

COVESTRO GROUP AT A GLANCE

Company Profile

Organization and Business Model

Organization

Covestro is one of the leading global suppliers of high-tech polymer materials and application solutions developed for these materials. Covestro AG, the parent company of the Covestro Group, is headquartered in Leverkusen (Germany). It is listed on the stock exchange in Germany and is included in the DAX, Germany's leading index.

In the year 2021, Covestro unveiled the Group's new Sustainable Future strategy, which has customer centricity and sustainable growth at its core. The guiding principle of the strategy and the Group's long-term vision is to become fully circular. In the interest of this objective, Covestro realigned its organizational and reporting structure effective July 1, 2021. The Group's previous three reportable segments – Polyurethanes (PUR), Polycarbonates (PCS), and Coatings, Adhesives, Specialties (CAS) – have been replaced with two reportable segments: Performance Materials (PM) and Solutions & Specialties (S & S). The segments further comprise seven precisely defined business entities. These are set up according to their respective success factors. All mission-critical operations along the value chain are incorporated into these new entities. Covestro has thus focused its businesses even more closely on the requirements of individual markets and aligned them to a greater degree with its customers' needs.

 See "Group Strategy" and note 4 "Segment and Regional Reporting" in the Notes to the Consolidated Financial Statements.

The Performance Materials segment forms a separate business entity comprising Covestro's standard urethane components, standard polycarbonates, and base chemicals businesses. The focus here is on reliably delivering standard products at competitive cost.

 See "Performance Materials Segment Strategy."

The Solutions & Specialties segment comprises six business entities: Engineering Plastics, Coatings & Adhesives, Tailored Urethanes, Thermoplastic Polyurethanes, Specialty Films, and Elastomers. In this segment, Covestro combines sophisticated products with a high pace of innovation and application technology services.

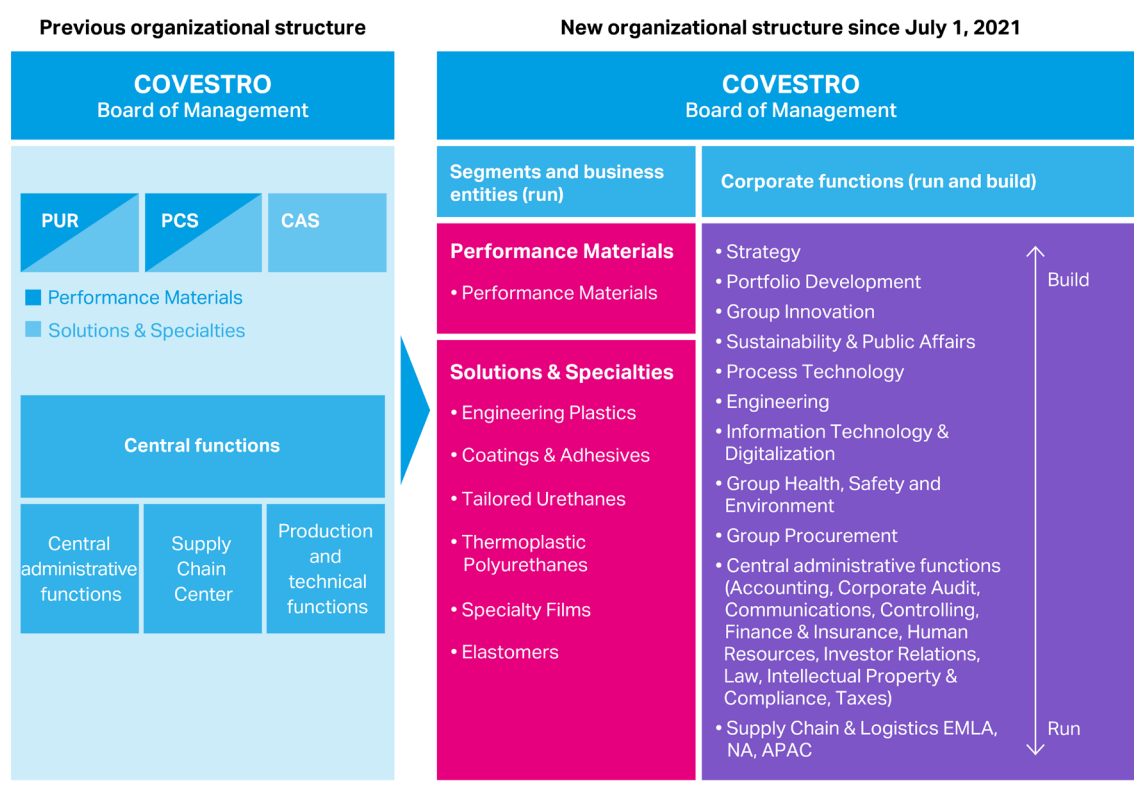
 See "Solutions & Specialties Segment Strategy."

In addition, the Group has established corporate functions which work toward the further long-term development of Covestro (Build), for instance permanently ensuring the Group's competitiveness and supporting efficient corporate governance (Run). As of December 31, 2021, the Covestro Group comprised 66 consolidated companies in 21 countries in addition to Covestro AG, and employed 17,909 people*.

 See note 5.1 "Scope of Consolidation and Investments" in the Notes to the Consolidated Financial Statements.

* The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours.

Group structure



The Board of Management of Covestro AG runs the company on its own responsibility with the goal of sustainably increasing the company's enterprise value, and determines and pursues its corporate objectives. It defines the company's portfolio, allocates resources, and decides on the financial steering and reporting of the Covestro Group.

The Chief Executive Officer (CEO) is Dr. Markus Steilemann. His area of responsibility includes the Strategy, Sustainability & Public Affairs, and Group Innovation, as well as Corporate Audit, Human Resources, and Communications corporate functions.

Sucheta Govil is Covestro's Chief Commercial Officer (CCO). She is in charge of the seven business entities, including all business-related processes and areas of production, from procurement and application technology to sales. In addition, she is responsible for the three regional Supply Chain & Logistics units, which handle internal and external supply chains worldwide.

Dr. Klaus Schäfer is the company's Chief Technology Officer (CTO). He is responsible in that role for the corporate functions of Process Technology, Engineering, Group Health, Safety and Environment, and Group Procurement. He also coordinates the rollout of and compliance with global processes and standards and the rollout of initiatives in Covestro's production network.

Dr. Thomas Toepfer is Covestro's Chief Financial Officer (CFO) and additionally holds the position of Labor Director. His responsibilities comprise the corporate functions of Accounting, Controlling, Finance & Insurance, Information Technology & Digitalization, and Investor Relations, as well as Law, Intellectual Property & Compliance, Portfolio Development, and Taxes. Dr. Toepfer is also responsible for country-specific topics in the United States and China.

 See "Composition of the Board of Management."

The Supervisory Board oversees and advises the Board of Management. The Supervisory Board has 12 members, half of whom are shareholder representatives and half employee representatives pursuant to the German Codetermination Act. Dr. Richard Pott is the Supervisory Board Chair and Petra Kronen is Vice Chair.

 See "Declaration on Corporate Governance."

Business Model

Covestro produces precursors for polyurethane foams and the high-performance plastic polycarbonate as well as precursors for coatings, adhesives, sealants, and specialty products, including films. Other precursors such as chlorine and by-products like styrene are also part of Covestro's product portfolio.

The company's materials are used in many areas of modern life. Covestro offers its clientele innovative and sustainable solutions that enable improved performance on the one hand and help reduce carbon footprints on the other. The array of products ranges from insulation for refrigerators and entire buildings, laptop and smartphone cases, and medical technology to scratch-resistant and fast-drying vehicle coatings and film coverings for personal identification cards. Covestro therefore covers a wide variety of sectors: The company's main customers are from the automotive and transportation; construction; furniture and wood processing; and electrical, electronics, and household appliances industries. The products are also used in sectors such as sports and leisure, cosmetics and health, as well as in the chemical industry itself. In addition, materials by Covestro are used to manufacture medical equipment, safety barriers, and sneeze and splash guards used to combat and control the spread of the coronavirus pandemic.

Covestro monitors developments in its sales and consumer markets and orients its activities to support customers' growth. Together with customers as well as with business and scientific partners, the company works continuously to further advance products, technologies, and application solutions. Covestro's main competitors are BASF, Dow Chemical, Huntsman, Mitsubishi, Saudi Basic Industries Corporation (SABIC), and Wanhua Chemical.

 Additional information is available at: solutions.covestro.com/en/brands

Global megatrends play a considerable role in this process: Advancing climate change, the growing global population, increasing urbanization, and new forms of transportation are changing the lives of billions of people. Consequently, the polymer industry will have to develop as well. Companies like Covestro are facing new challenges and playing a part in developing innovative solutions as a result. For this reason, Covestro intends to align its entire production and product range – and ultimately the entire company – to the circular concept in the long term. As part of that, we intend to accelerate transformation to a climate-neutral and resource-conserving economy. The focus here is on alternative raw materials, renewable energy, innovative recycling, and joint solutions. Covestro's aim is to pave the way and support these trends with its materials. By replacing traditional materials with durable, light, more environmentally compatible and cost-effective materials, Covestro makes significant contributions in areas such as lightweight construction in the automotive industry, increasing the energy efficiency of living spaces through the use of new insulating materials, promoting sustainable energy with specialty materials, and improving the shelf-life of food through better insulation along the entire refrigeration chain. Covestro is continually increasing its share of alternative raw materials in production to replace conventional materials, some of which require large amounts of raw materials from nonrenewable sources.

 See "Circular Economy."

 Additional information is available at: solutions.covestro.com/en/industries

Segments

Performance Materials

The Performance Materials segment focuses on developing, producing, and reliably supplying high-performance materials such as standard polyurethanes and polycarbonates, as well as base chemicals. These include diphenylmethane diisocyanate (MDI), toluylene diisocyanate (TDI), long-chain polyols, and polycarbonate resins. Those materials are used in sectors such as the furniture and wood processing industry, the construction industry as well as the automotive and transportation industry. These materials are used in roof structures, insulation for buildings and refrigerators, mattresses, and car seats, among other applications.

Solutions & Specialties

The Solutions & Specialties segment consolidates Covestro's solutions and specialties businesses, and combines chemical products with application technology services. A fast pace of innovation is a key success factor since customer requirements change quickly. Covestro's Solutions & Specialties business comprises a variety of polymer products including precursors for coatings and adhesives, polycarbonates, MDI specialties and polyols, specialty films, elastomers, and thermoplastic polyurethanes. They are used in sectors such as the automotive and transportation industry; the electrical, electronics and household appliances industry; the construction industry; and the healthcare industry. These materials include composite resins for wind turbine rotor blades; precursors for coatings and adhesives; laptop cases; floodlights; and high-quality specialty films. The Resins & Functional Materials (RFM) business acquired by Covestro in the reporting year from Koninklijke DSM N.V., Heerlen (Netherlands), is also part of the Solutions & Specialties segment.

 See "Significant Events."

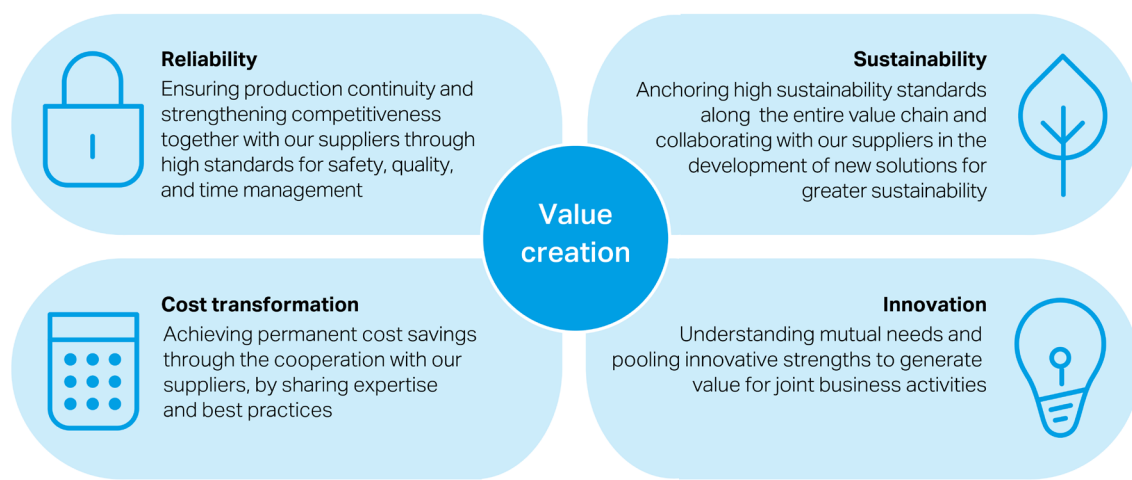
Procurement

Purchasing at Covestro is handled by the corporate Group Procurement function. Group Procurement works with the business entities and hubs of the corporate Supply Chain & Logistics function to ensure the timely global supply of goods and services to all divisions of the company on the best possible terms and conditions. This ensures that the Group's high quality standards are met. Furthermore, Group Procurement is responsible for ensuring that Covestro's ethical and environmental principles are upheld throughout the entire procurement process. The basic tenets of our procurement policy are set forth in a directive that is binding on all employees throughout the Covestro Group.

📖 See "Sustainability in the Supply Chain."

+ Additional information is available at: www.covestro.com/en/company/profile/procurement/sustainability-in-procurement/supplier-code-of-conduct.

Strategic principles in procurement



The objective is to generate a competitive advantage for Covestro and make a decisive contribution to overall value. In doing so, Covestro is guided by four strategic principles: reliability, sustainability, cost transformation, and innovation. By purchasing renewable energy or alternative raw materials, Group Procurement contributes to realizing Covestro's vision of becoming fully circular. In addition, the corporate Group Procurement function promotes the digitalization of purchasing processes and systems in the interest of improving the efficiency and effectiveness of the procurement process for Covestro and its suppliers.

📖 See "Sustainability in the Supply Chain."

In fiscal 2021, goods and services were procured from some 13,000 suppliers (previous year: some 13,000) in 66 countries (previous year: 67) for €11.3 billion (previous year: €7.9 billion).^{*} Distribution of purchasing volumes was balanced across the regions.

