



SUSTAINABILITY

OUR MISSION

Responsibly transforming raw materials into value – to provide metals for an innovative world.

At Aurubis, sustainability means:



Treating the **environment** and limited natural resources with care.



Maintaining a **relationship of trust** with employees, suppliers, customers, and neighbors.



Securing **long-term company success** with responsible business practices and stable growth.

FOCUS

SUSTAINABILITY



ROLAND HARINGS

Chief Executive Officer

Dear friends of the company,

The key to a more sustainable future is responsibly produced metals. Without our products, innovative technologies in alignment with the environment aren't possible. We are aware of our responsibility and are increasingly moving sustainability to the forefront of our activities. We are also fulfilling this aspiration by integrating sustainability more strongly into our company strategy, which is currently being revised.

In this magazine, we highlight measures and projects from our strategic sustainability action areas, the areas in which Aurubis fulfills its responsibility to society. In the sustainability area of People, you can see how we counteract the lack of specialized workers by means of increased training, as well as ensuring more occupational safety. In the area of Economy, we illustrate how Aurubis leads by example with its commitment to the Copper Mark

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REPORT 2019/20** 2

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Action areas of the **Aurubis Sustainability Strategy** 2018–2023

and the first site certification pursuant to this new quality seal. Because for us, responsibility in the supply chain is fundamental. With our recycling activities, we reinforce the careful handling of resources and advocate for the circular economy. The Environment area demonstrates how Aurubis is contributing to the 1.5°C goal of the Paris Climate Agreement by working on decarbonizing our production and making industrial heat usable for the local community.

It's clear to us that we can only be successful in the future if we continue spreading an understanding of sustainability in all company departments and business activities.

We hope you'll join Aurubis on this path.


ROLAND HARINGS
 Chief Executive Officer

2019/20 HIGHLIGHTS

- » One of the most efficient smelter networks in the world
- » Made progress in the Ten Principles of the United Nations Global Compact (UNGC)
- » Joined the UNGC initiative Business Ambition for 1.5°C and drafted the roadmap for Science-Based Targets for reducing greenhouse gas emissions
- » Acquired the Belgian-Spanish recycling specialist Metallo
- » Placed a Schuldschein loan with a sustainability component
- » Further increased vocational training capacity
- » Expanded social engagement
- » Published the Aurubis Human Rights Commitment
- » Joined the Copper Mark

AURUBIS AT A GLANCE

2019/20 by the numbers



€ 221 million
OPERATING EARNINGS
before taxes (EBT)



9.3 %
ROCE
(return on capital employed)



7,236
EMPLOYEES
including **319** apprentices



3.47 million MWh
ENERGY INPUT¹
(total)

¹ Calendar year 2019



€ 30.6 million
INVESTMENTS
in environmental protection¹

¹ Calendar year 2019



1 million t
**RECYCLING
CAPACITY**



12
HOURS OF TRAINING
per employee on average



€ 15 million
R&D EXPENDITURE



1.4 million t
CO₂ EMISSIONS
(Scope 1 and 2)¹

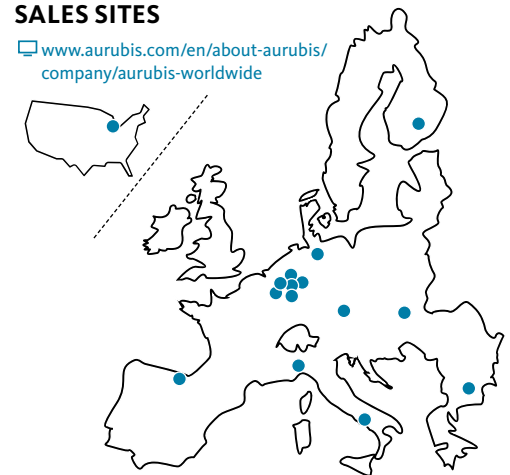
¹ Calendar year 2019



5.4
LTIFR
(lost time injury frequency rate)

AURUBIS PRODUCTION & SALES SITES

[www.aurubis.com/en/about-aurubis/
company/aurubis-worldwide](http://www.aurubis.com/en/about-aurubis/company/aurubis-worldwide)



PEOPLE
FUTURE-ORIENTED EMPLOYER

AN EXCEPTIONAL TEAM...

More than 7,000 employees, over 50 nationalities worldwide, connected by passion and expertise for metals – a real strength, especially in times of crisis.

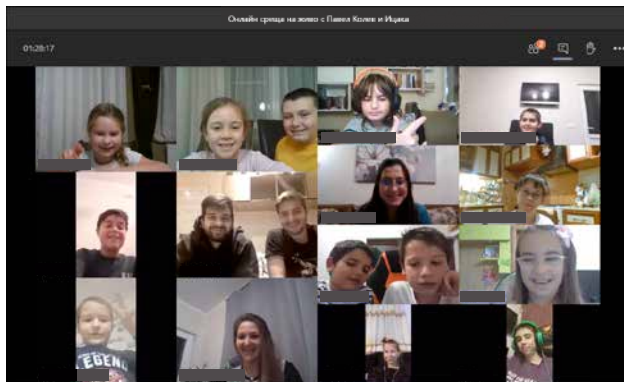
Aurubis is stable. Not just because of its robust business model, but also thanks to the employees at all of the sites. With a great deal of discipline and commitment, they have made sure that Aurubis has made its way through the coronavirus pandemic relatively unharmed from an economic perspective thus far.



Aurubis is a good example of how diversity can work when everyone has shared values such as a sense of responsibility, discipline, and solidarity.”

CEO Roland Harings





... INCLUDING WHEN IT COMES TO DIGITAL COLLABORATION

Remote work, virtual meetings, and coordinating through chats – this is everyday life after roughly one year of the pandemic. In entirely new formats, employees communicate with each other across sites and functions: Mystery Lunches promote networking among colleagues, regardless of their site or work area. Participants are randomly assigned partners for a shared virtual lunch. And what's more: digital tools such as the collaboration platform Yammer are ready to kick off to continue promoting communication and networking among the employees.

In the unusual context of the coronavirus pandemic, we also developed creative ideas in Event Management to successfully turn live events into digital ones – whether it be the Annual General Meeting, employee events, or trade fairs.

For the virtual Meet-Up event series, the Executive Board invites experts from the entire company to discuss ideas, questions, and suggestions about different topics. Information events hosted by the Works Council in Hamburg, as well as events on health issues and plant tours for children in Pirdop, were successfully digitalized.

PEOPLE
TRAINING AND EDUCATION

DIGITAL, INNOVATIVE LEARNING ...

We foster a learning culture based on personal responsibility, flexible arrangements, dialogue, and digital skills. With the Learning Academy, continuing education and digital, self-guided learning have become even more accessible since mid-2020: the new platform is a central location for all qualification and learning opportunities, and the options have been expanded.

... NOW AND IN THE FUTURE

To raise enthusiasm for our apprenticeship training, video clips on apprenticeship vocations were produced and posted in social media channels.

Despite the ongoing coronavirus pandemic, Aurubis AG increased its number of apprenticeships during the last fiscal year. The plants in Hamburg and Lünen are therefore among the biggest industrial training providers in these cities.



Applying their studies directly – at the Hamburg site, students in dual study programs can connect theory and practical experience.



ABOUT

100

NEW APPRENTICES

at the Hamburg and Lünen plants

+13%

APPRENTICES

compared to the previous year

TARGET BY FY 2022/23

18

TRAINING HOURS

per employee per
year on average

PEOPLE
HEALTH AND SAFETY

ZERO WORK-RELATED ACCIDENTS, INJURIES, AND ILLNESSES

When it comes to occupational safety, the clear target is to have no incidents in the company. A Group-wide communication campaign at all of the sites supported this target. The campaign included Doc Copper, Nora Nickel, and Louis Lead. They each reflect not only a characteristic feature of an Aurubis metal, but also an aspect of occupational safety.

With 10forZero, Aurubis created ten characters that focus on ten significant risk areas and make these Golden Rules even more visible. The campaign, which was accompanied by informational material, training sessions, and a quiz, was successfully concluded in March 2021. We're now already working on a follow-up campaign to reinforce safe conduct even more, so there will be a reunion with Doc Copper and his friends.

TARGET BY FY 2022/23

≤ 1.0

LTIFR¹

¹ Lost time injury frequency rate. This is the number of work-related accidents with at least one lost shift per million hours worked.

- 

» Rule 1
FIT FOR WORK
I speak to my supervisor when I don't feel well.
- 

» Rule 2
HAZARD RESPONSE
I take immediate action when I notice an unsafe situation.
- 

» Rule 3
MOBILE EQUIPMENT & TRAFFIC
I follow all traffic rules.
- 

» Rule 4
CONFINED SPACES & CONTAINERS
I do not enter any confined spaces or containers without a valid permit.
- 

» Rule 5
WORKING AT HEIGHTS
I use fall protection equipment when working at heights.
- 

» Rule 6
LOCKOUT / TAGOUT
I follow the lockout / tagout procedure.
- 

» Rule 7
LIFTING & MECHANICAL EQUIPMENT
I ensure that lifting equipment is suitable for the task at hand and that no one is under it.
- 

» Rule 8
CHEMICALS & HAZARDOUS SUBSTANCES
I understand and follow instructions regarding hazardous substances.
- 

» Rule 9
SAFETY DEVICES
I do not deactivate any safety devices.
- 

» Rule 10
PERSONAL PROTECTIVE EQUIPMENT (PPE)
I wear and use the required PPE.

GERMANY

Throughout Germany, Aurubis is a partner in the Haus der kleinen Forscher (Little Scientists' House) network, which encourages children to take an interest in MINT subjects (math, IT, natural sciences, and technology).

GERMANY – HAMBURG

The integration project and design label Bridge & Tunnel and the organization Hanseatic Help enable integration and participation with unique approaches. The Elbphilharmonie Audience Orchestra and the Inclusion Days carried out at schools by the BG Baskets wheelchair basketball team are additional examples of projects sponsored in Hamburg.

SPAIN

Our site in Berango is active in a sponsorship project for traffic education and fostering enthusiasm for cycling among children and young adults.

CHILE

In our supplier country Chile, our involvement extends to the development of dual occupational training (following the German model) for sustainable resource use in agriculture at a school in the O'Higgins Region. The purpose of the project is to provide future prospects for young people and strengthen alternative economic structures apart from mining.

BELGIUM – OLEN

Aurubis Belgium in Olen is fighting hidden poverty (including poverty in old age) together with the organization Welzijnsschakels. The sponsored project Sociale Dienst Olen has the mission of improving the lives of disadvantaged individuals and families.

PERU

In our supplier country Peru, we contribute to a holistic education program for elementary school children in the Urubamba region (above). Furthermore, Aurubis supports sustainable water use and biodiversity conservation in a national park near Arequipa.

**PEOPLE**
SOCIAL ENGAGEMENT**TOGETHER
WE CARE!**

We bundle our social engagement under the slogan "together we care" – on a national level in Germany, but also internationally in the areas surrounding our sites as well as in our supplier countries. The examples at left provide an impression of our sponsoring projects.

Visit our website for more information:
www.aurubis.com/en/togetherwecare

BULGARIA

Aurubis Bulgaria is involved with partner companies from the region, for example in a dual education program at the technical university in Zlatitsa and at summer schools to promote musical and technical instruction near the site. Furthermore, we sponsored the reconstruction of the convent in Zlatitsa (at left), an important part of the historical legacy of the Bulgarian Renaissance. Together with other companies from the region, we have supported the hospital in Pirdop for many years – with additional assistance in the reporting year during the coronavirus crisis.

**€ 1.57 million****EXPENDITURES**

for social engagement
in fiscal year 2019/20

ECONOMY
RECYCLING SOLUTIONS

DRAWING OUT THE BEST ...

The transition from a linear to a circular economy is one of the main pillars in achieving the Green Deal targets established by the European Commission. One of the largest copper recyclers in the world, Aurubis helps close the cycle for a number of metals.

We encounter metals in all areas of our lives. Rising demand worldwide is countered by finite natural resources. The solution: metal recycling. Once they are recovered, non-ferrous metals like copper can theoretically be reprocessed indefinitely – without loss of quality. With metal recycling, we tap new raw material sources right at our doorstep. Just the copper resources found in buildings, infrastructure, and consumer goods around the world (referred to as the anthropogenic warehouse) are estimated at up to 450 million t, equivalent to more than 50 % of the current geological reserves.¹

¹ Fraunhofer Institute, "The promise and limits of Urban Mining," 2020.



Our contribution to a sustainable circular economy:

INTEGRATED SMELTER NETWORK

to simultaneously recover different metals

INNOVATIVE RECYCLING SOLUTIONS

for various end-of-life materials

IMPLEMENTING "CLOSING-THE-LOOP" SOLUTIONS

with our product customers



AT LEAST

75 %

OF AN AVERAGE CAR

is recyclable – thanks to metals like copper, nickel, zinc, and aluminum



MORE THAN

40

DIFFERENT METALS

can be found in a smartphone



UP TO

30 t

OF COPPER

are required to build
an offshore wind turbine

... AND MAKING IT USABLE AGAIN

Without metals, the energy transition, electric vehicles, and digitalization would be nearly impossible. The volumes of complex electrical and electronic scrap are rising at the same time. An especially valuable resource is lithium, used for example in lithium-ion batteries in electric vehicles. Recycling these batteries still poses challenges to industry for the time being. Our R&D department is therefore investigating different ways to recover lithium and other metals on an industrial scale.

OVER

50

“CLOSING-THE-LOOP”

PARTNERSHIPS

in which copper customers
are simultaneously our suppliers

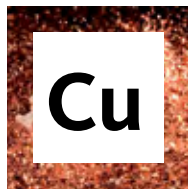
1 million t

RECYCLING MATERIALS

is the annual processing capacity
since the acquisition of the Metallo Group

INDISPENSABLE: OUR METALS

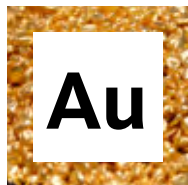
Our non-ferrous metals enable a number of innovative and sustainable applications for our customers – for renewable energies, mobility, digitalization, and urbanization, to name a few examples. Copper, nickel, and lead are essential for the energy transition, for instance. We present a selection of our metals in the following.



COPPER

FEATURES: easily shaped and tough, an excellent conductor of heat and electricity.

USES: in nearly all green technologies, particularly wind energy, photovoltaics, and electric vehicles; used in batteries.



GOLD

FEATURES: soft, easily shaped, very high electrical conductivity, resistant to oxidation and corrosion, wear-resistant, and has a very long lifespan.

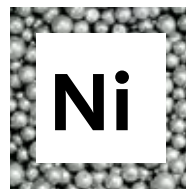
USES: in cables and coatings in the electronics industry, as it is especially suited to transferring electrical currents and voltages without losses.



SILVER

FEATURES: soft, easily formable, with very high electrical conductivity.

USES: especially in solar energy.



NICKEL

FEATURES: medium-hard, malleable, can be polished easily; very resistant to air, water, hydrochloric acid, and leaches at room temperature.

USES: for nearly all CO₂-free energy sources and in electric vehicles, used in batteries.



TIN

FEATURES: easily formable and conductive, increases copper's conductivity.

USES: in the electronics industry in superconductors, LCDs, or chips, used as solder as well as lead-tin alloy in conductors, used to fabricate plate glass.



SELENIUM and TELLURIUM

FEATURES: metalloids with different oxidation states, join with other metals to form various compounds.

USES: as semiconductors and superconductors in the electronics industry and photovoltaics.



LEAD

FEATURES: strongly formable before it breaks, resistant to certain acids.

USES: in wind energy, photovoltaics, and geothermal energy (in cable sheathing), to name a few examples.



ECONOMY
GROWTH AND INNOVATION

DIGITAL OPPORTUNITIES

One central element of the new digital strategy is the expertise of azeti, a Berlin start-up that has been part of the Aurubis Group since July 2020. The Internet of Things (IoT) platform developed by azeti can evaluate and integrate production data. In the Digital Factory project, we are developing the use of this platform in production and maintenance. For instance, we successfully installed sensor technology on the gripper arm of the anode casting wheel at the Hamburg plant: the sensors detect any malfunction in the hydraulics before the arm breaks down. And in the flash smelter, too, we're optimizing combustion with the help of the software – with the goal of applying this to other sites as well.

Digitalization offers significant opportunities at Aurubis – in production, but also in customer relationships.

[Q Innovation, research, and development](#)

BETTER PROCESSES IN THE LONG TERM

With the Aurubis Operating System, we pursue the goal of using technical facilities optimally, establishing standards and best practices in the plants, and thus sustainably avoid operating losses.

[Q Aurubis Operating System](#)

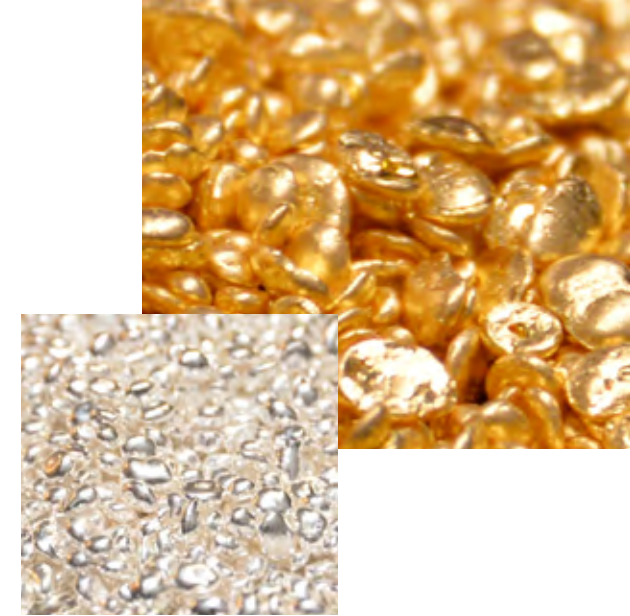
ECONOMY
RESPONSIBLE SUPPLY CHAIN

RESPONSIBLE IN PRODUCTION

Aurubis supports the Copper Mark. The initiative establishes sustainability standards for copper production – in mines, smelters, and refineries. We have our smelter sites audited in accordance with these standards. Pirdop (Bulgaria) is kicking things off.



Conflict-free
gold, silver, and
tin with external
certification



SUSTAINABLE IN COMPANY FINANCING

In June 2020, Aurubis placed a Schuldschein loan with a sustainable component for the first time to finance the Metallo acquisition – with a volume of € 400 million – giving us a pioneering role in the basic materials sector.

The conditions of the Schuldschein loan are directly linked to our sustainability rating from EcoVadis. If we improve our rating, we obtain a more favorable interest rate – and vice versa. “With the Schuldschein loan, we connect our financing costs to our integrity and responsibility for people, for the environment, and within the supply chain. It reflects a clear commitment to the alignment of economic, social, and ecological activities in the company,” says head of Sustainability Kirsten Kück.

ENVIRONMENT
ENERGY AND CLIMATE

OUR CLIMATE, OUR CONTRIBUTION

With the Green Deal, the EU has an ambitious target for 2050: a resilient economy and society that achieves carbon neutrality through high innovative strength and competitiveness. This corresponds to our goals, as is apparent in our affirmation of the Science-Based Targets initiative. We have committed to setting science-based CO₂ reduction targets, contributing to the 1.5°C goal of the Paris Climate Agreement. And we want to become carbon-neutral well before 2050.

4,027¹
ICA average

2,300¹
Aurubis average



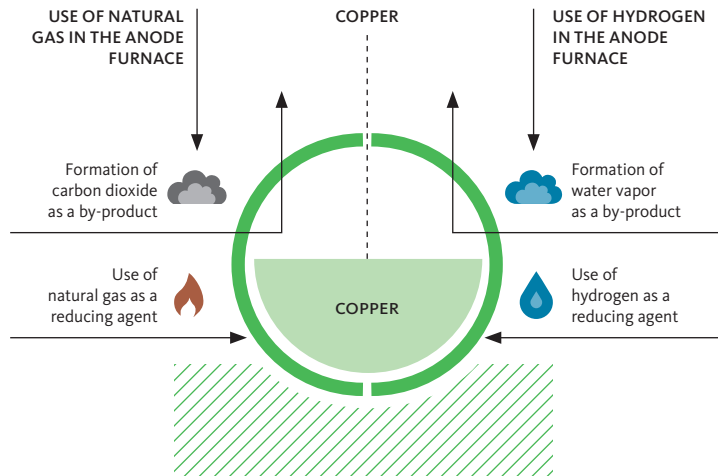
CO₂ emissions compared to the industry: life cycle assessment of a copper cathode

¹ CO₂ equivalent per ton of copper in kg



At all of the relevant production sites, we have been successfully implementing CO₂ reduction projects through different energy efficiency measures for several years. Furthermore, we are working on making our electricity uptake more flexible so that we can react to fluctuating electricity availability and thus use more renewable energies.

Shifting the electricity supply to renewable energies, utilizing hydrogen as a reducing agent in the copper process, and investing in new facilities: this is what the future holds. And we also provide solutions outside of our plants, solutions that save energy and thus CO₂ – such as the Industrial Heat project.



HYDROGEN AS AN OPPORTUNITY FOR ENERGY-INTENSIVE INDUSTRY

Green hydrogen is considered a key technology for decarbonizing industry. It can store energy, be converted to electricity, and replace natural gas as a reducing agent in production – without forming greenhouse gases.

ABOUT

89,000 t

CO₂ REDUCTION

since fiscal year 2012/13 – with individual projects to enhance energy efficiency and reduce emissions

TEST IN THE PRIMARY SMELTER ON THE USE OF

HYDROGEN

in the Hamburg plant in May 2021

SOLAR ENERGY FOR COPPER PRODUCTION

Aurubis Bulgaria is executing a project for a 10 MW photovoltaic installation on the plant premises – and will thus become the first industrial consumer in Bulgaria to invest in its own production of green energy on this scale. Commissioning is planned for 2022. “We want to generate 20% of the electricity that we need from internal renewable sources by 2030,” says Aurubis Bulgaria CEO Tim Kurth, describing the plant’s vision.

A 2.7 km long heat pipeline connects our plant to the HafenCity East neighborhood.



INDUSTRIAL HEAT FOR HAMBURG

After Hamburg’s HafenCity East neighborhood began receiving CO₂-free industrial heat from the Aurubis plant in Hamburg in October 2018, another 160 apartments in the Rothenburgsort district were connected to the heat supply in early 2021.

Each year, up to 160 million kWh of heat can be extracted from the processes, equivalent to a more than 20,000 t reduction in CO₂. We save about half of this quantity on the plant premises since we use waste heat, not natural gas, to produce steam. The other half of the CO₂ reduction is due to the transmission of heat to the HafenCity East neighborhood, where conventional fuels would otherwise generate district heating.

But there’s room for more: the total potential heat volume that could be extracted at Aurubis amounts to up to 500 million kWh per year, which could cover more than a tenth of Hamburg’s district heating needs and prevent about 140,000 t of CO₂ annually. This is nearly equivalent to the amount that Hamburg’s industry has wanted to save annually since 2018. We are currently working on an additional expansion of the Industrial Heat project.

UP TO

160 million kWh

CO₂-FREE INDUSTRIAL HEAT

from the Aurubis plant in Hamburg each year – equivalent to a more than 20,000 t reduction in CO₂ emissions

ENVIRONMENT
PROTECTION FROM ENVIRONMENTAL IMPACT

TREADING LIGHTLY IN PRODUCTION

We have already achieved enormous success in reducing our environmental impact on air, water, and soil. Our production has one of the smallest environmental footprints worldwide. Given our current low emission level, additional improvements on a comparable scale are only possible with high investments.

With one of the largest environmental protection projects since the 1980s, Aurubis continues to develop its technological edge in environmental protection: we will reduce diffuse emissions of fine particulates in the primary smelter at the Hamburg plant by up to another 70% by 2023. With the RDE project (“Reduzierung diffuser Emissionen,” or “Reducing Fugitive Emissions”), which has an investment volume of over € 100 million until the end of fiscal year 2021/22, we are proving once again that modern urban development and copper production just a few kilometers from downtown Hamburg can sustainably coexist.

The project involves closing openings in the roof. The pipes are capable of suctioning off over 1 million m³/h of air and filtering it in a modern installation. The conversion is underway.



18%

**REDUCTION IN DUST
EMISSIONS SINCE 2012**

Our goal is to remain 15% below the 2012 level

€ 100 million

INVESTMENTS

in continued emission reduction until the end of fiscal year 2021/22




More information on our action areas, including facts and figures, is available in the following Sustainability Report.

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THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (SDGs)



In this report, we have identified the individual SDGs with this symbol  in different sections. Even though we aren't able to fully quantify our contribution to achieving these goals yet, we highlight activities that promote the goals.

STATUS OF SUSTAINABILITY STRATEGY 2018 – 2023 TARGETS

-  Target achieved
-  Target currently not according to plan
-  Progress according to plan
-  Target discontinued

These symbols indicate the status of our Sustainability Strategy targets.



The Aurubis Executive Board (from l. to r.): Roland Harings (CEO), Rainer Verhoeven, Dr. Thomas Bünger, and Dr. Heiko Arnold

DEAR READERS,

We are living in a time full of challenges. A time that calls for new ideas to transform these challenges into opportunities. We have to, and we will, continue to change the way we live and earn money. One of our key objectives is to counteract the impacts of ongoing climate change with our business activities and to contribute to more resource efficiency and to protecting health.

This objective is reflected in the ten principles related to human rights, labor, the environment, and anti-corruption that are part of the United Nations Global Compact (UNGC), which we have been committed to since 2014. And we're pleased to be able to demonstrate our progress in implementing the principles once

again in this Sustainability Report. As in previous years, this report is based on the internationally recognized standards of the Global Reporting Initiative (GRI). We have also categorized our strategic topics in accordance with the UN Sustainable Development Goals (SDGs), goals that we are helping to achieve.

In this report, we look back on an eventful year during which we initiated many positive things – despite the unique challenges during the pandemic. Protecting our employees and securing operations have been the highest priority in everything we do. We are very grateful that we are standing together in the company and have robustly overcome this difficult time so far. And our sustainability activities have continued, even in crisis mode.

We belong to an energy-intensive sector but are already producing our copper cathodes in an extremely energy-efficient manner when compared internationally, with a significantly lower CO₂ footprint than the industry average. Our result of A⁻ in the last CDP rating confirms our course. But we won't stop here: Aurubis is committed to the European Green Deal and the goal of becoming carbon-neutral by 2050 at the latest. In late 2019, we joined the UNGC initiative Business Ambition for 1.5°C, which requires the Group to set science-based emissions reduction targets (Science-Based Targets) and thus to contribute to achieving the 1.5°C objective from the Paris Climate Agreement. Because there can be no energy transition – from CO₂-intensive energy systems to renewable energy systems – without metals, especially copper. In their applications in wind turbines, high-voltage cables, electric vehicles, and batteries, our metals contribute to reducing CO₂ emissions. Aurubis provides these metals while simultaneously overcoming the challenges of the industry by being part of the solution and by allowing ourselves to be assessed based on our sustainable activities.

As one of the world's leading recycling companies, we contribute to the efficient use of resources and to reducing CO₂ emissions. One additional milestone in this process is the 2020 acquisition of the Belgian-Spanish recycling specialist Metallo. We now have

a recycling capacity of more than 1 million t annually in the Group network. Through the integration, Aurubis will become one of the most efficient smelter networks in the world. At the same time, recycling means securing raw materials in times of rising demand from the growing electromobility sector – a political objective that we also advocate for in the European Raw Materials Alliance, ERMA.

In summer 2020, we became the first company in the basic materials industry in Europe to place a Schuldschein loan with an ESG (environmental, social, and governance) component, which we used to finance the Metallo acquisition. We thus gave investors the opportunity to invest capital in accordance with clear sustainability aspects, while utilizing a sustainable finance instrument ourselves for the first time.

The past year also showed how important stability and investments in education are for sustainable development and social cohesion. Training and education remain an important pillar of our strategic area “People”: we have further increased our vocational training capacity. Nearly 100 apprentices started their training at the Hamburg and Lünen sites in the past year. Additionally, apprentices from other companies can take basic vocational education courses at Aurubis. During the reporting year, we also continued to develop our social engagement, for instance in the education projects in Latin America and locally in the proximity of our plants.

The publication and Group-wide communication of the Aurubis Human Rights Commitment and our participation in the Copper Mark were key milestones in responsible supply chain management in the past fiscal year. The Copper Mark is the new quality seal for the copper sector indicating that copper has been produced responsibly along the entire value chain. Our plant in Bulgaria is the company’s first primary smelter to start the certification process for the Copper Mark. Additional sites will follow this year.

Looking back at the events of the last fiscal year, we set a course that, overall, makes Aurubis more sustainable. Acting responsibly also means continuing to strive for and implement improvements.

Aurubis is part of the society we live in. Dialogue with our stakeholders is important to us. We therefore warmly invite you to be in contact with us, to stay up to date online by visiting www.aurubis.com, and to approach us if you have any questions – we welcome your ideas and comments!

