material recycling and energy efficiency as well as change to use lower emission fuel and electricity have significantly reduced the product's carbon profile. This is driving the competitive advantage on high alloy steel with low-carbon footprint that customers are increasingly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

80% of Outokumpu's all direct CO₂ emissions fall under the European Union Emissions Trading Scheme (ETS). The ETS has finalized the third trading period in 2020. In 2020, free allocation for the Group was slightly above the emissions. The fourth period will remain with similar conditions but substantially shorter free allocations.

The main risks of the next trading phase 2020–2030 of the emissions trading system to Outokumpu involves the pass-through costs of allowances to the electricity price and reduction of electricity price compensations. In the later part, the company needs to buy allowances as some surplus allocations available from production decrease in the past will be used. The final decision on the benchmarks for free allocation is expected mid-2021. Allowance prices are expected to increase especially as the Green Deal of the European Commission requests further greenhouse gas reduction, and the benchmark for free allocation will decrease. Read about the risks related to emissions trading in Key risks section. The EU Emissions Trading System does not take into account the product life span. This is misleading for metal and steel products because they decrease CO₂ emissions during their life span more than their production phase causes. ■



Focus on energy efficiency

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.

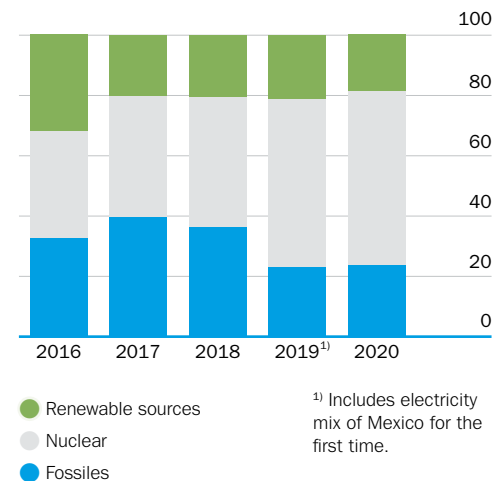
Outokumpu is continuously striving to make its production operations more energy and material efficient and minimize its environmental impacts. Although the melting of recycled steel and the production of stainless steel consume a lot of energy, stainless steel enables energy efficient solutions from a life-cycle perspective by saving energy during its use phase.

In 2020, our improvement of energy efficiency, calculated as a sum of different process steps including ferrochrome, was 3.6% compared to

the baseline 2007–2009. The reached energy efficiency corresponds to a yearly saving of over 0.3 million MWh in 2020. Over the period of 2010–2020 the average improvement was 7%. The company could not reach the target for year 2020 after a ten-year period due to changes such as restructuring, new grade production mix and the low capacity use impacted the specific energy consumption. A new target of at least 0.5% reduction per year compared to the baseline 2018–2020 in energy efficiency by 2030 was set. Additionally,

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.

Origin of electricity, %



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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 MWh/t.

Yield optimization improves energy efficiency

The biggest energy-saving potential lies in the optimization of yield. Yield refers to how much sellable products we can make of the metal raw materials added to the process. Energy reduction and efficiency plans are included in environmental management systems at all our sites. In the past, we have been able to improve our overall energy efficiency by reorganizing production sites and optimizing our internal supply chain. However, in recent years this improvement has not been achieved. In 2020, we did not succeed in increasing our

capacity utilization due to the difficult market situation and the COVID-19 pandemic.

As energy sources, we use natural gas, propane, or other fuels, such as diesel. Fossil fuels cover about 81% of our total fuel consumption. Outokumpu does not consume renewable fuels in production processes today, but we utilize our own recovered carbon monoxide process gas with 19% of our total fuel. Process gases and waste heat are also used to heat buildings on 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 2020, 76% of our electricity sources came from low-carbon (renewable and nuclear) sources. [See more details in the data tool](#)

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. For example, the combined heat and power plant in Tornio produces heat for the Tornio site out of recovered process gases, and in Dahlerbrück, Germany, we have our own hydro power 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 a new nuclear power plant project in Finland.

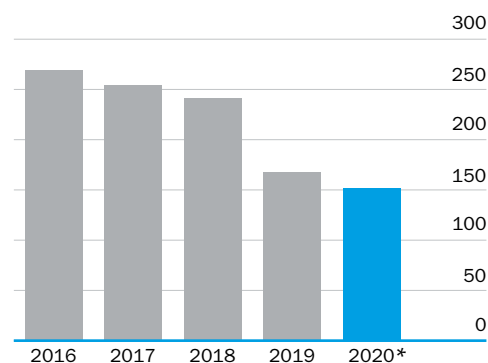
Fuel switch to lower carbon emission fuels is ongoing. Natural gas has already been in use at our sites in Germany, Mexico, the US, the

UK and now in Tornio, Finland. We still have some improvement potential left in Sweden where we are actively studying options for alternative fuels. ■

Energy used in operations

Terajoules, TJ	2020	2019	2018
Electricity	15,735	16,167	17,189
Carbon monoxide gas	2,250	2,412	2,275
Natural gas	7,269	7,239	4,623
Propane	1,828	2,024	4,754
Diesel, light and heavy fuel oil	573	668	662
Energy	27,655	28,509	29,502
Energy use in GJ per tonne crude steel	11.0	10.9	10.1

Market-based electricity emission factor, kg CO₂eq/MWh



* Hydro power recs are calculated as fossil fuel replacements in specific countries.

We operate at the heart 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 and is fully recyclable, without any quality degradation.

In fact, 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.

Record high recycled content rate

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

The steel recycled content rate of our stainless steel, defined according to ISO 14021, was 87.8% in 2020. This includes pre- and

post-consumer scrap. Including the use of recycled metal from our waste streams, the recycled content of our products was 92.5% in 2020. We reached better recycling than our target of 90% for 2020. The result might have been impacted by the circumstances created by the COVID-19 pandemic. We aim to maintain the high level of 92.5% until 2023 and align all the target years in 2023 when the first transitional science-based target will be revised.

One key factor in reaching such a high level of recycled content is the recovery and recycling of metals from the production processes, e.g. from dust and scales. We are continuously looking for best ways to recycle the metals of

Total waste

Tonnes	2020	2019	2018
Total non-hazardous waste	442,763	281,646	356,230
Recycled	46,619	49,227	52,736
Recovery	9,657	17,138	19,256
Landfilled	386,487	215,281	284,239
Total hazardous waste	152,588	146,765	163,555
Recycled	59,635	12,988	15,414
Recovery	25,471	53,252	47,700
Landfilled	67,482	80,525	100,442
Tailing sands	1,023,503	1,006,590	991,391

The recycled content of our products, including the use of recycled metal from our waste streams, was 92.5% in 2020, exceeding our own target.

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our melt shop dust. Dust recycling increased especially at our site in Calvert, the US. These sidestreams 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.

Aim to reduce waste to landfill in stainless steel production

Outokumpu's long-term goal is zero-waste stainless steel production, which means that 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 zero waste 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. We are striving to reduce this even further.

The amount of tailing sands from the mining operation increased in 2020 compared to the previous year, as the production of chrome concentrate increased. 17.8% of waste from stainless steel production was recycled and 5.9% recovered. Other recovered materials like lime, bricks, and some sludges were mostly used in our melting shops to substitute virgin additive materials like slag formers. Tailing sand is deposited in the pond of the mining area itself.

Turning slag into by-products

Outokumpu sold or used 1.13 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 CO₂ emissions. For example, in road construction, slag use is an environmentally and economically sustainable solution.