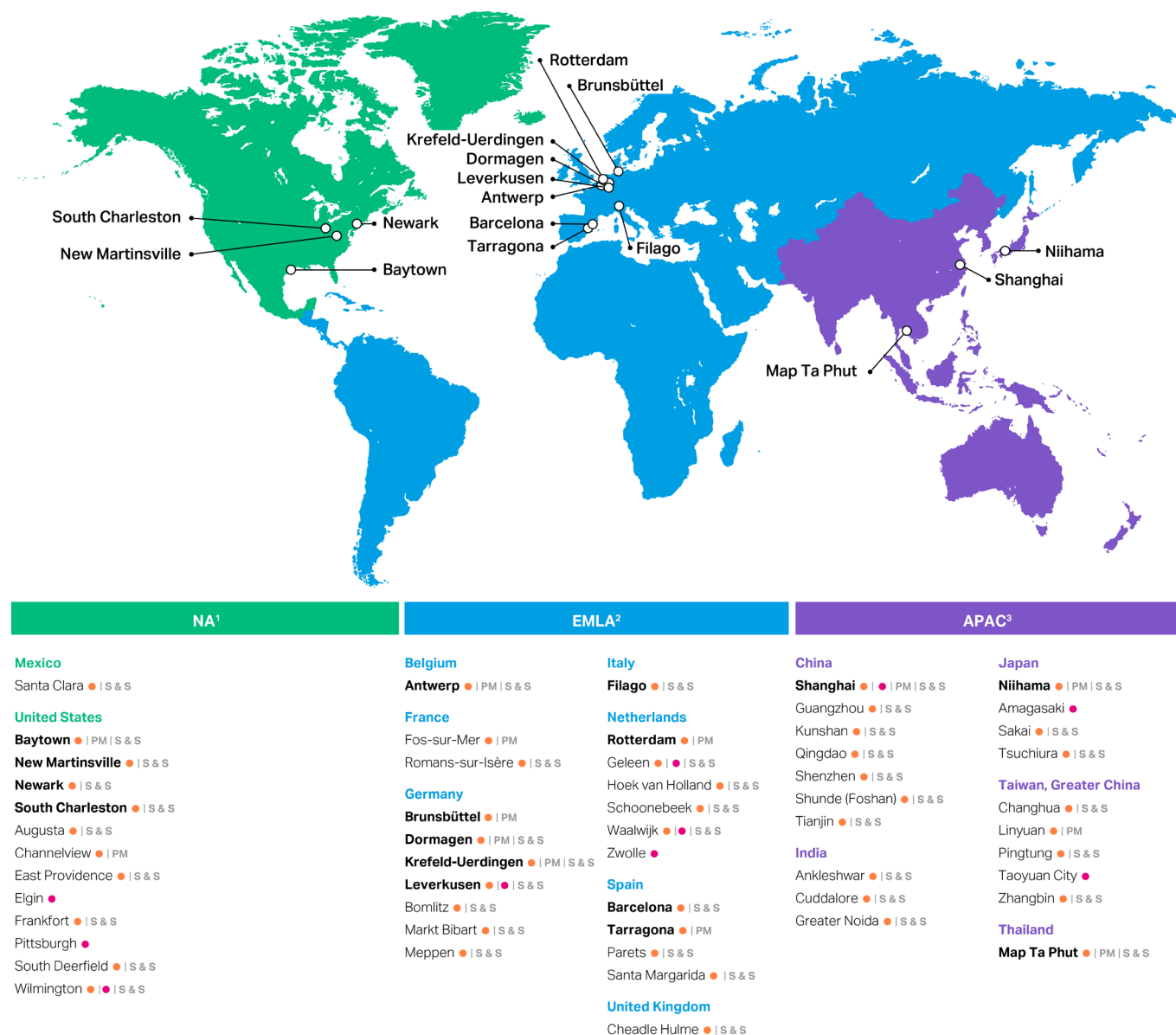
The most important raw materials for our products are petrochemical substances such as phenol, benzene, propylene/propylene oxide, toluene, and acetone – which collectively account for 35%* of our purchasing value (previous year: 33%). Moreover, the operation of our production facilities requires large amounts of energy, which we primarily procure from external sources in the form of electricity and steam. We endeavor to procure raw materials essential for operations which are difficult for Covestro to obtain from external supply sources from within the Group or through joint ventures. To name just two examples: Covestro produces part of its chlorine in-house and procures propylene oxide through a joint venture. Operations, logistics, and investment projects require technical goods and services in addition to raw materials and energy. These activities are consolidated by the corporate Group Procurement and Supply Chain & Logistics functions to generate a contribution in line with the Group's strategy. We also regularly monitor the sustainability and quality of our suppliers and ensure that they comply with internal and external standards.

^{*} Due to the still ongoing systems integration of the acquired RFM business, the RFM-related purchasing volumes were only partially included for fiscal 2021.

Production Sites and R&D Facilities

Covestro operates production sites and research and development (R&D) facilities for various product groups throughout the world. The following chart shows the geographical distribution of Covestro's 50 production sites and 10 R&D facilities in the EMLA, NA, and APAC regions.

Covestro's production sites and R&D facilities



SITES & FACILITIES: ○→ Main production sites ● Production site ● R&D facility

SEGMENTS: PM Performance Materials S & S Solutions & Specialties

¹ NA: North America region (Canada, Mexico, United States).

² EMLA: Europe, Middle East, Latin America (excluding Mexico), Africa region.

³ APAC: Asia and Pacific region.

Large-capacity production facilities serve in particular to ensure that customers in the respective regions are supplied reliably and efficiently with the Performance Materials segment's products. Additional plants in selected countries manufacture polyurethane precursors and products for the Solutions & Specialties segment. Moreover, we operate production plants in certain countries for customer-specific compounding of polycarbonate resins.

Thanks to the integration of upstream production stages (backward integration), e.g., in its own production of chlorine, Covestro has continually optimized the value chain. In addition, Covestro has put in place wide-ranging programs and initiatives to achieve and steadily improve performance in the areas of safety, costs, and plant availability.

We invest continuously in our global production network in order to maintain our production facilities and their infrastructure, to optimize manufacturing processes, and to expand capacities in line with market developments. To do so, Covestro relies on advanced and environmentally friendly production processes and continually optimizes its technologies. Key growth projects in the year 2021 included increasing the production capacity for specialties in the EMLA region and expanding compounding capacities in Krefeld-Uerdingen (Germany), Shanghai (China), and Guangzhou (China).

 See "Cash Flows from Investing Activities."

Covestro primarily conducts research and development at three major centers in Germany, the United States, and China. Additional centers in China, in Taiwan (Greater China), in the United States, and in the Netherlands were added with the acquisition of RFM. Customer-oriented applications are generally developed in the relevant regions, while global, fundamental research and technology development are mainly conducted in Germany. We also operate an R&D facility in Japan, which concentrates on the Japanese market. Our global presence allows us to respond to regional trends and customer requirements in the best possible ways.

 See "Innovation."

Marketing and Sales

Industry-specific marketing and sales teams are responsible for developing potential business with prospective and existing customers and continually analyzing markets and trends. Each business entity markets and distributes its own products through its own sales organization as well as through trading houses and local distributors. Major customers with global operations are an exception to this, as these are serviced directly by our key account managers. Marketing is conducted in close cooperation between marketing, sales, and application development teams. Marketing activities at Covestro are comprehensively managed by the business entities.

In recent fiscal years, selected business entities transferred their sales activities in part to the Covestro Direct Store, our digital sales channel. In fiscal 2021, more than 13,000 transactions with a total value in the mid- to upper three-digit million euro range were completed via this digital platform. The number of transactions grew by around 60% over the prior-year period while the corresponding revenue doubled. Besides selling products through the Covestro Direct Store, the company is also working on placing a selection of products on third-party digital sales platforms to align our range of products even more closely with our customers' needs and to give them a completely digital customer experience. To this end, we developed a Group-wide initiative called Customer Centricity in fiscal 2020 to put customers at the forefront of every employee's day-to-day responsibilities. Regardless of the impact of the coronavirus pandemic, our focus is still on continuing to implement our digitalization strategy for our marketing activities. The goals of the strategy are to provide our customers with even more effective and customized information, and to communicate with them more directly and holistically. To achieve this, the initial digital showroom concept was expanded into digital event platforms. We also boost the idea of connecting the dots in our marketing activities, i.e., integrating all relevant processes, systems, and therefore data flows. Big Data in relation to customer, market, and business consolidation and the associated provision and analysis of information are also becoming increasingly important for us.

The corporate Supply Chain & Logistics function in the EMLA, NA, and APAC regions is mainly responsible for customer service activities and the efficient fulfillment of customer orders. It is tasked with the entire process – from receiving orders through plant logistics and shipping to invoicing and handling complaints. Customer-oriented support in the individual regions allows us to process orders especially quickly and seamlessly. Covestro makes use of channels such as e-commerce platforms for receiving and processing orders. Our customers can place orders and check the status of their orders at any time in the Order@Covestro self-service portal. However, Order@Covestro is not used to initiate new business: Instead, the portal complements the services we provide our existing customers and helps us handle routine inquiries during times outside our customer service and sales staff's business hours.

The transportation of our products to customers is handled by logistics service providers who are selected and evaluated according to stringent safety, environmental, and quality criteria. Alongside the protection of people and the environment, delivery reliability is particularly important to us. The preferred mode of transportation is rail or intermodal – a combination of different modes of transportation. When selecting the mode of transportation, we also consider resource efficiency and seek to reduce associated carbon emissions in particular. Whenever permitted by transportation times and delivery reliability, we supply customers from close-to-production warehouses. In the case of longer distances and depending on the reliability of the mode of transportation, our products are temporarily stored in regional distribution centers and then dispatched from there in order to shorten delivery times. We also participate in the RH2INE industry initiative as part of our corporate commitment to reducing our carbon emissions. This initiative aims to deploy fuel-cell-powered vessels on the Rhine River starting in the year 2024. Building on RH2INE, Covestro is a key player in initiating another fuel cell project whose goal is to accelerate the development and use of fuel cells in cargo trucks.

 See “Sustainability in the Supply Chain.”

We measure customer satisfaction using the Net Promoter Score (NPS), a metric that reflects customer willingness to recommend Covestro, to ensure that customer feedback is incorporated to a greater degree in our internal decision-making processes. We conduct systematic customer satisfaction surveys for this purpose each year. In addition, our foremost quality goal is to eliminate errors in all our processes to guarantee a high level of customer satisfaction. This information is regularly collected throughout the world and analyzed in a global management system, taking into account customer satisfaction analyses and supplier assessments, which measure the performance of Covestro’s suppliers. We use this data to derive corrective and preventive measures for the purpose of continually increasing quality and customer satisfaction and further lowering the error rate and the incidence of complaints. In the reporting year, we received 5.13 customer complaints per 1,000 deliveries.

Strategy

Purpose and Vision

Advancing climate change, the growing global population, increasing urbanization, and new forms of mobility are enormous global challenges. Covestro faces these challenges, thus bringing together economic success and sustainability. The goal is to realize Covestro's purpose: "to make the world a brighter place."

Our aim is to provide solutions to global challenges with our high-performance polymer materials. In pursuing it, we rely on technologies that reduce energy usage and emissions in our production processes. The products and solutions we develop are replacing traditional materials such as glass and metal, which are manufactured less sustainably or have a less sustainable life cycle. We are convinced that our long-term strategy of pursuing a circular economy will bring us closer to achieving our purpose.

Building on our purpose, the implementation of our vision is the foundation of our Group strategy: We will be fully circular. This vision sets a clear direction for our company's future development.

Purpose, vision, and strategy



Our corporate values and corporate culture as embodied by our employees are major factors in putting our purpose, vision, and strategy into action.

 See "Corporate Values and Corporate Culture."

Group Strategy

Strategic Goals and Activities

Our overarching goals derived from our purpose and our vision set the course for our Group's Sustainable Future strategy. This incorporates the changing external and internal dynamics, such as shifts in climate policy, in markets, and in digital transformation, and reflects the new influence of our vision. Our Group strategy comprises three strategic chapters: We want to "Become the best of who we are," while we "Drive sustainable growth," and "Become fully circular." Our strategy is based on a solid foundation; its implementation is being enabled by the acceleration of Covestro's digital transformation and expansion of our "We Are 1" culture.

The Group's Sustainable Future strategy



"Become the Best of Who We Are"

"Become the best of who we are" is the first strategic chapter to transform our company in the best possible way to exploit its full potential, thus creating the basis for sustainable and profitable growth. The first strategic chapter is driven by a clear understanding of our business: We deliver a broad portfolio of standard and specialty products and, at the same time, stand out with our strong innovation, research, and development capability. We want to focus even more on the factors that make our core business a success.

Our customers are our top priority in this process. We optimize processes that make our customers successful, improve workflows within our organization, and concentrate entirely on the needs of our customers. Depending on each customer's focus, we deliver high-quality standard products fast, or assist our customers with our technical expertise in improving or developing (specialty) products.

Last year, we launched the LEAP global transformation program to implement the first strategic chapter. This program realigns structures, processes, and control mechanisms to position our company to the best extent possible. The measures under the transformation program began in fiscal 2021 and implementation will be completed by the end of the year 2023. As of July 1, 2021, we restructured our organization, workflows, and responsibilities. This includes structuring our business into standard products on the one hand and specialty products on the other. Furthermore, the program aims to bundle central aspects of certain areas of competence across the company, with the primary objective of profitably furthering our business with a view to sustainability and the circular economy.

Another important core element of the first strategic chapter is the Customer Centricity concept, with which we intend to focus even more on the needs of our customers. At Covestro, Customer Centricity is based on three pillars:

- **Knowing the Customer:** We need to know our customers so well that we understand exactly what added value we can provide for their business activities.
- **Thinking Customer First:** Every single function in our organization must be focused on what our customers need.
- **Co-Creating Customer Value:** We must join forces with our customers to create added-value in the marketplace.