Roland Harings

Rainer Verhoeven

Dr. Heiko Arnold

Dr. Thomas Bünger

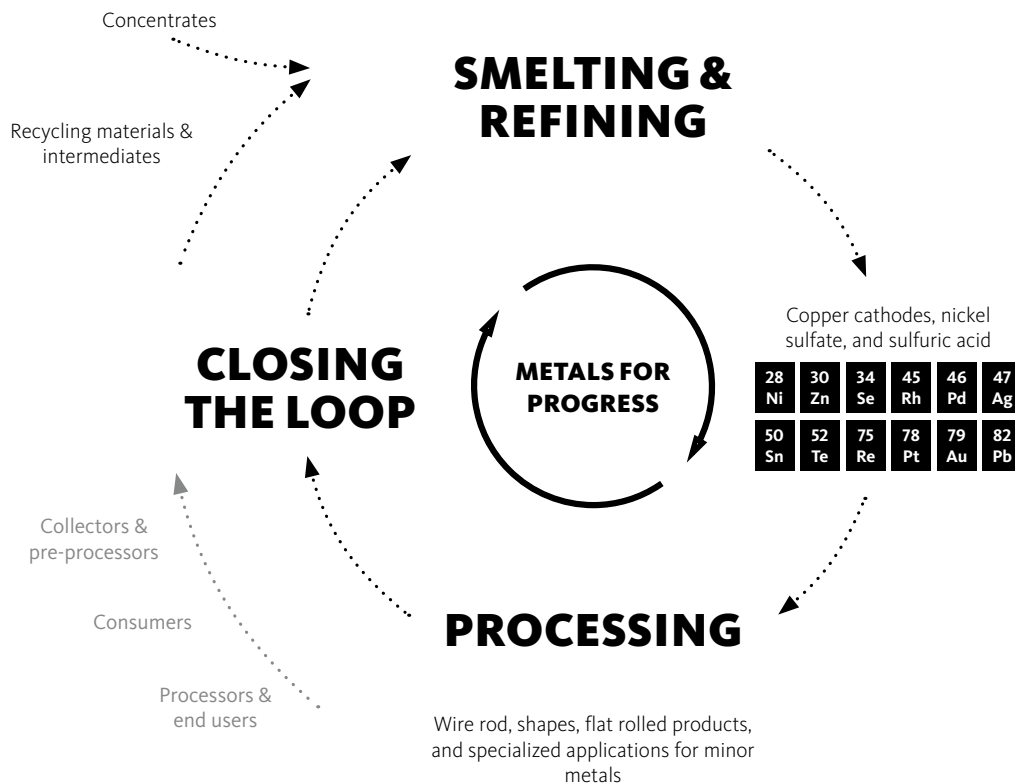
COMPANY PROFILE

Aurubis AG is a company in the basic materials industry that operates worldwide. As an integrated group, we process complex metal concentrates, scrap metals, organic and inorganic metal-bearing recycling raw materials, and industrial residues into metals of the highest purity.

GRI 102-1, 102-3, 102-4, 102-5, 102-10, 203/103, 203-2

In addition to our main metal, copper, our metal portfolio also includes gold, silver, lead, nickel, tin, zinc, minor metals such as tellurium and selenium, and platinum group metals. Sulfuric acid, iron silicate, and synthetic materials round off the product portfolio.

The company's headquarters, which is also home to one of our two primary smelters, is located in Hamburg, Germany. Our sites are mainly located in Europe, with larger production sites in Germany, Belgium, Bulgaria, and Spain, as well as cold rolling mills for flat rolled products, slitting centers, and rod plants in Germany and other European countries. Outside Europe, Aurubis also has a production site in the US, and a global sales and service network. Effective May 29, 2020, Aurubis AG acquired the recycling company Metallo with production sites in Beerse (Belgium) and Berango (Spain).



Our business model

GRI 102-2, 102-6, 102-9

In our Vision 2025, we established the objective of developing Aurubis from a copper producer to a multimetal group by 2025. Building on our strategy, we are expanding our business model to include this approach. This means that, in addition to copper, other metals will be increasingly recovered from raw materials and intermediate products and then processed into sales products.

We use both **copper concentrates** and **non-ferrous recycling materials** of all kinds as raw materials.

We process copper concentrates that are obtained from ores and are offered by mining companies and trading companies on the global market. The necessary raw materials for our two primary smelters in Hamburg and Pirdop are purchased worldwide. Aurubis doesn't hold any stakes in mines and has a globally diversified supplier portfolio. We source a significant portion of our copper concentrates from South American countries such as Peru, Chile, and Brazil. We also purchase raw materials from other countries like Bulgaria, Georgia, and Canada. As a buyer, Aurubis competes with other international primary smelters, particularly in China and Japan. Copper concentrates for the Hamburg site reach us primarily by waterway and are transhipped via the port terminal in Brunsbüttel. There, the different copper concentrates are also pre-mixed in accordance with the requirements of our production process. At the site in Pirdop, Bulgaria, concentrates reach us by land and sea via the port of Burgas.

In addition to copper concentrates, we use copper scrap and various types of organic and inorganic metal-bearing recycling raw materials, industrial residues, and bought-in metallurgical intermediates as feed material. Most of the copper scrap and metal-bearing recycling raw materials for our four secondary smelters in Lünen (Germany), Olen and Beerse (both in Belgium), and Berango (Spain) are sourced in the European and North American markets. Metal trading companies are the main actors on the supply side for recycling materials, though some recycling raw materials also reach us directly from industry through our "closing-the-loop" approach.

In the course of our production processes, we convert copper concentrates and recycling materials into copper cathodes. This is the standardized product format that is traded on the international metal exchanges. Copper cathodes are the starting product for fabricating additional copper products, but they can also be sold directly. Our product portfolio mainly comprises standard and specialty products made of copper and copper alloys. In terms of processing capabilities, we have manufacturing capacities for continuous cast copper wire rod, continuous cast shapes, rolled products, strip, specialty wire, and profiles.

Additional products result from processing the elements that accompany copper in the feed materials, elements that are in some cases purchased on purpose as part of our multimetal approach. In particular, these include different metals such as gold, silver, lead, nickel, tin, zinc, minor metals like tellurium and selenium, and platinum group metals. We also produce iron silicate and synthetic materials. Sulfuric acid forms as a joint product of copper concentrate processing. Sulfuric acid customers are very diverse and include international companies from the chemical, fertilizer, and metal processing industries.

The sales markets for our products are varied and international. Aurubis' direct customers include companies from the copper semis industry, the cable and wire industry, the electrical and electronics sectors, and the chemical industry, as well as suppliers from the renewable energies, construction, and automotive sectors.

To close the **value chain for copper** and other metals, we place a high priority on the **"closing-the-loop" approach**.

The focus of this approach is on materials such as production waste and residues that accumulate along the copper value chain in production, for example with our customers.

Anode casting wheel at the Hamburg plant



Aurubis corporate structure

In fiscal year 2019/20, the Aurubis Group's organizational framework was based on the underlying business model. The Group's structure is made up of two operating segments: Segment Metal Refining & Processing and Segment Flat Rolled Products.

» **Segment Metal Refining & Processing (MRP)** processes complex metal concentrates, copper scrap, organic and inorganic metal-bearing recycling raw materials, and industrial residues into metals of the highest quality. From an organizational perspective, Segment MRP includes the Commercial, Supply Chain Management (SCM), and Operations divisions.

The Commercial division is commissioned by the plants to purchase feed materials and sell products. The SCM division's responsibility to the plants is to carry out production planning, logistics management, and sampling, and to improve the Group-wide metal flows and inventories.

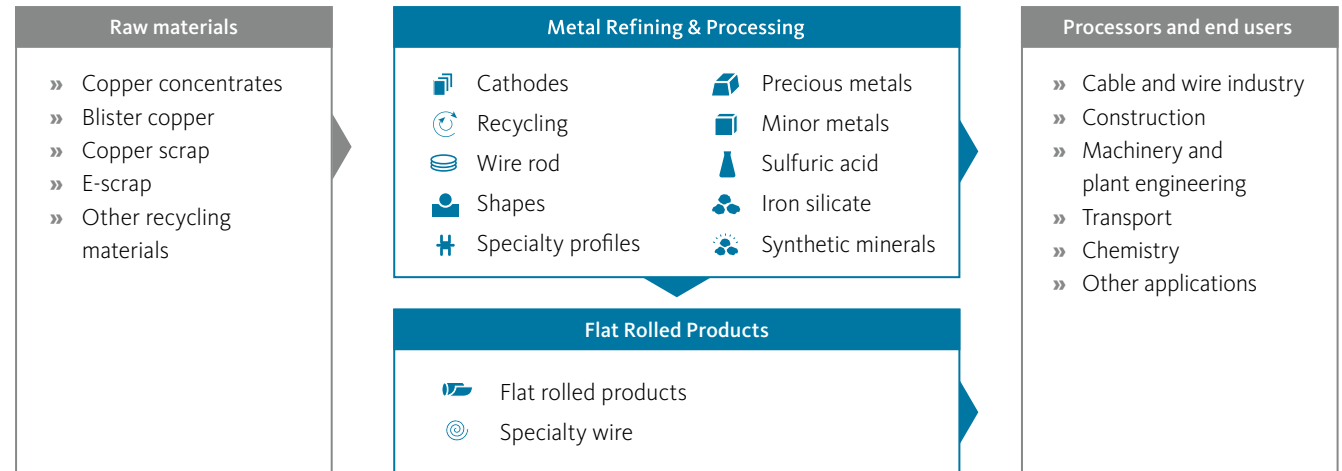
The Operations division is responsible for the ongoing optimization of the integrated smelter network and the production of all basic products and metals, as well as for their further processing into other products, such as continuous cast wire rod and shapes. Among other items, copper cathodes are manufactured at the sites in Hamburg and Lünen (both in Germany), Pirdop (Bulgaria), and Olen and Beerse (both in Belgium). The cathodes produced at the smelters are processed further into wire rod and shapes at the Hamburg (Germany), Olen (Belgium), Emmerich (Germany), and Avellino (Italy) sites. Segment MRP also includes the Metallo Group, the company acquired in 2020 with production sites in Beerse (Belgium) and Berango (Spain).

» **The second segment, Segment Flat Rolled Products (FRP),** processes copper and copper alloys – primarily brass, bronze, and high-performance alloys – into flat rolled products and specialty wire, which it then markets. The main production sites are Stolberg (Germany), Pori (Finland), Zutphen (Netherlands), and Buffalo (US). Furthermore, the segment also includes slitting and service centers in Birmingham (UK), Dolný Kubín (Slovakia), and Mortara (Italy), as well as sales offices worldwide.

» There has been an intention to sell Segment FRP since fiscal year 2017/18. Aurubis maintains this intention to sell Segment FRP.

More information is available in the [Magazine](#) and [Management Report of the Annual Report 2019/20, page 78ff.](#)

From raw materials to final consumers – an overview of the value chain and our business model



■ Aurubis AG

■ Upstream and downstream value-added stages

SITES AND EMPLOYEES¹

CONSOLIDATED SITES

Europe				
DE	Hamburg	Aurubis AG headquarters	2,582	
		Aurubis Product Sales GmbH	12	
		E. R. N. Elektro-Recycling NORD GmbH	14	
		Peute Baustoff GmbH	12	
	Lünen	Aurubis AG	660	
	Stolberg	Aurubis Stolberg GmbH & Co. KG	399	
	Emmerich	Deutsche Giessdraht GmbH	115	
	Fehrbellin	CABLO Metall-Recycling & Handel GmbH	49	
	Röthenbach	RETORTE GmbH Selenium Chemicals & Metals	41	
	Berlin	Aurubis AG	3	Group Representative Office
Nersingen/Strass ²	CABLO Metall-Recycling & Handel GmbH	2		
		2		
BG	Pirdop	Aurubis Bulgaria AD	890	
BE	Olen	Aurubis Belgium NV/SA	619	
		Beerse	Metallo Belgium NV	455
	Brussels	Metallo Group Holding NV	3	
Brussels	Aurubis Belgium NV/SA	24		
		24		
NL	Zutphen	Aurubis Netherlands BV	283	
FI	Pori	Aurubis Finland Oy	242	
IT	Avellino	Aurubis Italia Srl	99	
		Mortara	Aurubis Mortara S.p.A.	27
ES	Berango	Metallo Spain S. L. U.	92	
		Barcelona	Aurubis Product Sales GmbH	1
UK	Smethwick/Birmingham	Aurubis UK Ltd.	22	
SK	Dolný Kubín	Aurubis Slovakia s. r. o.	13	
FR	Lyon/Septème	Aurubis Product Sales GmbH	1	
Employees in Europe			6,662	
US				
US	Buffalo	Aurubis Buffalo Inc.	574	
Employees in the US			574	
Total employees			7,236	

¹ The KPIs relate to permanent and temporary employment arrangements as at the reporting date of September 30, 2020. Excluding Schwermetall Halbzeugwerk GmbH & Co. KG, Stolberg (DE), in which Aurubis holds a 50% stake. Sites without employees are not listed.

² The Nersingen/Strass site was closed on September 30, 2020.

NON-CONSOLIDATED SITES AND INDEPENDENT SALES EMPLOYEES

Europe			
DE	Berlin	azeti GmbH	20
SE	Finspång	Aurubis Sweden AB	5
RU	St. Petersburg	Aurubis Rus LLC	2
TR	Istanbul	Aurubis Turkey Kimya Anonim Sirketi	1
Employees in Europe			28
US			
US	Tampa	Aurubis Tampa LLC	2
Employees in the US			2
Asia			
CN	Shanghai	Aurubis Metal Products (Shanghai) Co., Ltd.	4
	Hong Kong		1
	Beijing		1
UAE	Dubai	Aurubis Middle East FZE	3
SG	Singapore		2
TH	Bangkok		3
JP	Tokyo		1
KR	Seoul		1
Employees in Asia			16
Total employees			46

Raw materials

Concentrates and recycling materials are the raw materials from which copper is produced.

- Concentrates
- Recycling materials

Products

The copper is processed into products. Some products are already the result of copper production.

- Cathodes
- Wire rod
- Shapes
- Specialty profiles
- Precious metals
- Minor metals
- Sulfuric acid
- Iron silicate
- Strip/foil
- Specialty wire
- Synthetic minerals

Slitting centers

Service centers located near our customers slit strip to the desired dimensions.



Sales and distribution network

An international sales and distribution network markets our products.



Status: September 30, 2020

SUSTAINABILITY AT AURUBIS

At Aurubis, sustainability is a significant part of our conduct, enshrined in our company strategy, and therefore plays a key role in our business activities.

We follow the company's mission of responsibly transforming raw materials into value – to provide metals for an innovative world. A responsible approach to employees, suppliers, customers, and neighbors is a matter of course for us, whether in direct business operations or in the surrounding areas. The same applies to the environment, as we are aware of the limits of natural resources and want to keep negative impacts from our business activities to a minimum.

Sustainability Strategy

In accordance with the company vision presented in 2017, Aurubis has developed into a multimetal group. This transformation is firmly established in the corporate strategy, which also includes sustainability as an integral pillar. We aim to enhance our sustainability achievements continuously, beyond the legal requirements. [Annual Report 2019/20](#) and [Annual Report Magazine](#)

In 2018, the Aurubis Executive Board and Supervisory Board adopted the Sustainability Strategy 2018–2023, the continuation of the Sustainability Strategy adopted in 2013.

Based on the aspects **People, Environment, and Economy**, it comprises nine action areas for a period of five years.

These are translated into concrete targets and measures for which we have established implementation deadlines and key performance indicators (KPIs) so that our sustainable company development can be measured and guided. During the reporting year, we subjected our Sustainability Strategy to an interim review. The updated strategy should be adopted and published by the Executive Board in fiscal year 2020/21. The individual measures of the current Sustainability Strategy and the status of their implementation are in this report at the end of the description of each action area.



The nine action areas of the Aurubis Sustainability Strategy

The three focal points and the nine accompanying action areas are also the basis for the structure of this Sustainability Report.

As part of our responsible business conduct, the topics of compliance and human rights play a key role in addition to the nine action areas, complementing the key aspects of People, Environment, and Economy. Furthermore, we address other significant interdisciplinary topics such as sustainable finance. Aurubis supports the work of the EU Action Plan on Sustainable Finance at European level and the German federal government's Sustainable Finance Committee at national level. These deal with political issues regarding the classification of sustainable products or possible liability regulations for risks in the supply chain, for example. Because it affects several of our sustainability activities, such as climate protection, protection and respect for human rights, and the circular economy, sustainable finance extends across multiple action areas of the Sustainability Strategy: for instance, key components in our company that meet the requirements of sustainable finance include our "closing-the-loop" approach and our metal recycling business, as well as our energy policy and

CO₂-saving measures. A few examples are the Industrial Heat project, hydrogen research, and the photovoltaic project in Pirdop, as well as our approach to responsibility in the supply chain.

Notably, Aurubis itself is active in utilizing sustainable financing instruments:

In the reporting year, we were the first European company in the basic materials industry to place an **ESG¹-linked Schulschein loan to finance the acquisition of the recycling company Metallo** and other general company financing needs.

MATERIALITY ANALYSIS

GRI 102-47

One proven tool in our strategy work used to determine the relevant reporting issues is the materiality analysis. We updated the materiality analysis in the reporting year with the assistance of internal experts. This was based on a revised list of potentially material topics that included new sustainability aspects in our industry that are more relevant for the future. The assessment was carried out pursuant to the GRI materiality definition for sustainability reporting. Moreover, a materiality assessment was carried out in accordance with the German Commercial Code (HGB) for the [Non-Financial Report](#), which was published in December 2020 as part of the Annual Report. In the course of the assessment, the relevance both outside and inside the company



Recycling solutions are an important action area of the Sustainability Strategy. Photo: Hamburg site

was assessed. The topics identified as material in this process are assigned to the action areas of the Aurubis Sustainability Strategy [Q Table of material topics](#). The topics relevant outside of the company are outlined in the “Responsible supply chain” action area. The resulting list of material topics and focuses of the strategic action areas didn’t change fundamentally as a result of the analysis. We present topics that have the same management approach in a consolidated format in this report. The analysis also provided an impetus for the strategy update.

We also included topics in this report that, according to our analysis, are not material within the meaning of the GRI or the HGB but that, on the one hand, have strong significance for us and our stakeholders, such as social engagement. On the other hand, we report on additional topics on the basis of transparency requirements of external stakeholders and ESG rating agencies.

¹ ESG stands for environmental, social, and governance. The abbreviation ESG is used in the financial sector to refer to sustainability criteria.

MATERIAL TOPICS

Overarching topics related to responsible corporate governance		
	» Compliance, avoiding corruption and anti-competitive behavior	Q pages 17f., 30f.
	» Observing human rights and labor and social standards	Q pages 19, 52f.
	» Good corporate governance	Q page 17
	» Sustainable finance	Q page 9f.
Sustainability Strategy action areas		
ECONOMY		
Growth and innovation	» Innovative processes ¹	Q page 20ff.
	» Long-term economic stability of the company	Q page 20
	» Product/process quality and product safety	Q page 23ff.
Recycling solutions	» Efficiently and responsibly using input materials in production	Q page 26ff.
	» Products for sustainable transformation and sustainable product design	Q pages 21ff., 26ff., 44
Responsible supply chain	» Efficient energy use	Q pages 31, 45ff.
	» Observing human rights and labor and social standards	Q pages 19, 30ff.
	» Using energy from renewable sources	Q page 31ff.
	» Land use, protecting biodiversity	Q page 31ff.
	» Responsible water use	Q page 31ff.
	» Responsibly handling waste	Q page 31ff.
ENVIRONMENT		
Energy and climate	» Efficient energy use	Q page 42ff.
	» Using energy from renewable sources	Q pages 22, 43f., 48
Protection from environmental impact	» Generated waste	Q pages 38f., 41
	» Maintaining air, water, and soil quality	Q page 36ff.
	» Responsibly handling waste	Q pages 38f., 41
	» Responsible water use	Q page 36ff.
PEOPLE		
Future-oriented employer	» Diversity and equal opportunity	Q page 51f.
Training and education	» Training and education, staff development	Q page 56ff.
Health and safety	» Health and occupational safety (including health management)	Q page 60ff.
Social engagement	» Social engagement ²	Q page 65ff.

¹ Material according to the German Commercial Code (HGB).

² Non-material according to the GRI and HGB.

Sustainability management

GRI 102-11, 102-16, 102-18

The fundamental responsibilities of sustainability management include making Aurubis' sustainability approach a fixed aspect of company practice and appropriately considering the concerns of our stakeholders. Every employee should actively contribute to implementing the agreed measures and targets.

We transfer the targets of our Sustainability Strategy with concepts, systems, and measures to everyday business. At Aurubis, the legal framework, corporate values, and internal policies ensure that our conduct is legally sound and that our communication with colleagues and business partners is fair and trusting, in addition to ensuring that resources are handled carefully. The Aurubis Code of Conduct provides guidance for employee conduct across the Group in accordance with our concept of responsible corporate governance. In the process, our five company values provide orientation as well: Performance, Responsibility, Integrity, Mutability, and Appreciation. Aurubis' principle of active prevention is a basic component of responsible business activities that contributes to long-term success.

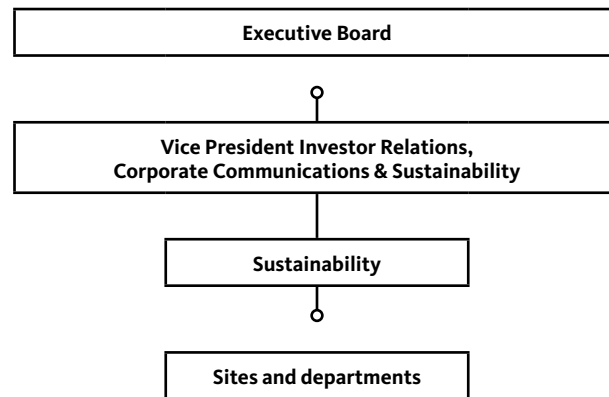
From an organizational perspective, the Sustainability department is part of the Investor Relations, Corporate Communications & Sustainability division, the head of which reports directly to the Executive Board chairman, who in turn bears the overall responsibility for the issue of sustainability in the Aurubis Group. The Sustainability department serves as the interface between the departments relevant to the topic of sustainability and coordinates all of the related processes in the Group, serving as a contact for the sites. At the same time, it is also responsible for continuously reviewing and developing the sustainability targets and supporting the operational implementation of the measures with the relevant

divisions. Yet another focus area is supplier screening based on sustainability criteria. The department represents Aurubis' interests in sustainability issues as well. Moreover, it manages sustainability reporting and communication. It is therefore the point of contact for ESG rating agencies.

We make our sustainability achievements transparent in a variety of ways.

These include participation in sustainability rankings and ratings such as the CDP (a non-profit organization that advocates for climate reporting). We are listed in the Global Challenges Index.

The sustainability organization at Aurubis



WE ARE RATED BY:


CDP	A ⁻
EcoVadis	Gold status, 72/100 points (2020)
ISS-ESG	B ⁻
MSCI	AA (2020)
Sustainalytics	3rd of 113*
Vigeo Eiris (V.E)	8th of 45*

* Industry ranking



Please note the disclaimers, [Q Imprint](#)

Stakeholder engagement

GRI 102-11, 102-40, 102-42, 102-43, 102-44,  SDG 8, 17

We communicate regularly with our key stakeholders about sustainability-related topics. We believe it is important to maintain an open and transparent dialogue with employees, customers, suppliers, politicians and society, capital market participants, the media, non-governmental organizations, and the scientific community.

We regularly discuss topics relevant to sustainability, for example raw material recovery along the value chain, the development of resource-efficient production processes, company environmental protection at our sites, and our contribution to the objectives of the

European Green Deal. At the same time, we identify social trends and political developments in these discussions.

This dialogue with our stakeholders takes place in the form of talks, forums, and events. The discussions we have during visitor days, shareholder events, capital market conferences, and supplier and customer meetings are especially intensive. In 2020, these dialogue formats were primarily carried out digitally instead of in person due to the coronavirus pandemic. With these different forms of dialogue, we hope to involve a broad spectrum of stakeholders who are interested in the company and/or are directly impacted by our business processes.

We carry out stakeholder analyses at regular intervals. In the process, we make sure to include the neighborhoods surrounding our sites, experts, interested members of the public, and critics and supporters of our business activities. For instance, we involve members of the public within the context of permit procedures and environmental impact assessments.

AURUBIS STAKEHOLDER DIALOGUE IN FISCAL YEAR 2019/20

Form of dialogue	Topics related to sustainability in FY 2019/20	Form of dialogue	Topics related to sustainability in FY 2019/20
Capital market (analysts, institutional and private investors, financial press/other multipliers, banks)		Customers	
Annually: » Annual General Meeting Multiple times per year/as needed: » Conferences » Roadshows » Forums » Site visits from investors » Conference calls	» Performance Improvement Program (PIP) » Growth initiatives » Our sustainability activities (focus: energy and climate protection, the Copper Mark)	Multiple times per year/as needed: » Personal discussions and communication » Trade fairs » Conferences » Workshops » Participation in our customers' sustainability days » Conducting a customer satisfaction survey for Rod and Shapes » Conducting a sustainability survey with key customers » Joint development projects	» General market information » Technical issues » Quality discussions » Closing the loop and CO ₂ in the supply chain » Planned sale of Segment Flat Rolled Products (FRP) » Upcoming and current topics, projects, and project progress » Development projects: new materials for applications in electric vehicles

Form of dialogue	Topics related to sustainability in FY 2019/20
Suppliers	
Multiple times per year/as needed: » Personal discussions (phone calls, conferences) » Reciprocal visits	<ul style="list-style-type: none"> » Contract negotiations » New materials » Current market situation » Plans and projects on the supplier side and at Aurubis, sustainability issues » Aurubis' sustainability requirements for suppliers » CO₂ in the supply chain
Media	
Multiple times per year/as needed: » Interviews, phone calls, briefings » Press conferences and events » Press releases » Individual TV shoots in the plants	<ul style="list-style-type: none"> » Recycling, including the Metallo acquisition » Energy and CO₂ cost development » Copper production » Training and education » Aurubis' social engagement » The Copper Mark
Employees	
At least once per year: » Annual performance appraisals	<ul style="list-style-type: none"> » Performance Improvement Program (PIP) » Measures taken during the coronavirus pandemic » Acquisition of Metallo and azeti
Multiple times per year/as needed: » Meet the Board and CEO Lunch Talk (dialogue formats with the Executive Board) » Fireside chats, for example with apprentice representatives and young high-potential employees » Meet-Up (dialogue format across levels of the hierarchy with a changing group of participants depending on focus topics) » Information events on current topics, such as all-staff meetings » Employee magazine CU+ » Regular intranet articles and expansion of social media activities » Employee events such as the Aurubis Christmas market and the inauguration of the new training center in Hamburg	<ul style="list-style-type: none"> » Yammer as an internal knowledge network and communication platform » Health and safety campaign 10forZero

Form of dialogue	Topics related to sustainability in FY 2019/20
Neighbors near the sites	
Multiple times per year/as needed: » Personal discussions » Public participation in permit procedures and environmental impact assessments » Register for company incidents and complaints from locals » Meetings related to local sponsoring projects	<ul style="list-style-type: none"> » Local and regional economic development » Plant safety » Environmental protection (noise, emissions to air and water) » Social engagement (e.g., participation in neighborhood festivals), education
NGOs	
Multiple times per year/as needed: » Personal discussions and written communication	<ul style="list-style-type: none"> » Climate and environmental protection » Recycling » Responsibility in the supply chain, human rights
Policymakers/governmental authorities	
Multiple times per year/as needed: » Discussions with legislative and executive representatives at state, national, and EU level » Participation in public consultations, in some cases indirectly through associations	<ul style="list-style-type: none"> » Environmental protection » Energy and climate (including energy and CO₂ cost development) » Circular economy » Financial sector » Taxes » Trade policy » Innovation » Supply chains, human rights
Scientific community	
» Joint research projects » Studies	<ul style="list-style-type: none"> » Basic research in the areas of precious metal refining and lead-free brass materials for machining applications » Studies: energy and CO₂ cost development

MEMBERSHIPS AND PARTICIPATION IN INITIATIVES AND PROJECTS

GRI 102-13

We engage in objective, trusting, and open dialogue, and have been involved for many years in a number of national and international initiatives and projects on sustainability issues such as climate and environmental protection, labor standards, human rights, and the fight against corruption.

EXAMPLES OF THE INITIATIVES INCLUDE:

- » B.A.U.M. – German Association of Environmental Management (since 2001)
- » CDP (since 2015)
- » DCGK – German Corporate Governance Code (since 2002)
- » ERMA – European Raw Materials Alliance (since 2020)
- » IG BCE – Equality Charter of the Mining, Chemical, and Energy Industrial Union (since 2014)
- » PREVENT Waste Alliance (since 2020)
- » Responsible Care – as a member of the German Chemical Industry Association (VCI), we are committed to the chemical industry's sustainability initiative
- » The Copper Mark (since it started in 2020)
- » UNGC – United Nations Global Compact with local involvement in the networks in Germany and Bulgaria (since 2014/15)

A selection of partnerships and projects is provided here. The projects we sponsor within the scope of our social engagement can be found in the [Q Social engagement](#) section.