In 2020, the use rate (including use, recovery, and recycling) of all slag was 77.1%. The remaining 336,700 tonnes of slag were 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. In 2020, less slag could be used which resulted in higher amount of landfilled slag. ■

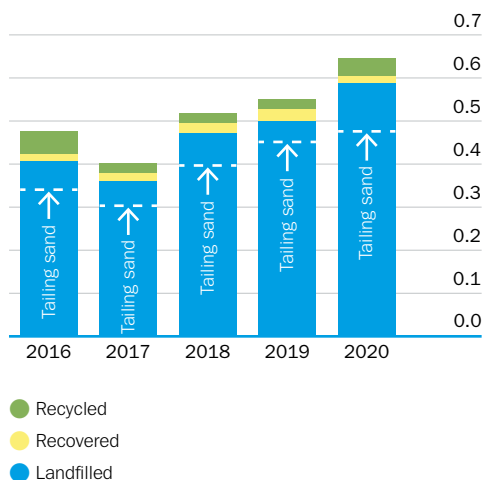


Reutilizing slag is good for the environment

Slag is an essential material in the steel melting process. However, once it is used, we also sell it under the trademark of OKTO to replace the use of natural materials, such as sand or crushed rock, in construction. In 2020, together with Destia, we compared the carbon footprint of slag and other road structure materials. Results showed that by replacing virgin materials, slag significantly reduced CO₂eq emissions in an actual road construction case. In this case, CO₂eq savings of nearly 800 tonnes could be reached.

Utilizing 700,000 metric tons of ferro-chrome slag annually may save up to one million tonnes of gravel and rock. OKTO insulation has been used for more than 50 years already. Over the years, the positive environmental impacts have become manifold and large areas of rock and sand have been spared. ■

Total waste development, tonnes per tonne steel





Reducing our impact on the environment

At our Dillenburg site in Germany, wildflower meadow and beehives meet stainless steel mill.

Our growing environmental efficiency is based on long-term efforts and continuous improvement. We constantly research and develop new ways of operating to reduce the environmental impact of stainless steel.

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. We aim to reduce our impact on the environment by proactively developing our production processes, energy and material efficiency, and solutions for the by-products from our operations.

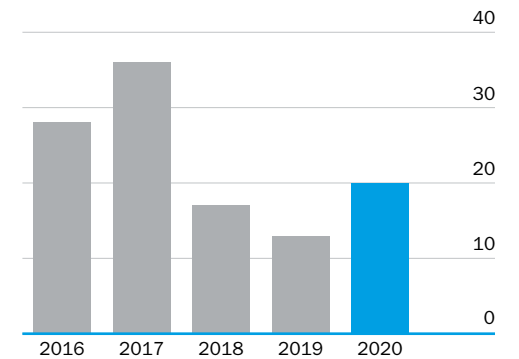
In Tornio, Finland the overall impact on the environment was analyzed during 2020 in connection with the revision of the environmental permit. The impact of the Tornio site to nearby sea area is negligible. The fallout via air is minimal and in practice not shown outside the mill area (modelling done by FMI, Finnish Meteorological Institute).

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 through a specialized recovery plant.

Our dust filtering systems are extremely efficient and remove 99% of the particles. The

Steel melt shop particle emissions, grams/t



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measured particle emissions from all of our production processes were 274 tonnes in 2020 (347 tonnes in 2019). A large amount of particles, 128 tonnes, were emitted from the ferrochrome production process. However, the emission measurement campaigns 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 inline with BAT levels. No significant further reduction is expected.

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 2020, there were four incidents involving radioactivity. 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 amount 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.

Water withdrawal and discharges

Million m ³	2020	2019	2018
Surface water	46.1	45.4	44.6
Municipal water	1.1	1.2	1.4
Groundwater	2.6	2.4	2.5
Rainwater	2.4	1.8	1.2
Water withdrawal by source	52.1	50.7	49.7

Water discharges by type and destination

Cooling water out	13.2	13.7	13.4
Wastewater out	22.1	22.4	23.4
Discharge to surface water	21.0	21.1	22.2

Emissions to water

Metal discharges to water, tonnes	41	34	25
Nitrogen in nitrates, tonnes ¹⁾	1,070	1,046	1,443

¹⁾ Data restated to give the discharged nitrate. Part of the nitrates are treated in a municipal treatment plant.

Water is reused in production

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. In 2020, six cases of minor non-compliances occurred. 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 and often includes rainwater. The impact of water withdrawal is evaluated at sites where river water is used, and where the 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 2017 and revised in 2020. None of

the sites had an impact on the river, meaning the withdrawal was below 5% at all sites. Our production site in Avesta, Sweden, has analysed the impact of the water management to the river Dalälven. The water quality remained unchanged with a very limited impact.

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 freshwater discharge was at about 50 megaliters. 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.

Impacts of the mining operation are limited

Outokumpu operates a chrome mine 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. 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



Honey “made by Outokumpu”

At our Dillenburg site in Germany, wildflower meadow meets stainless steel mill. The surprising wealth of plants and blossoms on our plant premises provides nutrition for numerous insects. We have among our workforce an avid hobby beekeeper, our operator Janosch Ritter, who together with other our team members have created a wildflower meadow to support the protection of endangered insect species and foster biodiversity.

In the summer, the project team also set up beehives. The first honey “made by Outokumpu” will be bottled next year. This will be done in cooperation with a local charity organization that will collect the sales revenues. ■

amount of 1.6 million m³ of rain and snow melting waters were collected in the process in 2020. Kemi mine discharges 3,200,000 m³ water, incl. rainwater, from the area, whereas the water intake from the municipal supply is only 23,500 m³.

During 2018–2021, Kemi mine is carrying out a Deep Mine project to increase the resource efficiency of the mine. The project is 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 has started at the Kemi mine in 2020, and the process will continue during 2021. In the process, the mine is looking to find more sustainable processes related to material recovery.

Biodiversity and cultural heritages

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. Areas once utilized by production are remediated for further use.

Outokumpu's site in Tornio, Finland is located near Natura protected water areas. No risk to mine protection basics of those areas have been identified according to Natura assessment. In a study, some very rare biotopes were found just by the mill area as well as also some protected animals, such as a frog race 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. The Kemi mine cooperates with local ornithological society to monitor the local biodiversity. During 2020, the Kemi mine and Tornio operations have both done fish plantings in addition to permit obligations to increase biodiversity. In 2020, there has been investigations related to biodiversity around the

Kemi Mine site (nature surveys) which will still be updated during 2021.

In Dahlerbrück, Germany a 0.042 km² 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.

In 2020, the company started to evaluate the possible impact on cultural heritage. ■

Biodiversity

Site	Area in km ²	Percentage
Calvert, US	4.69	18.8%
Dahlerbrück, Germany	0.063	0.3%
Kemi, Finland	9.16	36.7%
Tornio, Finland	6	24.0%
Total		79.7%

Sustainable supply chain



Our target is to transport as much of our products by rail and ship as possible.

Stainless steel is a durable and long-lasting material used by leading brands and demanding industries around the globe. As the leading provider of sustainable stainless steel, Outokumpu has strict requirements for traceability and responsibility throughout the supply chain.

Our customers require assurance that the materials for their applications are produced and procured in an ethical and responsible manner. 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.

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.

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 or similar standards and meet our supplier requirements, which require our suppliers to act according to the applicable laws and regulations, maintain a quality management system, sign general terms and conditions, and be able to clearly define, document, and share their supply and production control processes including material traceability.

We assess our new and existing suppliers, and if there is evidence of any kind of violation of our requirements, the suppliers are requested to provide an improvement plan and evidence of improvement. If the situation continues without progress, Outokumpu will discontinue purchasing from the supplier. There were no cases of restricting supply in 2020.

Outokumpu monitors its suppliers through self-assessment, screenings, and audits. Due to the COVID-19 pandemic, no on-site audits were conducted during 2020. However, a supplier performance assessment was conducted for 103 of Outokumpu's key suppliers in 2020, covering almost 60% of key suppliers. In the supplier performance assessment, suppliers are assessed using the following criteria: technology, quality, supply, cost, safety, environment and financial risk. As a result, improvement opportunities and

Sustainable operations

improvement requirements were identified and communicated to the suppliers.