“Drive Sustainable Growth”

“Driving sustainable growth” – and therefore bringing together sustainability and economic success – is part of the second strategic chapter of our Group strategy. To ensure that our portfolio is fit for the future, we intend to invest in market segments that are attractive and sustainable for the long term. In the future, we will orient all activities that promote organic and inorganic growth, i.e., investments, acquisitions, research and development (R&D) activities, and our strategic venture capital initiative (Covestro Venture Capital, COVeC), even more strongly toward sustainability.

 See “Strategic Partnerships and Collaborations.”

The most important elements for driving this development include managing and steering the product portfolio toward greater sustainability and circularity. Covestro is building a future-proof, innovative, and sustainable product portfolio using the Product Sustainability Assessment (PSA) based on the methodology developed by the World Business Council for Sustainable Development (WBCSD). This process entails identifying changes in the regulatory and market environment early on with the help of the PSA and considering these as part of the decision-making processes and the Group’s strategy. Covestro conducted a pilot project for this purpose in the reporting year and is currently reviewing the PSA methodology, for example, to integrate circularity into the system. The majority of our new products are already aligned with the United Nations Sustainable Development Goals (SDGs). In the interest of accelerating the development of our circular product portfolio, we decided in the reporting year to allocate a significant portion of our investment budget to projects in this area in the future. We plan to devote up to €1 billion of our capital expenditure over the next 10 years to projects promoting a circular economy.

In order to generate value with the capital invested, we are analyzing and managing our investment portfolio according to profitability and sustainability criteria. We support investment projects with a return on capital employed (ROCE) above certain thresholds that generate the lowest possible greenhouse gas emissions or even bring about a reduction.

 See “Management” and “Long-Term Variable Compensation.”

We plan to build plants faster and more cost-effectively in future to increase the efficient use of our investment capital without sacrificing the reliability or safety of our facilities. For this reason, we will expand our global network of partners specializing in plant construction, equipment, and services; optimize in-house processes and the use of resources; and increasingly apply a blueprint approach – i.e., we want to use completed construction projects as a template for future projects.

With the acquisition of the Resins & Functional Materials (RFM) business of Koninklijke DSM N.V., Heerlen (Netherlands), in fiscal 2021, Covestro is expanding its sustainable business units to implement its long-term strategy. The acquisition and integration of RFM makes Covestro one of the world’s leading suppliers of sustainable coating resins.

 See note 5.2 “Acquisitions and Divestitures” in the Notes to the Consolidated Financial Statements.

“Become Fully Circular”

The third strategic chapter comprises measures to allow Covestro to “become fully circular.” As part of that, we intend to accelerate transformation to a climate-neutral and resource-conserving economy. We see this orientation as an opportunity for Covestro to add solutions to global challenges – our circular products – along the entire value chain. Implementation of the third strategic chapter, and thus our vision, is driven by our global strategy program “Circular Economy.” This program has consolidated and driven the implementation of circular economy activities at Covestro in a comprehensive global structure since fiscal 2019. In addition to management of the implementation of activities aimed at achieving a circular economy, the program covers strategic issues such as alternative raw materials, marketing products based on these raw materials, and using recycling to develop sources for raw materials. Moreover, Covestro launched a global climate program in the reporting year, which aims to coordinate the transformation of production facilities to achieve climate neutrality.

Limited natural resources and advancing climate change are two key arguments for driving circular economy. Our activities aim to close material and carbon loops, and thus achieve climate neutrality and reduce the use of resources in the company itself, and in upstream and downstream stages of the value chain. Our goal is clear: In the future, we want to produce 100% of our products from alternative raw materials. Eventually, we aim to produce polymers without using fossil-based raw materials like crude oil. By realigning our production processes, we will be able to use raw materials, for example, derived from sustainable biomass, CO₂ or recycled materials, or obtained using green hydrogen from electrolysis. In the reporting year, we purchased circular raw materials totaling over 20,000 t and incorporated them into our production processes.

Completely climate-neutral production processes also require a rigorous stepwise transition of the electricity supply to renewable energies at competitive prices while maintaining a secure supply. In the future, we aim to obtain 100% of the electricity required by all of our sites from renewable sources of energy. We are pursuing this goal by arranging long-term supply contracts for electricity from renewable energy sources, such as the one at our Antwerp (Belgium) site.

We also want to drive the circular economy by developing and using innovative recycling options. In this context, we consider chemical recycling particularly promising as an effective tool for reclaiming considerable quantities of feedstocks for reuse. It is suitable primarily for materials and waste that cannot be mechanically recycled due to their properties or when the recycling process must produce like-new materials.

We are aware that shifting our production activities and our product portfolio to circular economy is a major, long-term undertaking that we cannot accomplish alone. For this reason, we will increasingly work on establishing collaborative partnerships and networks with our customers, suppliers, research institutes, and other solution providers throughout the value cycle.

 For more information on our activities, see “Circular Economy.”

Digitalization and Corporate Culture

Our Sustainable Future strategy rests on a solid foundation, with digitalization and our “We Are 1” corporate culture as key elements. We are focused on tackling digital transformation and the associated opportunities by implementing an extensive range of measures along the entire value chain, in the corporate functions, and at all points of contact with our customers. This involves Covestro promoting the use of digital technologies and leveraging the potential of artificial intelligence. At the same time, Covestro encourages an open climate at work that spurs employees to question existing concepts and develop new approaches for our business.

The digital transformation of our business aims to generate competitive advantages for Covestro. This includes expanding our digital R&D activities and collaborations with major corporations such as Google. Insights provided by data science additionally support the divisions in profitably deploying algorithms and machine learning. A team of specialists drive the development and implementation of our digital products and business models.

 See “Use of Digital Technologies.”

We have embedded our “We Are 1” corporate culture firmly in our company to fully leverage internal potential and meet our corporate goals. The key here is our employees who bring this culture to life. We work consistently on developing our culture and simplifying implementation by deriving specific measures from our four cultural dimensions.

 See “Corporate Values and Corporate Culture.”

Segment Strategy

Performance Materials Segment Strategy

The Performance Materials segment comprises mainly polyurethanes and polycarbonates product groups. The segment's standardized products are sold to outside customers and used by the Solutions & Specialties segment. The Performance Materials segment exclusively manufactures standardized products, aiming mainly to increase efficiency through cost management as well as process innovations.

In the years to come, demand for polyurethanes is expected to grow sharply. We manufacture the required precursors for flexible and rigid foams. Strategically important sectors include the construction industry and the furniture industry, where we already occupy a strong position. We intend to grow with the market in both industries. Worldwide efforts toward meeting the SDGs are also reflected in the short- and long-term demand for our products. For instance, growing calls for energy-efficient living space are expected to increase long-term demand for particularly effective insulation solutions in the construction industry.

The market for standardized polycarbonates is anticipated to grow only minimally in the coming years because of a lack of impetus for increased demand from sectors such as the construction and consumer goods industries. In the future, the majority of our polycarbonate volume will be passed on to the Solutions & Specialties segment for further processing and sale in high-growth markets.

The Performance Materials segment is home to most of our production facilities, and as such, is key to implementing our circularity strategy. The focus here is on steps such as continually optimizing our production facilities, procuring alternative raw materials, and developing sustainable product solutions, e.g., for diphenylmethane diisocyanate (MDI) and toluylene diisocyanate (TDI). The use of alternative raw materials enables us to produce these diisocyanates with a smaller carbon footprint, which is demonstrated and certified by way of mass balancing and the ISCC PLUS certification for end products.

Many of the precursors produced by the Performance Materials segment are further processed in the Solutions & Specialties segment or sold with additional, customer-focused services. Intersegment transactions are conducted at arm's length and reported separately as intersegment sales.

Solutions & Specialties Segment Strategy

The Solutions & Specialties segment covers a broad range of specialty products and customer-specific solutions in the following business entities: specialty polycarbonates (Engineering Plastics), precursors for coatings and adhesives (Coatings & Adhesives), polyurethane specialties and solutions (Tailored Urethanes), Thermoplastic Polyurethane, high-quality films (Specialty Films), and specialty elastomers (Elastomers). Covestro projects above-average growth in this area, above all in the Engineering Plastics and Specialty Films business entities.

We continually update our product portfolio to generate further growth in the Solutions & Specialties segment with a particular focus on sophisticated solutions for which there is strong demand in promising applications. These include smart homes, medical technology, holography, and materials for electric vehicles and wind turbines.

The continual development of innovative products and applications with significant customer benefit is therefore a core element of the segment's strategy. Other crucial factors for the success of our growth strategy in this segment are the respect and appreciation of our customers for our strong technological competence, standing apart from the competition based on our global leadership in consulting on application technology and carrying out complicated projects for customers, our expertise in chemical formulations and compounding, the efficient expansion of our capacities, customer-focused product development, and the continual improvement of our customer-centric pull supply chain.

Management

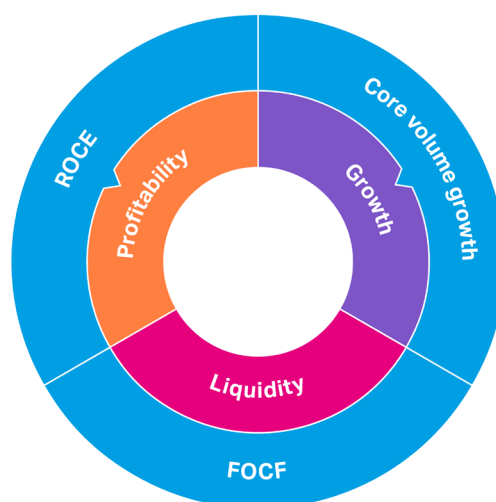
Management System

Covestro's management system is oriented toward long-term, profitable growth and continuous value creation. The Board of Management is the main decision-maker responsible for our global business and approving the planning derived from our Group strategy. In order to plan, manage, and monitor the development of our business, we use key management indicators which enable the Group's business performance to be evaluated in a comprehensive and holistic manner. In addition, the Board of Management uses defined sustainability goals and selected nonfinancial performance indicators to govern the Group's sustainable orientation.

Key Management Indicators

The Covestro Group assessed its business performance using indicators in the areas of growth, liquidity, and profitability in the fiscal year under review.

Key management indicators



Return on capital employed (ROCE) is the key management indicator used to assess the profitability of the Covestro Group, measuring the return the company achieves on the capital it uses (capital employed). ROCE is calculated as the ratio of net operating profit after taxes* (NOPAT) to average capital employed. If ROCE exceeds the weighted average cost of capital (WACC), i.e., the minimum return expected by equity and debt capital providers, the company has created value. ROCE is calculated annually at the end of each fiscal year.

Calculation of the return on capital employed

NOPAT	÷	Avg. capital employed	=	ROCE
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The ability to generate a cash surplus is measured by the free operating cash flow (FOCF). FOCF is an indicator of the company's liquidity and ability to finance its activities. It corresponds to cash flows from operating activities less cash outflows for additions to property, plant and equipment and intangible assets. A positive FOCF serves to pay dividends and interest and to repay debt.

* The imputed income taxes are determined by multiplying the effective tax rate by the operating result (earnings before interest and taxes, EBIT).

The growth of the Covestro Group is measured in terms of the development of core volume growth*. Unlike sales, this core volume growth key management indicator is influenced only indirectly by changes in raw material prices or currency effects.

The key management indicators are also used in Covestro's Group-wide bonus system (Covestro Profit Sharing Plan), which is applicable uniformly to all staff from the Board of Management members to employees under collective bargaining agreements. The three areas of profitability, liquidity, and growth each account for one-third of the final assessment and bonus calculation formula. As a result, all employees whose personal efforts contribute to Covestro's overall positive performance can share in the company's success.

 See "Overall Assessment of Business Performance and Target Attainment" and "Short-Term Variable Compensation."

From the year 2022 onward, greenhouse gas (GHG) emissions will be comprehensively integrated into the management system. In the reporting year, an additional change was approved that stipulates incorporating environmental, social, and governance (ESG) criteria into the short-term compensation system (Covestro Profit Sharing Plan, Covestro PSP) for the Board of Management and all employees. Earnings before interest, taxes, depreciation and amortization (EBITDA) will also replace core volume growth as a key management indicator. In the future, Covestro's management system will be made up of four components: growth measured as EBITDA, liquidity measured as FOCF, profitability measured as ROCE above the weighted average cost of capital (WACC), and sustainability measured in terms of selected ESG criteria. In the year 2022, the sustainability component will be determined by direct and indirect GHG emissions (Scope 1 and 2).

 See "Scope 1 and Scope 2 GHG Emissions" and "Long-Term Variable Compensation."

Other Relevant Indicators

Throughout its financial reporting, Covestro uses further indicators such as EBITDA, capital employed, and the absolute value contribution in addition to the key management indicators to assess the business performance of the Group.

EBIT and EBITDA

EBIT, which corresponds to income after income taxes plus financial result and income taxes, allows us to assess income without the influence of the income-dependent tax liability and/or various financing activities. EBITDA is used to assess the operating profitability of Covestro and its reportable segments during the year. EBITDA is EBIT plus amortization and impairment losses on intangible assets, and depreciation and impairment losses on property, plant and equipment, less impairment loss reversals. As a result, EBITDA is adjusted for possible distortions arising from various depreciation/amortization methods and measurement options, and therefore represents earnings from operating business activities.

 See "EBIT" and "EBITDA."

Capital Employed

Capital employed, which is relevant to the calculation of ROCE, is the interest-bearing capital required by the company for its operations. It is calculated from operating noncurrent and current assets less non-interest-bearing liabilities. Non-interest-bearing liabilities include, for example, trade accounts payable and current provisions. The average capital employed is determined using the capital employed at the beginning and end of the relevant period.

 See "Return on Capital Employed (ROCE) and Value Contribution."

* Core volume growth refers to the core products in the Performance Materials and Solutions & Specialties segments. It is calculated as the percentage change in externally sold volumes compared with the prior year. Covestro also takes advantage of business opportunities outside its core business, for example the sale of precursors and by-products such as hydrochloric acid, sodium hydroxide solution, and styrene. Such transactions are not included in core volume growth.