ENERGY AND CLIMATE ACTION AREA:

- » Energy Efficiency Network for Companies in the Aachen Region (Aurubis Stolberg)
- » German Energy Efficiency Networks Initiative through the Hamburg Industry Association
- » Innovation alliance NEW 4.0 – Northern German Energy Transition; participation in follow-up program Living Lab Northern Germany
- » Foundation 2°

ENVIRONMENTAL IMPACT ACTION AREA:

- » German model project Mobil.Pro.Fit.® in collaboration with the environmental organization B.A.U.M. e. V.: low-emission mobility
- » EU project on achieving an environmental balance in organizations and products: further developing and testing a method for determining the environmental footprint of copper production
- » European research project FORCE – Cities Cooperating for Circular Economy: developing new concepts to avoid and treat waste
- » Environmental Partnership and Partnership for Air Quality and Low-Emission Mobility, coordinated by the city of Hamburg: reducing nitrogen dioxide emissions, which are caused by transport in particular

RESPONSIBLE SUPPLY CHAIN ACTION AREA:

- » Participating in the automotive industry dialogue within the scope of the German National Action Plan (NAP) on Business and Human Rights



WE SUPPORT



Responsible Care – ein Beitrag zur Nachhaltigkeitsinitiative Chemie³



WORK IN ASSOCIATIONS AND POLITICAL LOBBYING

GRI 102-13

We are an active member of the main economic, industry, and specialist associations at national and international level. The objective is to encourage members to work together not only with policymakers, but also with other stakeholders such as investors and NGOs, by using our stakeholder networks and partnerships in cases where this makes sense.

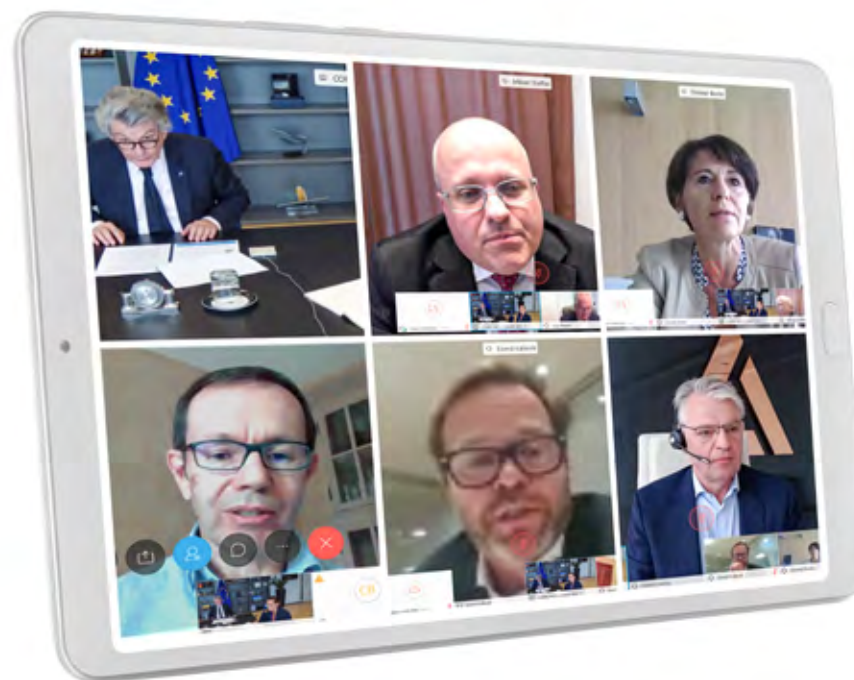
EXAMPLES OF KEY ASSOCIATION MEMBERSHIPS:

- » Agoria (Belgian Federation for the Technology Industry)
- » ASSOMET (Italian Association of Non-Ferrous Metals Industries)
- » BAMI (Bulgarian Association of the Metallurgical Industry)
- » EERA (European Electronics Recyclers Association)
- » Eurometaux – European Association of Metals
- » European Precious Metals Federation
- » Federal Association of German Industries (BDI)
- » Federation of German Waste, Water, and Raw Materials Management Industry (BDE)
- » German Chambers of Industry and Commerce (including Hamburg, Dortmund, Aachen)
- » German Chemical Industry Association (VCI)
- » German Equities Institute (DAI)
- » German Federation of Metal Traders (VDM)
- » German Precious Metals Federation
- » International Copper Association (ICA)
- » Metallinjalostajat (Association of Finnish Steel and Metal Producers)
- » VNMI (Dutch Association of the Metallurgical Industry)

We are involved in the political dialogue as well. Through our Group representative offices in Berlin and Brussels, we find out early on about new legislative proceedings and other initiatives that could decisively influence our work. Our five employees on site therefore serve as contacts for actors in the European Commission, the European Parliament, the German Bundestag, the German federal ministries, and German federal state offices. The relevant experts in our specialized departments support the work in specific topic areas. We are politically neutral in the process and communicate with all parties that are part of the democratic system and that don't hold discriminatory or bigoted views. Plant visits and political briefings are open to representatives of all parties committed to basic democratic consensus. We make this political communication transparent and open, and we don't take any party-specific positions.

Aurubis is included in the [European Union's Transparency Register](#) and publishes data regarding its expenditures for lobbying at European level. The range between € 500,000 and under € 600,000 depicts the total estimated lobbying expenditures, e.g., for personnel, office space, events, and business travel. Our contributions to public consultations are accessible on the European Commission's website. Furthermore, our positions on individual topics are outlined in associations' position papers that are available online, for example.

As part of an initiative of the German Chemical Industry Association (VCI) to increase transparency in lobbying, Aurubis advocates for the introduction of a national lobbying transparency law in Germany.



Roland Harings (CEO, bottom right) in a conversation with (from top l. to bottom r.): Thierry Breton (EU Commissioner for the Internal Market), Mikael Staffas (CEO of Boliden), Christel Bories (CEO of Eramet), Marc Grynberg (CEO of Umicore), and Eivind Kallevik (Executive Vice President of Hydro).

Corporate governance and compliance

 SDG 10, 16

Corporate governance

Corporate governance and the principles of responsible company management determine the actions of Aurubis' management and supervisory bodies. We understand corporate governance as an ongoing process to improve company management and supervision in light of new experience and regulations, as well as developing national and international standards. With the joint Corporate Governance Report of the Executive Board and Supervisory Board, Aurubis commits to responsible, transparent company management and supervision in order to sustainably create value for the shareholders and other interest groups.

We adhere to the **German Corporate Governance Code**.

Accordingly, we value close cooperation between the Executive Board and the Supervisory Board, as well as consideration of shareholders' interests. We rely on open communication, a balanced approach to risks and opportunities, and proper accounting and auditing. Compliance is monitored in the company by means of prevention, supervision, and sanctions.

¹ PRIMA stands for Performance, Responsibility, Integrity, Mutability, and Appreciation.

² The current compliance approach of the Beerse and Berango sites that were acquired in 2020 is fundamentally similar to that of Aurubis. The final harmonization with Aurubis' policies and commitments will take place in fiscal year 2020/21.

Our company values, PRIMA¹, and the Code of Conduct, but also principles from external organizations such as those of the United Nations Global Compact (UNGC) and the Responsible Care Global Charter of the chemical industry, provide us with additional orientation in company practice.

A number of skills and factors are decisive when it comes to the composition of Aurubis' management and supervisory bodies, including independence and sufficient diversity. For instance, there is a diversity concept for the composition of the Executive Board, with which the Supervisory Board pursues the objective of achieving the highest level of diversity with respect to age, gender, education, and professional background. Pursuant to Section 111 (5) of the German Stock Corporation Act (AktG), the Supervisory Board passed a minimum target quota of 25% for the proportion of women on the Executive Board by June 30, 2022.

The Supervisory Board passed a publicly accessible concept regarding its own composition as well, which includes concrete targets for its structure, a skills profile, and a diversity concept.

Aurubis' compensation policy should establish incentives for sustainable corporate governance in the interests of shareholders and other interest groups. The total compensation of the individual Executive Board members is determined by the Supervisory Board upon the recommendation of the Personnel Committee and is composed of fixed and variable compensation components. As part of the variable Executive Board compensation, the annual bonus takes the individual performance of each Executive Board member into account. When specifying the targets for the Executive Board

members' individual performance, the Supervisory Board is guided by the following categories, among others: employees, leadership and company culture, corporate social responsibility, and ecological objectives.

Additional information is available in the [Annual Report 2019/20](#) in Corporate Governance, page 18ff. and Risk and Opportunity Report, page 110ff.

Compliance

GRI 102-16, 102-17, 205-1, 205/103, 205-2, 205-3, 206-1, 206/103, 307/103, 419/103

To us, compliance means that we follow laws and align our actions with ethical principles, our values, and company policies. In this context, compliance with all legal and company guidelines and policies is our objective. A potential violation of the law can have serious consequences – for our employees, for Aurubis as a group, and for our business partners.

The Aurubis Code of Conduct applies Group-wide² and prescribes correct conduct for all employees in accordance with our concept of responsible corporate governance. Every employee receives the Code of Conduct and confirms that it has been received by signing the employment contract.

The company's Chief Compliance Officer is the central point of contact for all compliance-relevant issues and reports directly to the entire Executive Board. At the individual Group sites,

local compliance officers are available as a point of contact for employees. Together with the Executive Board, our compliance employees promote a compliance culture and actively strive to strengthen awareness for following rules and laws in the Group. Compliance management establishes the main targets, develops the corresponding organization, and identifies, analyzes, and communicates significant compliance risks. Our compliance program introduces principles and measures to limit risks and prevent violations. The Chief Compliance Officer reports regularly (and as the circumstances may require) to the Executive Board and Audit Committee of the Supervisory Board with regard to the compliance management system, compliance violations, and compliance-related measures. He works closely with the employees responsible for Risk Management and Internal Audit. Within our internal control system, the Chief Compliance Officer reviews potential compliance risks together with the Executive Board, the plant managers, and the heads of corporate and central functions. As part of compliance management, the corruption risks at our sites are also identified and documented by Risk Management.

The compliance measures include prevention, monitoring, and sanctions. Preventive measures at Aurubis comprise the risk analyses previously mentioned, internal policies, guidance, and particularly the training of full-time and part-time employees.

For Aurubis, preventing anti-competitive behavior and corruption in our business dealings is a key aspect of corporate responsibility and one of the central topics of our compliance activities.

The Corporate Anti-Corruption Compliance Policy and the Code of Conduct for employees are at the core of our anti-corruption efforts. Anti-corruption measures are established in our compliance management. Accordingly, the corruption risks in the purchasing and sales departments and with respect to office holders are identified at all of our sites.¹ In particular, we counter the identified risks by means of routine, Group-wide anti-corruption training for our employees, supervisors, and Executive Board members. The same applies to risks related to anti-trust law. Employees for whom these topics are relevant due to their responsibilities are trained on these topics about every three years, regardless of their level in the company hierarchy and the nature of their employment. Contractors also receive training as necessary. In the past three years, a total of 475 employees received anti-corruption training and 355 employees received anti-trust law training. We are not aware of any anti-trust or corruption cases in the reporting period.

We also pay attention to possible compliance and corruption risks when selecting our business partners.

One significant step in this process is our Business Partner Screening, which we use to review our suppliers of input materials for any corruption risks.


Data protection is another issue we prioritize. The Legal Affairs & Corporate Governance department oversees this issue. The department's Data Protection Officer and Data Protection Manager are the contacts responsible for data protection. We overhauled our data protection management in 2018 and have since been in the process of harmonizing it across the Group. We also want to continue developing concepts to raise awareness of the topic of data protection within the company. Furthermore, at the start of the new fiscal year, a new position was created that will develop a management system for information security.

Employees and business partners can make confidential and anonymous reports regarding legal violations and breaches of our codes and standards via our Compliance Portal, the whistleblower hotline. The Corporate Compliance Policy states that there are no disadvantages for a whistleblower who makes a report. The hotline is available in English, German, and Spanish and is open to all external stakeholders as well. It is operated by external, independent attorneys. Any tips they receive, for example regarding possible cases of corruption, discrimination, or incidents in the supply chain, are investigated. If any wrongful acts are actually proven, they can lead to warnings, dismissals, and/or damage claims. During the reporting year, no issues related to compliance or human rights were reported to the hotline. One complaint regarding the protection of human rights was submitted to us directly. [🔗 Responsible supply chain](#)

More information is available in the [📄 Corporate Governance Report of the Annual Report 2019/20, page 18ff.](#)

¹ The current compliance approach of the Beerse and Berango sites that were acquired in 2020 is fundamentally similar to that of Aurubis. The final harmonization with Aurubis' policies and commitments will take place in fiscal year 2020/21.

Human rights

GRI 412/103, 412-1, 412-2, 412-3  SDG 5, 6, 7, 8, 10, 12

Aurubis itself has become more international and has grown in the last few decades; our purchasing activities have taken place on local and global markets from the very beginning. Aurubis doesn't operate its own mines, but it receives about 3% of the world's copper concentrate output. We take on the challenges that come with this: sustainable conduct and economic activities are integral components of the company strategy.

We respect human rights and advocate for their protection. In the process, we follow the United Nations Guiding Principles on Business and Human Rights in accordance with the "Protect, Respect and Remedy" framework and view human rights due diligence as a responsibility shared by all participants in the value chain in question, including nations and economic actors.

Respect for human rights is reflected in our company values and is included in our Code of Conduct, which every employee receives with his/her employment contract. In May 2020, we published the [Aurubis Human Rights Commitment](#) summarizing Aurubis' understanding of its due diligence obligation regarding human rights as well as the key elements of this obligation, and communicated this Group-wide in early 2021. It is aimed at all employees, business partners, and other partners of the Aurubis Group. The Aurubis Business Partner Code of Conduct, on the other hand, specifically applies to business partners.¹

We have participated in the United Nations Global Compact since 2014 and are therefore committed to implementing its Ten Principles related to human rights, labor, the environment, and anti-corruption.

The Executive Board bears responsibility for the respect of human rights in our business activities. All Aurubis employees are obligated through the Code of Conduct to respect human rights in their daily work and in all business decisions under all conditions.¹ Supervisors serve as role models in this regard. We call on all employees to report justified suspicion of discrimination or other human rights violations. We expect this from our business partners as well. Our compliance portal, also referred to as the whistleblower hotline, can be used to report any such violations.

[Q Compliance](#)


We reject all forms of discrimination, forced labor, or child labor and respect the rights of indigenous populations. Compliance with the internationally recognized core labor standards of the International Labour Organization (ILO) are of fundamental importance. We are committed to the principle of co-determination in the company and place a high priority on good communication between our employees and the company management. [Q Future-oriented employer](#)

¹ The current compliance approach of the Beerse and Berango sites that were acquired in 2020 is fundamentally similar to that of Aurubis. The final harmonization with Aurubis' policies and commitments will take place in fiscal year 2020/21.

ECONOMY

With our more than 150 years of tradition and steady innovative strength, we have positioned ourselves in the raw materials sector with metallurgical excellence and have continued growing internally and through external acquisitions.

Growth and innovation

GRI 201/103,  SDG 8, 9

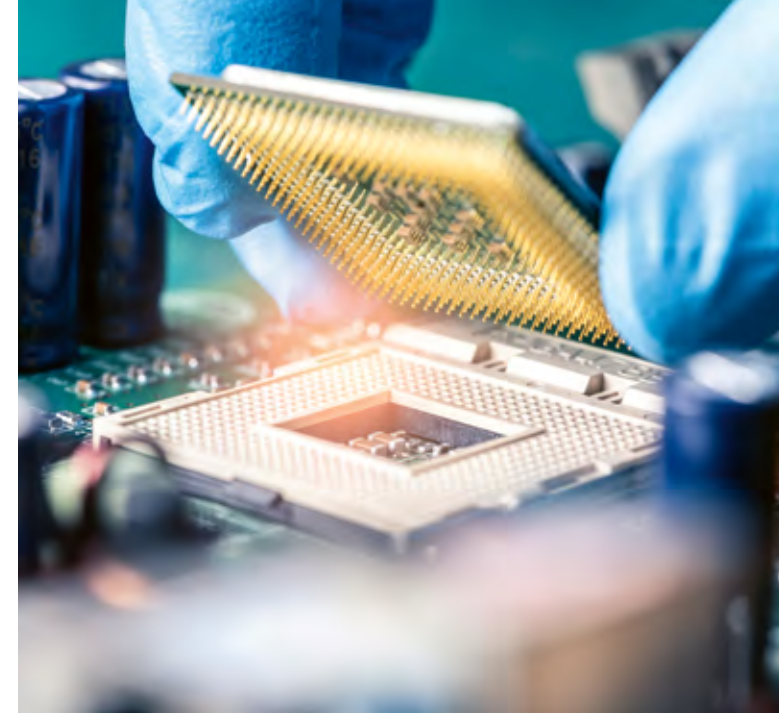
One of our key sustainability topics is the company's long-term economic stability, which includes a robust position, profitability, and earning these profits responsibly. Operating EBT and operating return on capital employed (ROCE) are our central financial control parameters. One company objective – and part of the Sustainability Strategy – is to achieve a ROCE of 15%.

Renewable energies, mobility, digitalization, and urbanization are more than trends, and they rely on our metals.

Economic stability means being in a crisis-proof position for the future in order to achieve our economic targets. Our Vision 2025 points the way: we will develop from a copper producer

and recycler into a multimetal group www.aurubis.com/en/about-aurubis/vision-2025. We provide answers to the challenges of the coming years, for example those related to the increasing complexity of input materials. When it comes to primary materials, the copper content of copper ore is declining and accompanying elements are appearing in higher concentrations. When it comes to secondary raw materials from end-of-life production, metal quantities are decreasing due to miniaturization and material compositions are becoming more and more complex. Solutions for efficiently extracting copper and other metals from complex starting materials are therefore in demand.

An important step that unites growth and innovation for us was the acquisition of recycling specialist Metallo, with sites in Beerse and Berango, in the reporting year. With this acquisition, we significantly increased our capacity for processing complex



Digitalization, urbanization, and renewable energies are increasing global copper demand

recycling metals. Furthermore, we acquired software developer azeti in 2020, which helps us digitalize and develop production processes, products, and business models, as well as commercial and administrative processes.

The Performance Improvement Program (PIP) started in 2019 is key for our economic stability and focuses on saving costs and boosting efficiency in the administrative functions, in non-metals procurement, and in the Hamburg plant. Metallurgical process innovations from our research and development activities – for example in the use of hydrogen and in battery recycling – as well as updates related to digitalization are essential for us because they further improve the company's competitiveness.

More information is available in the Annual Report 2019/20:

[Annual Report 2019/20 Magazine](#),

[Management Report – Business model of the Group, page 78ff.](#)

Innovation, research, and development

MANAGEMENT APPROACH

With our multimetal strategy, we have set the target of growing in the processing of complex raw materials. For this purpose, we utilize our expertise in smelting, refining, metal recovery, recycling, and copper processing to generate the highest added value, along our entire value chains, from the various raw materials. Some innovations help to secure our economic success and competitiveness for the future, while at the same time contributing to reducing our environmental impacts in many cases. As a result, we are continuously developing our processes and methods to further reduce emissions.

Our interdisciplinary Research & Development (R&D) division reports directly to the Chief Technology Officer. The international team is made up of employees from different disciplines. It cooperates especially closely with the Operations, Strategy, Environmental Protection, Quality Control, and Commercial departments and divisions. We also include external partners in innovation projects.

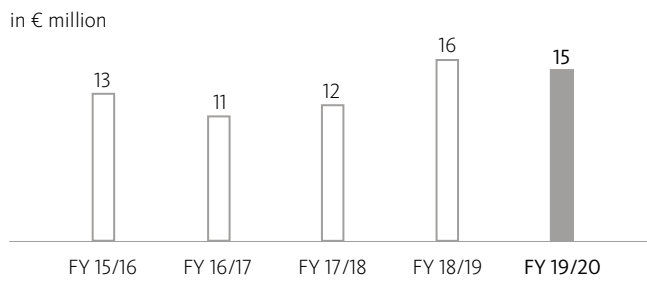
The Aurubis Group's R&D expenditures in fiscal year 2019/20 amounted to € 15 million. We have a total of 88 employees in this area who are located at our sites in Hamburg, Lünen, Beerse, Buffalo, Olen, Pirdop, Pori, Stolberg, and Zutphen.

During the reporting period, R&D work primarily focused on optimizing production processes for copper, lead, and precious metals, as well as on improving environmental compatibility. At the same time, the department investigated new technologies, and developed products and applications for our metals.

To improve production processes through digitalization, the R&D department works closely with Aurubis' new digital organization. This organization brings together (among others) azeti, the Aurubis Digital Innovation Lab ("InnoLab"), and the Analytics Center of

Excellence, with their expertise in data modeling and artificial intelligence. The digital organization reports directly to the Chief Information Officer, who in turn reports to the Chief Financial Officer.

R&D expenditure



This robot analyzes stamping samples fully automatically



INNOVATIONS FOR FORWARD-LOOKING PROCEDURES

One focus of our R&D work is the ongoing development of metallurgical processes, especially with respect to the flexibility and productivity of the complex primary and secondary raw materials that are used. For this purpose, we carry out extensive trials and work on process models to optimize our existing facilities.

In coordination with Raw Material Purchasing and in close collaboration with leading companies from the mining industry, we are developing solutions for efficiently processing future feed materials, particularly complex concentrates from new mine projects.

The ongoing improvement of environmental protection during production is an important work area for R&D. We continuously work on reducing emissions and were able to successfully do so in the off-gas cleaning process in our converters in the primary smelter. Additional examples are available in the [Protection from environmental impacts](#) section.

The use of hydrogen instead of natural gas will reduce CO₂ emissions in primary copper production in the future.

The Corporate Energy & Climate Affairs department carried out an extensive analysis of the technical possibilities for minimizing Aurubis' CO₂ footprint. R&D supported this analysis with technical expertise and preliminary trials. R&D is concentrating on further investigating possible metallurgical applications of hydrogen to be able to shift to hydrogen in the future, on the conditions of cost-efficiency and clear political parameters. We will test the use of hydrogen on an industrial scale in the Hamburg plant in May 2021. This trial in an anode furnace of the primary smelter will demonstrate whether what works in lab trials is possible in everyday production as well. [Hydrogen Factsheet](#)

SOLUTIONS FOR THE ENERGY TRANSITION

GRI 102-6

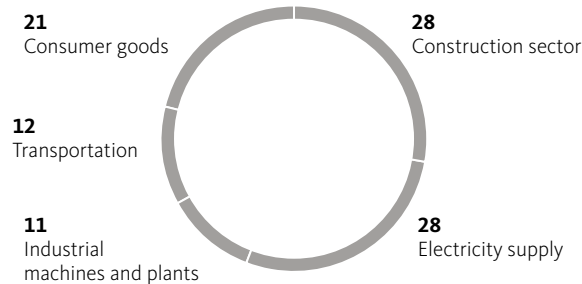
It can be assumed that the demand for copper and other non-ferrous metals will continue increasing due to the energy transition, electric vehicles, and digitalization.

To optimize our metals for use in electric vehicles, one focus of our research is on new copper strip products for connectors and high-performance electronics. In this regard, solutions for the requirements of electric vehicles have been developed to enhance the efficiency and lifespan of the components. Moreover, activities related to innovative coating technologies and low-alloyed, highly conductive copper alloys for automotive connectors continued. The first copper products have already been transferred from the lab to serial production. When it comes to wire, too, R&D activities for applications in electric vehicles increased and a project was initiated with the target of achieving complex cross-sections and expanding the alloy portfolio.

With the BlueBrass brand, we developed a lead-free alloy for our preliminary products such as copper rod and strip over the past few years, which is used in the electrical, automotive, and renewable energies sectors. In fiscal year 2019/20, we received a number of clearances for serial delivery from customers, and multiple patents were issued for the BlueBrass family of materials. The recycling of lithium-ion batteries from electric vehicles is currently posing challenges to the industry.

Global copper demand by sector

For 2020, in %



Source: Wood Mackenzie, 2020

One R&D focus in the reporting year was the development of a technology to enable the processing of larger quantities of **lithium-ion batteries** in the future.

To this end, the R&D department is working on a hydrometallurgical process to increase the recycling rates of the non-ferrous metal contents such as copper, nickel, and cobalt, as well as to open up access to manganese and lithium. The goal is to implement these processes on an industrial scale to be able to return the valuable recovered metals to battery manufacturers.

R&D IN THE DIGITAL AGE

With our new approach to digital innovations, Aurubis is establishing a forward-looking position in the industry. Our goal is to support complex operating processes with advanced analytics methods, for example with data-driven decision models and

methods such as machine learning. An extensive data foundation is crucial for effective, sustained improvements in this regard, in order to better understand the relationships within the process.

For instance, the Internet of Things (IoT) platform developed by azeti is helping drive forward the Digital Factory, the digitalization of production. The platform is able to bring together data from highly diverse sources – such as production control systems, enterprise resource planning systems, or directly from sensors – and to evaluate it in collaboration with the Analytics Center of Excellence. This helps in deriving improvements in efficiency, flexibility, resource use, output, and environmental protection earlier and more accurately, as well as in preventing disruptions. This can optimize shutdown planning and maintenance costs,

Electric cars contain nearly four times as much copper as conventional cars



reduce environmental strain, and improve current efficiency, to name a few examples.

With the help of data science methods, for instance, data will be appropriately processed and visualized to increase current efficiency in the copper tankhouse, the electrochemical process that comprises the final refining stage of metal recovery at Aurubis. This should make electricity use more efficient and reduce the return of material residues to the smelting process.

Additional examples of the advantages of the increased use of sensors in our core primary and secondary copper production processes include a new optical cathode inspection method for improved process and quality control in the future, as well as optical detection of circuit boards in recycling raw material processing.

Another research field is the digitalization of commercial processes through mathematical optimization. One example is a model for copper rod fabrication whose purpose is to optimize the entire sourcing, sales, and production process and that deals with logistics both between the production sites and between Aurubis and the customer.

More information is available in the [Q Energy and climate protection](#) section and in the Annual Report 2019/20:

- [Annual Report 2019/20 Magazine,](#)
- [Management Report – Research & Development, page 83f.](#)

INNOLAB

The **Aurubis Digital Innovation Lab** was established in September 2020 for the digitalization of products and business models with the goal of developing precisely the digital innovations that provide our customers and material suppliers with digital added value and allow us to collaborate with them more closely and more digitally. Both the Digital Factory and the InnoLab have started in Hamburg for the time being, with the plan to expand their activities to additional sites in the future.



Aurubis employees in the new InnoLab

Quality

GRI 416/103, 416-1, 416-2, 417/103, 417-1

With modern, efficient production processes, continuous improvement, and close communication with our customers, we ensure that our products meet high requirements, and we set standards in recycling. We strive to produce flawless products with consistent process and service quality in all company divisions around the world. Our quality concept also includes compliance with environmental and social standards over the entire life cycle of our products in order to rule out, to the greatest possible extent, any unintended impacts on the environment and people who come into contact with the products.

MANAGEMENT APPROACH

The quality policy is prescribed by the Executive Board and implemented by quality management at the individual sites. In Technical Marketing and Quality Control, customers' technical requirements are determined, reviewed, and introduced in coordination with the production units if they are feasible. Complaints are processed across divisions, between Technical Marketing, Quality Control, and the production lines.

We subject all products to comprehensive quality inspections. We utilize modern process management and quality assurance systems to fulfill international standards, legal regulations, and customer requirements. Quality management at Aurubis AG is part of the integrated management system for energy, quality, and the environment (IMS). The guiding document in this context is the IMS Manual, which outlines responsibilities, procedures, and processes related to quality. Our quality management systems at all production sites are certified in accordance with ISO 9001:2015. The Segment Flat Rolled Products sites in Buffalo, Stolberg, and Zutphen have also been certified in accordance with the stricter rules of the standard IATF 16949, which applies first and foremost to direct suppliers of the automotive industry.

The fulfillment of the requirements of quality management standard ISO 9001:2015 is reviewed in annual external audits. Furthermore, there are product standards and technical customer specifications that prescribe the respective product features, which we confirm in the contracts with our customers. Customer specifications that extend beyond the standards are processed and implemented by Technical Marketing, Quality Control, and the production lines.

Our customers' requirements and satisfaction are important to us. Consequently, we carry out customer surveys and record key figures for customer satisfaction, such as delivery reliability and quality.

Our quality approach is also evident in our services, which we provide in technical and analytical matters in logistics and in commercial and technical customer service, for instance. Our specialists support our customers on site upon request. Training and workshops are also carried out upon consultation.

PRODUCT SAFETY

GRI 471-1

Product safety has top priority for us. To fully rule out possible negative impacts of our products on the environment or the health and safety of people who come into contact with the products in the production process or as customers, these aspects are taken into consideration in the entire product life cycle, from product development, certification, raw material sourcing, production, storage, and transport, to the usage and disposal phase.

Our environmental policy stipulates that our customers shall be given a suitable briefing on the properties of our products and essential safety measures and advised on questions regarding product disposal.

Safety data sheets are available for copper and a number of other products. We can issue a plant certificate for every delivery that indicates its material properties. We minimize risks from the transport of our products by consistently observing the load securing regulations and the maximum permitted loads.

Corporate Environmental Protection is responsible for ensuring chemical safety, Group-wide, with respect to production. The European chemical regulation REACH¹ establishes an important framework for chemical management.

MANAGEMENT OF BUSINESS PROCESSES

Business process management is a management system for recording, measuring, and optimizing processes, which we use to contribute toward implementing the company strategy and achieving business targets. Our focus is on loss-free, efficient, digitalized process execution. By improving process transparency and efficiency, we fulfill standards and requirements that customers provide or that come from ISO 9001 and internal guidelines.