General procurement supply chain

In 2020, Outokumpu had over 9,000 suppliers. The vast majority (93%) of the suppliers are located in Finland, Germany, Sweden, the UK, the US, and Mexico, where Outokumpu has its production units. In those locations where we have significant production sites, the proportion of spending on local suppliers was on level of around 90% for general procurement, excluding raw material suppliers. There were no major changes in the supplier base during the year.

Raw materials

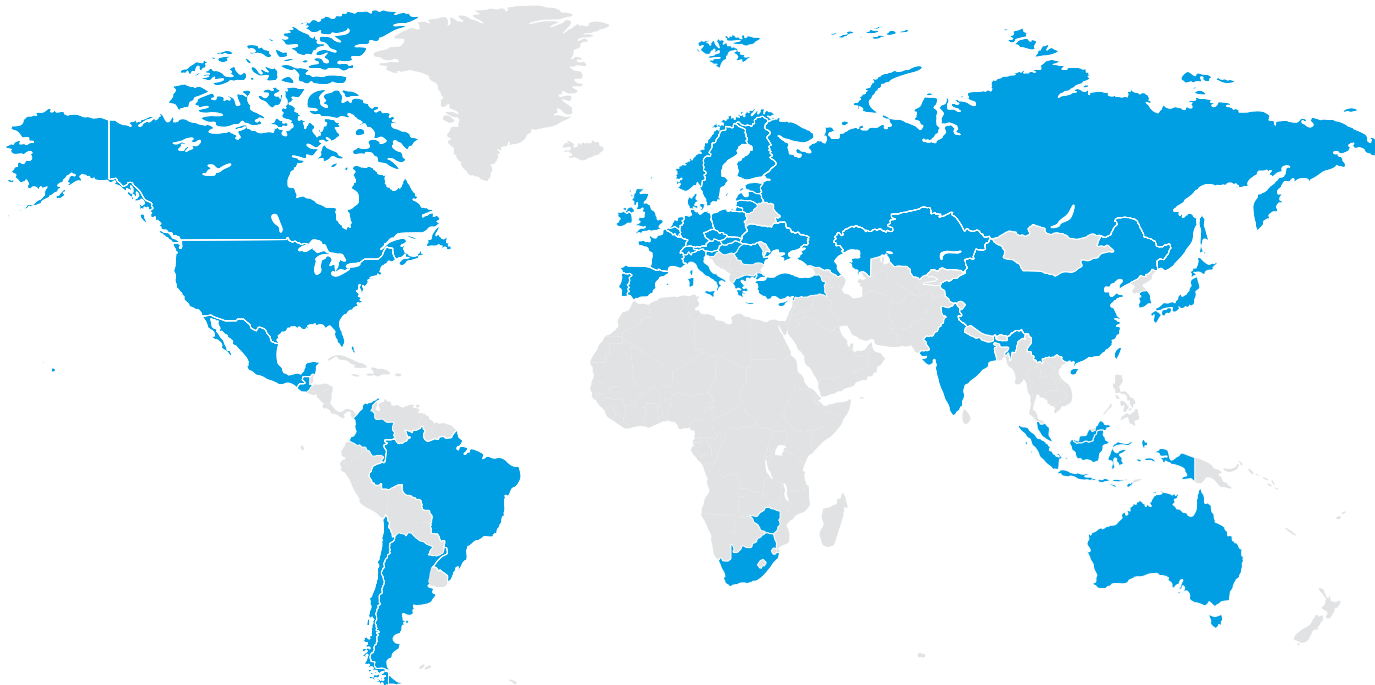
We take into account the OECD Due Diligence Guidance for Responsible Supply Chain. In 2019, our direct material suppliers were screened on the environmental, social, and governance (ESG) risks in countries of origin. The ESG country risk assessment was based on the following seven criteria: regulatory quality, rule of law and corruption from the World Bank, Environmental Performance Index, conflict minerals, child labor, and forced labor. The top 20 suppliers cover 80% of the total direct material spending. Six suppliers out of this group are located in countries with ESG

risks. During 2020, only one site was audited due to travel restrictions but 23 suppliers were assessed under the ESG criteria resulting in some development discussion and tracking procedures.

Finnwatch, a Finnish NGO, published in February 2021 a report on Outokumpu's supply chain in Brazil. Outokumpu recognizes the report and will further investigate the case. Outokumpu has started to implement the UN Guiding Principles on Business and Human Rights.

Environmentally sustainable transportation

Outokumpu's target is to transport as much of our products by rail and ship as possible. Our mills have various programs and targets to make transportation more environmentally friendly, such as the implementation of intermodal transportation. In intermodal transportation, trucks are used for pre-carriage and on-carriage but trains are used for long distance transport. Also, the CO₂eq emission factors of trucks are continuously decreasing due to better technique. In 2020, the company could significantly decrease the transport CO₂eq emissions by about 19% although production only decreased by 3.7%. ■



Material and service suppliers

● Outokumpu supplier countries, including the most important supplier countries with purchases of more than 50,000 euros.

We operate safely, always

Safety is our highest priority. Everyone at Outokumpu has the right to a safe and healthy working environment. Strong safety performance correlates with improved quality and operational efficiency. We aim to be among the industry leaders in safety with the vision of zero accidents.

Our safety management system supports us in striving toward this goal through various preventive activities. Safety audits are performed regularly according to a standardized audit program. Due to the COVID-19 pandemic, most of the audits were conducted remotely. Our daily work is guided by common safety principles, standards, guidelines, and our ten Cardinal Safety Rules.

Hazard observations and Safety Behavioral Observations (SBOs) are utilized to flag potential risks and unsafe 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 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.

Responding to COVID-19

Protecting the health and safety of employees is the top priority at Outokumpu. During the year, Outokumpu has taken several rigorous safety measures to mitigate the negative effects of the COVID-19 pandemic on people and operations. A group-level crisis management team has been responsible for

coordinating mitigation measures across the company. Local crisis teams have implemented site-specific rules and instructions according to the decisions by the company and local authorities.

Thanks to these decisive and well-timed actions, the impacts have been limited. We continue to monitor the development of the pandemic closely in each country that we operate in and adjust the needed measures accordingly.

Strengthening positive safety culture

During 2020, developing the company's safety culture was focused around creating a positive safety culture across the organization.

The company-wide behavioral safety training program SafeStart has been executed at most of our sites with approximately two-thirds of the employees having completed the training. The feedback questionnaire that was filled out by participants at the end of the training has given a good indication that the program has met expectations with positive feedback for the trainers who held the trainings.

In addition to the safety awareness training and the regular task and location specific safety education, a new e-learning course

Protecting the health and safety of our employees is always our top priority, and even more so during the COVID-19 pandemic.

Work-related injuries*



* Per 1 million working hours.

about controlling contractors in safety was launched during 2020. Despite the restrictions caused by the COVID-19 pandemic, safety trainings at the sites could be arranged according to plans by implementing safety measures and control systems for minimizing any risk.

Safety performance

Proactive safety actions and incidents were reported and monitored on a monthly basis. The definitions of safety performance indicators are based on international standards. Incident rates and the rate of proactive safety actions (leading indicators) were reported per million working hours.

Outokumpu uses total recordable injuries per million working hours of employees and contractors (TRIFR) as the main safety performance indicator. Group TRIFR, our main

safety measure, declined from the previous year and was 2.4 against the target of <3.0 (2019: 3.2). Group LTIFR (lost time injuries per million working hours) was 1.4 against the target of <1.2 (2019: 1.4).

The rate of all work-related accidents (total recordable injuries and first aid treated injuries per million working hours) was 13.7 (2019: 15.3).

Proactive safety action frequency was 5,353 (2019: 3,810). This includes reported near-misses, hazard observations, SBOs, and other preventive safety actions per million working hours.

Health and well-being

Good health and well-being of our personnel are essential values on their own. In addition, we believe that a healthy and thriving team of professionals is an asset to the company's success. We want all employees to return home healthy, safe, and sound every day.