Weighted Average Cost of Capital (WACC)

The weighted average cost of capital (WACC) is relevant to the calculation of the absolute value contribution and reflects the expected return on the entire company's capital comprising both equity and debt. The cost of equity factors used in WACC is calculated by adding the risk-free interest rate to the risk premium for an equity investment. Covestro uses the returns on long-term German government bonds as the risk-free interest rate. We derive this risk premium from capital market information for comparable listed companies. The cost of debt factors is calculated by adding the risk-free interest rate to a risk premium on debt capital that Covestro calculates using the financing costs of comparable companies, and subtracting the tax benefit of interest incurred on borrowed capital. Calculation of the cost of capital generally has a long-term perspective; short-term fluctuations are evened out.

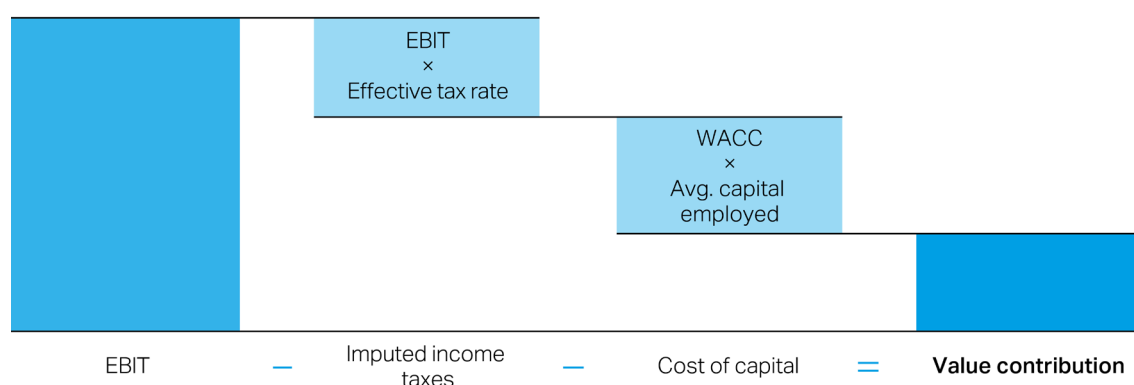
 See "Return on Capital Employed (ROCE) and Value Contribution."

Value Contribution

Covestro aims to steadily increase enterprise value. Value is generated if Group earnings exceed the cost of capital. The absolute value contribution is the difference between NOPAT and the cost of capital. The latter is calculated by multiplying the average capital employed by WACC. A positive value contribution means that value has been generated.

 See "Return on Capital Employed (ROCE) and Value Contribution."

Calculation of the value contribution



Net Financial Debt

Net financial debt is used to assess the financial position and financing requirements. It equals the sum of all financial liabilities less cash and cash equivalents, current financial assets, and receivables from financial derivatives.

 See "Cash Flows from Financing Activities."

Corporate Policies

We have laid down important basic principles for our actions in six policies applicable throughout the Group. The text of these guidelines is publicly available. They provide our employees with guidance, including in the areas of value creation; sustainability; innovation; employees; health, safety, environment, energy, and quality (HSEQ); and compliance. The standards outlined in these policies must be adhered to by all employees worldwide. Additional details are provided in directives. Local instructions are used to implement the directives in the country subsidiaries. Compliance with the directives and local instructions is verified using internal audits and other measures. In addition, issues and action plans as well as target attainment are monitored in a management review.

+ Additional information is available at: www.covestro.com/en/sustainability/service-downloads/policies-commitments

[Supplementary information >](#)

Corporate Policies

Value Creation

Covestro's primary objective is to turn its development activities and products into solutions that create value for customers, society, the environment, employees, and investors. We accomplish this, for instance, by manufacturing products with superior properties, environmental performance, usability, and cost effectiveness. At the same time, Covestro aims to make the life cycle of products as resource-efficient as possible to extract the greatest possible value from the resources used in them.

Sustainability

We want to bring economic success into alignment with environmental and societal goals. Doing business in this way conforms to Covestro's purpose: "to make the world a brighter place." In making decisions and taking actions, we therefore consider the three dimensions of sustainability – people, planet, profit – equally, while adhering to the principle of avoiding a negative impact on any of them. Our Sustainability Policy underscores this intention. Special committees at Covestro are responsible for defining and managing important sustainability topics. These include the development and implementation of targets and packages of measures

 See "Sustainability."

Innovation

Innovation is an essential factor in mastering the challenges of a changing world, remaining competitive, and creating value for the long term – inspired by and consistent with sustainability. Accordingly, we continually develop new products, processes, applications, and technologies that offer new perspectives. It is particularly important to us that innovation be an issue of personal concern to each and every Covestro employee.

 See "Innovation."

Employees

Covestro's success is based on the outstanding skills and strong commitment of its employees. We therefore offer our employees a good and safe working environment and promote their professional and personal development. Covestro values a corporate culture that is curious, courageous, and colorful, and enables employees to successfully contribute their talents to the company. The core competencies and management skills that guide our employees' further development are also oriented to these values.

 See "Employees."

Health, Safety, Environment, Energy, and Quality (HSEQ)

Health, safety, environment, energy, and quality are vitally important for achieving our goals. We set high standards and continually work toward improving our performance. This is the main objective of our integrated HSEQ management system, which ensures the implementation of the specifications in our HSEQ Group Regulation in orientation to or conformity with the internationally recognized standards ISO 45001, ISO 9001, ISO 14001, and ISO 50001.

 See "Integrated Management System for Health, Safety, Environment, Energy, and Quality."

Compliance

Covestro's corporate governance is characterized by a strong sense of responsibility as well as adherence to ethical principles. This includes strict compliance with all statutory requirements and Covestro's voluntary commitments, which are anchored in our internal regulations and are applicable to all employees worldwide.

 See "Compliance."

Corporate Commitments

As a company committed to operating sustainably, we take a clear stand on relevant issues. Like our guidelines, the text of these corporate commitments is publicly available. The minimum standards applicable to such efforts are stipulated in our voluntary corporate commitments. Compliance with them is governed by the corresponding directives, which are valid throughout the Group. At present, Covestro has entered into voluntary commitments on the following: the UN Sustainable Development Goals, the Ten Principles of the UN Global Compact, Responsible Care™, human rights, slavery and human trafficking (UK Modern Slavery Act Statement), water, product stewardship, corporate compliance, responsible lobbying, responsible marketing and sales, tax transparency, and conflict minerals. In terms of lobbying in particular, we have laid down clear and binding rules for our engagement in the political arena. The voluntary commitment and a more comprehensive directive are applicable Group-wide and build on transparency and openness in the interaction with representatives of political institutions. In addition, Covestro has voluntarily joined the European transparency register in addition to publicly publishing its voluntary commitment. Covestro does not make any donations as a company to political parties, politicians, or candidates for a political office. The associations in which Covestro is a member make donations under their own responsibility and according to the respective relevant legislation, in particular taking account of laws related to donations to political parties.

 Additional information is available at: www.covestro.com/en/sustainability/service-downloads/policies-commitments

[< Supplementary information](#)

Integrated Management System for Health, Safety, Environment, Energy, and Quality

Covestro's stated aims are to take preventive measures to protect employees, suppliers, and service providers; ensure uninterrupted operations; and continually improve quality. The Board of Management has tasked the management of the corporate Group Health, Safety and Environment (HSE) function with this responsibility directly. The integrated system implemented throughout the Group ensures that the requirements of the corporate health, safety, environment, energy, and quality (HSEQ) regulations are carried out. It is based on internationally recognized standards governing occupational health and safety (ISO 45001), the environment (ISO 14001), energy (ISO 50001), and quality (ISO 9001).

Adherence to processes and workflows is verified through regularly conducted internal audits, annual self-assessments, and external certifications. The insights we gain from these measures are incorporated into our annual management review. Every process is thus subject to ongoing monitoring and is updated as required.

Our existing HSEQ management system corresponds to the requirements of the current ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 standards. In fiscal 2021, based on these ISO standards, it was also successfully reviewed, audited, and had its certification upheld by an external certification body. Specific targets in line with the aforementioned ISO standards have been defined.

The acquisition of Resins & Functional Materials (RFM) resulted in new sites being added to the Covestro Group. Covestro's regulations will be applied to the new sites gradually, since different HSEQ guidelines and standards have applied to some of these locations in the past. This process will take some time and will run into the year 2022 or even beyond in specific cases. However, reporting on the relevant nonfinancial HSEQ statements has been harmonized, so all RFM sites have been fully integrated into the reporting as of April 1, 2021.

 See "Health and Safety" and "Environmental Impact of Own Operations" for additional details on the aforementioned targets.

The corporate HSE function is responsible for the integrated HSEQ management system, which comprises the following three elements:

Health and Safety

In the area of occupational health and safety, globally applicable processes and workflows include detailed rules governing the safety of production facilities and manufacturing processes, the investigation of accidents and environmental as well as transportation incidents, health care and occupational safety, and emergency management at Covestro. The rules stipulated by international standards such as ISO 45001 comprise the minimum requirements applicable worldwide and are supplemented with additional regulations if needed. They are intended to prevent work-related health impacts and accidents and incidents at the workplace or on transportation routes that could have adverse consequences for people or the environment. In addition, we offer support to our customers, for example by providing training on the safe handling of our products in and outside of our facilities. We increasingly rely on the support of third-party databases to help us identify, review, and update our compliance with mandatory legal and other requirements.

 See "Health and Safety."

Environment and Energy

Minimum environmental and energy standards applicable worldwide were specified to ensure that our high standards for resource conservation and emissions reduction are met. These requirements are based on internationally recognized standards and rules such as ISO 14001 (environmental management) and ISO 50001 (energy management). Each year we analyze and evaluate the effects of our activities on the environment. From our environmental performance assessment, we derive measures to reduce and minimize environmental impacts. Global process and workflow descriptions help us implement these measures throughout the Group. In the reporting year the energy efficiency system at the major German production facilities introduced in the 2008 fiscal year was reviewed and audited by an independent certification body, and its certification to ISO 50001 upheld.

Quality

We have very high expectations of the raw material quality we use, and we set ourselves standards for their processing into high-performance plastics and polyurethane precursors. Within the framework of our integrated HSEQ management system, our quality management activities meet the requirements of the current ISO 9001:2015 standard. Thanks to our quality management system, we can put in place the conditions necessary for incorporating our customers' requirements and their satisfaction into our products and services.

[Supplementary information >](#)

Audits and Certifications

Our binding Group regulations that serve to achieve HSEQ goals are available to all employees in the Group's in-house databases and are reviewed annually using internal audits and external certification companies. This may require the management system to be adjusted. Our business activities are covered by certified HSEQ management systems to the degree outlined below:

Certification of HSEQ management systems according to external standards¹

	2020	2021
Certified according to various quality management standards such as ISO 9001	100%	100%
ISO 14001 certified/EMAS validated (environment)	96%	95%
ISO 45001 (formerly OHSAS 18001) certified (occupational safety)	89%	87%
ISO 50001 certified (energy)	46%	48%

¹ In % of business activity, measured according to energy usage.

[< Supplementary information](#)

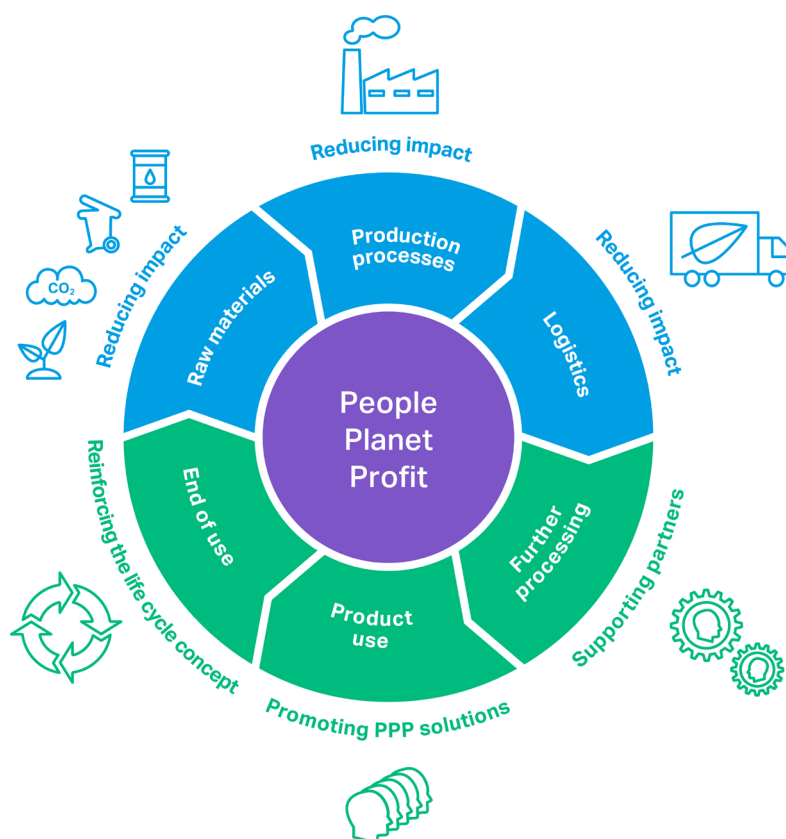
Sustainability

As a company, Covestro is fully committed to sustainability. This is stated clearly in our purpose “to make the world a brighter place” as well as underscored by our vision and our Group strategy with the strategic chapters which state our intention to “Drive sustainable growth” and “Become fully circular.” We set ambitious sustainability targets as early as fiscal 2016. We started including sustainability criteria in our long-term variable compensation system for Covestro’s Board of Management and executives as of the reporting period. Starting in fiscal 2022, these and other sustainability criteria will be applicable to not only the Board of Management but to all employees as part of the short-term variable compensation system.

See “Key Management Indicators,” “Long-Term Variable Compensation,” and “Covestro’s Sustainability Targets.”

We integrate sustainability into our business activities, while at the same time ensuring adequate focus on the issues of greatest relevance to us and our stakeholders. In addition to our responsibility for the environment, we also want to fulfill our social responsibility within society in accordance with our purpose. This is why we strive to add value at the social, environmental, and economic levels. Our decisions and our actions take into account the three dimensions of sustainability: people, planet, and profit (PPP). We are oriented toward a positive impact on at least two of the dimensions, while at the same time ensuring the third one is not negatively impacted. Every decision, every action we take, and the resulting consequences are considered holistically, that is, throughout the entire value cycle.