The Group Process Management department is responsible for managing business processes. Its main task is to develop the Aurubis process house, a depiction of the business processes that spans the entire Aurubis organization, as well as the related digitalization and automation projects. With the process house, we create a platform accessible to all employees that reveals optimization potential in the processes and makes their risks and controls visible. Furthermore, it is helpful when integrating new business units, it supports employee onboarding and qualification, and serves as a basis for future transformation measures.

¹ REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals.

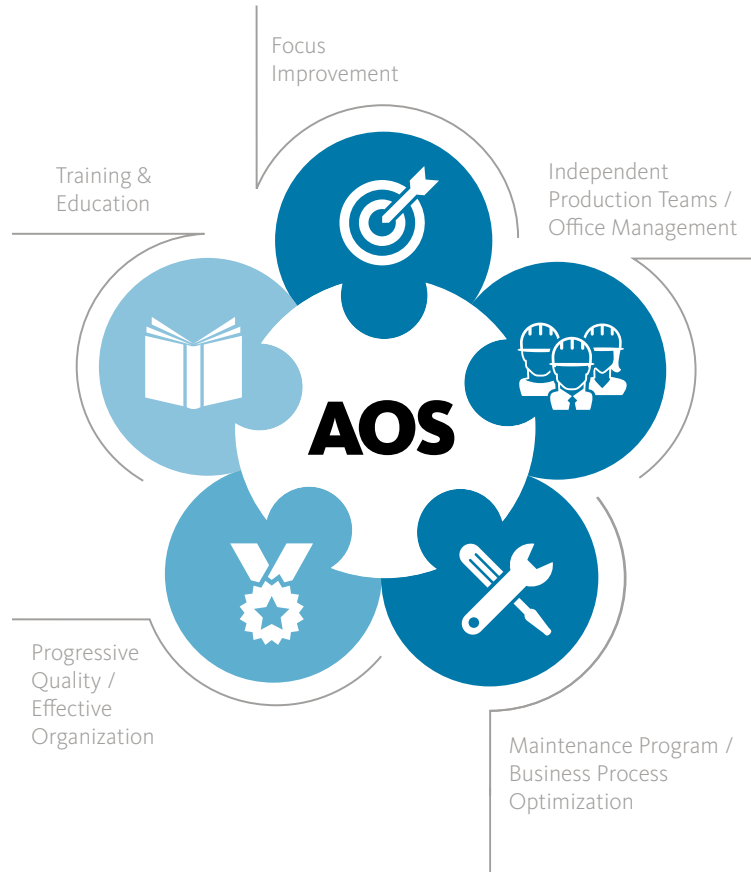
AURUBIS OPERATING SYSTEM

The goals of the Aurubis Operating System (AOS) are to sustainably avoid operating losses, use technical facilities optimally, and establish standards and best practices in the plants. At the time this report was produced, AOS had been introduced at the production sites in Hamburg, Pirdop, Olen, Lünen, Avellino, and Emmerich. As a universal system, AOS also contributes to the dialogue on experiences and mutual learning between the plants, driving the increasing standardization within the Group. Our ambition is to establish AOS as an employee-supported management system in the Operations division by 2024.

The Group-wide implementation of our **management system, the Aurubis Operating System**, helps us continuously and permanently improve our processes.

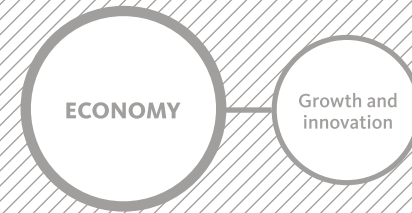
The goal of the AOS pillar Progressive Quality is to avoid all product defects and the customer complaints that arise from them. For this purpose, any defects that occur are consistently recorded in a database and categorized by process phases, which enables a precise root cause analysis and correction. In this way, we analyze the process steps – such as casting, rolling, or packaging – where quality deviations appear in our rod lines so that we can correct these issues in a targeted manner for the long term, for example.

Another key AOS pillar is Training & Education. At the Hamburg plant, 50 employees completed a modular training program to be qualified as AOS experts. An AOS expert guides and supports improvement teams, continues developing independent production teams, actively serves as a multiplier for AOS-relevant information, and relays feedback from the organization. Our target is for 5% of the staff to be AOS experts. The planning for equivalent AOS expert qualifications at the other plants is underway and this will be carried out as needed. [Training and education](#)



More than 100 AOS improvement teams have already optimized processes at the Hamburg site. For example, the teams have reduced production waste and material losses, in addition to cutting downtimes of the system and key machines. During the reporting year, the systematic continuing education of our

production and maintenance employees was prepared. Because AOS impacts the entire staff, supporting communication events such as the AOS Marketplace are carried out, where our employees can gather information about the progress of AOS adoption and of projects that have already been implemented.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Successfully implementing the efficiency improvement program




The efficiency improvement program was transitioned to the Performance Improvement Program (PIP), focused on reducing costs and increasing throughput in our primary smelters. Initial measures have been implemented and cost savings have been achieved. The goal is to save € 100 million in costs until fiscal year 2022/23. We expect savings of € 70 million already by the end of fiscal year 2020/21.

Achieving ROCE of 15%



Operating ROCE (return on capital employed) was 9.3% in fiscal year 2019/20 compared to 8.6% the year before.

Recycling solutions

GRI 201/103, 301/103, 306/103,  SDG 8, 12

Metals are the foundation for a number of forward-looking issues such as the energy turnaround, the shift towards electric vehicles, smart homes, and digital transformation. Rising demand worldwide is countered by finite natural resources. This makes it even more important to handle processed metals responsibly. For us, metal recycling is one solution to counter this challenge. Recycling not only contributes to the raw material supply, but also helps save energy, because the considerable amount of energy required for ore mining, processing, and transport to metal smelters isn't necessary. The potential for recycling solutions is growing due to rising consumption and shortening product life cycles. The challenge, whether it be mobile phones or other electronic devices, is that they are becoming more and more complex, with many small, often firmly connected components made of different materials.

Aurubis is a world leader in recycling copper, precious metals, and other non-ferrous metals in an efficient, environmentally sound manner.

With our multimetal recycling, we actively take part in the modern circular economy, promote the efficient and environmentally friendly use of valuable resources, and contribute to raw material security.

Aurubis plays a vital role in the recycling chain: thanks to our integrated smelter network, we are able to process a broad range of materials – from industrial waste that accumulates directly from our production or our customers' operations to complex materials from end-of-life products. From these materials, we produce metals that can be directly used in new products.

MANAGEMENT APPROACH

In addition to the processing of copper concentrates, the recycling of copper scrap and complex recycling raw materials such as circuit boards is a key business area at Aurubis. Non-ferrous metals like copper can be recycled as often as desired without loss of quality. Furthermore, complex recycling raw materials contain not only copper, but a number of other accompanying elements that can be recovered, such as gold, silver, nickel, tin, lead, and zinc.

We consider industrial residues, slimes, and shredder materials, but also recycling materials and waste containing copper, precious metals, and lead to be complex recycling raw materials. We source them from our global supplier network. These materials include production residues and waste that accumulate along the value chain in the metal recovery process. Complex materials also come from sectors such as waste management, the electronics industry, and the chemical industry. These raw materials undergo a multi-stage treatment process, so pure metals or metal-bearing products are available again in the end. In this way, we process substances

that would have to be disposed of elsewhere, significantly reducing our own, and our business partners', emissions. This also strengthens Europe's non-ferrous metal supply and reduces dependency on imports from outside the EU.

On the other hand, we also consider end-of-life materials from electronic devices, vehicles, and other everyday items to be complex recycling raw materials. These consist of increasingly complex material combinations that include plastics, ceramic, or glass. Separating them into material and product streams by type in order to reuse them is a significant challenge.

We utilize highly developed mechanical and metallurgical separating and refining processes in different combinations as part of our multimetal expertise, work on new technologies for optimal metal recovery, and invest in state-of-the-art equipment. With our Beerse and Berango sites added in mid-2020, non-ferrous

Recycling raw materials being processed at the Hamburg site



metals such as tin and zinc are recovered even more efficiently in the expanded smelter network and our annual processing capacity increases to approximately 1 million t of recycling materials.

The Commercial division is tasked with sourcing recycling materials for the individual plants. This is divided into the departments Recycling Raw Materials (which handles the material supply for the smelters), Marketing Cathodes (which supplies the production facilities with cathodes and “direct melt” raw materials), and Product Sales & Marketing with the function Customer Scrap Solutions (which supplies the smelters and production facilities with production waste from our copper product customers). This organization aligns with our recycling approach: we use secondary materials from production and from end-of-life products as raw materials and view this as a closed loop.

“CLOSING-THE-LOOP” PARTNERSHIPS

In the marketing of our products and in our customer relationships, we include the return of the metals in our thinking. For instance, we give our customers the opportunity to sell us production residues or copper scrap and to receive refined copper in return. We provide individualized solutions for taking back recycling materials that accumulate in the processing of our copper products, as well as other metals in the different value-added stages that take place with our product customers and their customers. Depending on the value-added stage, they accumulate materials with very high copper contents, such as Millberry scrap, which can be immediately directed to the copper production process, or more complex or alloyed production waste that can also be smelted, such as copper-, tin-, lead-, and precious metal-bearing stamping waste, slags from foundries, and other industrial residues like used catalysts and galvanic slimes.

This demonstrates that thanks to our integrated smelter network, we find solutions, even for metallurgical challenges, and are thus able to serve customers from a variety of sectors – from smaller scrap traders to global industrial companies and customers of the recycling industry, all of which make up our broad base of recycling raw material suppliers.

As part of our “closing-the-loop” activities, we build up partnerships through which we not only sell our products, but also take back recycling raw materials customers accumulate, in addition to other service offerings. The raw material cycle comes full circle.

RECYCLING EXPERTISE AT THE AURUBIS SITES

Aurubis processes recycling materials at different sites. The managers of these sites report to the Chief Operations Officer. Our sites in **Lünen** (Germany), **Olen** and **Beerse** (both in Belgium), and **Berango** (Spain) specialize in processing recycling raw materials. Recycling raw materials are nearly the only feedstock at our largest recycling plant, the Aurubis recycling center in Lünen. The Lünen plant is certified through WEEELABEX in accordance with the European series of standards EN 50625. This certificate confirms that waste electrical and electronic devices are efficiently treated and disposed of in a way that minimizes the environmental impact and emissions of harmful substances. Aurubis participated in the development of the preliminary standards that preceded this series of standards.

CLOSING THE LOOP WITH GRILLO

Together with the specialist for zinc and sulfur Grillo Werke AG, we have developed a **seamless material cycle for copper, zinc, and other valuable metals**. The project enables the reuse and continued use of materials through a direct route between the Aurubis recycling center in Lünen and the Grillo location in Duisburg. The cycle was awarded a prize in 2017 in the Responsible Care competition of the German Chemical Industry Association (VCI).



An employee at the Beerse site analyzes different recycling materials prior to processing

The Beerse and Berango sites process about 315,000 t of complex secondary raw materials each year to recover not only copper, tin, and lead, but also metal intermediates such as nickel sulfate solution and zinc oxide. These sites follow a “zero waste” strategy with the goal of transforming as many scrap materials as possible into valuable products. With innovative refining processes, the Beerse site is a forerunner in processing and recycling increasingly complex raw materials, which optimally aligns with Aurubis’ approach.

Moreover, we have two companies with unique expertise within the Group: our subsidiary **E.R.N.** specializes in recycling electrical and electronic devices of all kinds, while **CABLO** specializes in recycling cable scrap and our copper customers’ cable production waste. In November 2020, Aurubis and the recycling company TSR Recycling GmbH & Co. KG (TSR) signed an agreement to establish a recycling joint venture. The company’s objective is to bundle the cable dismantling activities of Aurubis subsidiary CABLO and TSR. Aurubis will hold 40% of the joint venture, which will go by the name of Cablo GmbH in the future. The review by the responsible merger control authorities is expected to conclude in fiscal year 2020/21.

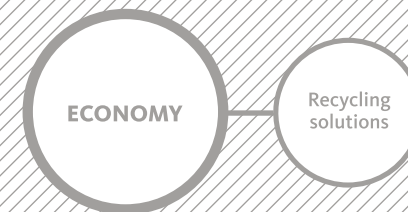
The **Hamburg** and **Pirdop** sites also process recycling raw materials. Though the primary smelters utilize copper concentrates as their main feed material, they also use copper scrap to a certain extent because it is ideal for process cooling and therefore enables particularly energy-efficient processing.

PARTICIPATION IN FORCE PROJECT

We were one of 22 national and international partners participating in the European research project “FORCE – Cities Cooperating for Circular Economy.” The project’s goal was to develop new concepts to avoid and treat waste in the material streams related to plastic, biomass, end-of-life electrical appliances, and wood. As a multimetal recycler, Aurubis supported the project with its expertise for the purpose of improving the recycling of strategic metals (e.g., copper and gold) through the best possible collection and dismantling system for waste electrical and electronic equipment.

Aurubis and Stadtreinigung Hamburg (the city of Hamburg’s municipal waste management service) carried out a recycling project to investigate the ecological and economic aspects of manual dismantling compared to machine dismantling of household devices. The life cycle assessment concluded that manual dismantling is advantageous from a purely ecological perspective. Taking the significant time investment into account, manual pre-dismantling proved to be impractical from a cost-efficiency perspective. Design for recycling can be an important manufacturer contribution to making today’s recycling even more efficient.

[Environmental Statement 2020](#)



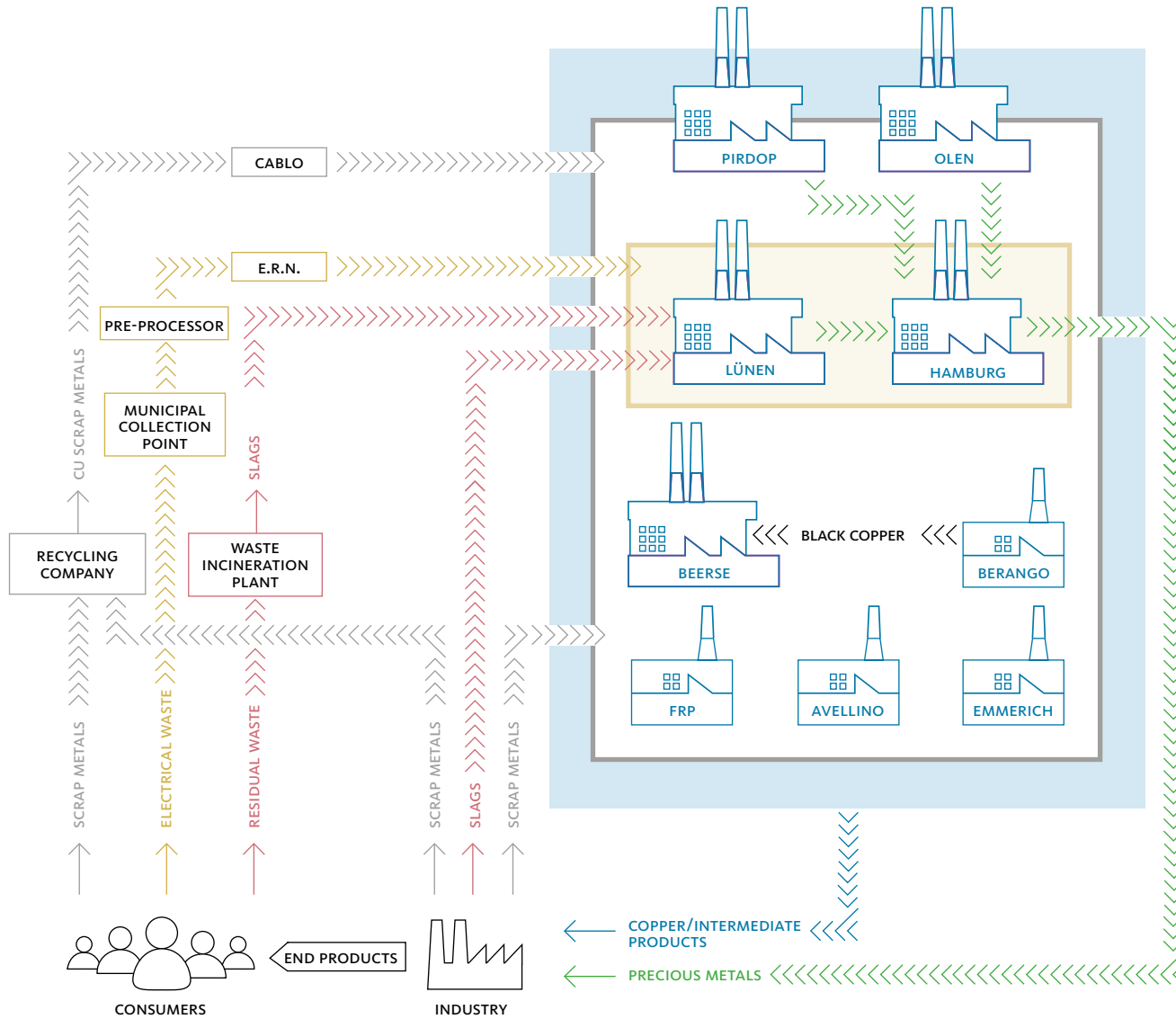
TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Establishing and developing “closing-the-loop” systems as a result of new or intensified cooperation with original equipment manufacturers (OEMs), retailers, or copper product customers



Over the past several years, we have established over 50 “closing-the-loop” arrangements in which our customers also became suppliers of secondary materials. The material volume from these closed loops was approximately 50,000 t in fiscal year 2019/20.

Recycling network at Aurubis




TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Analysis of market conditions and future opportunities of sustainable products 

During the reporting period, we carried out a survey on product sustainability among key customers of our semi-finished products such as wire rod, shapes, bars, and profiles. The goal of the survey was to gain representative insights into participants' views on sustainability, procurement practices, and requirements for a sustainable product portfolio. On the one hand, the assessment confirmed our belief that sustainability is becoming increasingly important, especially in terms of the products' CO₂ footprint and proportion of recycling material. On the other hand, it was clear that our customers are not only interested in sustainable products, but also expect a company to conduct itself responsibly overall. Additional steps are being defined based on the survey.

Responsible supply chain

GRI 201/103, 412/103, 412-3,  SDG 8, 12, 15

As a producer of copper and other non-ferrous metals, we are aware of our responsibility toward the environment and people who could be directly or indirectly impacted by our business activities.

And we know that our suppliers have to work just as responsibly as we do. This is all the more important because we source raw materials from around the world for our business. This includes regions that pose risks regarding compliance with sustainability standards.

In our Sustainability Strategy, we have set the target of managing our supply chain responsibly.

MANAGEMENT APPROACH

GRI 102-9

We source and, in our primary smelters, process copper concentrates that are obtained from ores and are offered by mining companies and trading companies on the global market. We use copper concentrates, copper scrap, other metal-bearing recycling materials, and bought-in intermediates as feed material, which we largely source on the European market. Metal trading companies are the main actors on the supply side for recycling raw materials, while some of these materials also reach us directly from product manufacturers and our copper customers. We source our primary and secondary raw materials from a number of suppliers, which protects us from becoming too dependent on individual major suppliers and shields us from regional fluctuations on the global market. For primary raw materials, we value long-term relationships and strategic cooperation with our suppliers. Compared to primary raw materials, secondary raw materials are largely purchased on the basis of short-term supply contracts.

We source most of the copper concentrates from large, global mining companies that are committed to sustainable economic activities and regularly publish their sustainability performance. Furthermore, most of these mining companies are organized in the International Council on Mining and Metals (ICMM). The members pledge to implement the ICMM Mining Principles, which comprise ecological and social requirements and governance standards. The implementation of these principles has been validated since 2020, including by independent third parties, and the results of the assessments are disclosed transparently.

We expect our business partners to follow not only local laws, but also UN sanctions and trade restrictions as well as **UN conventions related to human rights, environmental protection, and safety**.

We have included a corresponding clause in our supply contracts since 2013. In the meantime, this clause is a component of more than 80% of our supply contracts for primary raw materials. We want to implement this standard in all supply contracts for primary raw materials by fiscal year 2022/23.

We have pledged to comply with the OECD Due Diligence Guidance, which serves as an important guideline for promoting responsible supply chains for minerals from conflict and high-risk areas. This guidance regulates responsible global supply chain management in the processing of conflict-free raw materials. We have implemented Aurubis Business Partner Screening to fulfill the due diligence obligation [Q Identifying supply chain risks](#). The screening is based on the principles of the OECD.

In fiscal year 2019/20, the Aurubis Business Partner Code of Conduct was introduced across the Group. This outlines our requirements regarding human rights and labor standards, occupational health and safety, environmental and climate protection, business integrity and responsible mineral sourcing, as well as reporting procedures and the monitoring of the business partner's due diligence obligation. The Aurubis Business Partner Code of Conduct is publicly accessible at: [Business Partner Code of Conduct](#)

Complaints or substantiated suspicions of violations of our codes of conduct can be reported through the publicly accessible compliance portal. [Q Human rights](#), [Q Compliance](#), [Business Partner Code of Conduct](#)

Producers have to fulfill sustainability standards in order to sell cathodes on the London Metal Exchange (LME) in the future



IDENTIFYING SUPPLY CHAIN RISKS

GRI 205/103, 308/103, 308-1, 414/103, 408-1, 409-1, 411-1, 414-1

It is important to us to carry out a risk assessment and select business partners carefully in Germany and abroad. Our corporate policies on Business Partner Screening and the processing of conflict-free precious metal raw materials establish responsibilities and processes within the Group. The Procurement and Sales departments are responsible for implementing this screening. For this purpose, we use software that helps assess financial, tax, and criminal law risks, as well as risks regarding corruption, human rights violations, labor conditions, and environmental and climate protection. In the process, we consider both regional risks and those related to the business partners' business activities. Our raw material suppliers, key suppliers of goods, services, and operating supplies, [9 Indirect procurement](#) and our customers are all subject to review. The result includes a profile that, in the case of increased risk, leads to additional research by the Commercial, Compliance, and Sustainability departments. Based on this assessment, management decides on possible contracts or restrictions.

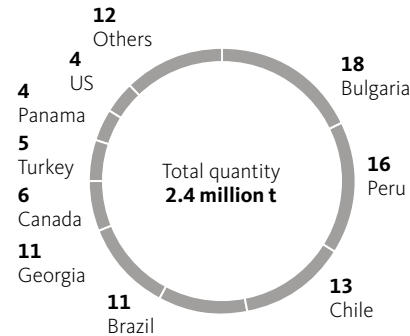
To fulfill our due diligence commitment, new partners are reviewed before any contracts are signed. For existing business partnerships, the Compliance and Sustainability departments regularly repeat the analysis depending on the original risk and the subsequent communication with the business partner.

Communication with our business partners is part of our company policy. Our raw material purchasers visit our suppliers. During these visits, they also observe the criteria of the screening process.

During the reporting year, we identified serious cases of environmental pollution caused by one of our suppliers, which

Origin of copper concentrates GRI 301-1

for the Aurubis Group in 2019/20, in %

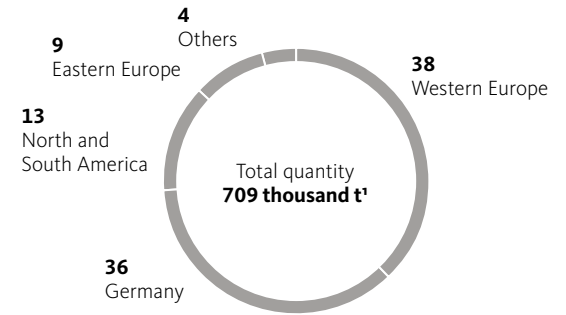


nevertheless aren't directly connected to the products we supply. We contacted the supplier's management at different levels to try to understand the incidents and the measures to curb this pollution and prevent future incidents. We are observing the management approaches taken, as well as the improvements, at short intervals and receiving reports from the supplier's management regularly. If the supplier doesn't make sufficient progress, we reserve the right to end the business relationship as a final consequence, but until then, we will take the business partner's commitments and willingness to cooperate at face value, including with regard to external assessments.

Aurubis and Nussir ASA in Norway signed a memorandum of understanding in August 2020. Aurubis intends to buy copper concentrates over ten years after the mine is commissioned in 2023. Nussir will open the first completely carbon-neutral

Origin of recycling materials GRI 301-2

for the Aurubis Group in 2019/20, in %



¹ Excluding FRP

mine in the world, which will be fully electrified and operated with renewable energies. The relatively short transport routes between Norway and Hamburg further contribute to reducing CO₂ emissions. Moreover, the mining activities will create jobs in the region. Because new mining projects are usually linked to changes in local conditions, we as a possible buyer closely observe the situation on site and are engaged in a dialogue with two interest groups of the Sami people that have expressed concerns about the project.

The reporting year was strongly influenced by the coronavirus pandemic, which also impacted the people in copper production countries such as Peru and Chile, two of our largest procurement markets for primary raw materials. We kept the channels of communication with our suppliers open to stay informed about the situation on site.

SHARED STANDARDS FOR RESPONSIBLE METAL PRODUCTION

Since 2013, Aurubis' gold production has been annually certified as conflict-free according to the standards of the London Bullion Market Association (LBMA). This certificate verifies that we carry out our due diligence processes in accordance with the OECD standards promoting responsible supply chains for minerals from conflict and high-risk areas in connection with the procurement of gold-bearing raw materials. This certification option has been available for silver since 2019, and Aurubis has been certified as conflict-free in this area since then as well. Suppliers of other raw materials go through a comparable process to those who supply gold- and silver-bearing raw materials.

We see the biggest opportunities for sustainable metal production when every actor in the value chain – from the mine to the final consumer – **takes responsibility and works on solutions together.**

This is one reason why we support appropriate industry solutions like the Copper Mark. Aurubis Bulgaria is the company's first primary smelter to commit to this standard. The Copper Mark is an initiative that entails a review of the sustainability standards of copper production sites including mines, smelters, and refineries. With this standard, we want to foster responsibility throughout the value chain, boosting and verifying our own sustainability performance with an external certification from an independent body. Additional locations will follow in 2021. As a company that has played an active role in the Copper Mark from the start, we also participated in the development of a multimetall due diligence standard that covers nickel, lead, and zinc, in addition to copper,

on the basis of the OECD standards related to procurement from conflict and high-risk areas. The Copper Mark published the standard in February 2021.

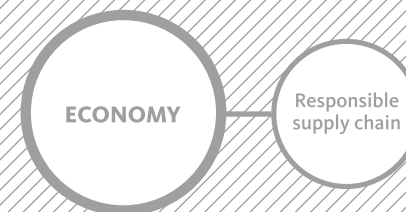
The London Metal Exchange (LME), one of the largest exchanges for non-ferrous metals, is gradually introducing conditions for responsible procurement for all of the brands traded there starting in January 2021. The LME's sustainability requirements are likewise based on the OECD principles [LME Responsible Sourcing](#). The goal of the due diligence standard of the Copper Mark is for the LME to recognize it as equivalent to the LME's own standard.

TRANSPARENCY AND DIALOGUE

GRI 102-43

As a company in the raw material industry with smelter operations in Europe and purchasing activities worldwide, we are continually a focus of public interest and take part in a dialogue with the public. We are active in the political discussion and therefore fulfilled the request to take part in the German federal government's monitoring survey on the National Action Plan on Business and Human Rights (NAP) in spring 2020.

Aurubis doesn't have its own mines or stakes in mines, and it purchases only a small percentage of the ore concentrate volume sold worldwide. This market position poses challenges when it comes to exercising influence over individual mining companies in the supplier portfolio with respect to improvements in ESG performance. Our approach is therefore to employ persuasion and promote a willingness to collaborate for sustainable management. Because the market for ore concentrates is served by a few large mining companies or integrated metal companies, revealing our supplier base would involve the disclosure of business secrets and competitive disadvantages. For this reason, transparency means that we ensure that the commitment to sustainability is upheld on



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Implementing Aurubis Business Partner Screening across the Group

Business Partner Screening is used at Aurubis AG and at the key sites Pirdop and Olen. The Beerse and Berango sites have their own screening system. The integration of the two systems is ongoing.

Including human rights, environmental protection, and safety clauses in supply contracts for primary raw materials

During fiscal year 2019/20, the percentage of contracts with primary raw material suppliers including the corresponding clause was over 80 % (target: 100 % by fiscal year 2022/23).

all sides in the run-up to, and during, the business relationship. The effectiveness of our measures is already documented by the LBMA certificates for gold and silver and, in the future, by the Copper Mark seal as well. This requires an audit carried out by an external, independent party. Within the scope of the certification processes, our supply chains are presented transparently to the independent auditors.

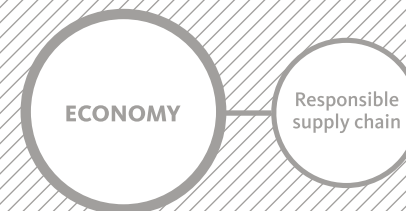
INDIRECT PROCUREMENT

In addition to purchasing primary and secondary raw materials, Aurubis procures goods, services, and operating supplies that are required for our production but that don't go into our sales products (indirect procurement). The sites' Procurement departments are responsible for processing these purchases. All materials and services are purchased on the basis of a Corporate Procurement Policy.¹

The corporate function Corporate Procurement, which works across sites and divisions, is responsible for concluding framework contracts, for process and organizational adjustments, and for overarching supplier management. Overarching topics are coordinated in regular meetings of the sites' procurement managers and corporate specialists. To counter the increasing complexity in international sourcing and to make operational procurement viable for the future, an eProcurement solution was introduced at Aurubis AG during the fiscal year, which will be successively rolled out to additional sites.