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 Outokumpu sites to ensure a healthy working environment.

The number of occupational diseases diagnosed in the Group was 0 (2019: 0). The total absentee rate was 3.3% (2019: 4.2%). ■



Strong safety performance, strong safety culture

In 2020, our performance in safety was on a very good level as we improved our performance especially regarding our total recordable injuries. This follows the long trend of continuous improvement in safety performance, proving that we have been able to build a strong safety culture within Outokumpu.

Since 2016, when the new safety KPIs were implemented our total recordable injury rate has declined over 70% from 8.7 to 2.4. Our lost time injury rate has declined from 2.2 to 1.4.

"Everyone can be proud of this performance that we have achieved and the strong safety culture we have built. Our focus on safety principles, safety standards and sharing good practices throughout the company has been the key to our success. This shows that we are on the right path toward our long-term goal of zero accidents," says Alastair McCubbin, Head of Health & Safety. ■

Work-related injuries by region, accident and employee type

	Group	BA Europe	BA Americas	BA Long Products	BA Ferro-chrome	Employees	Contractors
TRIFR ¹⁾	2.4	2.1	1.6	8.1	3.1	2.3	2.7
LTIFR ²⁾	1.4	1.5	1.1	3.1	1	1.3	1.7
Total recordable injuries ³⁾	53	25	9	13	6	40	13
Fatalities	0	0	0	0	0	0	0
Lost time injuries	31	18	6	5	2	23	8
Restricted work injuries	6	0	3	1	2	3	3
Medically treated injuries	16	7	0	7	2	14	2

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

²⁾ Lost time injuries including fatalities and lost time injuries, per million working hours.

³⁾ Includes fatalities, lost time injuries, restricted work injuries and medically treated injuries.

We want to build our employees the best work environment

The year 2020 was largely labeled by the impacts of the COVID-19 pandemic. Also, the launch of Outokumpu's new strategy set in motion a transformation affecting our personnel at all levels. Our Ways of Working provide us now with the fundamentals that describe our key success factors.

Mitigating the effects of the pandemic

The outbreak and the continuous effects of COVID-19 strengthened our teams, and our joint response proved the cross-functional cooperation within the organization to be strong. Maintaining the level of collaboration and effectiveness of work was a remarkable achievement of all the Outokumpu team members.

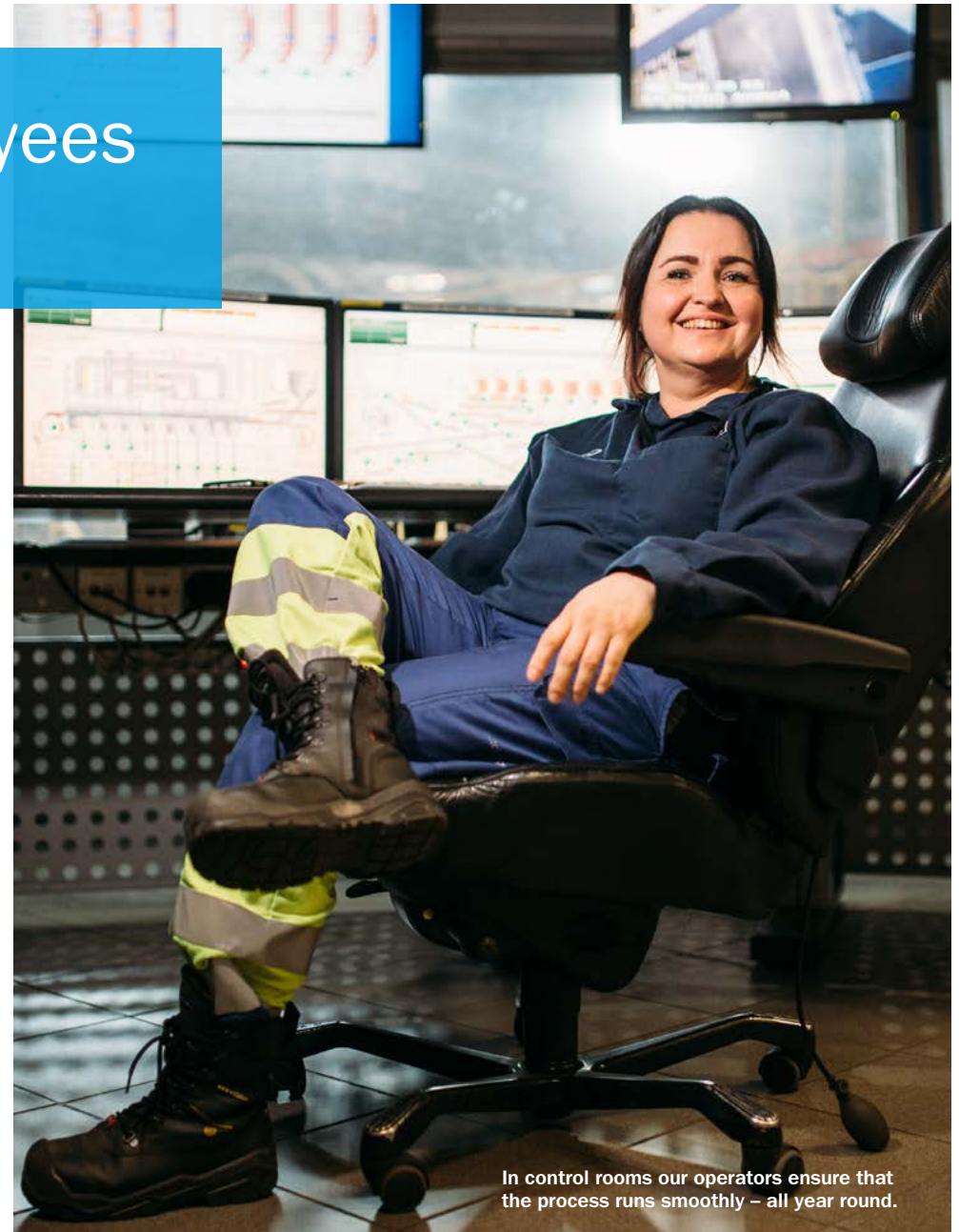
We empowered our employees to work remotely whenever possible and helped to adjust their work environment according to the changed situation and restrictions caused by the pandemic. The online meeting methods were taken into use without delay, where applicable, and adjusting the ways of working in operations was systematic and prompt.

In these circumstances, social interaction and face-to-face collaboration have naturally

shown their value. Nonetheless the amount of successfully conducted remote work and online meetings will have implications on our future ways of interaction. The flexible view and practice of combining remote and office work will provide our way forward.

The Outokumpu Ways of Working

To steer our journey toward our vision, we commit to promote a high-performing culture and Outokumpu Ways of Working. The Ways of Working were launched with our new strategy, and they clarify and define the way we need to work together in Outokumpu in the coming years. They consist of six elements: we operate safely always, we leverage the power of one Outokumpu, we deliver, we grow people and value diversity, we act sustainably, and we are a trusted partner. The way we work at Outokumpu is now condensed in these fundamentals that describe our important success factors.



In control rooms our operators ensure that the process runs smoothly – all year round.







For example, related to valuing diversity, it is very important that all people feel comfortable to work in the company and can contribute equally to our joint journey. There is zero tolerance for any kind of discrimination in Outokumpu, whether it is based on ethnic origin, nationality, religion, political views, gender, sexual orientation, age, or any other factor. Outokumpu's Code of Conduct sets the way of operating in the Group, built on the equal treatment of all people.

Our target is to align ourselves in these six Ways of Working, thereby gaining the ingredients to be a truly high performing organization. The Outokumpu Ways of Working provide us with a road map: they express the requirements for our ways of working to be the customer's first choice in sustainable stainless steel. During 2021, our Ways of Working will be communicated and implemented throughout the organization, and gradually also incorporated into our performance management system and My Performance Commitment development discussions.