Sustainability formula



United Nations Sustainable Development Goals (SDGs)

Against this backdrop, the United Nations Sustainable Development Goals (SDGs) are critically important to us as a guideline for improving living conditions worldwide. The SDGs serve primarily as a source of direction and inspiration for innovation and as indicators for the future positioning of the company.

Additional information is available at: www.covestro.com/en/sustainability/service-downloads/policies-commitments

Covestro already makes positive contributions to all 17 SDGs and many sub-goals. The majority of these relate to products in our core business that, for example, help conserve large amounts of energy during their use phase or are used in other sustainable applications. Additional contributions stem from our own production activities, workflows, and business practices, from our social engagement, and from solutions for underserved markets (the inclusive business segment). In addition to evaluating the positive contributions to the SDGs that Covestro is already making, we believe that any analysis of SDGs must also aim to identify potential additional requirements that Covestro could face. By this, we mean topics that, from the perspective of stakeholders, could potentially be seen as having a negative impact on individual SDGs if there was any inactivity or neglect.

We are aligning our research and development (R&D) portfolio to the SDGs to increase our contributions further.

[Supplementary information >](#)

Covestro's contributions to the SDGs

	AREAS OF ACTIVITY ¹				
	R&D projects ²	Core business products	Production, workflows, business practices	Inclusive business	Social engagement
1 No Poverty	●	●	●	●●	●
2 Zero Hunger	●	●		●●	●●
3 Good Health and Well-Being	●●●	●●	●●	●	●
4 Quality Education			●	●	●●●
5 Gender Equality			●●	●	●●
6 Clean Water and Sanitation	●	●	●●●	●	●●
7 Affordable and Clean Energy	●●	●●●	●		●●
8 Decent Work and Economic Growth	●●●	●●	●●●	●	●●
9 Industry, Innovation and Infrastructure	●●	●●	●●	●●	●●
10 Reduced Inequalities	●		●	●	●
11 Sustainable Cities and Communities	●●	●●	●	●●	●
12 Responsible Consumption and Production	●●●	●●●	●●●	●●	●
13 Climate Action	●●●	●●●	●●	●	●
14 Life Below Water	●		●		●
15 Life on Land	●		●		
16 Peace, Justice and Strong Institutions			●	●	
17 Partnerships for the Goals	●	●●	●●	●●●	●●●

● Low ●● Medium ●●● High

Covestro internal study from the year 2017; R&D projects, production, workflows, business practices, and inclusive business activities updated in the year under review (abridged process)

¹ The impact of the contributions is comparable within individual areas of activity.

² Evaluation of R&D projects by project budget and estimated SDG contribution.

[< Supplementary information](#)

Material Sustainability Topics

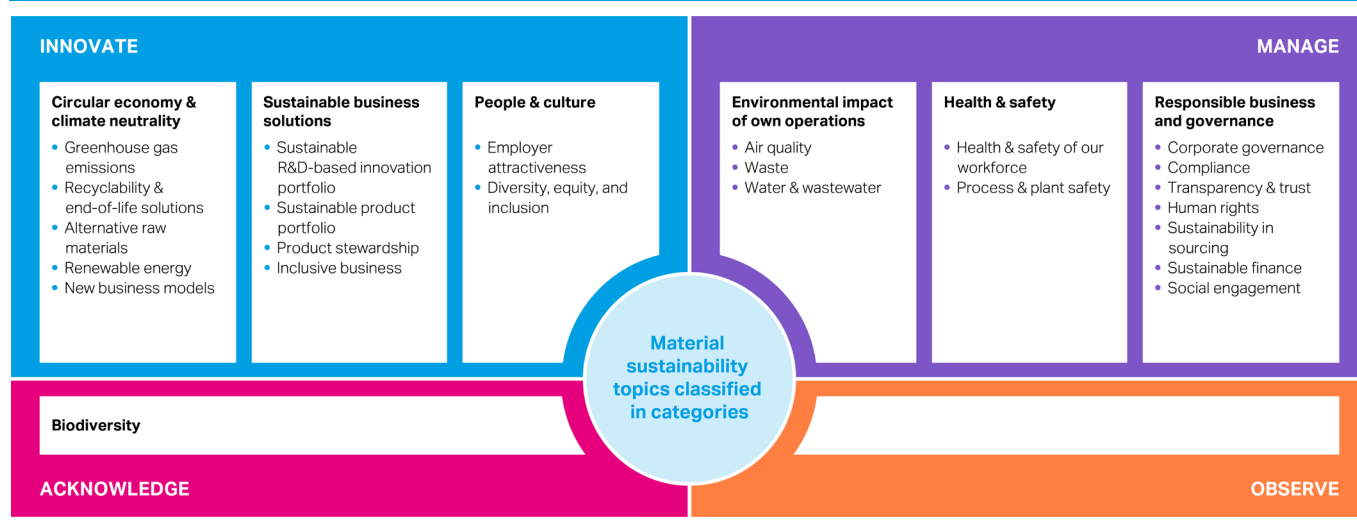
We identify material sustainability topics to create a foundation for Covestro's worldwide sustainability efforts and provide focal points for our sustainability management activities. Detailed information for specific targets, measures, and management approaches for the respective material sustainability topics is provided in the relevant chapters of the Group's Management Report.

Regularly conducted materiality assessments help us to identify and prioritize the sustainability topics most important to the company. We perform both full materiality assessments every three to four years and annual reviews, an abridged process with reduced scope and effort. The most recent comprehensive materiality assessment was conducted in the 2020 fiscal year. In all other years, such as the reporting year, we review all material topics and modify them as necessary in line with the latest developments. We complete a thorough process every three to four years to identify the material sustainability issues and compile an extensive list of topics from internal and external sources. These are assessed based on their relevance to Covestro, taking into account the feedback and opinions of internal and external stakeholders. To identify the material sustainability topics for Covestro, we apply the three dimensions of materiality: "business relevance," "stakeholder relevance," and "impact of Covestro's activities on the respective sustainability aspects." The topics are subsequently combined into thematic areas and assigned to four categories – Innovate, Manage, Observe, and Acknowledge – to reflect the need for different actions depending on the management approach in each case. The material topics and their assignment to the categories are reviewed and acknowledged annually by the head of the corporate Sustainability & Public Affairs function (Chief Sustainability Officer, CSO) and the Board of Management.

In the reporting year, the annual review was conducted by a group of employees from the corporate functions, (including Strategy; Portfolio Development; Investor Relations; Group Health, Safety and Environment), along with Risk Management employees and the topic owners. This group was tasked with responsibilities including bringing in the views of stakeholders from inside and outside the company. The material sustainability topics identified in the 2020 comprehensive analysis were confirmed in the 2021 annual review. No additional or new topics were identified for Covestro as a result of the acquisition of the Resins & Functional Materials business. In the year under review, the Corporate Governance topic was incorporated into the "Responsible business and governance" cluster. "Product stewardship" was assigned to "Sustainable business solutions." Two topics from the previous year were combined into the topic of "Sustainable finance": "Addressing expectations of sustainability-oriented investors" and "Financial instruments linked to sustainable performance." In addition, some designations were modified, but this did not affect the topic definitions.

See "Nonfinancial Group Statement."

Results of the materiality assessment



Material Sustainability Topics in the "Innovate" Category

The material topics in the "Innovate" category are highly relevant to our business and for stakeholders, and provide opportunities for direct influence by Covestro's business activities on the respective sustainability topics. New management approaches must be defined and established for these topics of future relevance.

The “Circular economy & climate neutrality” cluster has become increasingly important in the public debate and from the business perspective, which is also reflected in our company’s vision and our strategic chapter “We will be fully circular.” Specific action items in our Group’s circular economy strategy program were identified for implementation and approved by the Board of Management. Furthermore, our activities in the areas of “Recyclability & end-of-life solutions,” “Alternative raw materials,” and “New business models” underscore our circular economy ambitions. We devote our expertise in chemical processes to supporting the development of recycling processes for used materials for plastics production. Covestro aims to use “Alternative raw materials” to switch the fossil raw materials we use in production to renewable.

We intend to help achieve climate neutrality by reducing the volume of fossil raw materials employed in production and upstream and downstream links in the value chain. An important way to achieve this is cutting greenhouse gas emissions in our production processes. We have set a goal of decreasing our specific greenhouse gas emissions per metric ton of product by 50% from 2005 levels by the year 2025. In the future, we also aim to obtain 100% of the electricity required by all of our sites from renewable energy sources.

 See “Covestro’s Sustainability Targets” and “Circular Economy and Climate Neutrality.”

In the year under review, the “Sustainable Business Solutions” cluster was also very significant. We have been aligning our activities, including our innovation efforts, more closely to the SDGs since the year 2017. Covestro’s goal is to devote 80% of its R&D costs by 2025 to projects that contribute to achieving the SDGs. Another important topic is the “Sustainable product portfolio.” We are working on developing a methodology for assessing our product portfolio from a sustainability perspective. This provides key points of reference to “Product stewardship.” We consolidate our “Inclusive business” activities in a program under which we aim to meet needs in what are known as underserved markets.

 See “Innovation,” “Group Strategy,” “Product Stewardship,” and “Inclusive Business.”

The cluster of “People & culture” plays a key role in our sustainability positioning and is a pillar of our Group strategy. Now and in the future, Covestro works to develop innovative solutions to advance issues that affect employees, including our efforts to increase our “Employer attractiveness.” We also advocate for “Diversity, equity, and inclusion.”

 See “Employees.”

Material Sustainability Topics in the “Manage” Category

The material topics in the “Manage” category are also highly relevant to our business and for stakeholders, and provide opportunities for direct influence by Covestro’s business activities on the respective sustainability topics. In contrast to the “Innovate” category, Covestro already applies well-developed management approaches to “Manage” topics, which are continually reviewed and improved when necessary.

The “Environmental impact of own operations” cluster is an integral part of our integrated Health, Safety, Environment, Energy and Quality (HSEQ) management system. In addition, “Air quality,” “Waste,” and “Water & wastewater” are environmental topics integral to our management and business processes. Emissions are recorded and analyzed as part of determining the Group’s environmental impact. We strive to reduce waste streams by disposing of waste by type and implementing economically feasible recycling processes. At Covestro, we view water and wastewater holistically with regard to water usage and quality as well as wastewater volumes and possible plastic waste in the world’s oceans.

 See “Integrated Management System for Health, Safety, Environment, Energy, and Quality” and “Environmental Impact of Own Operations.”

The cluster of “Health & safety” is also addressed in our integrated HSEQ management system. “Health & safety of our workforce” and “Process & plant safety” are equally important to us. As a chemical company, we bear a special responsibility for the health and safety of our stakeholders. This is why we strive to eliminate workplace incidents and accidents and operate our plants safely to protect people and the environment.

 See “Integrated Management System for Health, Safety, Environment, Energy, and Quality” and “Health and Safety.”

Our material sustainability topic review in the reporting year resulted in the “Corporate Governance” topic being included in “Responsible business and governance” cluster. This reflects our view that environmental (E), social (S), and governance (G) aspects are equally important within our material sustainability topics. Moreover, Covestro clusters “Compliance,” “Transparency & trust,” “Human rights,” “Sustainability in sourcing,” “Sustainable finance,” and “Social engagement” in the “Responsible business and governance” thematic area. “Compliance” and “Transparency & trust” form the foundation of our business practices. Likewise, it goes without saying that we are committed to respecting and safeguarding human rights, another material topic. Our commitment to sustainability also includes our suppliers. Covestro promotes “Sustainability in sourcing” with social, ethical, and environmental standards for existing and new suppliers, with the goal of having 100% of our suppliers with regular purchasing volumes of more than €100,000 comply with our sustainability requirements by 2025.

 See “Compliance,” “Human Rights,” and “Sustainability in the Supply Chain.”

 See “Stakeholder Dialogue.”

Our commitment to sustainability extends to finance. The material sustainability topic “Sustainable finance” covers Covestro’s sustainability-oriented investors as well as financial instruments linked to sustainable performance. In the first case, we want to increase our attractiveness for investors interested in sustainability, while in the second, financial instruments linked to sustainable performance offer attractive possibilities. Covestro’s performance in the relevant strategic sustainability rankings directly influences the cost of these financial instruments and therefore creates incentives for action on sustainability.

 See “Public Recognition” and “Financial Position.”

Besides core business activities, “Social engagement” is another way Covestro aims to contribute to sustainable development.

 See “Social Responsibility.”

Material Sustainability Topics in the “Observe” Category

In addition to the “Innovate” and “Manage” categories, the “Observe” category highlights topics that may become more important for Covestro in the future.

In the review of material sustainability topics conducted in the reporting year, the “Financial instruments linked to sustainable performance” topic from the previous year was transferred to “Sustainable finance” in the “Manage” category. No material sustainability topic is currently assigned to the “Observe” category.

Material Sustainability Topics in the “Acknowledge” Category

Topics with major social importance are included in the “Acknowledge” category, such as “Biodiversity,” a significant issue for our stakeholders. That is why we include the topic in this category. Our commitment to a circular economy, environmental protection, and the associated increase in the use of biobased raw materials will make the topic of biodiversity more and more important for Covestro in the future.

Sustainability Management

Covestro's Sustainability Targets

The company applies a comprehensive approach to sustainability targets, which covers the entire product life cycle, including social, environmental, and economic aspects. Our sustainability targets contribute to achieving the SDGs and reflect the aims of some of our material sustainability topics in the "Innovate" and "Manage" categories. We continually observe developments outside the company and develop our sustainability targets in line with our vision and corporate strategy. In the reporting year, we worked on updating our CO₂ roadmap and our sustainability target for GHG emissions. We are planning to define and publish new target values in the year 2022 and report on details and progress against our sustainability targets in the appropriate sections of the Group's Management Report:

- We want our research and development (R&D) project portfolio to be aligned with the SDGs. By the year 2025, 80% of project expenditures for R&D will take place in areas that contribute to reaching these goals. In the year 2021, 54% of R&D project costs met this target (previous year: 51%).

 See "Innovation."