When it comes to purchases with environmental importance made by Aurubis AG, we carry out an authorization process related to the purchases' environmental compatibility. This is used for waste disposal services, for example. We take a catalogue of questions about environmental protection, occupational safety, and social issues into account when selecting suppliers and service providers. It is updated regularly and has to be answered by all new suppliers. Suppliers that do not complete the questionnaire or that provide insufficient answers are not considered in the rest of the tendering procedure. We annually review the documents from our suppliers whose work is environmentally relevant to ensure that they are complete. When sourcing investment goods, environmental protection and safety requirements for the product, services connected with the product, or the supplier are defined and taken into consideration. The criteria include energy consumption, emissions, material input, prescribed disposal methods, the expected life cycle, and whether important test certificates are available, for example for material quality or employee qualifications.

The Group-wide introduction of the Aurubis Business Partner Code of Conduct also included the suppliers for Aurubis AG's indirect procurement as well as key suppliers of the Aurubis Bulgaria and Aurubis Belgium plants.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Identifying a suitable sector solution




The Copper Mark is an initiative that entails a review of the sustainability standards of copper production sites including mines, smelters, and refineries. Aurubis Bulgaria started the multi-stage review process during the reporting year, the first primary smelter in the company to do so.

¹ The Beerse and Berango sites acquired during the reporting year will be integrated in a revised Corporate Procurement Policy in the future.

ENVIRONMENT

As a multimetal group, Aurubis assumes responsibility for protecting the environment and the climate. The efficient use of natural resources and energy and the reduction of CO₂ emissions are an important part of the company's ecological and economic responsibility and have been part of our corporate culture for many years. Aurubis views the value chain as a whole and pursues the goal of striking a balance between the economy, the environment, and people. [Q Responsible supply chain](#)

Protection from environmental impact

 SDG 6, 9, 12, 15

MANAGEMENT APPROACH

GRI 303/102, 304/103, 305/103, 306/103, 307/103

We strive to maintain our leading position in environmental protection by steadily learning and improving. Environmentally sound multimetal production from primary raw materials such as iron concentrates and recycling form the foundation for a responsible and demand-oriented metal supply. By doing so, we are safeguarding our sites and creating the basis for future-oriented investments.

Our goal is to minimize the environmental impact of our business activities. Within the scope of the environmental management

system, we identify our environmental impacts and take measures to improve our environmental performance. Key objectives in the company's environmental protection efforts are therefore maintaining air, water, and soil quality and biodiversity in our plants and the surrounding areas, as well as handling waste and hazardous substances responsibly. They are observed and managed with a holistic perspective in our environmental management system.

The head of Corporate Environmental Protection is responsible for the strategic positioning of environmental protection in the Group and reports to the Chief Operations Officer. Environmental officers oversee the environmental protection duties at the individual production sites.



Analytics is a key component of environmental protection at the sites

The principles of our Corporate Environmental Protection Guidelines provide a framework for safeguarding our uniform, Group-wide environmental standards. They are enshrined in the Corporate Policy on Environmental Protection [Environmental Statement 2020](#). We have set Group-wide targets in environmental protection. We implement local measures at the production sites to achieve these targets. Environmental performance is monitored and controlled using key environmental parameters, which are regularly recorded at the production sites and verified by external inspectors. We regularly and publicly issue reports such as the annual Environmental Statement, the Sustainability Report, and the Aurubis website.

The main standards for our production processes are outlined in the permits issued by the governmental authorities. The baseline includes European regulations on immissions, emissions, water, waste, and disruptions, as well as their implementation in national law, plus the European chemical regulation REACH.

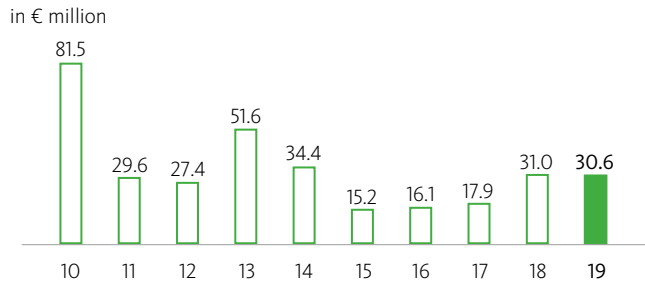
Apart from our own guidelines, we are committed to voluntary obligations from industry initiatives such as the European chemical industry's Responsible Care initiative.

The high priority Aurubis places on environmental protection is evident in our investments as well. We have invested more than € 630 million since 2000 in measures to improve environmental protection throughout the Group.

> € 630 million
investments in environmental protection
in copper production since 2000

Most of our sites have environmental management systems in accordance with ISO 14001/EMAS [Certifications by site](#). At the Hamburg and Lünen sites, these are part of the integrated management system (IMS) for quality, environmental protection, energy, and occupational safety. One target within our Sustainability Strategy is to introduce an environmental management system in accordance with ISO 14001 at all production sites by 2022. During the reporting period, the certifications were confirmed through routine surveillance visits or recertification. In addition to fulfilling legal requirements, we monitor and improve our environmental performance by means of the management systems. They assist us in recognizing potential improvements and, in the case of deviations from specified targets, in initiating corrective actions. We therefore fulfill the principle of continuous improvement laid out in our environmental guidelines.

Investments in environmental protection in copper production¹



¹ At the copper production sites, i.e., Hamburg, Lünen, Olen, and Pirdop. The Beerse and Berango sites are not included.

We continuously inform our employees about environmental and energy-related topics and train them according to the site-specific environmental issues. Moreover, emergency drills are carried out regularly, which we document and evaluate. At the individual sites, we have emergency, alarm, and hazard prevention plans in place to prevent environmental impacts and to protect our employees and the surrounding population. The environmental officers of all of the Group's production sites take part in meetings organized by Corporate Environmental Protection to exchange information twice a year. The participants present best practices that can be transferred to the other sites. Moreover, the sites are regularly informed about national and international changes in environmental legislation. Extensive environmental risk assessments are regularly conducted by an external auditor at every production site. Topics of the assessments include emissions to air and water, water management, and handling hazardous substances, but also the challenges that climate change poses.

STAKEHOLDER ENGAGEMENT

GRI 102-43

Dialogue with governmental authorities and the public is important to us and is a key element of our environmental policy in the environmental guidelines. We provide contact information for those responsible for environmental issues at the individual sites on our website. Furthermore, we have operated a public information center in Pirdop since 2011. Environmental monitoring data is also shown publicly on monitors in the communities of Pirdop and Zlatitsa.

Within the context of our stakeholder dialogue, Aurubis is also involved in publicly funded projects. For example, since 2013, we have participated in the EU projects Organisation Environmental Footprint and Product Environmental Footprint for copper cathodes, projects that seek to achieve an environmental balance in organizations and products. In 2018, the two pilot projects we participated in were successfully concluded after the results were accepted by the official supervisory bodies. We will take part in the next phase of the Environmental Footprint and contribute our experience in this area. Furthermore, we carried out a life cycle analysis for copper cathodes. The results show that the footprint of the Aurubis cathodes in the environmental aspects considered, for example global warming and acidification (measured in sulfur dioxide equivalents), is in some cases substantially smaller than the worldwide industry average (i.e., the members of the International Copper Association, [ICA copperalliance.org](#)). The detailed results are published in the Aurubis AG Environmental Statement [Environmental Statement 2020](#). The ICA is currently working on updating the study that Aurubis actively supports. The collection of the data required for the study started in 2020. A life cycle assessment for our rod products is currently underway and should be concluded in the course of 2021.

The New York State Department of Environmental Conservation (NYSDEC) identified environmental deficiencies at the Aurubis

site in Buffalo, US, and initiated legal proceedings in 2018. The deficiencies related to the handling of hazardous substances and wastewater treatment. To remedy these issues, the site implemented an action plan, increased its number of environmental management personnel, and modified organizational structures. Close monitoring should also contribute to further minimizing risks. As at the reporting deadline, the legal proceedings with the responsible environmental authority were about to conclude.

AIR QUALITY

GRI 305/103

The dust emissions arising during copper production can contain metals and metal compounds. We have already achieved a great deal in reducing dust emissions by means of technical measures. By consistently using the best available techniques, we have minimized specific dust emissions for primary and secondary copper production by 95% since 2000.

One of the main focuses in the 1990s was the use of state-of-the-art filter technologies for all directed emission sources from chimneys. Today, projects to reduce so-called diffuse emissions have high priority. Such emissions can arise in areas near hall openings – such as gates, doors, or ridge turrets – and during material storage and handling, for instance. Technical options for reducing directed dust emissions have been virtually exhausted. Nevertheless, avoiding diffuse emissions will continue to challenge us in the future. We want to overcome these challenges by using innovative technology and training our employees.

Reducing dust emissions remains one of our central targets. In 2019, we surpassed our goal of reducing specific dust emissions by 15% until 2022 (compared to 2012). We expect our total input to rise as a result of our multimetal approach, which will increase the total volume of processed materials at a higher rate than the copper output. It will thus be a challenge in years to come to keep the ratio of calculated emission values to copper output at a low level.

In 2019, the value measured for arsenic in fine particulates in ambient air was well below the target level again at the Veddel measuring station in Hamburg, after slightly exceeding this target level in 2018.

We want to reach a new milestone in the **primary smelter** at the **Hamburg plant**, where we are investing about

€ 100 million

in measures to continue reducing emissions until the end of fiscal year 2021/22.

These measures include optimized source extraction, a newly installed procedure for processing intermediates, and the use of state-of-the-art suctioning and filter technology to trap residual dust emissions. Once our plans are fully implemented, we will reduce diffuse emissions from the primary smelter by more than 70%. The plan is to gradually implement this until 2024. The first, significant phase will be commissioned in 2021 already.

Sulfur is one of the main components of the copper concentrates in use. The gaseous sulfur dioxide produced when concentrates are smelted is converted into sulfuric acid in the sulfuric acid plant using the modern double catalysis process. When compared internationally, Aurubis is a forerunner in reducing sulfur dioxide emissions: we have reduced emissions per ton of copper output by 87% since 2000. This was due in part to the construction of the Sulfacid facility to clean smelter off-gases with low sulfur dioxide concentrations – a unique project in the non-ferrous metals industry that extends beyond the best available techniques (BATs) established at European level. Furthermore, the facility for cooling converter slags at the site in Pirdop will be expanded in the future to process slags from the flash smelter. Implementation is scheduled to begin in 2021.

WATER USE AND WATER POLLUTION CONTROL

GRI 303/103, 303-1, 303-3, 303-4, 303-5

We use water in our production processes and for cooling purposes, mainly in closed cycles. The sparing use of water resources and thus the reduction of water consumption, as well as continuous improvement in water pollution control, are included in our company guidelines. Wherever possible, Aurubis uses river water and rainwater to save potable water resources. In the past, we have been able to boost our use of rainwater in our production processes with new facilities. For instance, Aurubis commissioned a facility for rainwater retention, treatment, and utilization at the Lünen site, which now covers a large part of the plant's internal cooling and process water needs with the collected rainwater. Additionally, the water used in our production and cooling processes is reused wherever this is feasible.

We used a total of 71.0 million m³ of water in 2019 (previous year: 80.5 million m³) at our production sites – the majority as cooling water. In relation to copper production, we have steadily reduced water withdrawal (2012: 59 m³/t of copper output, 2019: 49 m³/t of copper output). We achieved this reduction with more efficient facilities, among other things. [Q KPIs related to water and effluents](#)

The relevance of water-related aspects is reviewed at the sites by means of the environmental management systems and in the course of permit procedures. Inspections include the influence of production on bodies of water. The environmental management systems are audited and certified annually. Water management is also part of the externally conducted environmental risk assessments. The risk identification and assessment as well as measures to minimize risks include, for example, permits under water law, water sources, wastewater treatment, and groundwater conservation.

Furthermore, treating wastewater and thus avoiding environmental pollution is one of our key responsibilities in industrial environmental protection since water may contain metals after use, such as copper, zinc, and lead. Wastewater treatment and water discharge, for instance in the municipal wastewater system or in surface water, is regulated in the official discharge permits at all sites. This is monitored by governmental inspections, which are supplemented by internal monitoring carried out by the plants themselves.

Water quality is crucial in the targets for water consumption. We therefore set the goal of maintaining the low level of specific metal emissions to water and of constantly improving them with technical measures. We want to achieve 1.1 g/t of copper output in 2022, a 50% reduction compared to 2012. An initial analysis supported by the Aqueduct Water Risk Atlas 2019 showed that only a very small proportion of our water withdrawal in copper production comes from regions with a high level of water stress. Water stress is defined as the ratio of total water withdrawal to the available renewable surface and groundwater reserves. We want to intensify this assessment in the future.

For example, the following site-specific projects and individual measures contribute to improving water conservation:

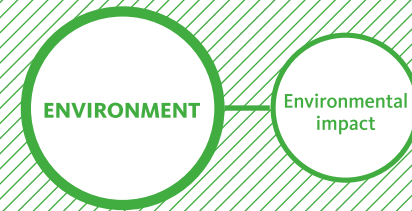
- » Aurubis extracts industrial heat for the heat supply of the Hamburg urban development district HafenCity East, and since 2021 for the Rothenburgsort district as well. This heat forms when sulfur dioxide is converted to sulfuric acid. For the Hamburg site, the cooling water volume discharged into the Elbe River decreased by over 10 million m³ in 2019 as a result of this Industrial Heat project commissioned in late 2018.

- » At the site in Pirdop, Bulgaria, a new sand filter was installed in the facility for cleaning process wastewater in 2019. This reduces the discharge of undissolved substances into bodies of water.

SOIL CONSERVATION

Our goal is to prevent the discharge of harmful substances in the soil and groundwater. At Aurubis, we handle a number of metal-bearing materials and other hazardous substances, which is why we have established regulations – such as process instructions – and training sessions related to safely handling and preventing the release of these substances. These are supplemented by technical measures like paving and catch basins.

Due to long-time industrial use, there can be soil contamination typical of industrial areas, which we work to prevent from mobilizing and spreading by paving our plant premises, for example. In addition, we conduct systematic soil and groundwater monitoring at the relevant sites to prevent negative changes to the soil and groundwater. External auditors regularly carry out an extensive assessment of the soil and groundwater situation, as well as a risk assessment for our sites.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Introducing the ISO 14001 standard for environmental management at all production sites



The existing certifications were confirmed during the reporting period through surveillance audits or recertification. [Q Certifications by site](#)

Status of the four sites that are pending: gap analyses have been carried out at Peute Baustoff in Hamburg, Retorte in Röthenbach, and Buffalo in the US.

In the case of past pollution, remediation and precautionary measures may become necessary, for instance to prevent discharge into the groundwater:

- » At the Lünen site, equipment was set up to clean up historic oil damage and successfully underwent test operation at the end of 2019. Preventive and protective measures are taken in order to eliminate future strains on the soil. These include fully reinforcing sensitive plant areas with moisture-resistant surfaces, using double-walled containers, and closely monitoring equipment with automated leak detection.
- » Soil material that was removed at Retorte GmbH in Röthenbach a.d. Pegnitz during environmental remediation in summer 2019 was recycled at the Hamburg site. The soil material was mainly composed of sand and was used as an additive to form slag for recovering selenium at the end of the copper refining process.

RESOURCE CONSERVATION AND WASTE MANAGEMENT

GRI 306/103, 306-1, 306-2

When it comes to processing recycling materials and other raw materials, waste management is one of the central pillars of industrial environmental protection. Avoiding waste and responsibly handling waste and hazardous substances are part of our environmental policy and are enshrined in our environmental guidelines: in this respect, processed raw materials and intermediate products should be brought into the economic cycle as completely as possible, and unavoidable waste recycled or harmlessly disposed of. A special feature of our business model

is the fact that a substantial amount of process residue is directly used internally in metallurgical processes and is thus directly recycled [↗ Recycling solutions](#). Raw material suppliers are also advised on issues related to environmental protection if needed.

The certification of our environmental management systems and the additional certification of our recycling sites Lünen, CABLO,¹ and E.R.N. as specialized waste disposal companies validate our responsible approach to waste.

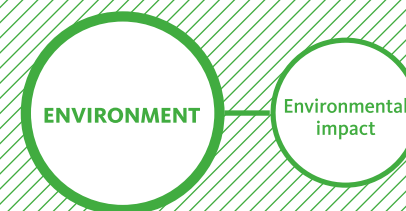
Handling hazardous waste is a job for experts. The employees charged with this task therefore receive training specific to their site in order to ensure correct handling and thus to minimize possible health and environmental risks. Contractual arrangements guarantee that external service providers, too, handle or dispose of waste correctly and in compliance with the law.

BIODIVERSITY

GRI 304/103, 304-1

We endeavor to ensure good conditions for species conservation and biodiversity in our plants and their surroundings. Protecting biodiversity and improving nature conservation at the production sites are included in our environmental targets. [📄 Environmental Statement 2020](#)

¹ In the future, the subsidiary CABLO will be bundled together with the cable dismantling activities of TSR Recycling GmbH & Co. KG as a joint venture between Aurubis and TSR. Approval from the merger control authorities is still pending.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Reducing specific metal emissions to water by 50 % until 2022 (compared to 2012), equivalent to 1.1 g/t of copper output



In 2019, metal emissions to water in copper production processes were reduced to 1.0 g/t of copper output, a decline of 54%. We therefore went beyond our target in 2019. We want to maintain the low level in the future and continue improving through technical measures.

At the site in Pirdop, Bulgaria, a new sand filter was installed in the facility for cleaning process wastewater in 2019. This reduces the discharge of undissolved substances into bodies of water.

RESOURCE CONSERVATION AND CIRCULAR ECONOMY BASED ON THE EXAMPLE OF IRON SILICATE

As part of our copper refining and recycling processes, we produce iron silicate from mineral components. This industrially produced mineral is comparable to natural minerals from quarries, but without the interference in nature that accompanies quarrying. Iron silicate can be used in different areas, especially construction, as a replacement for primary building materials.

To assess the ecological footprint of building materials, we carried out a life cycle analysis (LCA) for iron silicate products compared to primary building materials. The life cycle analysis shows a clear result: using iron silicate significantly reduces CO₂ emissions as well as other environmental impacts.

The use of our iron silicate products can therefore help the construction sector to reduce its CO₂ footprint. This conserves natural resources while preventing landfilling.

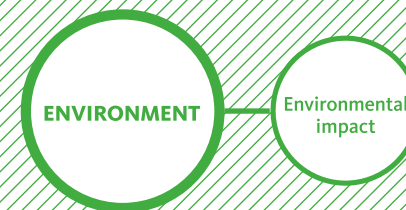
Find out more on our website:
[What is iron silicate?](#)
[Iron silicate life cycle assessment](#)



The aspect of biodiversity was also inspected by governmental authorities as part of authorization procedures with environmental compatibility tests. Where any impacts on biodiversity were expected, the required compensating measures were implemented. Furthermore, we help conserve the habitats of animals and plants in the areas surrounding our sites with our water treatment, air emission reduction, and waste treatment methods. Implementing these types of measures is part of our environmental guidelines.

Wherever possible, we maintain or expand green areas on our plant grounds. For instance, we take part in the Hamburg initiative UnternehmensNatur to promote biodiversity at our site there. When we have to expand the usable area on our plant premises, we choose areas that have limited biodiversity.

Furthermore, at the Pirdop site, we renaturated a landfill that had been decommissioned in late 2018. At the Hamburg site, a pilot project to set up a green facade was implemented to promote biodiversity and improve the ambient air.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Reducing specific dust emissions by 15% until 2022 (compared to 2012), equivalent to 61 g/t of copper output



In 2019, dust emissions per ton of copper output in copper production were reduced to 60 g/t, a decline of 18%. We therefore went beyond our target in 2019. We want to maintain the low level in the future and continue improving through technical measures.

To reduce fugitive emissions, a new facility for cooling converter slag in pots was built at the site in Pirdop, Bulgaria, and was commissioned in 2019. At the Hamburg site, we are investing approximately € 100 million in measures for continued emission reduction in the primary smelter (ridge turret suctioning to capture the remaining diffuse emissions). The first, significant phase will be implemented and commissioned in 2021.

KPIs

The environmental KPIs are reported for calendar year 2019. The specific values are related to the copper production sites, i.e., at the Hamburg, Lünen, Pirdop, and Olen sites. The Beerse and Berango sites are not yet included.

Nitrogen oxides (NO_x), sulfur dioxide (SO₂), and dust

GRI 305-7

	Unit	2019	2018	2017	2016	2015	2012
Dust	t	99	110	101	93	90	114
NO _x	t	769	846	809	870	868	767
SO ₂	t	4,154	4,859	5,145	4,648	4,986	5,431
Specific dust emissions	g/t of copper output	60	63	56	59	55	72
Specific NO _x emissions	kg/t of copper output	0.56	0.57	0.54	0.63	0.62	0.55
Specific SO ₂ emissions ¹	kg/t of copper output	4.6	4.9	4.9	5.1	5.1	5.6

¹ Values based on primary copper production, i.e., at the Hamburg and Pirdop sites.

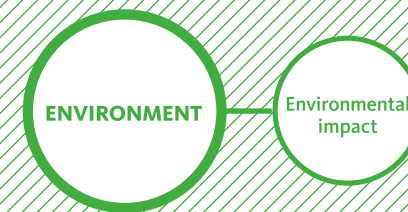
Water and effluents

GRI 305-3, 303-4, 303-5

	Unit	2019	2018	2017	2016
Total water withdrawal	million m ³	71	80.5	82.6	77.7
Water withdrawal by source					
Surface water	million m ³	67.7	76.6	79	74.1
Rainwater	million m ³	0.3	0.4	0.4	0.4
Groundwater	million m ³	0.5	0.6	0.5	0.6
Municipal water	million m ³	2.1	2.6	2.1	2.3
Other ¹	million m ³	0.3	0.3	0.5	0.4
Specific water withdrawal in copper production	m ³ /t of copper output	49	51	53	54
Total water discharge	million m ³	66.1	77	77.1	72.9
Water discharge by destination					
Surface water	million m ³	64.7	75.6	75.8	71.5
Municipal wastewater system	million m ³	1.3	1.4	1.3	1.4
Wastewater to third parties	million m ³	<0.1	<0.1	<0.1	<0.1
Metal emissions to water²	g/t of copper output	1	1.1		

¹ Other: distilled water, steam, etc.

² Values based on copper production, i.e., at the Hamburg, Pirdop, and Olen sites. In this table, we refer to the copper production sites that discharge directly into water. In Lünen, wastewater is directed to the public sewer system after being treated on the plant premises and therefore is not included.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Reducing specific SO₂ emissions to air with site-specific projects and individual measures



The new facility in Pirdop for cooling converter slag that was mentioned also contributes to reducing SO₂ emissions. The plan is to expand the project to include the processing of slags from the flash smelter. Implementation is scheduled to begin in 2021.

Waste

GRI 306-3, 306-4, 306-5

	Unit	2019	2018	2017	2016
Total hazardous waste	t	48,634	48,886	51,799	41,423
Landfilling	t	36,429	34,032	34,417	27,430
Disposal (thermal)	t	112	81	139	197
Thermal utilization ¹	t	391	447	452	365
Recycling	t	8,717	10,457	13,063	9,220
Storage	t	1,682	1,846	1,264	3,722
Internal utilization/recycling	t	1,303	24	2,464	487
Total non-hazardous waste	t	46,992	42,966	45,350	44,494
Landfilling	t	1,739	2,134	1,899	1,991
Disposal (thermal)	t	542	428	139	197
Thermal utilization	t	590	472	446	499
Recycling	t	38,494	32,947	35,768	33,916
Storage	t	89	128	184	1,265
Internal utilization/recycling	t	5,537	6,857	6,914	6,626
Construction waste	t	123,348	46,558	38,826	51,029

¹ Deviations in the prior-year figures from the Sustainability KPI Update 2018/19 are the result of a recount of one waste stream.

Conservation areas in close proximity to copper production sites

GRI 304-1

	Name	Distance	Direction
Hamburg (DE)	Hamburger Unterelbe	200 – 600 m	Southeast
	Holzhafen	600 – 1,000 m	East
	Heuckenlock/Schweenssand	3,600 m	South
Pirdop (BG)	Tsentralen Balkan – bufer (Bird conservation area)	approx. 1,700 m approx. 2,300 m	North East
	Sredna gora	approx. 2,300 m	South
Lünen (DE)	In den Kaempfen, Im Mersche, and Langerner Hufeisen	< 2,000 m	Northeast
	Lippeaue	< 5,000 m	Northwest
	Lippe-Unna, Hamm, Soest, Warendorf	< 2,500 m	Northwest
Olen (BE)	Valleigebied van de Kleine Nete met haar brongebieden, moerassen en heiden	approx. 1,000 m	North
	De Vallei van de Kleine Nete Benedenstroom	approx. 1,000 m	North
	Het Olensbroek-Langendonk	approx. 1,000 m	North
Beerse (BE)	Eksterheide	approx. 500 m	West
	Duivelskuil	approx. 750 m	Southwest
	Pomp-Poelberg	approx. 1,000 m	Northwest
Berango (ES)	Ría de Mundaka-Cabo de Ogoño Marine Area	approx. 3,500 m	North
	Ría del Barbadun	approx. 10,000 m	Southwest

Energy and climate protection

GRI 305/103,  SDG 7, 9, 12, 13

MANAGEMENT APPROACH

The individual production steps in our value chain are energy-intensive. For us, the efficient use of energy is thus an issue of ecological and economic responsibility. The use of energy is the main source of CO₂ emissions in the Group. Taking the entire value chain into consideration, over half of the CO₂ emissions are upstream and downstream, i.e., they originate from our suppliers, customers, and service providers (Scope 3 emissions). Most of the Scope 3 emissions originate from the activities of the mining companies from which we source ore concentrates.

At the same time, the products we manufacture contribute to reducing CO₂ emissions because they play an important role in renewable energies, energy efficiency applications, and electric vehicles. Electric cars contain nearly four times more copper than vehicles with conventional combustion engines, and building and connecting an offshore wind turbine to the energy grid requires up to 30 t of copper. Our metals contribute to CO₂ reduction in our society thanks to their use in electric vehicles and in the expansion of renewable energies.

Identifying climate-related opportunities and risks and deriving related measures are two issues that link our risk management and our energy and environmental strategy. When doing this, we consider (pending) legal requirements, technological developments, and compliance-related, reputational, and physical risks. More information is available in the [Risk and Opportunity Report of the Annual Report 2019/20](#) under “Energy and climate,” as well as in our publicly available CDP report www.aurubis.com/cdp. CDP

gathers and evaluates data and information about companies’ CO₂ emissions, climate risks, and reduction targets and strategies, assessing their responsibility in the supply chain in the process. We voluntarily report our CO₂ emissions annually as part of the CDP climate change program.

With our affirmation of the **Science-Based Targets initiative (SBTi)**, we are committed to setting a science-based climate target to reduce our CO₂ emissions to contribute to limiting global warming to 1.5°C in accordance with the Paris Agreement on climate change.

Our Group-wide Corporate Energy & Climate Policy outlines how Aurubis secures and optimizes the energy supply, energy consumption, and CO₂ avoidance. In this context, the policy also defines the roles and responsibilities of the sites and corporate departments.

The head of Corporate Energy & Climate Affairs develops and implements the Group-wide energy strategy and reports directly to the Executive Board chairman. The corporate department also coordinates the development of the energy management and monitoring systems across the Group, providing for a uniform approach and facilitating the exchange of expertise regarding best practice examples – for instance in the form of an energy efficiency network for the German Aurubis sites’ energy management officers

and a regular international Aurubis workshop. Topics include completed and planned energy efficiency projects, results of external energy audits, the current legal situation, and aid programs and implementation assistance related to new requirements.

Our large production sites have energy management systems (EMS); nine sites are currently certified in accordance with ISO 50001, meaning somewhat more than half of the production sites already fulfill this high standard [Certifications by site](#). The other sites plan to follow by the end of fiscal year 2021/22. The management systems contribute to efficiently steering energy consumption and identifying energy savings potential. The EMS is being implemented across the Group: all of the sites that are still lacking have started with the implementation of an EMS or its

Wind turbines supply the Aurubis plant in Olen with power



integration in existing environmental and/or quality management systems. The EMS at the Hamburg and Lünen sites is part of the integrated management system for quality, environmental protection, energy, and occupational safety. During the reporting period, the certifications were confirmed through routine surveillance visits or recertification.

Beyond our involvement within the Group, we are in regular contact with external partners regarding energy and emissions issues. In Germany, for example, we take part in the German Energy Efficiency Networks Initiative through the Hamburg Industry Association and are active in other national associations and groups such as the German Chemical Industry Association (VCI) and the German Institute for Standardization (DIN), as well as European associations like Eurometaux. We contribute to climate and energy policy initiatives at regional level, such as the Energy Efficiency Network of the Aachen region and the innovation alliance NEW 4.0 – Northern German EnergieWende, which is sponsored by the German Federal Ministry for Economic Affairs and Technology and is now coming to an end. We will also participate once more in the Living Lab Northern Germany, the follow-up to NEW 4.0.