Improving organizational health

We strive to improve our organizational health. Elevating empowerment, role clarity, and leadership were identified as the key development areas for 2020, based on the results of our global employee survey Organizational Health Index conducted in 2019. By developing our leadership capabilities, we can significantly impact our business performance and organizational health – hence improving leadership and empowerment helps influence many other areas of organizational health.

Outokumpu Ways of Working

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

Although every day work was largely affected by the pandemic, many development initiatives took place to increase our organizational health and employee satisfaction. We clearly saw that the development on empowerment and leadership supported us also in managing the difficult and challenging situation caused by the pandemic.

To ensure alignment with the new company strategy and targets the 2020 organizational health survey was moved forward. The next survey will take place in 2021. By creating a common understanding on how we run and lead our business, engage and empower our people, and moreover how the day-to-day behaviors and mindsets are connected to the company strategy, this employee engagement survey will further support our Ways of Working.

Step-change in leadership

Strong leadership forms a firm foundation for our high performing organization, and we aspire to grow leaders within our own organization. The basis for further leadership development in Outokumpu is the implementation of the Leadership Pipeline concept and methodology, and our Step-Change in Leadership Excellence program develops our leaders in all levels. The program brings clarity to the expectations of different roles and pushes accountability forward in the organization in a coherent way. The program has been piloted and rolled out in several locations, and we are proceeding with a top down approach starting with the Outokumpu Leadership team and Group finance team. The roll-out will then continue throughout the organization, commencing with management teams and then cascading within the function or location, targeted at strengthening

the performance of each team and endorsing them to become high performing.

The Step-Change in Leadership Excellence program includes workshops where management teams learn to function as a cohesive unit, with a clear team purpose and vision, aligned priorities and key deliverables in alignment with the wider Outokumpu organization and strategy. The training enables individual leaders to complete the transition into the leadership role that needs to be executed to add most value to their team and the organization.

For the recently appointed administrative managers, who have stepped into their role for the first time, we have developed in-house a program to advance tools and methods which drive performance, talent, and rewarding. Leadership Pipeline is implemented in this program as well as in our License to Lead shift-leader program to our first-line managers in



More experts in problem solving

We strive to support the development of our people, and to facilitate continuous improvement in our operations, the Outokumpu team members are regularly trained and certified as experts in the Lean Six Sigma methods and tools. Developing process improvement and problem-solving skills helps us to improve business processes, e.g. by reducing variation and eliminating defects and waste.

In 2020, on a regular basis, we celebrated the achievement of our employees by certifying new Green Belts, who help us to continuously improve our processes and procedures.

During the year, these training sessions presented an example of the many which were promptly transformed into virtual format, and projects were executed in the altered circumstances, with excellent deliverables. ■

operations. Hence, we will continue enhancing the capabilities of our managers to ensure alignment in our leadership on all levels.

A strong focus will be maintained on people development and especially in leadership development, and the Leadership Pipeline program will be executed in more functions and teams throughout the entire organization.

Making a career

In our international and process driven organization, key roles require international and cross-functional experience accompanied by excellent leadership skills. To attract, develop, deploy and retain the talent we need for the future we have increased the rigor of our talent management. This has included executing a significant international rotation of leadership inside the company: most of our major operational units now have new leadership. With a new talent management team, we are defining the road map for the coming years to ensure we employ capable and talented team members to take over key positions in the future, and the development work continues in 2021.

Defining and managing our talent pipeline and the different talent pools – young talents, those with high potential, and top leadership – form a core responsibility of our global talent management. Our intensive programs grow these talent pools step by step, as we identify and assess the potential of our talents in the different pools to provide clarity about the strengths and development areas of each talent.

For example, the global program Form your Future sets the basis for international career

growth in Outokumpu, targeting newly hired graduates. We provide them opportunities for international collaboration, coaching, as well as efficient presentation and communication skills. The program also gives an opportunity to share experiences, provide insights and inspiration and moreover, get motivated by success stories from our current leaders.

Learning and development

Amidst the COVID-19 pandemic and the unexpected change in circumstances, it was important to continue the training and coaching efforts to further increase role clarity, cooperation, and leadership skills to enable the best execution of our goals. Thanks to the quick and agile shift into virtual learning methods and online exercises we were able to maintain a fair number of training and development measures despite the social distancing restrictions and travel guidelines.

Even before the effects of COVID-19, the share of e-learning had risen significantly as part of our learning plan and offering. Self-evidently growth occurred also after the outbreak of the pandemic, providing training where learners participate in an online learning course at different times, whenever it is the most suitable for the participant and at their own pace. To keep up the learning processes, e-learning were created, and courses were launched in the areas of safety, manufacturing excellence, and sustainability.

We also had a significant increase in the quantity of webinars and virtual training available. Initially, we experienced a brief drop in the number of training sessions as events were canceled, but the ways of working

quickly adjusted. Helping our own subject matter experts enhance their training skills has encompassed a systematic process for the past three years, and amidst the pandemic, we saw the benefits materialize. One driver was the increased offering of learning sessions for trainers instructing on the use of virtual tools and methods. Virtual training delivers multiple benefits especially in a global company spread over several locations and sites. Many of our face-to-face and classroom training sessions were converted into online versions allowing development to continue though people could not travel nor meet in person.

To enhance efficiency, customer orientation, and the understanding of quality in our organization, we will introduce a learning program on quality. The modular program is targeted especially at our operators and it will familiarize our employees with the significance of quality – especially to our customers –, our quality management system, and the way every one of us affects quality.

In total in 2020, 93% of Outokumpu employees participated in training sessions and programs. Despite the significant increase in remote and online training as well as webinars, however, the number of training days dropped during the exceptional year. Overall, the number of training and development days amounted to 9,978 (2019: 18,004) and 79,825 hours (2019: 144,036) during the year.

Setting and achieving targets

To ensure that managers and employees understand their main tasks and how they contribute to the business targets and the strategy, we have a systematic process for

Our people & society

setting and achieving individual performance and behavior targets as well as a discussion about development needs. The core of performance management in Outokumpu is My Performance Commitment process, MPC.

Consistent execution of My Performance Commitment process ensures high performance by clarifying responsibilities and individual accountabilities. Our target setting process starts with the definition of the business targets, which are cascaded throughout the organization. Each employee and their manager agree on individual performance targets that contribute to the overall business targets on the right level: business targets, leaders' targets, or individual contributor targets.

In 2020, Outokumpu continued its performance review process with increasing focus on achieving results. Communication tools for managers and employees were further developed with an intensified attention on follow-up and driving a performance culture in the organization. To further strengthen engagement and performance among employees, Group supported managers with performance tools and measures while also providing training. Going into 2021, the target setting and follow-up will be further strengthened and intensified to secure a delivery following the new strategy for positioning Outokumpu competitively for the future.

My Performance Commitment process is documented in our common HR platform PeopleDrive. In 2020, 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 those countries where local contracts or regulations do not make it possible to have performance development discussions, Outokumpu follows the local procedures.

Through having one global HR ERP system, PeopleDrive, Outokumpu has been able to improve and harmonize HR processes and bring efficiency and better end-user experience to managers and employees. During 2020 Outokumpu conducted several audits to ensure high quality of data, acknowledging that the global system supports an increasing number of other processes and systems within the Group.

Outokumpu's remuneration principles and framework was largely unchanged from the year before: incentive plans remained the same while the target setting was adjusted. Salary budgets were set on very moderate market-based levels observing the overall difficult market situation. Long-term incentive programs continue to focus on emphasizing shareholder value creation and ownership culture and setting a performance culture through Group and BA level target setting. The commitment to our new strategy and transformation will also be reflected in the incentive programs within Outokumpu.

Organizational development

As part of our aim for a lean and agile organization, we started delayering the organizational structure. The target is a simplified and flat structure with clear roles and responsibilities, thereby creating a high level of individual accountability.