- All of our suppliers with regular purchasing volumes of more than €100,000 per year are expected to comply with our sustainability requirements by 2025. During the year 2021, 80% of relevant suppliers met our sustainability requirements (previous year: 79%).

 See "Sustainability in the Supply Chain."

- Specific greenhouse gas emissions per metric ton of product manufactured are expected to be reduced by 50% from the 2005 benchmark by the year 2025. By the end of fiscal 2021, we achieved a reduction of 53.9% (previous year: 46.2%).

 See "Climate Neutrality."

- We want 10 million people in underserved markets to benefit from our solutions by the year 2025. The goal is to improve their standard of living primarily through affordable housing, sanitation, and food security. By the end of fiscal 2021, our solutions had already reached 3.2 million people (previous year: 1.1 million people).

 See "Inclusive Business."

- We intend to create more value and increase our carbon productivity by using fewer carbon-based fossil resources. The goal is to decouple our value-generating activities from these non-renewable and non-circular raw materials. We see our circular economy activities as a key lever for shifting the previously linear use of resources in our business toward circularity and regeneration.

 See "Circular Economy and Climate Neutrality."

[Supplementary information >](#)

Monitoring

Sustainability is a core element of our Group strategy with an increasing impact on our business activities. Oversight of sustainability at Covestro begins with the highest governing body, the Supervisory Board, whose Sustainability Committee was established in the reporting year; it is dedicated to working on sustainability issues at Covestro. On the Board of Management, the Chair is responsible for the topic of sustainability. The CSO, who is head of the corporate Sustainability & Public Affairs (S&PA) function, reports to the Chair of the Board of Management.

A central governance body for environmental, social, and governance (ESG) issues was set up to ensure continual progress and permanent integration of these topics into all areas of the company. The new ESG Governance Body (ESG GoB) is staffed with top-level executives from the business entities and relevant corporate functions and is responsible for Group-wide sustainability issues, oversees mission-critical projects and activities, and possesses the corresponding decision-making powers. In addition, in-depth discussions are held throughout the Group to identify important issues and trends and to promote the implementation of the sustainability agenda in the corporate functions and business entities. The goal here is to manage sustainability issues consistently and holistically and to accelerate Covestro's sustainability agenda.

Due to the multi-faceted nature of this committee, various corporate functions and business entities are regularly involved, and depending on the topic, additional internal and external guests may be invited to participate. The Chief Executive Officer (CEO) chairs the committee, and the Head of Sustainability is tasked with organization and execution.

Composition of the ESG Governance Body (ESG GoB)



As a corporate function, S&PA defines the sustainability strategy and spearheads general sustainability projects and programs in the company. In addition, S&PA coordinates Covestro's sustainability activities and supports the other corporate functions and business entities in implementing them in operations. Furthermore, it represents Covestro's interests outside the company.

The corporate function was reorganized in the year under review: Central teams responsible for circular economy, climate and energy, sustainable product portfolio management, stakeholder engagement, and social issues are the points of contact with extensive expertise in these topics in the function. The teams are supported by additional regional functions that pursue an integrated sustainability and interest agenda while taking into account regional requirements. The central teams report to the CSO, who is also Head of S&PA corporate function and reports to the CEO.

Stakeholder Dialogue

An open and continuous exchange with our regional, national, and global stakeholders is the foundation for mutual understanding and societal acceptance of Covestro's decisions. At the same time, these discussions provide new inspiration and important recommendations. We have a close and collaborative relationship with our stakeholders. They assess our company not only from a legal standpoint, but also according to whether we do business in a sustainable and ethical manner. In order to identify material sustainability topics, we continually

analyze the interests, expectations, and needs of our major stakeholders and incorporate the results into our materiality analysis, our sustainability agenda, and our opportunity and risk management activities.

 See "Material Sustainability Topics."

The following chart provides an overview of our key stakeholder groups and the relevant dialogue formats.

Covestro's transparent dialogue with important stakeholders

Stakeholder groups	Forms of dialogue
Customers	• Regular in-person exchanges via Sales and Marketing employees • Branding and market research, customer surveys • Attendance at international industry trade shows • Webinars and digital showrooms
Employees	• Town hall meetings with members of the Board of Management and senior executives • Ad-hoc mailings and presentations, company intranet, social media, internal campaigns • Dialogue between managers and employees, regular discussions between the Board of Management and Works Council
Suppliers	• Together for Sustainability initiative • Sustainability events and workshops with suppliers • Regular exchange via staff with procurement responsibilities
Associations	• Active member in national and international associations, e.g. Association of the Chemical Industry e. V. (VCI), Plastics Europe, American Chemistry Council (ACC), and China Petroleum and Chemical Industry Federation (CPCIF)
Scientific community	• Long-standing, collaborative relationships with leading German and international universities and public research institutions
Investors, lenders, and analysts	• Annual general meeting • Annual report, half-yearly, and quarterly reporting • Various events for investors and analysts with different focuses • Online information offered on investor.covestro.com
Regulators	• Regular exchange with government agencies, ministries, politicians
The public, neighbors, and NGOs	• Ad-hoc dialogue, e.g., in the event of investment projects in the community • Chempark neighborhood offices (Germany), community advisory panels (CAPs) (United States)
Media	• Press releases, press conferences, background discussions, individual interviews • Communication through social media channels such as LinkedIn, Twitter, Facebook, and YouTube • Annual report, half-yearly, and quarterly reporting, as well as presentations and speeches from conferences and meetings (also available on our website)

Depending on the topic and its relevance, Covestro's departments identify and prioritize major stakeholders and select the appropriate dialogue format and frequency of contact in each case. Covestro has been using various digital dialogue formats (for example, for the Annual General Meeting as well as employee and customer events) to ensure that the company stays in touch with its stakeholders during the coronavirus pandemic.

[< Supplementary information](#)

Public Recognition

Our sustainability activities relating to environmental, social, and governance (ESG) are regularly evaluated by third-party organizations such as rating agencies. Sustainability ratings are not only a decision-making basis for institutional investors and customers, but also help us to continually review our sustainability activities and supplement them as needed. We have identified five strategic ratings and actively engage with the agencies. In the year 2021, Covestro received recognition from the rating agency ISS ESG, just as in fiscal 2020. ISS ESG again awarded us Prime status with an overall score of B–. This puts Covestro among the best 10% of rated companies in the chemical industry. Additionally, Covestro was ranked above average once more by another rating agency, Sustainalytics, placing it fifth out of 124 specialty chemical companies assessed. In the year 2019, the international rating agency EcoVadis gave us its top Gold rating, and we also retained the previous year's A rating from MSCI ESG Research, one of the world's largest provider of sustainability analyses and ESG ratings. In addition to the above-named ratings, we also qualified to remain listed in the important FTSE4Good Series. Covestro participated in the Carbon Disclosure Project's (CDP) Climate Change rating for the first time in the reporting year, receiving the second best score of A– right out of the gate. This demonstrates Covestro's great willingness to disclose a wide range of climate-related information and report extensively on the opportunities and risks for the company inherent in climate change.

Covestro has already entered into financing arrangements that link financing costs to a sustainability rating. Examples in the past included our revolving credit facility and bridge financing. Covestro continually observes whether other financial instruments can be linked meaningfully to sustainability aspects.

📄 See "Material Sustainability Topics" and "Financial Position."

Assessments by third-party organizations

Rating	Rating scale	Covestro's score						Distinction
		2016	2017	2018	2019	2020	2021	
	A to D– (top score: A)							A– "Leadership" status (since 2021)
	0–100 points (the higher the better)	73			80			
	A+ to D– (top score: A+)	B–		B–		B–		"Prime" status (since 2016)
MSCI	AAA to CCC (top score: AAA)	BBB	BBB	A	A	A	A	
	Until 2019: 0–100 points (the higher the better) After 2019: 0–100 points (the lower the better)	74	75		80	23.3	20.0	18.3

We consider the results in these ratings and the inclusion in sustainability indices an indication of our ESG performance. The details of these ratings also show us how we can continue to improve.

➕ Additional information is available at: www.covestro.com/en/sustainability/what-drives-us/rating-and-indices

Circular Economy and Climate Neutrality

Strategy, Management, and Implementation

A key component of Covestro's Group strategy is the aim to become fully circular. This helps us address the environment-related sustainability aspects of our activities in particular. For us as a carbon- and energy-intensive company, our circularity strategy covers all of our commitments in this regard, particularly including our aim of achieving climate neutrality.

In moving toward a circular economy, Covestro strives to provide solutions with a lower carbon footprint than conventional production so that products and materials are returned to the value creation cycle at the end of their life cycle – as a whole, in the form of polymers, or in molecular or other chemical forms. Using other renewable sources of carbon and increasingly deploying renewable energy in production are supplementary measures Covestro will take to establish circularity in the company and achieve climate neutrality. In accordance with the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC), we understand and support climate neutrality as society's collective goal of attaining net zero greenhouse gas (GHG) emissions by the year 2050 in the sense that they are equal to or lower than the emissions removed by the planet through natural absorption. For Covestro, this means reaching net zero emissions in its own operations and in energy procurement, while working on solutions to reduce emissions along the value chain. In addition to reducing emissions, this includes a shift toward nonfossil biogenic CO₂ sources, the use of technical and natural sinks, or compensatory measures to balance residual emissions.

In the reporting year, Covestro took additional steps to further advance efforts toward "becoming fully circular" in line with our corporate vision. All our activities aim to close carbon and material loops, and thus achieve climate neutrality in the company itself and in upstream and downstream stages of the value chain as well as reduce resource use and shrink our environmental footprint.

For Covestro, becoming fully circular also includes a seamless transition to climate neutrality. Covestro has been able to continually reduce specific energy usage by 40.2% since fiscal 2005 and therefore decrease the associated specific GHG emissions (Scope 1 and Scope 2). It goes without saying that the energy used to put in place a circular economy should not result in higher greenhouse gas emissions. Renewable energy plays a key role in this regard.

For the first time, we are supplementing our climate reporting for fiscal 2021 with a separate report published on our website aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).



OUR TARGET FOR INCREASING CARBON PRODUCTIVITY

STATUS

Our circular economy activities are making a critical contribution. We investigated and evaluated various indicators and measurement methods for circularity during the reporting year and will build on this to develop a system for Covestro.

We intend to create more value sustainably and increase our carbon productivity by continually using fewer carbon-based fossil resources, taking a regenerative approach, and closing material loops. The goal is to decouple our value-generating activities from nonrenewable and noncircular raw materials such as fossil carbon.



Our global Circular Economy strategy program is our contribution to promoting a circular economy. We updated our focal areas in the strategy program as a result of the restructuring of the Group and continuous implementation of circularity in the company. Moreover, Covestro launched a global climate program in the reporting year led by the head of the Sustainability & Public Affairs corporate function (Chief Sustainability Officer). This program aims to build on the existing system for recording greenhouse gas emissions (Scope 1 and

Scope 2) to coordinate a shift by our production facilities toward climate neutrality. In fiscal 2022, we therefore plan to develop climate targets along with interim targets. The first step is to focus on quantitative targets for Scope 1 and Scope 2 emissions. The effects of future recycling technologies and new circular loops on greenhouse gases will also be considered. The second step will be to additionally include all relevant Scope 3 emissions and assign quantitative targets.

The segments and corporate functions are responsible for implementing the Group's vision. Global teams from various corporate functions drive implementation in line with the Circular Economy strategy program with a focus on topics such as developing circular business solutions, marketing circular solutions, transforming the product portfolio, sourcing renewable energy and raw materials, circular R&D, and site transformation. Their findings and recommendations are used to further develop the strategic circular economy action plan and the associated targets. Also contributing to this effort are other areas of focus covering advocacy, collaboration, employee engagement, and responsible business practices. Key guidance and questions regarding the circular economy strategy are handled by the Group's top-level governance body on environmental, social and governance (ESG) issues. This strategy program is sponsored by Covestro's Chief Executive Officer (CEO).

Circular Economy

Efforts toward building a circular economy in the company can be measured by verifying the degree to which we can replace fossil sources of carbon for production with renewable raw materials and create a closed loop for producing renewable anorganic compounds. We accomplish this for carbon sources by concentrating on products and processes that permit us to employ biomass, CO₂, and raw materials recycled from waste. Synthetic raw materials manufactured using green electricity, such as hydrogen, are also becoming increasingly important. In particular, Covestro can leverage procurement on the one hand and the development of our own innovative process technologies for CO₂ use, biotechnology, and plastics recycling using chemical means on the other. We are counting on new strategic partnerships to promote recycling within the value chain to make alternative raw material use transparent and to ensure used plastics are recycled at the end of their life cycle.

Monitoring Circularity in the Company

In the interest of quantifying our progress and successes in building a circular economy in line with our Group's vision, this reporting year we researched and assessed various indicators and methodologies for measuring circularity in the company. We aim to develop a customized system for Covestro following on this effort. To this end, we are also studying existing models, e.g., the ones developed by the Ellen MacArthur Foundation or the World Business Council for Sustainable Development (WBCSD), and building on our experience to date with approaches to carbon productivity.

Criteria for a Circular and Sustainable Product Portfolio

We have begun defining criteria and circularity requirements for our products and services so that we can align our product portfolio more closely with circular solutions for our customers and offer these in a targeted manner in the future. Examples include minimum recycled or renewable raw material content and the combined use of renewable energy in the production of our materials. A top priority in this regard is to improve our carbon footprint compared with a conventional product portfolio so that we can make a significant contribution to future climate-neutral value creation in our industry. During the year under review, we marketed new, circular product solutions in both segments.

Recyclability & End-of-Life Solutions

Our core technical competence is the development and application of complex chemical processes. In particular, we want to use this expertise to establish innovative chemical and biochemical recycling and production processes for a circular economy. We want to create processes that enable us to reclaim from used materials the chemical precursors required for their production. These can in turn be used as raw materials in our production activities. In addition, we also want to use raw materials that were recycled in upstream stages of the value chain at Covestro. On the whole, chemical recycling processes are an important tool to help Covestro in gradually replacing the use of fossil-based materials and in contributing to closing carbon loops as a pillar in a climate-neutral method of production. The benefits of the new processes will be verified by means of a life cycle assessment (LCA), in other words, taking into account effects and contributions throughout the entire life cycle.