We also take part – both independently and through industry associations – in political dialogue to counter the challenges that arise from changes to regulatory requirements. During the reporting period, this dialogue addressed electricity price compensation, the coal phase-out, and the reform of the EU Emissions Trading System (ETS) with CO₂ certificates, which is intended to prevent the outsourcing of CO₂-intensive processes to regions outside of the EU. [Q Stakeholder engagement](#), [Energy and Climate Factsheet](#)

ENERGY EFFICIENCY AND REDUCING THE USE OF FOSSIL FUELS

To prevent CO₂ emissions, we primarily focus on energy efficiency measures. Furthermore, we are increasingly considering measures to replace fossil fuels with alternatives, for example by commissioning the 10 MW power-to-steam plant (see below). Assuming that 100 % of the power supply comes from renewable energies, this plant alone could cut about 4,000 t of CO₂ annually. The reduction of greenhouse gas emissions is taking a higher priority in investment decisions as well.

Aurubis produces copper cathodes with a roughly **40 % smaller CO₂ footprint** than the global average for copper smelters.¹ This is due to our high level of recycling on the one hand and comparatively more efficient production methods on the other.

¹ Source: ICA – International Copper Association: Copper Environmental Profile, Sept. 2017

Green hydrogen is considered a key technology for decarbonizing industry. Hydrogen is an energy source that can be used to store and transport energy. It can be converted to electricity and replace crude oil and natural gas in production – without releasing CO₂ in the process. Aurubis is investigating how hydrogen can be efficiently and cost-effectively integrated in production and currently sees the biggest potential in the material use of hydrogen in the anode furnaces. In this process step, the copper's purity

is enhanced by using natural gas as a reducing agent. When the natural gas is substituted by hydrogen, the hydrogen reacts with the copper and separates oxygen from copper oxide. This forms water vapor alone, and not CO₂ as before.

[Q Innovation, research, and development](#), [Hydrogen Factsheet](#)

The more steps that have been implemented in energy efficiency in the past, the more challenging a further optimization is. Moreover, because there are limits to reducing energy consumption and emissions, the improvements being achieved today within the plant boundaries are only marginal compared to previous years. This is despite the same or higher levels of investment, which were already high to begin with. For example, complex recycling raw materials with relatively low metal contents and complex copper concentrates require a higher specific energy input to be processed. As a result, we focus not only on further increasing efficiency but on solutions that save energy and thus prevent CO₂ emissions outside of our plant – such as the Industrial Heat project in Hamburg – as well as on projects that contribute to the energy shift. Examples include the wind turbine in Olen, the flexible mode of operation in the production facilities in Hamburg, Lünen, and Olen, and the photovoltaic park project planned in Pirdop. Environmental protection already accounts for a large part of the energy consumption at Aurubis today. This includes the operation of filters with fans and other suctioning equipment, for instance.

www.aurubis.com/industrialheat

The use of renewable energies on a large scale is a challenge for us, since generating them is associated with energy supply fluctuations. However, our production processes require a constant energy supply. We are therefore working on measures to make our energy uptake more flexible so that we can react to fluctuating energy availability and thus use more renewable energies.

For this reason, Aurubis is participating in the Living Lab Northern Germany and, within the scope of this project, investigating the cost-efficiency of producing and using hydrogen in copper production. The goal of the Living Lab Northern Germany is to continue carrying out trials related to the energy system transformation and decarbonization possibilities. One focus in this context is integrated energy with a concentration on hydrogen. As part of the precursor project NEW 4.0, Aurubis commissioned a study on the limits and the potential of making electricity consumption more flexible at the Hamburg plant. One part of the project involved installing a power-to-steam facility (electrode boiler) at the Hamburg plant, which, during periods of surplus renewable energy in the grid, converts the energy into steam for internal processes and contributes to integrated energy. For the Hamburg plant, over 10% of the installed electricity consumption capacity can be flexibly controlled already as a result. Since its installation in August 2019, the electrode boiler has been used extensively, saving more than 2,000 t of direct CO₂ emissions in the first year since its commissioning.

Another example is the world's largest arc plasma furnace, commissioned in Beerse in 2017. In the furnace's reactor, metals are evaporated from the slags of plant processes. The slag is cleaned through this procedure and transformed into usable metals and minerals. In contrast to other furnaces in the industry, the furnace is electrically operated, which makes the use of renewable energies possible.

We also cover a portion of our energy needs with electricity we generate internally using excess heat from our processes. We installed steam turbines for this purpose in Hamburg, Lünen, and Pirdop. The savings potential is 30,000 t of CO₂ per year.

The savings during the reporting period were lower, mainly due to temporary outages or maintenance measures related to the steam turbines and their surrounding areas. On top of that, we use

waste heat from the production processes to secure the heat and process steam supply at the Pirdop, Lünen, and Hamburg sites. Demand there is largely covered by waste heat. We efficiently use waste heat potential on a smaller scale, too, for instance by feeding waste heat from the air compressors into the heating system at the Stolberg site.

At the Aurubis site in Pirdop, a **10 MW photovoltaic (PV) park** is in the planning stage.

The PV facility for generating electricity internally is the largest of its kind in Bulgaria according to current plans, and Aurubis Bulgaria would be the first industrial consumer in the country to invest in renewable energy production on this scale. The plan is to install the 22,200 PV panels on a remediated landfill site. The PV park will cover an average of about 2.5% of the primary smelter's energy needs and is part of the site's energy transition plan. The CO₂ savings potential would be 4,000 t per year. Commissioning is planned for 2022.

ADDITIONAL EXAMPLES OF ENERGY EFFICIENCY PROJECTS

Aurubis extracts industrial heat for the heat supply of Hamburg's Hafencity East district, and since 2021 for the Rothenburgsort district as well. This heat forms when sulfur dioxide is converted to sulfuric acid. Each year, up to 160 million kWh of heat can be extracted from the processes, equivalent to a more than 20,000 t reduction in CO₂ annually [Q Magazine](#). Beyond the use of industrial heat, we do a great deal to continue enhancing our energy efficiency. At the Hamburg site, smaller measures have also been implemented, such as the filter overhaul and the optimization of the cooling unit in the main laboratory, as well as the installation of an efficient burner technology. At the Lünen plant, continuous

process improvement and adjustment are still the primary focus, which holds significant energy savings potential with operation adjusted to the raw materials. Our Olen plant won second place in the environmental contest held by the city of Olen in June 2018 for its achievements in sustainable energy use and was successfully certified in accordance with ISO 50001 in 2020 for the first time.

Aurubis Stolberg is part of the Energy Efficiency Network for companies in the Aachen region sponsored by the Aachen Chamber of Industry and Commerce. The site regularly informs its network partners about the successful measures implemented during the past few years: for example, the renovation of the flash smelter for strip reduced gas consumption by 20% and shielding gas use by 50%. However, even smaller changes such as switching to LED lights have a positive impact on the energy balance. Projects and routine training sessions encourage employees to take energy issues into account in their conduct.

Other examples of the efficient use of energy include our Stolberg and Avellino sites and the operations of CABLO¹ in Fehrbellin, E.R.N. and Peute Baustoff in Hamburg, and the Deutsche Giessdraht GmbH plant in Emmerich. Using excess heat from air compressors, optimizing the heating and cooling processes (including heat use in the production facilities), installing new heating equipment and more efficient air compressors, and using LED lighting, more efficient engines, and new forklifts are a few developments that have saved energy at these sites. In the future, we will transfer these efficiency measures to other sites where they have not been implemented yet. Funding programs at the national and state level were used for the investment projects as far as possible.

¹ In the future, the subsidiary CABLO will be bundled together with the cable dismantling activities of TSR Recycling GmbH & Co. KG as a joint venture between Aurubis and TSR. Approval from the merger control authorities is still pending.

CO₂ FOOTPRINT

As an energy-intensive company, we are aware of our impact and thus our responsibility for climate protection. With our commitment to setting a target in the context of the SBTi, we will make our contribution to the 1.5°C target from the Paris Climate Agreement.

Direct and indirect CO₂ emissions (Scope 1 and 2) within the Group amounted to roughly 1.4 million t in calendar year 2019. Scope 1 emissions were at a level of 0.32 t of CO₂ per ton of copper in 2019.

Our Scope 3 emissions decreased slightly in 2019, from 2.1 million t (2018) to 1.9 million t, which was mainly due to a slightly lower cathode output and an adjustment to the calculation method. The breakdown of emissions according to Scope 1, 2, and 3 in calendar year 2019 is shown in the graphic.

The graphic shows that more than half of the CO₂ emissions arise from services performed by third parties. Of these Scope 3 emissions, about two-thirds originate from the activities of mining companies. The transport of the materials to and from our sites is the second biggest source, accounting for about 11%. A smaller proportion of emissions arises from our investments in new or modernized facilities, as well as from the production of our fuel- and energy-related input materials that are not covered by Scope 1 and 2. Our employees' commutes and business trips have only a very limited impact.

Scope 3 emissions by activity¹

GRI 305-3

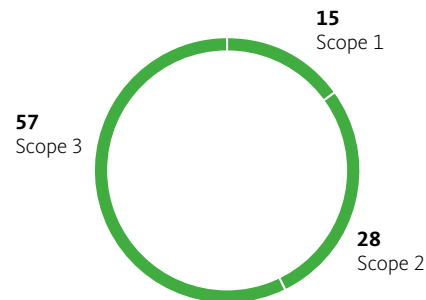
Calendar year 2019, in %	
Purchased goods and services	66
Upstream transport and delivery	11
Fuels and energy-related activities	8
Downstream transport and delivery	8
Investment goods	6
Employees' commuting routes	1
Generated waste	< 1
Business travel	< 1

¹ Scope 3 emissions were reported using the methods of "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" and include all relevant Scope 3 emissions, some of which are estimates.

CO₂ footprint of the Aurubis Group by scope

GRI 305-1, 305-2, 305-3

Calendar year 2019, in %



Aurubis reports the emissions produced as a direct result of burning fuels in its own facilities (Scope 1) and emissions related to purchased energy, for example electricity (Scope 2). Furthermore, an estimate of the emissions caused by the services provided by third parties, such as transport, and purchased preliminary services was created with partially aggregated data (Scope 3).



Industrial heat from the Hamburg site is used to supply heat to the HafenCity East and Rothenburgsort districts

TRANSPORT

Within our business, transport extends from the arrival of our raw materials and the exchange of goods between our production sites, to the delivery of finished products to our customers. Our objective is to optimize this transport traffic and to limit the environmental impacts it causes.

We source copper concentrates from South America in particular, so they are shipped 100% by sea to Europe and transported further by inland vessel or rail. We source over 80% of our secondary raw materials directly from Europe. [Responsible supply chain](#)

20,000 truck
deliveries can be avoided each year with the Cu-Port.

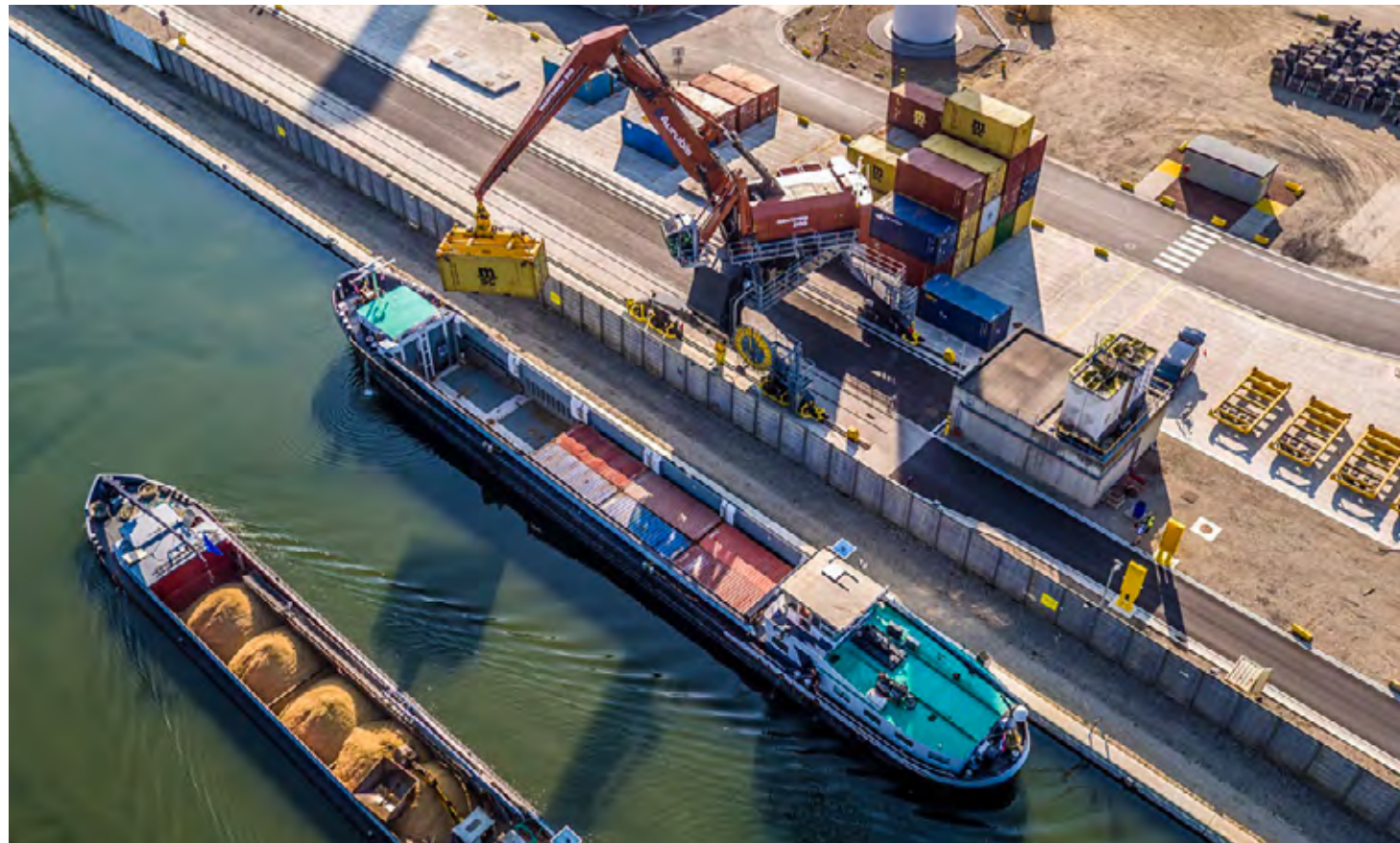
We select our carriers according to established criteria. Although economic and timing aspects have priority, we favor the most environmentally friendly carrier whenever possible. Accordingly, we prefer waterways over rail – and road transport is the last resort. Of the freights and transports we oversee, about 50% (by volume) take place by waterway, 25% by rail, and 25% by road.

We try to improve transport between the individual plants as well. To limit this as much as possible, we continuously review how we can optimize cargo loads and return trips. Furthermore, we maintain a dialogue with our suppliers and customers to tap additional transport synergies. We use a forecasting system to optimize capacity utilization with the forwarders, thus preventing empty transport runs.

One example of our transport optimizations is the Cu-Port project at our Olen site. The plant's convenient location on the Bocholt-Herentals Canal makes it ideal for water transportation. As part of a public-private partnership between Aurubis and De Vlaamse Waterweg, the operator of the canal system, the so-called Cu-Port was commissioned at the site in 2020: a new container crane, together with a new quay wall and a connection to the existing railway network.

This project not only provides us with a long-term, cost-efficient solution for our material flow on site and a reduction in CO₂ emissions, but also has a positive effect on traffic safety and quality of life in the region. Transport that was previously performed by truck is now carried out by waterway. This prevents a total of about 20,000 truck deliveries per year and 237 t of CO₂ emissions.

Another example from the fiscal year is that, in addition to copper shapes, copper rod is now also increasingly being transported from Hamburg to long-standing customers by rail, which contributes to reducing CO₂ emissions. One single wagonload can transport more copper rod than two trucks.



The Cu-Port was commissioned in 2020 at the Olen plant

Artificial intelligence is being used in the new ETA project to improve the predictability of cargo ships' scheduled arrival times. ETA stands for "estimated time of arrival." For this purpose, data from ship routes was collected in a machine learning model, with routes being gathered as of 2015 by means of historical GPS data. The result is that the arrival of ships with copper concentrates in Brunsbüttel for the Hamburg plant or in the Burgas port for the Pirdop plant can now be predicted, to the day, two weeks in advance. This is a huge improvement for raw material, plant

capacity, and production planning. The program is being optimized further and expanded to include additional routes.

A CO₂ calculator will be available through the tracking software for road transport deliveries that is scheduled for implementation in 2021. The visibility of the CO₂ emissions of each trip creates the possibility of directly measuring and thus controlling CO₂ emissions, which should raise awareness for climate-friendly decisions.

EMPLOYEE MOBILITY

When it comes to commuting to and from work, mobility is unique for every employee and can contribute to personal satisfaction, health, and environmental protection.

External events influence their approach to mobility as well: for instance, there have been hardly any business trips during the coronavirus pandemic, and fewer employees have been commuting to the Aurubis plants due to working remotely.

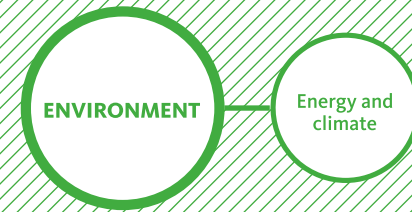
At the headquarters in Hamburg, we support alternatives to conventional individual transport with free, lockable bike boxes at two nearby train/subway stations to improve the connection between the plant premises and local public transport. During the reporting year, two StadtRAD (a bike rental/sharing system) stations started up near the plant premises with the same goal. Additional projects for sustainable mobility are in the planning stage.

Employees of Aurubis Belgium on their leased speed pedelecs



As part of its mobility plan, Aurubis Belgium provides the option of bike leasing, including e-bikes and speed pedelecs. Employees with speed pedelecs can complete the mandatory safety training in sessions organized by the site. At Aurubis Zutphen (Netherlands), employees can buy a bike from their gross salary, which makes the purchase less expensive and promotes biking to work.

Some Aurubis sites also carry out promotional campaigns to motivate employees to ride bikes. For example, a team of Stolberg employees took part in the German national Stadtradeln (city biking) campaign for three weeks in summer 2020. Aurubis Belgium offered bike-riding colleagues small prizes during a designated car-free day.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Investigating processes and electricity consumption in relation to the German government's Climate Action Plan 2050 and analyzing the requirements for new investments (starting fiscal year 2018/19)



In fiscal year 2019/20, we affirmed the Science-Based Targets initiative and committed to setting a science-based climate target to reduce our CO₂ emissions. In this context, the Sustainability Strategy target will be adjusted in the coming years.

Increasing flexibility in electricity sourcing (target of 10 % by fiscal year 2022/23)



Flexible electricity output amounted to 17 % in the reporting period.

KPIS

Natural gas and electricity are our main energy sources. The following table provides a detailed breakdown of our energy consumption.

The consumption figures have declined slightly due to planned maintenance shutdowns but are at the level of previous years. An increase is expected in the future due to the acquisition of the Beerse and Berango sites.

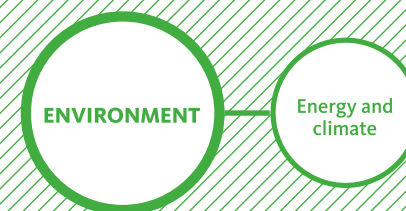
Aurubis reports the energy KPIs and CO₂ emissions for the production sites that are majority-owned (> 50%) by Aurubis, in this report excluding the Beerse and Berango sites. This reflects most of the energy consumption because the volume at the slitting centers and sales offices is negligible in comparison.

Energy

GRI 302-1 – 302-3

	Unit	2019	2018	2017	2016
Total energy consumption within the organization	million MWh	3.47	3.51	3.54	3.45
Total energy consumption from renewable energies	million MWh	0.15	0.17	0.14	0.03
Total primary energy consumption	million MWh	1.69	1.75	1.66	1.72
Total fuel consumption from non-renewable sources	million MWh	1.68	1.7	1.66	1.71
Natural gas	million MWh	1.17	1.21	1.15	1.2
Heating oil	million MWh	0.01	0.01	0.01	0.01
Liquefied petroleum gas (LPG)	million MWh	0.04	0.05	0.04	0.04
Diesel	million MWh	0.06	0.01	0.05	0.05
Fuel oil	million MWh	0.3	0.3	0.29	0.3
Coke	million MWh	0.08	0.09	0.09	0.08
Butane gas	million MWh	0.03	0.03	0.04	0.04
Total fuel consumption from renewable sources	million MWh	0.002	0.003	0.003	0.002
Wood and wood waste	million MWh	-	-	-	0.0003
Landfill gas (LFG)	million MWh	0.002	0.003	0.003	0.002
Total secondary energy consumption	million MWh	1.78	1.77	1.88	1.73
Total electricity consumption	million MWh	1.74	1.71	1.83	1.68
Total bought-in electricity	million MWh	1.72	1.69	1.79	1.65
from non-renewable sources	million MWh	1.59	1.56	1.66	1.62
from renewable sources	million MWh	0.13	0.13	0.13	0.03
Consumption of internally generated renewable energies	million MWh	0.02	0.02	0.04	0.03
Consumption of bought-in steam	million MWh	0.04	0.01	0.04	0.05
Energy intensity ¹	MWh/t	2.1	1.9	1.9	2.1

¹ Values based on copper production, i.e., at the Hamburg, Lünen, Pirdop, and Olen sites.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Introducing the ISO 50001 standard for energy management at all production sites



The Olen and Pori sites were certified in accordance with ISO 50001 for the first time during the reporting period.

[Certifications by site](#)

By the end of fiscal year 2019/20, a milestone plan was drafted for all production sites and a gap analysis was also carried out for most of them.

Implementing projects to enhance energy efficiency and reduce emissions, with a total project-related reduction of 100,000 t CO₂



A total of 87.9% of the target has been achieved, or 89.3% when including reductions made outside of the plant (particularly through the use of our industrial heat as district heating in the Hamburg HafenCity East district).

Reduction in energy consumption through individual projects

GRI 302-4

	Unit	2019
Reduction in energy consumption through individual projects	MWh	107,567
Use of waste heat from the sulfuric acid process, Hamburg (DE)	MWh	10,736
Efficiency enhancement in the KR System, Lünen (DE)	MWh	32,000
Installation of an efficient air compressor, Avellino (IT)	MWh	640
Use of more efficient burners and engines, Beerse (BE)	MWh	208

CO₂ emissions

GRI 305-1 – 305-4

	Unit	2019	2018	2017	2016
Scope 1 and 2 ¹	1,000 t	1,444	1,459	1,565	1,522
Scope 1 (emissions produced as a direct result of burning fuels in internal facilities)	1,000 t	503	522	517	508
Scope 2 (indirect emissions related to purchased energy, e.g., electricity) ²	1,000 t	941	936	1,048	1,014
Specific Scope 1 emissions ²	t/t of copper output ²	0.32	0.31	0.3	0.32
Specific Scope 2 emissions ²	t/t of copper output ²	0.65	0.59	0.66	0.70
Specific Scope 1 and Scope 2 emissions ²	t/t of copper output ²	0.97	0.90	0.97	1.02
Scope 3 (other indirect emissions) ³	1,000 t	1,917	2,081	1,901	1,642

¹ Aurubis reports its CO₂ emissions using the methods of the “European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MRR) – General guidance for installations.” Emissions from diesel vehicles in accordance with the emissions trading system are not included. However, they make up only a very small percentage compared to other sources. Scope 2 emissions are reported here according to the market-based method. For the CDP, we report Scope 2 emissions according to both the market-based and the location-based methods.

² Emissions from electricity for oxygen generation are not included.

³ Some Scope 3 emissions have been extrapolated. Scope 3 emissions were externally audited for the first time in 2019. Scope 3 emissions were reported using the methods of “The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)” and include all relevant Scope 3 emissions, some of which are estimates.

Reduction in CO₂ emissions through individual projects

GRI 305-5

	Unit	2019
Total	t	26,472
CO ₂ -free heat delivered to enercity, Hamburg HafenCity East (DE)	t	1,399
Increase in direct heat use from waste heat, Lünen (DE)	t	6,496
Internal use of heat from the sulfuric acid process, Hamburg (DE)	t	3,092
Optimization of compressed air production, Avellino (IT)	t	208

PEOPLE

Our success rests on our employees' performance. Protecting them from accidents and illness, supporting their individual skills, and creating an open, trusting work environment are important foundations for implementing our Group strategy. We think about the topic of sustainability beyond Aurubis. Our commitment doesn't end at the plant boundaries: we strive to be a responsible partner for employees, suppliers, customers, and neighbors at our sites.

Future-oriented employer

GRI 401/103,  SDG 5, 8, 10

MANAGEMENT APPROACH

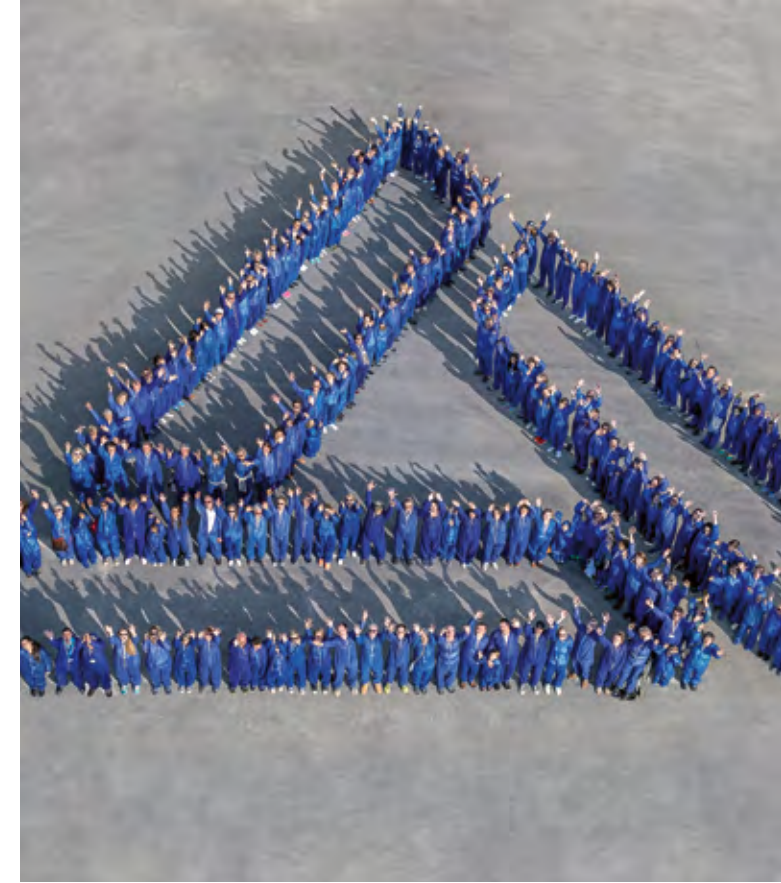
Competent, productive, and enthusiastic employees form the basis of the Aurubis Group's commercial success and further development. We have set the target of creating a work environment for good, close cooperation and promoting involvement and creativity.

We form a **team that works toward the company's progress** – even in challenging times.

All overarching activities related to our employees are managed at Group level by Human Resources (HR), the head of which reports directly to the CEO. HR is particularly involved with the HR strategy of the entire Group, as well as the implementation and monitoring of the resulting strategic HR instruments, especially those related to organizational and staff development, compensation and fringe benefits, employer branding, and supporting improvement and change processes. The work of the local HR departments is oriented first and foremost toward the local requirements. In the case of issues that apply Group-wide, the local departments work in close coordination with the central HR division.

Our HR strategy is derived from the Group strategy and is based on the corporate values. It is developed continuously, taking labor market changes, societal transitions, and trends in HR work into consideration. One focus is on the lack of qualified workers due to the demographic shift, as well as the search for young employees and apprentices, which is becoming more and more difficult.

One important factor is employer appeal, which we convey with targeted employer branding measures such as the relaunch of the career website and employer profiles in the relevant social media channels.



Current topics that are picking up momentum influenced HR strategy work during the reporting period, such as the progress in digitalization and trials with different ways of working that arose or sped up due to individual ad hoc solutions in the course of the coronavirus pandemic.

Furthermore, HR work during the reporting year also concentrated on the current Performance Improvement Program (PIP), which focuses on cost reduction. In the course of this program, we will cut approximately 210 full-time equivalent (FTE) positions in the Corporate Functions and the Hamburg plant by fiscal year 2022/23. The job cuts will follow socially responsible principles. For example, we will prevent as many redundancies as possible by not filling certain open positions, offering an improved early retirement scheme, and facilitating internal job changes. The employee representatives were and are involved in this process. Another focus was on structuring and supporting organizational changes such as the Metallo integration, the acquisition of the IT company azeti, and the closure of the CABLO site in Strass.¹

During the reporting year, relatively few employees at Aurubis had to reduce their work hours due to the economic impacts of the coronavirus pandemic, and no employees were laid off due to the pandemic.

¹ The site was closed due to economic reasons. Eleven salaried employees had to be made redundant as a result. No other sites were closed.

² The current Code of Conduct of the Beerse and Berango sites that were acquired in 2020 is fundamentally similar to Aurubis' Code of Conduct. The final harmonization with Aurubis' policies and commitments, including the Code of Conduct, will take place in fiscal year 2020/21.

DIVERSITY AND EQUAL OPPORTUNITY

GRI 405/103

Diversity in the personnel structure is important to us.