In 2020, the number of employees decreased by 475 globally. In April we concluded negotiations to reduce our personnel in Germany by approximately 370 full-time employees, and the measures were close to completion at the end of 2020. In the business area Long Products, approximately 100 positions were reduced by year end. Approximately 70% of the redundancies took place in the UK, and shift reductions were also implemented in Sweden earlier in 2020. In November, Outokumpu started employee negotiation processes in selected operating countries with the plan to create cost savings by restructuring and reducing the total employee headcount by up to approximately 1,000 mostly by the end of 2021. The employee reductions were planned to be 270 in Finland, 250 in Germany and 190 in Sweden, with further reductions planned across the European and Americas based operations. Outokumpu has targeted a headcount of below 9,000 during 2022.

By cultivating a lean and agile organization, we aim to grow an organization with people who have the capability of quickly reacting and adapting in the changing market environment. The year 2021 will see some of our teams building their everyday tasks, manners and routines after the delayering of the organization, as certain functions will need to adapt the structures or change the ways of working going forward.

Outokumpu is committed to informing and consulting its employees and their representatives to ensure a greater understanding of the company and the competitive situation in which we operate. In Europe, continuous



Keeping it safe

While we encourage remote work whenever possible during the COVID-19 pandemic, our mills would not run, and we could not deliver top-quality stainless steel to our customers, without our ever-present experts in several shifts. During the year, we took countless actions to ensure the safety of those who could not work remotely but also to keep our mills up and running by global and local guidelines on social distancing, hygiene and cleaning, travel bans as well as limiting face-to-face meetings and visitor access. Our teams came up with various solutions like outdoor meetings following the rules of social distancing.

Here the Americas' safety team, led by Wayne Denton, is showing example of how to organize the melt shop team's safety meeting safely.

Our Americas business area also successfully launched virtual customer visits to replace real-life visits to our mills. ■

Our people by region

	2020	2019	2018
Finland	2,517	2,502	2,437
Germany	2,326	2,555	2,667
Sweden	1,888	1,975	1,940
The United Kingdom	502	560	571
Other Europe	747	727	698
Europe	7,980	8,319	8,313
The United States	1,010	1,064	1,072
Mexico	786	859	903
South America	84	87	86
Americas	1,880	2,010	2,061
Asia/Rest of the world	55	61	75
Group total	9,915	10,390	10,449

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 ongoing cooperation between management and employees. Eight members represent employees and three the management. Normally, the Personnel Forum meets once a year but in 2020, the Outokumpu Personnel Forum was postponed and then canceled due to COVID-19. A meeting of the Personnel Forum is planned to be organized in 2021, yet the COVID-19 situation will be monitored very closely. Additionally, Group Working Committee was heavily affected in 2020 by COVID-19, as it was possible to convene face-to-face only once, and the other three official meetings were virtual. In addition, between mid-March and end of June, Group Working Committee had weekly COVID-19 update calls.

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, and in 2020 altogether 79% of the Group’s employees were covered by collective agreements (2019: 79%). In sum, 2,496 days in 2020 were lost due to strikes (2019: 5,424). ■



Sharing expertise across functions

To enhance the development of training programs internally, we have leveraged the power of one Outokumpu. With an extensive collaboration across functions, operations and different teams, during 2020 we have constructed for example a vast training program concentrating on quality. In the future, quality will help us to strengthen our market position and we recognize that the foundation for high-quality products is built on high-quality culture throughout the organization. Thus, the aim is to ensure that employees understand how they create value for the customer and Outokumpu in terms of product quality and how the contribution and awareness of each and every one of us is crucial. The training is targeted especially at operators and first line managers but will also be available to process specialists, decision makers and sales teams.

In addition to quality, online and in-house training programs have been developed around topics such as stainless products and properties as well as making of stainless steel from scrap to slab. These training programs will be rolled out during 2021–22. ■

Outokumpu and society

Local communities

While Outokumpu operates in a global market, our production sites are often located in relatively small cities or towns. This means that we are a significant part of the many of the communities we operate in, and often one of the very few private-sector employers in the area. We recognize that our decisions might have a major impact on communities, our personnel as well as local suppliers and service providers, and we maintain continuous cooperation with community officials and representatives, other companies, schools, and universities. Typically, sites have yearly discussions with local community representatives on relevant topics such as employment, the environment, energy, or sponsoring of local events.

As part of their community engagement, some Outokumpu sites also continued their dialogue within the community and with environmental NGOs related to ongoing permit processes or other environmental issues. In 2020, Outokumpu launched an Environmental Impact Assessment (EIA) procedure related to the plans to expand our Kemi Mine. Discussions about possible concerns related to the project have been conducted with local stakeholders.

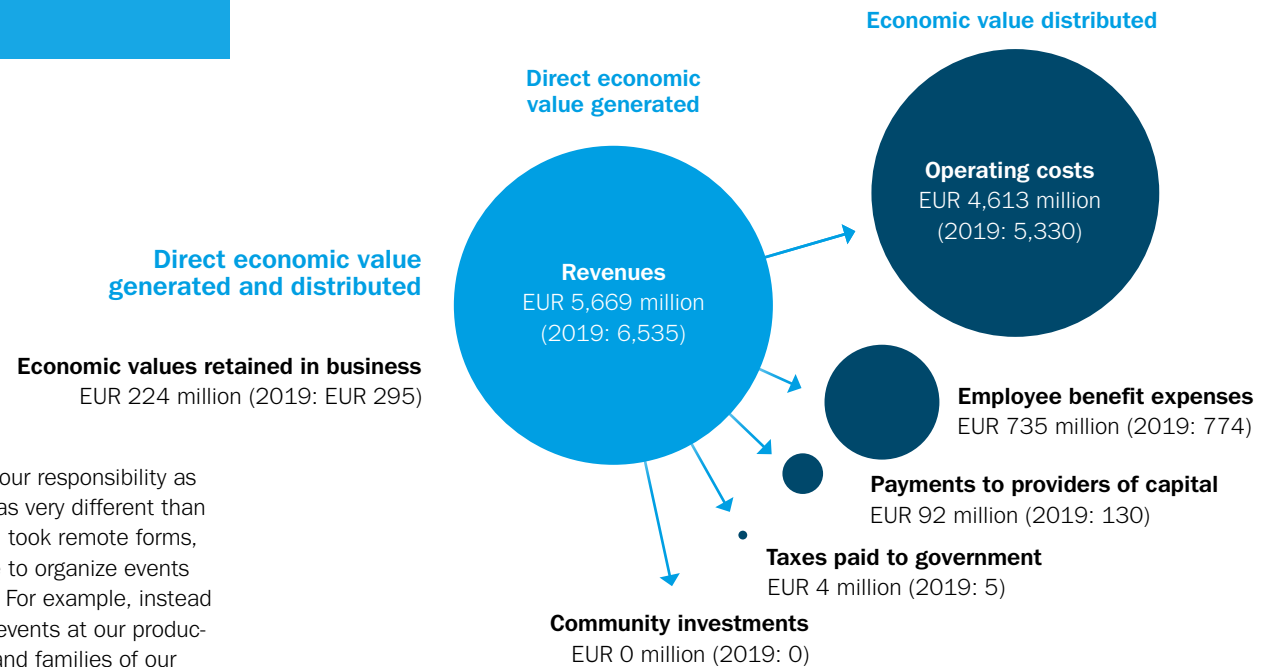
In this exceptional year, our responsibility as a community member was very different than it usually is. Cooperation took remote forms, when it was not possible to organize events due to social distancing. For example, instead of organizing open-door events at our production sites for neighbors and families of our employees, we limited the number of visitors at our sites to only business critical visits. Our sites followed both Outokumpu's own and local guidelines by authorities to safeguard both our employees and the community we operate in.

Public sector and sponsoring

In sponsorships, Outokumpu prioritizes connections to stainless steel, sustainability, talent, and education. Locally, Outokumpu has sponsored, for example, artworks by donating

Our main areas of direct economic impact are our financial interactions with customers, suppliers, employees, the public sector, investors and shareholders.