When we engage in dialogue with politicians and the public, we advocate for structuring the required regulatory environment for establishing a circular economy with room for innovation and, in addition to established recycling methods such as mechanical recycling, also recognizing chemical recycling processes as complementary methods.

Covestro is currently researching recycling processes for its own products and materials in more than 20 projects. Of particular importance for Covestro are processes with which materials can be chemically or enzymatically transformed back into their molecules. The secondary raw materials obtained in this manner are of a comparable quality and have properties similar to conventionally manufactured raw materials, and can therefore be reused to manufacture products and materials.

We made progress in areas such as thermochemical recycling of high-performance materials with complex compositions. In the reporting year, Covestro commissioned two new laboratories in Antwerp (Belgium) and Dormagen (Germany) for the thermal decomposition of chemical compounds at elevated temperatures. These facilities can break down polycarbonates as well as rigid foams into high-quality molecules that can then be recycled and integrated into production processes as raw materials. Our low-temperature pyrolysis process enables us to eliminate several steps and therefore to considerably cut carbon emissions compared with conventional high-temperature pyrolysis.

Both pyrolysis and depolymerization are being investigated and pursued as possible chemical recycling technologies for rigid polyurethane foams. In depolymerization, polymers are turned back into materials such as monomers and intermediates using solvents, catalysts, and heat, under pressure if necessary. In this context, CIRCULAR FOAM, an EU project coordinated by Covestro, was launched in October 2021 and will run for four years.

 See "Strategic Partnerships and Collaborations."

Furthermore, in the year 2021, Covestro made progress in the chemical recycling of flexible polyurethane foam from mattresses. After commissioning a pilot plant in Leverkusen (Germany) at the end of fiscal 2020, we continued to research detailed process parameters in the reporting year and were therefore able to further analyze the laboratory results to date.

Another strategic option for Covestro is enzymatic recycling, which involves using enzymes to very selectively break down plastics into smaller fragments (monomers) at low temperatures. These monomers can then be reused to produce new, equally high-quality plastics. Enzymatic recycling is still in the early phase of development, but due its high selectivity (generating few to no by-products) and low processing temperatures, this technology is very promising. Covestro has identified this potential and, in addition to our own research, has entered into key partnerships to deploy this innovative technology in recycling.

Besides developing pioneering recycling processes, Covestro has also tackled waste logistics. We are developing these activities in line with our circular economy goals of finding suitable ways to reuse previously used materials and products at the end of their life cycle. To this end, Covestro signed a strategic letter of intent with environmental services provider Interseroh Dienstleistungs GmbH, Cologne (Germany), during the reporting period aimed at collaborating on establishing new recycling loops. This partnership is a significant milestone for the convergence of the chemical and recycling industries.

Alternative Raw Materials

In addition to Covestro's own production of recycled and biogenic raw materials, the strategic alignment of our raw material and energy procurement activities with our corporate vision is vitally important. We aim to continually increase the share of alternative raw materials used in production and reach 100% in the long term. Covestro defines alternative raw materials as all raw materials made from biomass, CO₂, or waste, or manufactured on a nonfossil basis using renewable energy.

In the 2021 fiscal year, Covestro further stepped up the volume of strategic alternative raw materials sourced. We purchased a total of more than 20,000 metric tons of circular raw materials for use in production activities in Europe and at our site in Shanghai (China). The goal here is to be able to offer a broad market a steadily growing portfolio of sustainably manufactured materials.

We have begun to have our production facilities audited and certified to the ISCC PLUS process to reflect the certification of these raw materials for further use along the entire value chain. International Sustainability and Carbon Certification (ISCC) is a recognized system for certifying the sustainability of biomass and bioenergy. The standard, which covers all stages of the value chain, is widely used worldwide. In addition to Krefeld-Uerdingen (Germany) and Antwerp (Belgium), Covestro had additional sites, including Shanghai (China), certified to the ISCC PLUS process for the integration of renewable raw materials in production in the reporting period.

New Business Models, Digitalization, and Transparency in the Value Creation Cycle

It is critically important for the transformation to a circular economy that at the end of the life cycle of a material, the necessary information is available to choose a suitable recycling method. Covestro is involved in the Circularise Plastics project along with Circularise, The Hague (Netherlands), and DOMO Chemicals, Leuna (Germany). The objective of the project is to develop an open blockchain standard for establishing a data exchange protocol.

 See "Strategic Partnerships and Collaborations."

Covestro also implements digital processes to support technology development as part of the circular project portfolio. "In silico" catalyst development, in which the sequence of chemical reactions and the effect of different catalyst structures are calculated with computer-based methods, and simulation of reactions are common methods in digital chemistry that are applied in this context. We use our expertise in digitalization to develop important polymer feedstocks based on alternative raw materials. Covestro additionally concentrates on closing material loops in a number of different applications in the product portfolio. This includes partnerships and new business models aimed at adding value for our customers, for example, by marketing recycled products. In this way, modern data science methods support adaptation to future value chains.

 See "Use of Digital Technologies."

Global and Regional Promotion of the Circular Economy

We also promote the circular economy by participating in regional and global initiatives. For example, as a founding member of the Alliance to End Plastic Waste, Covestro actively campaigns for regulated systems for disposing of and recycling plastic waste to stop it from entering the environment.

 See "Alliance to End Plastic Waste."

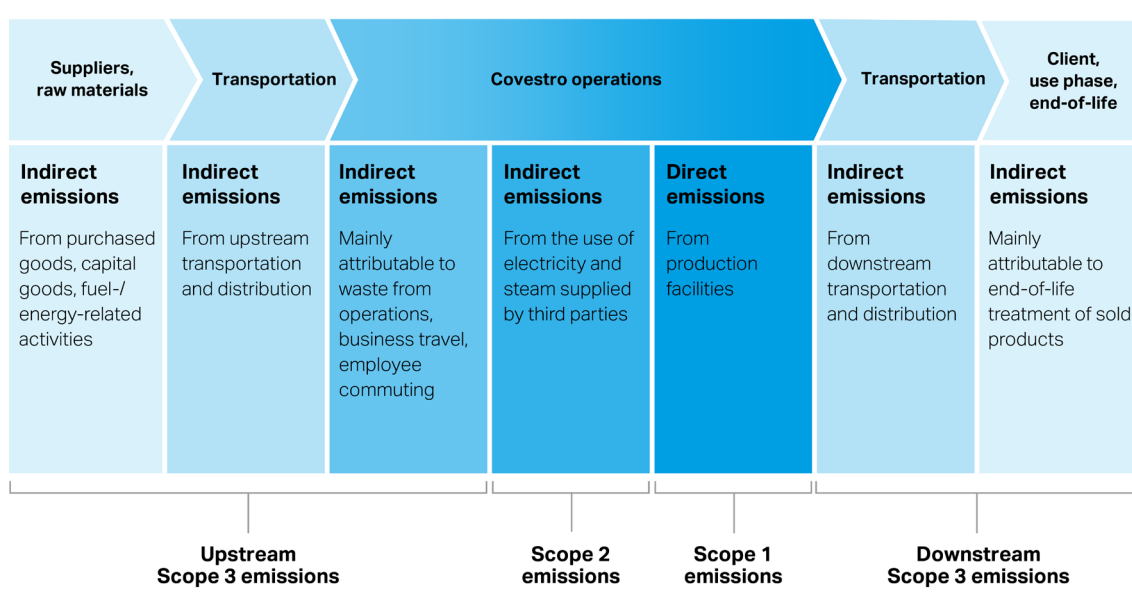
In addition to various R&D projects on the circular economy, Covestro participates in other circular economy projects at the sociopolitical level in Europe. Covestro is a founding member of the Circular Plastics Alliance, whose goal is for European industry to use at least 10 million metric tons of recycled plastics annually from the year 2025 onward. Recommendations for value-chain-specific action items are developed here in specific working groups. Covestro is an active member in the automotive, packaging, construction, electronics, and monitoring groups.

In China, we were also involved in circular economy topics through various associations such as the China Petroleum and Chemical Industry Federation (CPCIF), the China Plastics Reuse and Recycling Association (CPRRA), and the China Circular Economy Association (CCEA). By participating in these associations, Covestro plans to contribute to advancing the closed loop principle for plastics in China and to raising awareness among politicians and citizens of circular options along the entire value chain, particularly in the area of plastics. As one of the world's most important producers of chemicals, China is taking steps to further domestic plastic recycling and, at the same time, to prohibit or limit the use of single-use plastics. Covestro contributed in the year under review to developing national standards there for recycled polycarbonate along with a consortium of partners from the Chinese recycling value chain.

Climate Neutrality

Along with governments, non-governmental organizations, and other private-sector companies, Covestro supports implementation of the results of the 21st UN Climate Change Conference, which took place in Paris in 2015, and is committed to the UN Sustainable Development Goals (SDGs). For instance, Covestro participates in the German Chemical Industry Association's (Verband der Chemischen Industrie, VCI) In4Climate NRW and Chemistry4Climate initiatives to proactively develop solutions to master the challenges posed by climate change and bring about the industrial transformation necessary to do so. Our long-term corporate vision of becoming fully circular can only be successful if, at the same time, total greenhouse gas (GHG) emissions are continually reduced in order to contribute to achieving a climate-neutral economy. Covestro's climate program includes this transformation as a strategic component. In the reporting year, the global CO₂ roadmap was updated as part of the climate program to bring Covestro's existing goal of reducing greenhouse gas emissions in alignment with our corporate vision and regulatory requirements. The roadmap is a pillar of our climate program intended to support our efforts to set new GHG emissions targets as well as contribute to continually cutting emissions in the short, medium, and long term. It will serve as the foundation for prioritizing specific initiatives for reducing GHG emissions and for aligning our climate-related targets with the Group's vision going forward. In this process, the roadmap will fundamentally be used to address and analyze direct and indirect sources of emissions in accordance with the Greenhouse Gas Protocol (GHG Protocol). Covestro already has a regular reporting system in place for Scope 1 and Scope 2 GHG emissions. In the reporting year, a system was established for reporting on Scope 3 GHG emissions based on the GHG Protocol.

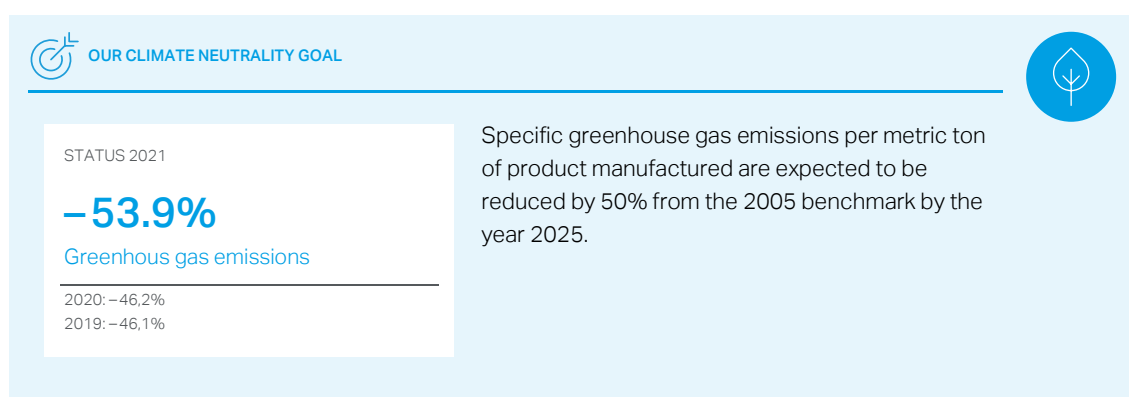
Covestro's GHG emissions along the value chain



Scope 1 and Scope 2 GHG Emissions

Covestro calculates greenhouse gas emissions according to the internationally recognized standards of the GHG Protocol. Direct emissions, e.g., from burning fossil energy sources and from our production processes (Scope 1), as well as indirect emissions from the provision and use of energy produced outside the company (Scope 2) at all environmentally relevant facilities, i.e., all production facilities and relevant administrative facilities with a significant impact on the environment, are included in the calculations. In addition to CO₂, Scope 1 emissions comprise all relevant greenhouse gases, including nitrous oxide (N₂O), methane (CH₄), and partly fluorinated hydrocarbons.

Scope 2 emissions are reported using the location-based and market-based methods. Market-based emissions factors were mostly used when calculating specific Scope 2 greenhouse gas emissions; wherever these were not available, the calculation was based on location-based emissions factors from a generally accepted source (e.g., International Energy Agency* (IEA) emissions factors).



The Covestro Group has set the sustainability goal of cutting specific greenhouse gas emissions by 50% from the 2005 benchmark by the year 2025. This is calculated by dividing the absolute Scope 1 and Scope 2 GHG emissions by our production volume at our main production sites, which are those responsible for more than 95% of our energy usage. In fiscal 2021, specific emissions totaled 0.3338 metric tons of CO₂ equivalents per metric ton of product. Compared with the base year 2005, this corresponds to a cumulative drop of 53.9%, and a 14.2% decrease compared to the previous year. We were therefore early in meeting our target of halving GHG emissions from the 2005 baseline. In the reporting year, we began to develop new targets for reducing our GHG emissions.

Greenhouse gas (GHG) emissions at main production sites¹

	2020	2021
GHG emissions ² (million metric tons of CO ₂ equivalents)	5.45	5.22
Production volume ³ (in million metric tons)	13.99	15.63
Specific GHG emissions⁴ (metric tons of CO₂ equivalents per metric ton of production volume)	0.3892	0.3338

¹ Portfolio-adjusted based on the GHG Protocol; financial control approach; global warming potential (GWP) factors correspond to the IPCC's Fifth Assessment Report.

² GHG emissions (Scope 1 and 2, GHG Protocol) at main production sites (responsible for more than 95% of our energy usage).

³ All in-spec key products – which, in addition to our core products, also include precursors and by-products – manufactured at main production sites, which are responsible for more than 95% of our energy usage.