The Code of Conduct and our corporate values serve as the basis for respectful cooperation.² For us, a diverse workforce is conducive to company success thanks to the knowledge transfer, different viewpoints, and open collaboration that it fosters.

Employees from 46 different nationalities are currently working in Hamburg alone, and 57 nationalities worldwide. We consider diversity to include not only cultural aspects and international representation, but also diversity in terms of specialized skills and age groups, as well as a gender balance. Our objective is to prevent these and other aspects of diversity such as religious or political views, sexual orientation, or disabilities from playing a role in hiring decisions or in an individual's continued career. Consequently, compensation also depends on the job performed, the quality of the work, and the level of professional experience.



If we determine that there are any instances of discrimination, we employ labor law measures such as warnings or dismissal. Those who are affected can contact the Compliance Officer, HR, the works councils, or the anonymous whistleblower hotline. No instances of discrimination were reported during the period under review.

One of our goals is to increase the proportion of female managers – independently of legal stipulations, which we fulfill by defining concrete target parameters for the first and second management levels under the Executive Board. Specifically, this means 25% female members on the Executive Board, 20% in the first management level, and 25% in the second management level by mid-2022. More information about the diversity concept is available in the [Corporate Governance Report of the Annual Report 2019/20, page 18](#). We want to raise enthusiasm among female applicants for working at Aurubis accordingly. We position ourselves in our marketing at colleges and universities and specifically work together with schools. Nevertheless, the challenge remains: women generally tend to apply to Aurubis less frequently – possibly due to the industry – and the number of female applicants in fields relevant to us remains low.

We contribute to the integration of severely disabled individuals and promote their employment. The proportion of severely disabled individuals at Aurubis AG (the Hamburg and Lünen sites) is 6.1% and thus exceeds the legal quota of 5%. The works councils of these sites have representatives for employees with severe disabilities who are available for questions related to severe disability or equal opportunity.

To cover peaks in order volumes, temp workers are brought on at the German sites in Hamburg and Lünen, for instance. We work together with a recognized temp agency for this purpose. Using a vendor management system for temp work, we ensure that temp workers are treated in accordance with the law and that they are compensated pursuant to the collective industry agreement regarding extra pay for temp work.

WORK-LIFE BALANCE AND WORKPLACE FLEXIBILITY

We offer our employees an attractive work environment and support them by offering options allowing them to establish a good work-life balance. In this regard, making working-time models more flexible and modern is of high importance. In connection with the coronavirus crisis, for instance, the start and end times of shifts were made more flexible and options for remote work were further expanded. The experience gained in the process will be used in the further development of a modern work organization.

Even though the legal and social parameters and the job requirements at the international Aurubis sites are very different in some cases, we address our employees' individual needs wherever possible. For example, in Germany we have a flex-time model in place for administrative employees. With the long-term working hours account, the employees in Germany have the option of individually using accumulated time, for instance in periods where they have to care for family members. We also take legal rights such as educational leave or temporary part-time arrangements into account and train our supervisors accordingly.

To improve the balance of work and family and to reduce the multiple burdens that young parents have during their training, we offer our apprentices with children part-time apprenticeships or enable additional childcare leave with a corresponding extension of the apprenticeship period. We also provide e-learning modules that can be completed at work or at home. These efforts are recognized outside of the company as well: for example, our Lünen site was recertified as a family-friendly company.

COMPENSATION AND BENEFITS

GRI 102-41, 401-2

Competitive salaries independent of gender, which are oriented to performance and qualifications, and comprehensive social services enhance our attractiveness as an employer and boost employee motivation. A collective agreement related to working life and demographic change applies to Aurubis AG. Furthermore, the wage contracts and company agreements in place at all of our sites ensure minimum standards. All salaried employees at Aurubis are paid in accordance with a wage agreement. Over 90% of employees across the Group fall under collective agreements.

In addition to the base salary, we offer performance-related components and additional company benefits. Performance- and success-oriented compensation is a central element of the remuneration system. The performance of the individual is always viewed in connection with that of the team, the department, or the production area.

All Aurubis employees are informed about the compensation model that applies to them. At the German sites, for example, there are posters, intranet articles, and Works Council events related to the collective wage agreements. The information about the relevant performance-related compensation is given to every employee with his or her employment contract.

All employees in Hamburg and Lünen have additional disability insurance, and all employees with an unlimited contract have a company pension. The options of a pension plan through the German Chemical Industry Pension Fund and a long-term working hours account are becoming increasingly popular. More than 80% of eligible employees under the wage agreement take advantage of the pension allowance offered. The long-term working hours account agreed on with the employee representatives has been introduced at all of the larger German sites. Extensive legal regulations apply when it comes to social safeguards, because our sites are mainly located in Europe. At our only production site outside of Europe, Aurubis Buffalo (US), where social security isn't comprehensively regulated by law, we assume 86% of the employees' health insurance contributions.

Once again, we gave employees in Germany, i.e., just over 50% of the total Aurubis staff, the opportunity to purchase Aurubis shares at a discount in fiscal year 2019/20. About 25% of the total staff took part in the share program. The number of participants rose slightly compared to the previous year. The employee share program was reinitiated at the start of fiscal year 2020/21 as well.

EMPLOYEE PARTICIPATION AND COMPANY CO-DETERMINATION

GRI 407/103

Compliance with the internationally recognized core labor standards of the International Labour Organization (ILO) is of fundamental importance. Our Code of Conduct and the PRIMA¹ company values are the basis for working together at Aurubis and provide guidance for cooperation and responsible behavior.

We are committed to the principle of co-determination in the company and place a high priority on good communication between our employees and the company management. Close, constructive cooperation with the unions active in the company and the elected Works Council members is thus an established principle for us. Our employees are informed regularly and promptly about current developments – during the coronavirus pandemic when contact restrictions were in place, the Works Council held multiple virtual information events at the Hamburg site, for instance.

¹ PRIMA stands for Performance, Responsibility, Integrity, Mutability, and Appreciation.

On the corporate level, the Executive Board and the Supervisory Board, which includes employer and employee representatives, work closely together as the highest governing bodies. On the plant level, the interests of the employees are represented by works councils/unions according to country-specific regulations. An elected European Works Council has been in place at Aurubis since 2009 and represents all of the European sites. In the United States, working conditions are subject to state and national labor laws. Because of the close cooperation between our site in Buffalo and the union active there (United Steelworkers), an exclusively negotiated collective agreement specifies the working conditions.

The chairman of the Hamburg Works Council at a virtual information event



KPIS

Aurubis reports the employee KPIs for all consolidated sites (as at the reporting date of September 30, 2020), excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake.

Employee development¹ GRI 102-7, 102-8, 401-1, 405-1

	Unit	2019/20	2018/19	2017/18
Total employees	Number	7,236	6,831	6,650
Female	%	13	12	12
Male	%	87	88	88
Blue collar	Number	4,356	4,214	4,130
Female	%	3	4	4
Male	%	97	96	96
White collar	Number	2,561	2,328	2,233
Female	%	29	28	28
Male	%	71	72	72
Apprentices (including Pirdop, BG)	Number	319	289	287
Female	%	12	13	10
Male	%	88	87	90
Temporary workers ¹	Number	147	223	214
New employee hires (including apprentices)	Number	547	792	540
Turnover rate (excluding apprentices)	%	7.4	7.8	6.6
Average length of employment in the company	Years	14.1	14.3	14.8

Prior-year figures have been adjusted.

¹ Personnel that are legally employed by an external service provider, regularly work for Aurubis, and have been approved in the course of internal personnel and resource planning. External consultants and service providers are not included.

Proportion of female managers GRI 405-1

	Unit	2019/20	2018/19	2017/18
On the Supervisory Board	%	33	33	33
On the Executive Board	%	0	0	0
First management level	%	20	24	12
Second management level	%	21	19	20



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Developing a diversity policy

In the course of updating the Sustainability Strategy, this target is being revised.

Improving the “health” (OHI)¹ of the organization with strategically aligned HR instruments and services, as well as individual development tools

During the process to update the Sustainability Strategy, which is still underway, a decision was made to discontinue this aspect as a separate target. The related development instruments and measures are now in the targets of the “Training and education” action area.



¹ The OHI indicates the “health” of a company, e.g., how well it is equipped to react to changes in the market and thus to achieve economic success sustainably. Key influencing variables include leadership skills, innovation, and willingness to learn, as well as company culture and climate.

Age structure in the Aurubis Group^{1,2} GRI 405-1

	Unit	2019/20	2018/19	2017/18
<20	Number	11	15	14
20 – 29	Number	990	997	981
30 – 39	Number	1,806	1,642	1,509
40 – 49	Number	1,583	1,467	1,445
50 – 59	Number	1,912	1,824	1,814
60 – 69	Number	602	584	584
>69	Number	13	13	16

¹ Prior-year figures have been adjusted.

² Excluding apprentices.

Temporary and permanent contracts^{1,2} GRI 102-8

	Unit	2019/20		2018/19		2017/18	
		Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Total employees	Number	6,706	211	6,287	255	6,136	227
Female	Number	830	44	758	45	720	53
Male	Number	5,876	167	5,529	210	5,416	174
Employees in Germany	Number	3,462	128	3,502	142	3,396	116
Employees in Europe (excluding Germany)	Number	2,704	49	2,197	72	2,129	75
Employees in the US	Number	540	34	588	41	611	36

¹ Prior-year figures have been adjusted.

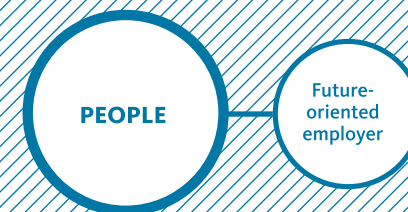
² Excluding apprentices.

Full-time and part-time employees in the Aurubis Group^{1,2} GRI 102-8

	Unit	2019/20		2018/19		2017/18	
		Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Total employees	Number	6,545	372	6,279	263	6,139	224
Proportion of total employees	%	95	5	96	4	96	4
Female	Number	716	158	666	137	647	126
Proportion of female employees	%	82	18	83	17	84	16
Male	Number	5,829	214	5,613	126	5,492	98
Proportion of male employees	%	96	4	98	2	98	2

¹ Prior-year figures have been adjusted.

² Excluding apprentices.




TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Regularly identifying and continuously developing working time arrangements, taking employee interests into consideration



A number of solutions were expanded significantly in both individual and collective agreements. In connection with the coronavirus crisis, for instance, the start and end times for shift employees were made more flexible and the remote work option was increased considerably. The flextime program is reviewed and developed continuously.

Training and education

GRI 404/103,  SDG 8

MANAGEMENT APPROACH

In order to achieve our company vision and advance our strategy, we rely on a learning organization. The ongoing individual development of our employees and sound training for young talents have high priority in this regard.

HR is responsible for staff development. It supports the other departments, in close coordination with the local HR managers, in building employees' skills in a directed way tailored to their needs. The objective is to meet current and future requirements and challenges.

To secure qualified personnel in the long term, we regularly assess demand for specific skills and trades, and offer apprenticeships accordingly. We also identify the demand for employee qualifications and successors for different positions in annual performance appraisals and in the yearly personnel planning process in order to develop and expand specialized skills and management expertise in a purposeful way.

EMPLOYEE QUALIFICATION MEASURES

GRI 404-2

We are continuing and expanding the training offerings in our leadership and qualification program according to the Group's needs.

To optimally support the development of future and current supervisory staff, different programs are in place for supervisors to gain qualifications. Potential candidates are taking part in the

management development program EXPLORE! Two Development Center measures were carried out to fill the spots in the program. With the Group-wide introduction of the qualification matrix, qualification measures for specialist employees were systemized further.

In particular, options for managers at the foreman level remain a top priority. Employees are offered a number of technical training measures as well as options for personal development. The program Management in the Production Environment, for example, is specifically geared toward challenges in that particular area.

We frequently evaluate the different qualification options and adjust them as needed. Since the last reporting year, we have successfully carried out our one- to two-hour micro-learning units called Learning Nuggets, in which participants learn and test new skills. The short Aurubis Essentials seminars educate interested colleagues about interdisciplinary topics, promoting a uniform, company-wide understanding of these issues.

Our goal is to continue fostering **digital and self-guided learning** as well as innovative learning methods within the Group.

Thanks to digital training formats, many Aurubis Essentials and Learning Nuggets took place online during the coronavirus pandemic. The insights from using the digital learning formats are valuable for the ongoing development of our learning organization.

With the Learning Academy, the learning content and options available to employees in Hamburg and Lünen have been significantly expanded and made more digital. Since mid-2020, the Learning Academy presented on the intranet has been home to all of the learning formats, whether online or live, internal or external, including courses on specialized, personal, and management skills, extending to educational films and presentations for independent study and digital learning. This platform also provides information about specialist or management careers at Aurubis. At the time this report is being published, a roll-out of the Learning Academy concept to other sites is under discussion. Employees across the Group have already taken advantage of individual training offers from the Learning Academy.

Aurubis apprentices at the Hamburg plant's Innovation and Training Center



In addition to qualification and development programs geared to necessary skills, for example in the areas of the Aurubis Operating System (AOS) and in project management, we also rely on platforms for networking and discussing best practices (e.g., expert panels and online learning groups).

In the focus area of project management, a Group-wide project management standard was established during the reporting year, and a learning path tailored to this standard was introduced, extending from basic training to certification as Group Process Manager. The objective is to promote shared standards and to enable project managers to discuss their experiences.

Our offers within the scope of the Leadership and Qualification Program also contribute to our employees' general employability. Depending on an employee's individual situation, the responsible supervisors and HR contacts provide consultation. Furthermore, for Aurubis AG employees who are in situations of transition – changing departments, retiring, or leaving the company, for example – supervisors can request a guided knowledge transfer from the Training and Education department or can acquire the skills necessary to carry out this process themselves.

PERFORMANCE REVIEW

GRI 404-3

Regular, open feedback and a qualified performance review are key elements in the ongoing development of our staff. Direct supervisors and the local HR departments at the sites are responsible for employees' supervision, performance reviews, and development planning. Their on-site HR work is oriented toward the standards of the central HR division.

Every Aurubis Group employee has an annual performance appraisal with his or her manager. Apart from a review and a performance assessment, the talk helps the participants identify

development needs, provide feedback, and coordinate targets. We take the results of the performance appraisals into consideration in our annual personnel development planning and the corresponding budgets. During the reporting year, we held talks with all of our production and office employees, which were documented by the supervisors.

Our new performance management process was introduced in late 2019. It applies Group-wide and emphasizes the recognition of good performance and ongoing communication between supervisors and their employees. For executives and other employees not covered by collective wage agreements, so-called calibration meetings take place after the annual performance appraisals between their supervisors, a reference group, and the HR contact person. These meetings help supervisors, through dialogue, to align their expectations on their employees, promote a common performance standard, and evaluate employees' performance and potential more objectively. The calibration meetings also contribute to leadership development and support, linking performance management and the achievement of company goals more systematically.

VOCATIONAL TRAINING

GRI 203/103, 203-2

Aurubis Hamburg received the distinction
“Outstanding Training Company 2019”
 from the Hamburg Chamber of Commerce.



Aurubis is one of the largest vocational training companies in the chemical industry in Germany. We are proud of our vocational training and retention rate, which makes an important contribution to securing a qualified workforce. At our site in Pirdop, Bulgaria, we implemented a vocational training program based on the Swiss training model a few years ago. At our Hamburg site, we offer apprentices of partner companies basic vocational education courses, for instance in chemistry and metals.

Aurubis Hamburg has been participating in the internship model AV 10-Plus since 2007. This model supports young people from a range of occupational groups, helping them to gain the qualifications required to begin apprenticeships. In 2019/20, seven of the ten participants took on an apprenticeship at Aurubis. The remaining participants started external apprenticeships or have gone on to pursue higher education.

In 2019, we inaugurated two modern vocational training centers in Lünen and Hamburg. In Lünen, the ATASI building is home to the divisions Vocational Training (including the training workshop), Occupational Safety, and Technology. In Hamburg, the Training and Research & Development (R&D) divisions are located in the Innovation and Training Center (IAZ). The new buildings lay the foundation for increasing the number of apprenticeships.

The coronavirus pandemic posed a significant challenge for vocational training during the reporting year. With digital learning supports and communication formats, vocational training continued almost seamlessly while taking the necessary precautions into account. The experience from working digitally will be taken into consideration in vocational training work in the future. Aurubis maintains its plans to increase the company's number of apprentices. More young people started an apprenticeship than in previous years.

Aurubis takes part in educational marketing at fairs and school events. To better address potential applicants, the vocational

training website was revamped and new video clips about apprenticeship trades were produced during the reporting year. Talented master's students in non-ferrous metallurgy at the RWTH Aachen receive funding with the Aurubis Prize, inaugurated in 2005, and other scholarships; this gives them the opportunity to come into contact with our future specialists at the same time.

In addition, the application process for apprenticeships in Hamburg and Lünen was simplified to remove possible hurdles for potential applicants.

The Training department in Hamburg also actively supports the cooperation programs MUT Academy and JOBLINGE Hanse with offers related to professional orientation, MINT workshops (MINT stands for mathematics, informatics, natural sciences, and technology), and applicant training for young people from difficult circumstances and promotes apprenticeships.

Aurubis apprentice René Dorawa received the 2019 award for the nation's best port logistics apprentice from the German Chamber of Industry and Commerce (DIHK).



The award winners on stage. René Dorawa 2nd from right (photo: DIHK /Jens Schicke)

More information about apprenticeships is available on our [Apprenticeship website](#)

SUSTAINABILITY WEEK

It is important to us for sustainability to be a fixed component of vocational training and that even apprentices develop an understanding and contribute to implementing the agreed measures and targets of the Aurubis Sustainability Strategy.

As a result, since 2015, there has been a separate Sustainability Week for apprentices in their first year of training. As part of the Sustainability Week in early March 2020, about 20 participants from Hamburg, Lünen, and Stolberg addressed the topic of recycling and resource conservation through group work, an excursion, and a closing presentation.

In addition to the apprentices, many internal experts from different departments were involved in this sustainability event, discussing the topic with the young participants.



CEO Roland Harings visited the apprentices during the Sustainability Week

More information about Aurubis as an employer and vocational training company is available on our website. aurubis.com/en/career/overview

PEOPLE

Training
and
education

TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Securing current and forward-looking staff qualifications



In the reporting year, the gradual rollout of the skills matrix started in all of the plants to systematically record qualification needs, and qualification planning for technical and specialized training began accordingly. Moreover, the establishment of Group-wide project management standards was initiated, with the introduction of a learning path to provide project managers with the appropriate qualifications. Our Group Process Managers were certified in accordance with these standards; additional employees in the company will be introduced to the standards as well.

Group-wide introduction of the AOS pillar Training & Education



The AOS pillar was integrated into the AOS Operations area. At the Hamburg plant, employees were qualified as AOS experts in a modular training program. The planning for equivalent AOS expert qualifications at the other plants is underway and this will be carried out as needed.

KPIS

Aurubis reports training and education KPIs for all consolidated sites (as at the reporting date of September 30, 2020), excluding Aurubis Product Sales GmbH and Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50 % stake.

Training and education

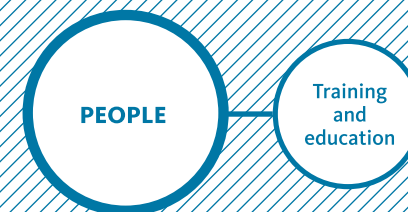
GRI 404-1

	Unit	2019/20	2018/19	2017/18
Apprenticeship rate (German sites)	%	7.7	7.3	6.3
Apprentice retention rate (German sites)	%	71.2	78.4	80
Average number of training hours per employee ^{1,2} :				
Aurubis Group	Number	12	15.2	11.5
Blue collar	Number	10.2	13.6	9.7
White collar	Number	15.2	18.3	15.1
Percentage of employees receiving training:				
Aurubis Group	%	67	76	– ³
Blue collar	%	66	73	– ³
White collar	%	69	79	– ³

¹ The number of training hours is lower compared to the previous year due to the global coronavirus pandemic.

² For FY 2019/20, the numbers were estimated for the Buffalo site. The Beerse and Berango sites were included for the entire FY 2019/20.

³ We did not record this KPI in FY 2017/18.




TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Establishing Group-wide knowledge management to identify, preserve, transfer, and enhance knowledge across functions



The knowledge transfer pilot phase was successfully concluded. Due to the participants' positive experience, knowledge transfer was established as a knowledge management method as part of succession planning at Aurubis AG. The knowledge transfer process is enshrined in the company's succession arrangements. A review is currently taking place to determine whether there is a need for knowledge transfer Group-wide.

Health and safety

GRI 403/103,  SDG 8

“No ton of metal is worth someone taking a risk and leaving our plants injured.” Roland Harings, Aurubis CEO

MANAGEMENT APPROACH

GRI 403-1, 403-4, 403-6, 403-9

As a responsible company, it is a matter of course for Aurubis to take measures to maintain the health and performance of people on the premises and to protect them from accidents and illness. We don't distinguish between our own employees, contractors, or visitors in this respect. Compliance with all local legal requirements is the basis of our activities. Our internal standards frequently extend beyond these requirements. A safe environment at all of our sites, which have very different areas of work in some cases – whether in multimetal production, logistics, or administrative management – has the highest priority for us.

Occupational Health and Safety (OHS or H&S) in the Group creates the overall conditions to prevent work-related accidents and illness. In the long term, we want to achieve our Vision Zero, that is, to reduce work-related accidents, injuries, and illnesses to zero. Our goal for the medium term is to reduce the number of work-related accidents with at least one lost shift per one million hours worked (lost time injury frequency rate, LTIFR) to ≤ 1.0 .

Group Health & Safety manages OHS and establishes minimum occupational safety standards for the entire Group by issuing process instructions in addition to the Corporate Policy on Occupational Health and Safety. Group Health & Safety is part of the corporate department Continuous Improvement | H&S, the head of which reports directly to the Chief Operations Officer.¹ Our occupational safety approach applies to our employees, temporary workers, and contractors. Occupational safety management at the sites is currently being developed to conform to the requirements of ISO 45001. Six sites (Avellino, Berango, Dolný Kubín, Pirdop, Pori, and Mortara) are already certified in accordance with ISO 45001, while Schwermetall Halbzeugwerk is certified in accordance with OHSAS BS 18001. All Aurubis production sites should be certified in accordance with ISO 45001 by June 2021.²

Our occupational safety experts, company doctors, and medical personnel are qualified specialists with experience in occupational health and safety.

The site managers play a key role because they are responsible for complying with applicable laws and ordinances on occupational health and safety, the relevant corporate policy, and the current process instructions. Furthermore, they record and evaluate health risks and help implement suitable measures to protect employees. The sites are in contact with each other via an organized network facilitated by Group Health & Safety so that existing knowledge can be used Group-wide. Moreover, employee representatives are included in the topic of OHS: through the reporting line to the

Executive Board, Group Health & Safety also reports to the general Works Council committee and the European Works Council during committee meetings.

The occupational health and safety performance is regularly discussed with the employees or their representatives in management meetings and safety steering committees at site and Group level, and strategies for continuous improvement of our OHS achievements are jointly developed.



In the Respiratory Protection Workshop, the safety equipment is cleaned and prepared for reuse

¹ This organizational change went into effect on January 1, 2021.

² With the exception of the newly added Beerse site (certification scheduled to take place by March 2022).

At the start of the coronavirus pandemic, a crisis team was established at Group and site level that met online regularly, together with the entire Executive Board. In this way, specific emergency plans and measures were quickly established to prioritize protecting employees' health while keeping operations up and running. These measures have been steadily adjusted to the ongoing circumstances of the pandemic.

RISK ASSESSMENT

GRI 403-2, 403-7, 403-9, 403-10

Our risk assessments extend to both current and future work processes in the company, including maintenance and repair procedures in addition to operations. The risk assessments cover hazards in normal operations, special work assignments, and abnormal incidents. Health hazards and individual requirements in the work area are systematically collected, evaluated, and documented.

The risk assessments are carried out at all sites, taking the type, extent, and probability or duration of the effect into account. The following is recorded and evaluated:

- » Legal standards and supplementary Aurubis standards
- » Hazards in normal operations, special work assignments, and abnormal incidents
- » Substances in the work area, their concentrations, and their effects on health
- » Physical impacts
- » Biological impacts
- » Physical and psychological strain in the work area
- » Strain from the surrounding area and from personal protective equipment

For this purpose, OHS management software is being used more and more at the sites; among other things, the software enables experiences to be shared internally. In this way, we record potential health risks for each work area and derive measures from these insights. The effectiveness of these steps is reviewed in routine workplace measurements, among other things.

PREVENTION AND EDUCATION

GRI 403-3, 403-4

Implementing occupational safety has many facets: for example, prescribed procedures, work instructions, and operating guidelines ensure that processes are as safe as possible and that employees remain safe when working in hazardous areas. Then there are the technical precautions, such as safeguards on equipment, as well as organizational measures and special personal protective equipment. Equipment, work materials, and personal protective equipment are regularly inspected to make sure that they are working properly.

In addition to these precautions, the occupational safety conduct of every individual is essential.

A preventive measure to avoid accidents, the Group-wide OHS campaign 10 Golden Rules (10forZero) was initiated with the objective of positively influencing occupational safety conduct. In addition, the sites in Hamburg, Lünen, Avellino, Emmerich, Pori, and Stolberg have a program for behavior-based safety (BBS). Legal compliance audits were also introduced to achieve internal improvements. Furthermore, the Health & Safety pillar was integrated into the AOS and will be implemented at the Hamburg, Lünen, Emmerich, Avellino, Pirdop, and Olen sites. The roll-out in Beerse and Berango will start in fiscal year 2021/22. This will support the continued structuring and standardization of Group-wide occupational safety processes, a measure that contributes to our Vision Zero.

Employees are informed about risks in the workplace and are instructed about necessary preventive and protective measures, enhancing their awareness. Safety talks sensitize employees to current OHS issues and encourage them to use this knowledge safely in practice. Safety briefings take place at appropriate intervals, but at least once a year. The type and content of this instruction draws on the legal regulations, risk assessments, and operating guidelines. Handling hazardous substances safely is also part of the safety briefings.

Contractors are instructed about hazards, protective measures, rules of conduct, and conduct in case of emergency at the specific site before they start working. In addition, we offer contractors the option of taking part in biomonitoring. As required, we provide them with our industry-specific personal protective equipment (PPE), for instance respiratory devices or fall protection.

Recurring emergency and evacuation drills are carried out at the sites. We include our neighbors in the emergency drills and evacuation plans if they could potentially be affected.

HANDLING ACCIDENTS

GRI 403-2, 403-9

Our internal reporting requires all sites to report accidents involving Aurubis employees or third parties to the Executive Board and Group headquarters immediately or within 24 hours, depending on the severity of the incident. The accident investigations have to be sent to Group headquarters within seven days. There is a monthly process for reporting accidents and incidents to the entire Executive Board, and every accident is immediately reported to the Chief Operations Officer.

Accidents are systematically investigated to determine their technical, organizational, and conduct-based causes. The causes determined from accident investigations and the measures derived

from them are communicated throughout the Group. They are outlined in “Lessons Learned” descriptions.

In addition to accidents with lost time (LTI), medical treatments, first aid services, and near-misses are centrally recorded and analyzed for all sites. This applies to the company’s own employees as well as to temp workers and contractors working on our premises.

Because of our preventive measures, the accidents typical of the smelting industry such as those involving molten metals, hazardous substances, and heavy loads are rare. Comparable to other industries, the main causes of injuries are stumbling, slipping, and falling.

In fiscal year 2019/20, the number of accidents decreased compared to the two previous years. The roll-out of the communication campaign for the 10 Golden Rules (10forZero), audits, Cross-Site Checks, and the AOS Health & Safety pillar, as well as the preparations to introduce ISO 45001 have, in total, contributed to an improvement in the OHS performance. With the 10 Golden Rules, we have once again reinforced individual conduct that reflects occupational health and safety awareness, from employees to management.

Another goal is to reduce accidents among contractors, an issue for which we prescribe Group-wide and site-specific targets for fiscal year 2020/21.

WORKPLACE HEALTH

GRI 403-6, 403-10

Internal company doctors are available at the Hamburg, Lünen, and Pirdop sites. At all of the other sites, freelance occupational physicians are commissioned with carrying out obligatory and

optional checkups. Health checkups and routine occupational health checkups are provided to the employees.

All health data is subject to medical confidentiality and is only accessible to medical personnel. Data can only be transferred with the employee’s written consent.

In addition, we support preventive measures to maintain employees’ health.

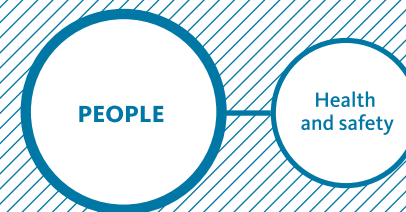
The offerings of the plant medical offices extend from flu vaccinations and medical checkups to addiction prevention, as well as supporting measures for the heart and circulatory system. There are a number of activities to promote health – for example, with respect to topics like integration management for employees who have been ill, and healthy leadership. A task force is currently recording these activities for the Hamburg headquarters and transferring them to a systematic, integrated concept for company health management.

In fiscal year 2019/20, a total of 13 reports were submitted regarding suspicion of an occupational disease. These involved diseases related to the respiratory system, allergies, the handling of hazardous substances, and the musculoskeletal system.