See taxes by country in our sustainability data tool. [↗](#)



stainless steel, significant local projects, and sports associations.

We support research related to our field of industry and maintain close cooperation with educational institutes. In 2020, for instance, Outokumpu strengthened cooperation with local educational institutions in Finland with Lapland University of Applied Sciences, Oulu University of Applied Sciences and Vocational

College Lappia. This way, the competencies and skills needed in the industry can be better embedded into curriculums. Students, educational institutions and Outokumpu all benefit from the systematic and long-term cooperation.

Apprenticeships have been offered to local colleges, and student placements have been made available in the form of one-year programs.

Associations and public affairs

Outokumpu is a signatory to the International Chamber of Commerce (ICC) charter and the United Nations Global Compact. Outokumpu has signed the World Steel Association's Sustainable Development Charter and the ISSF's Sustainable Stainless Charter and joined ResponsibleSteel initiative for the steel industry.

Outokumpu is a member of several international organizations and provides relevant information to decision-makers and experts relating to the development of the business environment and legislation. The Group also participates in the work of trade organizations. Our public affairs approach is to communicate via industrial associations like Eurofer toward governing bodies and regulators. Our total spending on association memberships is around EUR 2.5 million.

[See the list of our memberships on our website.](#) 

Ethics and Compliance

Outokumpu is strongly committed to conducting business in a legal, compliant and ethical way. The objective of Outokumpu's ethics and compliance program is to ensure that Outokumpu and its employees comply with the laws and regulations as well as Outokumpu's internal policies and instructions and make sound, ethical decisions as part of their daily work. The program also aims to mitigate compliance risks by a set of preventative and supervisory measures. During 2020 the implementation of all elements of the ethics and compliance program continued

in close cooperation with the leadership, business areas and business support functions. The compliance governance bodies, including Compliance Steering Group and a network of compliance contact persons, also supported with the implementation of the program.

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. One of the key compliance projects for 2020 was the revision of Code of Conduct. The revision was made, inter alia, in order to incorporate new Ways of Working and strategies into the Code of Conduct and to comply with the stricter external requirements and expectations from the business partners. The revised Code of Conduct will be launched during 2021 together with the updated, mandatory Code of Conduct e-learning for all employees.

Outokumpu's Code of Conduct sets zero tolerance for corrupt practices. Outokumpu has also an Anti-Corruption Instruction providing more detailed guidance on responsible business practices. In 2020, specific anti-corruption related communications were made, and anti-corruption e-learning was reissued to all administrative employees. The e-learning achieved a completion rate of 100%. The effectiveness of the anti-corruption e-learning was measured through a survey that was launched for the first time as part of the improvement of internal controls. Communications were also made with respect to data protection topic and data protection e-learning was relaunched

in 2020 with the completion rate of 100%. To strengthen the enforcement of mandatory compliance e-learning a consequence management process was implemented in 2020. Through this process, the completion of the mandatory compliance e-learning can be effectively monitored, and follow-up actions can be taken in case of non-completions.

During 2020 further improvement actions also continued in the identified other key risk areas, including competition law compliance and trade compliance. Within competition law compliance, the company's Competition Law Compliance Policy was updated, several webinars were conducted for selected target groups and communications were made through different channels on this topic. Within the area of trade compliance, Outokumpu has a Know Your Business Partner Instruction detailing the principles and rules related to establishing and monitoring relationships with business partners and managing related risks. During 2020, third party risks were further mitigated with process improvements and organizing several webinars on the trade compliance topic for targeted groups.

Compliance risks, including risks related to corruption, are assessed and reviewed annually and described in the Key risks section in this Annual report. More information regarding our misconduct reporting can be found in the review by the Board of Directors, Corporate Governance statement, and our [website](#). ■



Rescue patrol ready to serve

At our mills, we have internal task forces who support local rescue services by taking care of the situation until the rescue services arrive. But some of our experts also act as on-call firefighters in their community.

In Nyby, Sweden our task force works closely with the local rescue service in the Eskilstuna area. Among our stainless steel experts, we have eight on-call firefighters who work part-time and respond to hundreds of emergency calls in their community every year. As locals they have good knowledge of the area, and they are an important part of the local community's emergency preparedness, with also certain tasks agreed with the authorities. Outokumpu as an employer supports our team members' work as part-time firefighters and enables their participation in the emergency operations and exercises. As compensation, Outokumpu gains own experts with solid knowledge in fire protection, lifesaving and accident prevention work. ■

Customers and expertise

Our customers are our focus in our new vision, to be our customer's first choice in sustainable stainless steel.

We want to increase our customers' competitiveness with our products by improving their efficiency, profitability, and sustainability. We continuously innovate and improve our operations and products so that we can offer more benefits to our customers. Together with our customers, we can find new application areas where stainless steel can make a positive impact as a more sustainable solution. While we had to adjust our operations in 2020 to meet lower demand, our sales team proactively engaged with our customers during these exceptional times to ensure the continuation of our service and remain our customers' trusted partner.

Outokumpu has a strong customer base spread across the globe on every continent and balanced over a range of industries. Our customers build and construct infrastructure and buildings, produce energy, and manufacture appliances and cars. Most of our customers are based in areas where we have our own production: Europe, the US, and Mexico. We also have a global sales and service center network that serves customers on all the main continents.

Outokumpu conducts regular customer satisfaction surveys. In the latest one, conducted

in 2019, 95% of customers were satisfied, very satisfied or absolutely satisfied with their business relationship with us. Our strengths are quick reaction to customer requests, understanding customer needs and easy reach of contact people, while we need to work on our delivery performance. In the exceptional year of 2020, we strove to keep our delivery performance on an acceptable level but did not manage to improve it significantly.

Customer cooperation goes online

Continuous interaction with customers helps us to improve our understanding of our customers' needs, challenges, and business environments. This feedback helps us to achieve our growth targets and guides us in improving our performance, at the strategic and operational levels. In 2020, our customer cooperation took new remote forms. For example, the Americas business area arranged virtual visits with top distributor customers.

In terms of digitalizing our sales channels, 2020 was a significant step forward. Electronic Data Interchange (EDI) has been a main pillar of connecting on a transactional level with our customers. Additionally, we have been able to further expand our web shop offering. All those



Temoco provides bar furniture and chose Outokumpu as a supplier because we are a responsible producer of stainless steel.

Sustainable solutions

sales digitalization efforts do not only improve the customer experience and satisfaction, but also help us to further reduce administrative effort and cost of sales.

Excess material sold online in Germany

In 2020, we took another leap forward in our sales digitalization efforts and set up a new web shop selling excess material from our German mills. Excess material can be for instance leftovers due to order cancellations and with sometimes very distinct dimensions, or material that does not fulfill the quality requirements for prime products, such as with scratches on the surface, but which are still too good to scrap it. We have always sold excess material but by a different method and a negotiation process.

Now with the web shop, our select customers, who have bought excess materials before, can immediately see what is available, and the process runs smoothly for both Outokumpu and the customers. Our excess material web shop was set up in a record short time, in only 13 weeks. We are looking into possibilities to expanding it to Tornio and Terneuzen. ■



Bridge built to last

New Pooley Bridge, the first stainless steel road bridge in the UK, was designed by Knight Architects to replace the original historic stone bridge, swept away in a storm, and opened up for traffic in October 2020. “We found that local people wanted to minimize the risk of future flooding, to be able to see the landscape clearly and to include traditional stonework. We also needed to minimize the impact of construction on the river,” explains Hector Beade Pereda, Head of Design at Knight Architects.

Using strong duplex stainless steel, bridge designers could create something as slender as possible, to help the bridge appear transparent so that people can see the landscape through it. The slender design also allows the river to flow freely and avoids backing up during storms. The duplex steel is also more tolerant of impacts by debris when the river level is high and flowing fast. Light design minimized the impact of construction on the river. ■

[Find out more on Pooley bridge](#) 



Transforming bar industry sustainably

Temoco provides bar furniture for some of the Nordics’ leading bars, transforming the bar industry sustainably. Morten Larssen, the owner of Temoco: “We chose Outokumpu because they clearly show and act like a responsible producer of stainless steel. That business is all but green due to the industrial process, but they do their best to produce it as sustainably as possible. The fact that 90% of the raw materials used in their business are recycled and 100% recyclable played a large part and being located in the Nordics ensures fair working conditions. We must educate and inform our clients about all the benefits sustainable options give to the environment and to the economy. We believe that more players in the market will begin to pay more attention to sustainability.”

[Watch Morten Larssen describe the sustainable business of Temoco](#) 

Research and development

Outokumpu's research and development function contributes to Outokumpu's new vision to be the customer's first choice in sustainable stainless steel.

Outokumpu's research and development (R&D) aims to create extraordinary value for our collaboration partners both internally and externally by delivering focused projects on the current and future product demands of our customers, developing and adopting new process technologies, ensuring and improving efficiency of our production processes, ensuring best in class product support, securing competitive knowledge and driving value by using digital tools and data science.

Further optimization of R&D organization

Our R&D works closely together with sales, operations and customers to support the business and align R&D activities with customers' current and future needs. As part of organizational changes made in the Chief Technology Officer's function, the R&D organization was further streamlined in 2020. Both process and product R&D teams started to report directly to the head of R&D. Outokumpu has three R&D centers located in Avesta, Sweden, in Krefeld, Germany and in Tornio, Finland. R&D activities are focused on the development of our production processes, products and customer applications. In 2020, Outokumpu's R&D expenditure totaled EUR 21 million, 0.4% of net sales (2019: EUR 17 million and 0.3%, 2018: EUR 15 million and 0.2%).

Process R&D

During 2020 the key process R&D projects were focused on the optimization of product quality, yield, production cost reduction and material efficiency. R&D also contributed to product transfers between the Outokumpu units. A training program to further improve the technical competences of our staff at production operations was developed and launched. Sharing of best practices between Outokumpu production sites was also kept high in our agenda, facilitated by so called CTC (core technology competence) groups involving technology experts from both production and R&D teams. Process R&D experts continued to be actively involved in our industrial digitalization initiatives. A long-term R&D program to aiming to reduce the CO₂ footprint of our operations was initiated.

Product R&D

The product R&D projects are focused on developing new steel grades, characterization and improvement of the existing grades, as well as the use of stainless steels in different end-use application areas. The product R&D activities are focused on the Outokumpu Pro product family that offers stainless steel products for specific applications or demanding end use. Product and application development

projects mostly concentrate on the development of sustainable solutions in certain key segments, such as clean energy, transport and construction.

R&D infrastructure and networking

Outokumpu is continuously developing its R&D infrastructure and laboratory facilities. In 2020 one of our R&D key assets, the unique pilot plant facility at Tornio R&D center, was revamped. A completely new automation system was installed, and furnace fuel changed from LPG to LNG.

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 in national and international collaborative R&D projects and programs. ■



Digitalizing Tornio moves ahead

In 2020, we have been transforming our Tornio mill into the most digitalized and cost-competitive stainless steel operation in the industry. We built our own industrial digital platform based on Microsoft Azure technology. We are using artificial intelligence in process optimization, predictive maintenance and quality control. Concrete examples are surface inspection cameras installed in integrated rolling, annealing and pickling line as well as software and sensory gates in the spare part storage for automatic spare part storage inventory.

"This platform will enable us to transform from experience-based and intuitive decision-making to data-based decision-making," says Minna Bhati, Program Manager for the program. "Already we are using data from Tornio's machines to help close the skills gap between operators who have been producing stainless steel for decades and those who are new to the industry." ■

Scope of the report

Outokumpu has published its sustainability review as part of the Annual Report 2020. Sustainability information is also available at www.outokumpu.com/sustainability.

Outokumpu Oyj reports on the material developments of continuing sites and changes in 2020 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 2020, including Sustainability Review, was published in March 2021.

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 2018 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 30 in the Sustainability Review. The Financial Statements 2020 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 CO₂ eq

intensity of direct and indirect emissions of electricity and upstream emissions. Emissions are consolidated on production control.

CO₂ eq emissions of electricity are calculated and monitored by the emissions factor of Outokumpu's electricity mix of 152 kg CO₂ eq/MWh (2019: 167 kg CO₂ eq/MWh), given by the electricity supplier for the used electricity and calculated as weighted average. Some hydro power recs were calculated as replacing fossil fuel of the concerning country. In addition, the location-based electricity emissions are disclosed. They are calculated by the published country-specific emissions factors of the electricity generation of 2018 or 2019 if available.

CO₂ eq emissions outside the company (scope 3), except electricity, are covered by more than 96%. 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 58% from supplier specific emissions and 42% of LCA e-factor. Emissions of sold ferrochrome are not allocated to the stainless steel production of the company.
- For used gases, lime and dolomite, electrodes and coke: by emissions factors of ISO 14404.
- For upstream emissions of coke and oil: by emissions factors of WorldSteel Association.
- For internal and product transport: by typical distances and type of transport with the corresponding emissions factors. The coverage of reporting includes all

Scope of the report

modes of transport, including intermodal transportation.

- For business travel: by estimated driven kilometers with emissions factors for the car, and for flights by CO₂ eq reports of the flight companies. Rental car emissions are included by the rental car company report.

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

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 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 water, taken from municipal suppliers and estimated for rainwater amount.

Waste is separately reported for mining and stainless production. In mining, amount of non-hazardous tailing sands is reported. For stainless production hazardous and non-hazardous wastes are reported as recycled, recovered and landfilled. Waste treated is counted as landfilled waste.

Social responsibility

Health and safety figures

Health and safety figures reflect the scope of Outokumpu's operations as they were in 2020.

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.

Total personnel costs

This figure includes wages, salaries, bonuses, social costs or other personnel expenses, as well as fringe benefits paid and/or accrued during the reporting period.

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 = (Turnover + 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 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 disclosures for the reporting period 1 January to 31 December 2020, disclosed in Outokumpu Oyj's Sustainability Review 2020 and in Outokumpu Oyj's online sustainability tool. In terms of the Company's GRI Standards reporting and GRI Standards Content Index, the scope of the assurance has covered economic, social and environmental sustainability disclosures listed within the Topic-Specific Disclosures as well as General Disclosures 102-8 and 102-41 (hereinafter Sustainability Information).

Management's responsibility

The Management of Outokumpu Oyj is responsible for preparing the Sustainability Information in accordance with the Reporting criteria as set out in the Company's reporting instructions and the GRI Sustainability Reporting 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 Sustainability Information that is free from material misstatement, whether due to fraud or error.

Practitioner's independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for

Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

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

Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Sustainability Information based on the procedures we have performed and the evidence we have obtained. 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.

We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". That standard requires that we plan and perform the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance

engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the Sustainability Information. The procedures selected depend on the practitioner's judgement, including an assessment of the risks of material misstatement of the Sustainability Information.

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

- Interviewing senior management of the Company.
- Conducting three video interviews with sites in Finland, Sweden and the United Kingdom.
- Interviewing employees responsible for collecting and reporting the Sustainability Information at the Group level and at the site level where our online site visits and video interviews were conducted.
- Assessing how Group employees apply the Company's reporting instructions and procedures.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Outokumpu Oyj's Sustainability Information for the reporting period ended 31

December 2020 is not properly prepared, in all material respects, in accordance with the Reporting criteria.

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

Helsinki, 25 February 2021

PricewaterhouseCoopers Oy

Tiina Puukkoniemi	Janne Rajalahti
Partner	Partner
Authorised Public Accountant (KHT)	Authorised Public Accountant (KHT)