PROTECTION FROM HAZARDOUS SUBSTANCES

GRI 403-10

Our production processes involve materials that can influence health. Scientific insights lead to the ongoing development of legal regulations and limits. For us, protecting the employees who come into contact with these substances is a key component of our OHS management.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Developing the Group-wide occupational health and safety management system

The adoption of ISO 45001 at all production sites and slitting centers should be concluded in fiscal year 2020/21, with the exception of the newly added Beerse site (certification scheduled to take place by March 2022). The following sites are already certified: Avellino, Pirdop, Pori, Dolný Kubín, Mortara, and Berango.

[Certifications by site](#)

Introducing legal compliance audits to ensure conformity with the law.

Implementing the AOS Health & Safety pillar for the Hamburg, Lünen, Emmerich, Avellino, Pirdop, and Olen sites to structure and standardize occupational health and safety processes across the Group.



Complete personal protective equipment is required to work safely

As a member of the ILA (International Lead Association), we entered into a voluntary commitment to ensure that none of our employees have a lead level of more than 200 µg/l in their blood. We regularly analyze the lead levels in the relevant employees' blood.

A medical study from the International Copper Association (ICA) in our Hamburg plant investigated employee health and the existing copper dust load. The results showed that the exposure at our plant doesn't pose a negative health impact. Copper metal is generally harmless when it comes to safety risks for the environment and people. Accordingly, this is also true of our high-purity copper products and their processing if the processes of hot and cold forming are carried out correctly.

PEOPLE

Health
and safety

TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Implementing programs to promote occupational safety conduct

Continued roll-out of the communication campaign on the Group-wide 10 Golden Rules, which has taken place at 11 sites thus far. Conclusion of the campaign for all 10 rules is expected at the end of fiscal year 2020/21. The inclusion of the newly acquired Beerse and Berango sites has been scheduled, and the continuation of the campaign is in the planning phase.

Continuation of the behavior-based safety (BBS) programs at the Hamburg, Lünen, Avellino, Emmerich, Pori, and Stolberg sites. Future expansion of BBS to the entire Group.

KPIs

Aurubis reports occupational safety KPIs for all consolidated sites with ten or more employees, excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake. The number of work-related accidents with at least one lost shift per one million hours worked is abbreviated as LTIFR (lost time injury frequency rate).

Occupational safety

GRI 403-9

	2019/20	2018/19	2017/18	2016/17	2015/16
Work-related accidents involving Aurubis employees					
Absolute number of accidents	51 ¹	61 ²	60	47	45
LTIFR	5.4 ¹	6.0 ²	5.9 ²	4.8	4.6
Severity rate ¹	0.35	0.32	0.3	0.24	0.27
Number of work-related fatalities	0	0	0	0	0
Work-related accidents involving temporary workers					
Absolute number of accidents	10	16	– ³	– ³	– ³
LTIFR	36.2	39.4	– ³	– ³	– ³
Number of work-related fatalities	0	0	0	0	0
Work-related accidents involving external companies					
Absolute number of accidents	21	22	– ³	– ³	– ³
LTIFR	5.8	5.9	– ³	– ³	– ³
Number of work-related fatalities	0	0	0	1	0

¹ Absolute number of accidents including the Beerse and Berango sites starting June 1, 2020. LTIFR and severity rate: Beerse and Berango sites included for the entire fiscal year so that KPIs can be compared.


² Prior-year figures adjusted.

³ The KPI recording system was expanded at the start of FY 2018/19, but accidents had already been recorded and investigated prior to this.

PEOPLE

Health
and safety

TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Promoting employee health and well-being at work 

There are a number of offers to maintain and promote health.

The existing activities for company health management for the Hamburg headquarters are currently being transferred to a systematic, integrated concept.

To raise awareness among our supervisors for health-conscious conduct, we will offer training on “healthy management” in the future.

Social engagement

SDG 3, 4, 6, 10, 12, 15, 17

Social engagement is a fixed component of our company identity. We want to promote enthusiasm for our company and for our work and be a responsible, committed partner. It is important to us to fulfill the demands that society places on us – and to make a contribution to society that extends beyond the minimum requirements.

MANAGEMENT APPROACH

Social engagement is one action area of our Sustainability Strategy. We have set the target of contributing to a livable world for current and future generations, focusing on areas of action that are linked with Aurubis' key areas of expertise and following our sponsoring principles and the social engagement strategy "together we care" adopted in 2018/19.



SPONSORING PRINCIPLES

- » **We assume social responsibility:**
Social engagement is part of our company identity.
- » **We are a reliable and trustworthy partner:**
When we agree to provide support, we fulfill our commitments. We are transparent about what type of social engagement we pursue, and we ensure that the support we provide is visible.
- » **We want to raise interest in our company and our work, attracting qualified employees:**
We don't see it as a given that our employees would necessarily support our company. Dedicated employees will only work for us if they accept our actions and our values. This will only become more important in light of demographic change.
- » **We want to be a good neighbor at our sites:**
As a company with large industrial facilities, we are a conspicuous neighbor. It is therefore important to us that the people living in our neighborhood know what happens on our plant premises, that we are interested in their well-being, and that we will advocate for them.



Students in the schoolyard of the sponsored school Liceo Jean Buchanan in the O'Higgins Region in Chile

SELECTED PROJECTS

GRI 203/103, 203-1

Projects and partners are selected according to established criteria outlined in our policy on social engagement, which also defines responsibilities in the Group. The Event Management & Social Engagement division is responsible for our social engagement and reports to the head of Investor Relations, Corporate Communications & Sustainability. Due to this department's direct reporting line to the Executive Board chairman, the chairman is included in our social activities and related budget decisions. A committee made up of appointed members from Event Management & Social Engagement, Communications, Sustainability, and Corporate Compliance makes decisions about project support that exceeds a certain level set internally.

Apart from projects at Group level, our sites also get involved at the local level using their own budgets. Our policy applies to these projects as well, which, in addition to the three Group-wide focuses, also concentrate on culture, sports, or our core business.

€ 1.57 million

for social engagement in fiscal year 2019/20

Our social engagement is often linked to donations or sponsoring projects. Donations refer to supplies, monetary contributions, or services for which we don't expect anything in return. In the case of sponsoring projects, we present ourselves to the public as a project partner.

To determine the need for our involvement, we talk with our neighbors, our international partners (e.g., chambers of commerce, local and international NGOs), and political representatives. When it comes to project requests related to education, we discuss them with our HR and Training departments. Together, we are in contact with schools, universities, and other educational institutions.

For current projects, we inquire about what our funding is used for and in what amounts, as well as what objectives have been achieved. In addition, our project partners regularly inform us about their current measures and plans. Wherever possible, we participate in activities together with the projects we support.

FOCUS AREAS OF "TOGETHER WE CARE"

With the social engagement strategy "together we care," we are focusing our involvement on the areas of knowledge, the environment, and participation, in line with our company strategy.



Knowledge

We want to help people optimally use their potential – by promoting education, science, and teaching; by providing special offers for young people; and by imparting values.



Environment

As an industrial company, we have to handle resources with care and keep our environmental impacts to a minimum. Resource efficiency and environmental protection are therefore topics we take very seriously. We promote projects related to the aspects of the circular economy, energy efficiency, and nature conservation in particular.



Participation

We are active in many countries and regions, and we employ people from a variety of backgrounds. As a result, we know that the conditions for social participation aren't the same everywhere. We want to reduce this imbalance, for instance by supporting socially disadvantaged people and regions.

The coronavirus crisis posed significant challenges for our project partners. One of our particular concerns was providing quick, pragmatic, and customized emergency assistance to support our existing projects and thus continue to be a good partner even in times of crisis. Aurubis apprentices from Hamburg also took part in some of the campaigns in order to provide concrete, on-site help to those suffering from the coronavirus pandemic.

You can read more about these and other sponsored projects, as well as our support during the coronavirus crisis, on our website.

www.aurubis.com/en/togetherwecare

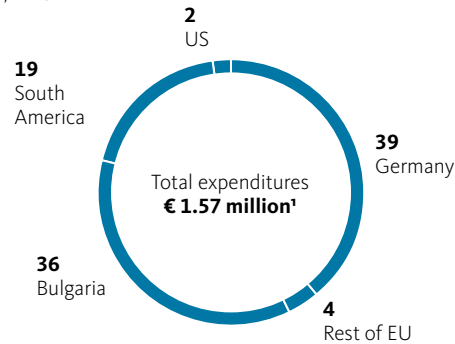
www.aurubis.com/en/corona



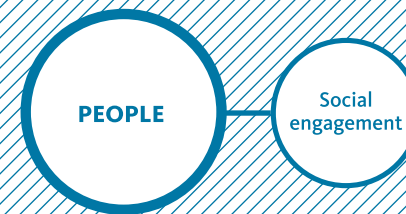
In 2019, Aurubis Bulgaria was one of the main partners of Sofia's Science Festival, the largest science event in Bulgaria

Total expenditures for social engagement and regional distribution GRI 203-1, 413-1

FY 2019/20, in %



¹ The total expenditures mainly comprise sponsoring amounts and donations combined. The total includes the Beerse and Berango sites for the entire FY 2019/20 as well as Schwermetall Halbzeugwerk GmbH & Co. KG.



TARGETS OF THE SUSTAINABILITY STRATEGY 2018 – 2023

Developing and implementing the “together we care” strategy for social engagement at Group level (by fiscal year 2018/19)



We established the “together we care” strategy for social engagement at Group level.

Setting up Group-wide monitoring of projects supported in the different regions (by fiscal year 2022/23)



The policy on social engagement calls for an evaluation of the projects, and data for individual projects is already available. A pilot project focused on monitoring has started in Chile. There are plans to continue developing these methods and to expand the related reporting in the future.

About this report

GRI 102-45, 102-46, 102-49, 102-50, 102-51, 102-52, 102-54, 102-56

CONTENT OF THE REPORT

This document is Aurubis AG's seventh Aurubis Sustainability Report. The report simultaneously serves as the Communication on Progress for the United Nations Global Compact (UNGC).

We use the standard of the Global Reporting Initiative (GRI) as a guide in our reporting. This report has been prepared in accordance with the GRI Standards: Core option.

The report is based on the principles of Sustainability Context, Materiality, Completeness, and Stakeholder Inclusiveness. The content of the report was selected based on the action areas of the Sustainability Strategy and the materiality analysis updated in fiscal year 2019/20 [Materiality analysis](#), [Sustainability at Aurubis](#), [Non-Financial Report of the Annual Report 2019/20](#). In order to provide rating agencies and other stakeholders with the information they need, we report beyond the topics identified.

Some of the information in this report was already included in the Non-Financial Report of the Aurubis Annual Report 2019/20, which was reviewed by an external auditor. The Non-Financial Report and the Auditor's Report are available in the [Annual Report 2019/20](#).

Our Sustainability Reports are released every two years. In the years without a Sustainability Report, the sustainability KPIs are updated and released separately in consolidated form in a KPI Update. The Non-Financial Report is released annually as part of the Annual Report. The last Sustainability Report was released in spring 2019, the KPI Update in January 2020, and the Non-Financial Report for fiscal year 2019/20 in the Aurubis AG Annual Report 2019/20 in December 2020.

DATA COLLECTION AND CONSOLIDATION

The reporting period is fiscal year 2019/20. Activities with special relevance were included up to the editorial deadline of March 11, 2021. The Aurubis fiscal year starts on October 1 and ends on September 30. In addition to Aurubis AG, the scope of consolidation includes all of the fully consolidated subsidiaries (as at September 30, 2020) and therefore fundamentally corresponds to the scope of consolidation of the Annual Report. The KPIs for the new Beerse and Berango sites (formerly Metallo) are included as of June 1, 2020. Any deviations from the scope of consolidation are expressly stated for the relevant figures.

Aurubis reports the employee KPIs for all consolidated sites (as at the reporting date of September 30, 2020), excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50 % stake. The KPIs relate to the headcount, including apprentices, unless expressly indicated otherwise.

All environmental and energy KPIs are reported for calendar year 2019, not fiscal year 2019/20, and for production sites that are majority-owned (> 50 %) by Aurubis' [Sites and employees](#). This reflects most of the energy consumption and emissions. The volume at the slitting centers and sales offices is negligible in comparison. When this report mentions copper production in the context of environmental KPIs, this refers to primary and secondary copper production at the Hamburg, Lünen, Olen, and Pirdop sites. The Beerse and Berango sites are not yet included in the environmental and energy KPIs. These sites will be fully integrated in the KPIs shown in this report in the coming year.

¹ The KPIs are used first and foremost for internal management purposes and reporting for governmental authorities, for which the calendar year is the given period under review. Parallel reporting of both calendar year and fiscal year figures could lead to confusion and ambiguity.

Certifications by site

Site	EMAS	ISO 14001	ISO 50001	ISO 9001	IATF 16949	EfbV	ISO 45001/ OHSAS 18001
Production sites							
Hamburg, headquarters (DE)	x	x	x	x			
Lünen (DE)	x	x	x	x		x	
Olen (BE)		x	x	x			
Pirdop (BG)		x		x			x
Beerse (BE)		x		x			
Berango (ES)		x		x			x
Avellino (IT)	x	x		x			x
Buffalo (US)				x	x		
Emmerich, Deutsche Giessdraht (DE)		x	x	x			
Fehrbellin, CABLO (DE)		x	x	x		x	
Hamburg, E.R.N. (DE)		x	x	x		x	
Hamburg, Peute Baustoff (DE)				x ¹			
Pori (FI)		x	x	x			x
Röthenbach, RETORTE (DE)				x			
Stolberg (DE)			x	x	x		
Stolberg, Schwermetall Halbzeugwerk (DE) ²	x	x	x	x			x
Zutphen (NL)		x		x	x		
Slitting centers							
Dolný Kubín (SK)		x		x			x
Mortara (IT)				x			x
Smethwick/Birmingham (UK)				x			

¹ For the sale of iron silicate granules used to produce blasting abrasives.

² Not majority-owned by Aurubis (50% stake).

Explanation

EMAS: System of specifications for environmental management systems and environmental audits

ISO 14001: Standard for environmental management systems

ISO 50001: Standard for energy management systems

ISO 9001: Standard for quality management systems

IATF 16949: Standard for quality management systems in the automotive industry, based on ISO 9001

EfbV: Ordinance on Specialized Waste Management Companies (German certificate)

ISO 45001: Standard for occupational safety management systems

OHSAS 18001: Standard for occupational safety management systems

GRI Content Index

GRI disclosure	Title	Reference	Comments	UNGC
UNIVERSAL STANDARDS				
GRI 101: Foundation 2016				
GRI 102: General Disclosures 2016				
Organizational profile				
102-1	Name of the organization	Q Company profile, page 5		
102-2	Activities, brands, products, and services	Q Our business model, page 6		
102-3	Location of headquarters	Q Company profile, page 5		
102-4	Location of operations	Q Company profile, page 5ff. Q Sites and employees, page 8		
102-5	Ownership and legal form	Q Company profile, page 5 Q Annual Report 2019/20, page 72		
102-6	Markets served	Q Our business model, page 6 Q Solutions for the energy transition, page 22 Q Global copper demand by sector, page 22		
102-7	Scale of the organization	Q Sites and employees, page 8 Q KPIs related to employee development, page 54		
102-8	Information on employees and other workers	Q KPIs related to employee development, page 54 Q Temporary and permanent contracts, page 55 Q Full-time and part-time employees in the Aurubis Group, page 55		
102-9	Supply chain	Q Our business model, page 6 Q Management approach, page 30ff.		
102-10	Significant changes to the organization and its supply chain	Q Company profile, page 5ff. Q Annual Report 2019/20, page 78ff.		
102-11	Precautionary Principle or approach	Q Sustainability management, page 12		7
102-12	External initiatives	Q Stakeholder engagement, page 13ff.		
102-13	Membership of associations	Q Memberships and participation in initiatives and projects, page 15 Q Work in associations and political lobbying, page 16		

GRI disclosure	Title	Reference	Comments	UNGC
Strategy				
102-14	Statement from senior decision-maker	Q Foreword, page 3f.		
102-15	Key impacts, risks, and opportunities	Q Annual Report 2019/20, page 110ff.		
Ethics and integrity				
102-16	Values, principles, standards, and norms of behavior	Q Compliance, page 17f. Q Sustainability management, page 12 Q Stakeholder engagement, page 13ff.		10
102-17	Mechanisms for advice and concerns about ethics	Q Compliance, page 17f.		10
Governance				
102-18	Governance structure	Q Sustainability management, page 12 Q Annual Report 2019/20, pages 19, 21f.		
Stakeholder engagement				
102-40	List of stakeholder groups	Q Stakeholder engagement, page 13ff.		
102-41	Collective wage agreements	Q Compensation and benefits, page 52f.		3
102-42	Identifying and selecting stakeholders	Q Stakeholder engagement, page 13ff.		
102-43	Approach to stakeholder engagement	Q Stakeholder engagement, page 13ff. Q Transparency and dialogue, page 32f. Q Stakeholder engagement, page 35		
102-44	Key topics and concerns raised	Q Stakeholder engagement, page 13ff.		
Reporting practice				
102-45	Entities included in the consolidated financial statements	Q About this report, page 68 Q Annual Report 2019/20, page 197f.		
102-46	Defining report content and topic Boundaries	Q About this report, page 68 Q Annual Report 2019/20, page 48		
102-47	List of material topics	Q Materiality analysis, page 11		
102-48	Restatements of information	Q About this report, page 68		
102-49	Changes in reporting	Q About this report, page 68		
102-50	Reporting period	Q About this report, page 68		
102-51	Date of most recent report	Q About this report, page 68		
102-52	Reporting cycle	Q About this report, page 68		
102-53	Contact point for questions regarding the report	Q Imprint, page 78		
102-54	Claims of reporting in accordance with the GRI Standards	Q About this report, page 68		
102-55	GRI content index	Q GRI Content Index		
102-56	External assurance	Q About this report, page 68		

GRI disclosure	Title	Reference	Comments	UNGC
TOPIC-SPECIFIC STANDARDS				
GRI 200: ECONOMIC STANDARDS				
GRI 201: Economic Performance 2016				
GRI 201/103: Management Approach		Q Growth and innovation, page 20ff.		
201-1	Direct economic value generated and distributed	Q Annual Report 2019/20, page 130		
201-2	Financial implications and other risks and opportunities due to climate change	Q Annual Report 2019/20, page 112f. Q www.aurubis.com/cdp		
201-3	Defined benefit plan obligations and other retirement plans	Q Annual Report 2019/20, page 133		
GRI 203: Indirect Economic Impacts 2016				
GRI 203/103: Management Approach		Q Company profile, page 5ff. Q Additional examples of energy efficiency projects, page 44 Q Training and education, page 56ff. Q Selection of projects, page 66f.		
203-1	Infrastructure investments and services supported	Q Additional examples of energy efficiency projects, page 44 Q Selection of projects, page 66f.		
203-2	Significant indirect economic impacts	Q Company profile, page 5ff. Q Training and education, page 56ff.		
GRI 205: Anti-corruption 2016				
GRI 205/103: Management Approach		Q Compliance, page 17f. Q Responsible supply chain, page 30		10
205-1	Operations assessed for risks related to corruption	Q Compliance, page 17f.		
205-2	Communication and training about anti-corruption policies and procedures	Q Compliance, page 17f.		
205-3	Confirmed incidents of corruption and actions taken	Q Compliance, page 17f.		
GRI 206: Anti-competitive Behavior 2016				
GRI 206/103: Management Approach		Q Compliance, page 17f.		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Q Compliance, page 17f.		
GRI 300: ENVIRONMENTAL STANDARDS				
GRI 301: Materials 2016				
GRI 301/103: Management Approach		Q Recycling solutions, page 26ff.		7, 8, 9
301-1	Materials used by weight or volume	Q Origin of copper concentrates, page 31		
301-2	Recycled input materials used	Q Origin of recycling materials, page 31		

GRI disclosure	Title	Reference	Comments	UNGC
GRI 302: Energy 2016				
GRI 302/103:	Management Approach	Q Energy and climate protection, page 42ff.		7, 8
302-1	Energy consumption within the organization	Q Energy KPIs, page 48		
302-2	Energy consumption outside of the organization	Q Energy KPIs, page 48		
302-3	Energy intensity	Q Energy KPIs, page 48		
302-4	Reduction of energy consumption	Q Reduction in energy consumption through individual projects, page 49		9
GRI 303: Water and Effluents 2018				
GRI 303/103:	Management Approach	Q Protection from environmental impact: Management approach, page 34ff. Q Water use and water pollution control, page 36f.		7
303-1	Interactions with water as a shared resource	Q Water use and water pollution control, page 36f.		7
303-2	Management of water discharge-related impacts	Q Water use and water pollution control, page 36f.		7
303-3	Water withdrawal	Q KPIs related to water and effluents, page 40		
303-4	Water discharge	Q KPIs related to water and effluents, page 40		
303-5	Water consumption	Q KPIs related to water and effluents, page 40		
GRI 304: Biodiversity 2016				
GRI 304/103:	Management Approach	Q Protection from environmental impact: Management approach, page 34 Q Biodiversity, page 38		8
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Q Conservation areas in close proximity to copper production sites, page 41		
GRI 305: Emissions 2016				
GRI 305/103:	Management Approach	Q Protection from environmental impact: Management approach, page 34ff. Q Air quality, page 36 Q Energy and climate protection, page 42ff.		7
305-1	Direct (Scope 1) GHG emissions	Q CO ₂ footprint of the Aurubis Group by scope, page 45 Q KPIs related to CO ₂ emissions, page 49		
305-2	Energy indirect (Scope 2) GHG emissions	Q CO ₂ footprint of the Aurubis Group by scope, page 45 Q KPIs related to CO ₂ emissions, page 49		
305-3	Other indirect (Scope 3) GHG emissions	Q CO ₂ footprint of the Aurubis Group by scope, page 45 Q Scope 3 emissions by activity, page 45 Q KPIs related to CO ₂ emissions, page 49		
305-4	GHG emissions intensity	Q CO ₂ footprint of the Aurubis Group by scope, page 45 Q KPIs related to CO ₂ emissions, page 49		
305-5	Reduction of GHG emissions	Q Reduction in CO ₂ emissions through individual projects, page 49		9
305-6	Emissions of ozone-depleting substances (ODS)		Ozone-depleting substances do not play a significant role in our processes.	
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Q Air quality, page 36 Q Nitrogen oxides (NO _x), sulfur dioxide (SO ₂), and dust, page 40		7

GRI disclosure	Title	Reference	Comments	UNGC
GRI 306: Waste 2020				
GRI 306/103:	Management Approach	Q Protection from environmental impact: Management approach, page 34ff. Q Resource conservation and waste management, page 38f. Q Recycling solutions, page 26ff.		7, 8
306-1	Waste generation and significant waste-related impacts	Q Resource conservation and waste management, page 38f.		7, 8
306-2	Management of significant waste-related impacts	Q Resource conservation and waste management, page 38f.		7, 8
306-3	Waste generated	Q KPIs related to waste, page 41		
306-4	Waste diverted from disposal	Q KPIs related to waste, page 41		
306-5	Waste directed to disposal	Q KPIs related to waste, page 41		
GRI 307: Environmental Compliance 2016				
GRI 307/103:	Management Approach	Q Compliance, page 17f. Q Protection from environmental impact: Management approach, page 34ff.		
307-1	Non-compliance with environmental laws and regulations	Q Stakeholder engagement, page 35		
GRI 308: Supplier Environmental Assessment 2016				
GRI 308/103:	Management Approach	Q Identifying supply chain risks, page 31		8
308-1	New suppliers that were screened using environmental criteria	Q Identifying supply chain risks, page 31		
308-2	Negative environmental impacts in the supply chain and actions taken	Q Identifying supply chain risks, page 31		
GRI 400: SOCIAL STANDARDS				
GRI 401: Employment 2016				
GRI 401/103:	Management Approach	Q Future-oriented employer, page 50f.		
401-1	New employee hires and employee turnover	Q KPIs related to employee development, page 54		6
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Q Compensation and benefits, page 52f.		
GRI 403: Occupational Health and Safety 2018				
GRI 403/103:	Management Approach	Q Occupational health and safety, page 60ff.		
403-1	Occupational health and safety management system	Q Management approach, page 60f.		
403-2	Hazard identification, risk assessment, and incident investigation	Q Risk assessment, page 61 Q Handling accidents, page 61f.		
403-3	Occupational health services	Q Prevention and education, page 61		
403-4	Worker participation, consultation, and communication on occupational health and safety	Q Management approach, page 60f. Q Prevention and education, page 61		
403-5	Worker training on occupational health and safety	Q Prevention and education, page 61		


GRI disclosure	Title	Reference	Comments	UNGC
403-6	Promotion of worker health	Q Management approach, page 60f. Q Workplace health, pages 62, 64		
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Q Risk assessment, page 61		
403-8	Workers covered by an occupational health and safety management system		100% of our employees are covered by an occupational health and safety management system.	
403-9	Work-related injuries	Q Management approach, page 60f. Q Risk assessment, page 61 Q Handling accidents, page 61f. Q Occupational safety KPIs, page 64		
403-10	Work-related ill health	Q Risk assessment, page 61 Q Workplace health, page 62 Q Protection from hazardous substances, page 62f.		
GRI 404: Training and Education 2016				
GRI 404/103: Management Approach		Q Training and education, page 56		
404-1	Average hours of training per year per employee	Q Training and education KPIs, page 59		
404-2	Programs for upgrading employee skills and transition assistance programs	Q Employee qualification measures, page 56f.		
404-3	Percentage of employees receiving regular performance and career development reviews	Q Performance review, page 57		
GRI 405: Diversity and Equal Opportunity 2016				
GRI 405/103: Management Approach		Q Diversity and equal opportunity, page 51f.		6
405-1	Diversity of governance bodies and employees	Q KPIs related to employee development, page 54 Q Age structure in the Aurubis Group, page 55 □ Annual Report 2019/20, page 20 Q Proportion of female managers, page 54		6
405-2	Ratio of basic salary and remuneration of women to men		At Aurubis, compensation depends on the job performed, the quality of the work, and the level of professional experience. No other distinctions are made.	6
GRI 406: Non-discrimination 2016				
GRI 406/103: Management Approach		Q Human rights, page 19		6
406-1	Incidents of discrimination and corrective actions taken	Q Human rights, page 19		
GRI 407: Freedom of Association and Collective Bargaining 2016				
GRI 407/103: Management Approach		Q Human rights, page 19 Q Employee participation and company co-determination, page 53		3
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk		None of Aurubis AG's business activities endanger the freedom of association or the right to collective bargaining. We expect our business partners on the supplier side to follow UN conventions related to human rights, environmental protection, and safety.	3

GRI disclosure	Title	Reference	Comments	UNGC
GRI 408: Child Labor 2016				
GRI 408/103:	Management Approach	Q Human rights, page 19		5
408-1	Operations and suppliers at significant risk for incidents of child labor	Q Human rights, page 19 Q Identifying supply chain risks, page 31		5
GRI 409: Forced or Compulsory Labor 2016				
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Q Human rights, page 19 Q Identifying supply chain risks, page 31		4
GRI 409/103:	Management Approach	Q Human rights, page 19		4
GRI 411: Rights of Indigenous Peoples 2016				
GRI 411/103:	Management Approach	Q Human rights, page 19		1, 2
411-1	Incidents of violations involving the rights of indigenous peoples	Q Identifying supply chain risks, page 31		2
GRI 412: Human Rights Assessment 2016				
GRI 412/103:	Management Approach	Q Human rights, page 19 Q Responsible supply chain, page 30ff.		1, 2
412-1	Operations that have been subject to human rights reviews or impact assessments	Q Human rights, page 19	100% of our business sites were audited to ensure that they respect human rights. We did not identify a risk of human rights violations at any of our production sites, most of which are located in Europe. Consequently, our efforts concentrate on our suppliers.	2
412-2	Employee training on human rights policies or procedures		No training took place during the reporting period. A Human Rights Commitment is part of the Code of Conduct that each employee receives along with the employment contract.	1
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Q Responsible supply chain, page 30ff.		2
GRI 414: Supplier Social Assessment 2016				
GRI 414/103:	Management Approach	Q Identifying supply chain risks, page 31		2
414-1	New suppliers that were screened using social criteria	Q Identifying supply chain risks, page 31		2
GRI 416: Customer Health and Safety 2016				
GRI 416/103:	Management Approach	Q Quality, page 23f.		
416-1	Assessment of the health and safety impacts of product and service categories	Q Quality, page 23f.		
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Q Quality, page 23f.		

GRI disclosure	Title	Reference	Comments	UNGC
GRI 417: Marketing and Labeling 2016				
GRI 417/103: Management Approach		Q Quality, page 23f.		
417-1	Requirements for product and service information and labeling	Q Quality, page 23f. Q Product safety, page 24		
417-2	Incidents of non-compliance concerning product and service information and labeling		There were no relevant incidents of non-compliance concerning product and service information and labeling.	
GRI 419: Socioeconomic Compliance 2016				
GRI 419/103: Management Approach		Q Compliance, page 17		
419-1	Non-compliance with laws and regulations in the social and economic area	Q Human rights, page 19	There were no significant fines or non-monetary sanctions in FY 2019/20.	1

Global Compact

COMMUNICATION
ON PROGRESS



This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

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