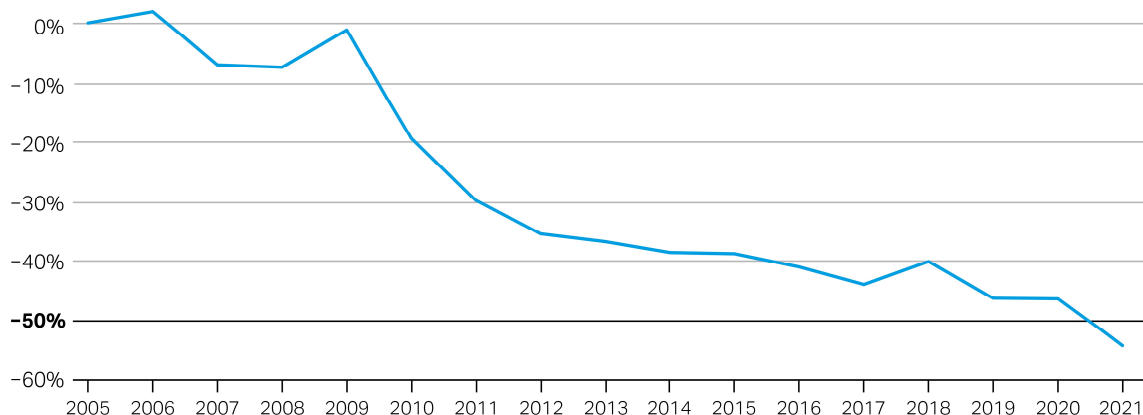
⁴ GHG emissions (Scope 1 and 2, GHG Protocol) divided by production volume.

The decline during the year was mainly due to technical improvements in nitrous oxide (laughing gas) purification at our sites in Baytown (Texas, United States), and Shanghai (China). Furthermore, previously reported steam volume and related GHG emissions had to be corrected for one of our US sites. In total, this led to a decrease in the calculated GHG volumes.

* International Energy Agency (IEA), "IEA Emission Factors 2021" document. All rights reserved by the IEA.

Changes in specific GHG emissions at main production sites

(cumulative annual change in specific GHG emissions per metric ton of product compared with 2005 benchmark – presented in %)¹



¹ The calculation methods for fiscal 2018 onward were changed to the current market-based method in accordance with the Scope 2 Guidance of the GHG Protocol. The values reported for the year 2005 to the year 2017 are calculated throughout in accordance with the methods in the GHG Protocol in effect until the year 2014. When calculating changes in percentage points from the year 2017 to the year 2018, the value for the year 2017 was recalculated on the basis of the market-based method for comparability purposes.

In addition to main production sites, absolute Scope 1 and Scope 2 GHG emissions are also monitored for other environmentally relevant sites. In the year 2021, the Group's GHG emissions declined by 2.8% year over year. Direct GHG emissions dropped 21.5% and indirect GHG emissions increased by 2.5%.

Covestro's total GHG emissions¹ (million metric tons of CO₂ equivalents)

	2020	2021
Direct GHG emissions ²	1.25	0.98
Indirect GHG emissions calculated using the location-based method (GHG Protocol 2015) ³	4.48	4.40
Indirect GHG emissions calculated using the market-based method (GHG Protocol 2015) ³	4.33	4.44
Total GHG emissions, comprising Scope 1 and 2 emissions according to the market-based method of the 2015 GHG Protocol	5.58	5.42

¹ Portfolio-adjusted based on the GHG Protocol; financial control approach; global warming potential (GWP) factors correspond to the IPCC's Fifth Assessment Report.

² In the year 2021, 83.8% of emissions were CO₂ emissions, 15.5% were N₂O emissions, 0.5% consisted of partly fluorinated hydrocarbons, and 0.2% was methane.

³ In combustion processes, CO₂ typically makes up more than 99% of all greenhouse gas emissions; this is why we restrict ourselves to CO₂ when calculating indirect emissions.

Energy Usage

Covestro is an energy-intensive company. For this reason, energy usage and GHG emissions are closely linked. Covestro's energy usage includes the primary energy used in production and during electricity and steam generation by the company as well as additionally acquired quantities of electricity, steam, refrigeration energy, and process heat (secondary energy). The secondary energy is calculated back to arrive at the equivalent primary energy usage required to generate them. This takes into account the energy lost while distributing these forms of energy. All told, these figures make up Covestro's equivalent primary energy consumption. In the interest of setting accurate targets, we track the energy usage of the sites we define as main production sites. These account for more than 95% of our total energy usage.

The use of energy and materials and the level of greenhouse gases emitted are closely related to the quantity of materials we produce. In fiscal 2021, total energy usage in the Group rose by 2.6%, and the equivalent primary energy usage at main production sites also grew by 1.5% – while production volumes increased by 11.7%. The equivalent primary energy usage for a given production volume (energy efficiency) improved accordingly, by 9.1%. The decrease in specific energy usage in the reporting year can therefore be mainly attributed to the cyclical improvement in plant capacity utilization. In our experience, a better utilized production facility leads to improved efficiency in terms of energy usage for a given production volume (specific energy usage). Furthermore, previously reported steam volume and related GHG emissions had to be corrected for one of our US sites, where the figure previously recorded had been too high. This also affected the calculated energy usage accordingly.

Energy usage in the Covestro Group at main production sites

	2020	2021
Equivalent primary energy usage ^{1,2} (in megawatt hour [MWh])	20,212,384	20,516,545
Production volume ³ (million metric tons)	13.99	15.63
Specific energy usage (energy efficiency)⁴ (MWh per metric ton)	1.44	1.31

¹ Sum of all individual energies used at our main production sites (responsible for more than 95% of our energy usage), converted into primary energy.

² Equivalent to 73,860 terajoule (TJ) in the reporting year (previous year: 72,765 TJ).

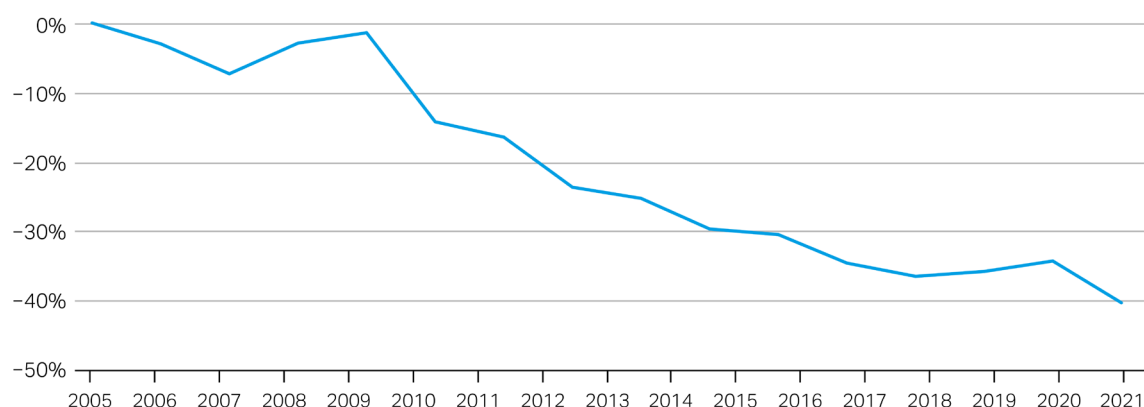
³ All in-spec key products – which, in addition to our core products, also include precursors and by-products – manufactured at main production sites, which are responsible for more than 95% of our energy usage.

⁴ Ratio of equivalent primary energy usage to production volume.

In addition, by the year 2030 we also want to halve the specific energy usage of our production facilities compared with the same base year 2005. This energy efficiency boost will contribute to further reducing specific GHG emissions. Our continued long-term positive trend indicates an overall 40.2% improvement in energy efficiency compared to the base year 2005 as shown in the following figure.

Changes in specific energy usage at main production sites

(annual change in specific primary energy usage per metric ton of product compared with 2005 benchmark – presented in %)¹



¹ $(\text{Equivalent primary energy usage} / \text{production volume}) / (\text{equivalent primary energy usage 2005} / \text{production volume 2005})$.

Covestro's STRUCTese® (Structured Efficiency System for Energy) system played a key role in permanently improving our specific energy usage. The energy efficiency system developed by Covestro compares actual energy usage in production with the realistic potential optimum. Eliminating inefficiencies results in permanent energy savings. STRUCTese® includes various steps that enable the identification of improvement measures – from analysis to monitoring to benchmarking. These measures are known at Covestro as STRUCTese® projects. The system, which has been gradually rolled out since the year 2008, is now used in many of our energy-intensive production facilities around the world and will be implemented in other facilities going forward.

In fiscal 2021, for instance, we invested in oxygen-depolarized cathode technology in our electrolysis operations at the Krefeld-Uerdingen (Germany) site. This is more efficient than conventional processes. Primary energy usage was therefore cut by more than 16,800 MWh, which is the equivalent of reducing emissions by some 4,400 metric tons of CO₂.

Moreover, Covestro carried out various other projects in fiscal 2021, resulting in annual savings of 29,600 MWh of primary energy, or 8,000 metric tons of CO₂ emissions. In addition, pro-rated savings from projects completed in the previous year (2020) amounted to 61,800 MWh of primary energy and 13,900 t of CO₂ and were realized in fiscal 2021. Combined, all the projects implemented since the introduction of STRUCTese® in the year 2008 have resulted in lasting reductions totaling 2.43 million MWh of primary energy and around 730,000 metric tons of CO₂ per year. In addition to main production sites, energy usage is also documented for other environmentally relevant Covestro sites.

Energy usage by energy type in the Group

	2020	2021
Primary energy usage for the in-house generation of electricity and steam (net, TJ)	7,450	8,851
Natural gas	7,991	9,059
(of which natural gas sold to external third parties)	(98)	(120)
Coal	–	–
Liquid fuels	85	165
Waste	574	750
Other ¹	(1,200)	(1,123)
Secondary energy usage (net, TJ)	48,019	48,046
Electricity ²	22,790	23,963
(of which electricity sold to external third parties)	(1,953)	(1,879)
Steam	22,301	22,158
(of which steam sold to external third parties)	(556)	(574)
Steam from waste heat (process heat)	2,488	1,475
Refrigeration energy	440	450
(of which refrigeration energy sold to third parties)	(73)	(76)
Total energy usage (TJ)	55,469	56,897

¹ E.g., hydrogen.

² Secondary energy usage for electricity is determined on the basis of the raw material mix of the country concerned.

Renewable Energy

In the future, Covestro intends to meet all of its energy needs with renewable energy. Actions we have taken toward this goal include developing new supply plans and signing purchase contracts for renewable energy, particularly electricity. In the reporting year, we signed an agreement with our energy supplier at the Antwerp (Belgium) site to procure 97 GWh of green electricity each year to cover 45% of our electricity needs at the site with wind energy. Another agreement for 60 gigawatt hours (GWh) of green electricity per year was signed for the sites in North Rhine-Westphalia (Germany) as part of our strategy of supplying our European sites with more than 400 GWh of electricity annually from renewable sources in the period from 2022 to 2026. Our site in Shanghai (China) obtained around 460 GWh of green electricity from the Three Gorges Dam in the reporting year and covered more than 40% of its electricity needs with renewable energy. This bolsters Covestro's sustainability strategy. Likewise, it contributes to shrinking the carbon footprint of production, our products, and our customers' applications.

Moreover, hydrogen is expected to contribute substantially to reducing GHG emissions both through use as energy and as a material, for instance, as part of CO₂ conversion in the chemical industry.

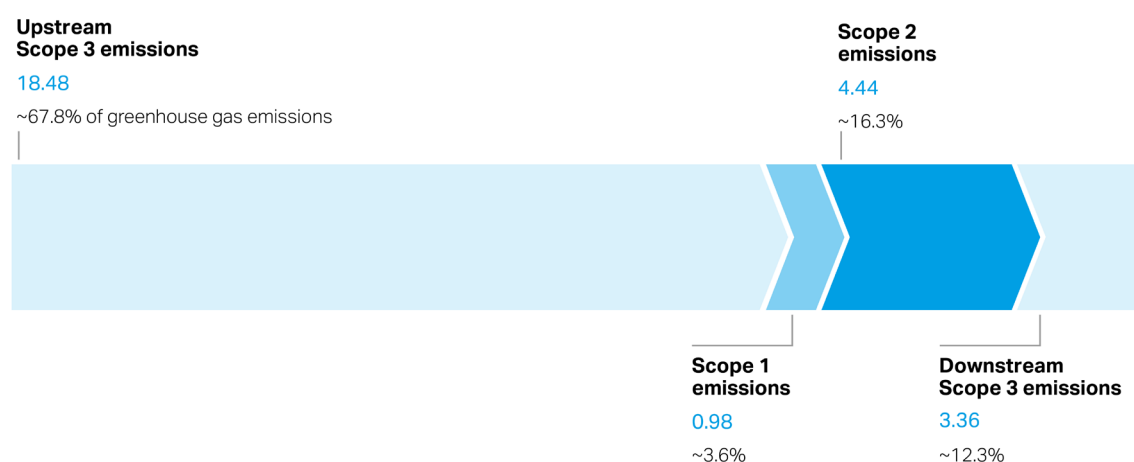
[Supplementary information >](#)

Scope 3 GHG Emissions

Upstream and downstream greenhouse gas emission data along the entire value chain (Scope 3) has been collected and reported at Covestro since the 2021 reporting period. Scope 3 emissions are determined for all environmentally relevant Covestro sites according to the categories and methods of the GHG Protocol and the Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain by the World Business Council for Sustainable Development (WBCSD). All categories were reviewed for relevance under the guidelines of the GHG Protocol in order to quantify all emissions associated with Covestro's business activities as completely as possible. Based on this analysis, we report the emissions resulting from the nine categories considered relevant to us. The basis for calculating the other indirect GHG emissions (Scope 3) are internal activity data and emissions factors from commercially and publicly available sources, or sources recommended by the GHG Protocol. The emissions for each Scope 3 category are based on individual calculations, which are described in detail in the Carbon Disclosure Project (CDP) questionnaire we completed. By continually improving the data basis and calculation methods used, we will further advance the accuracy and completeness of our Scope 3 emissions reporting.

The other indirect GHG emissions (Scope 3) represent 80% of the Group's total GHG emissions.

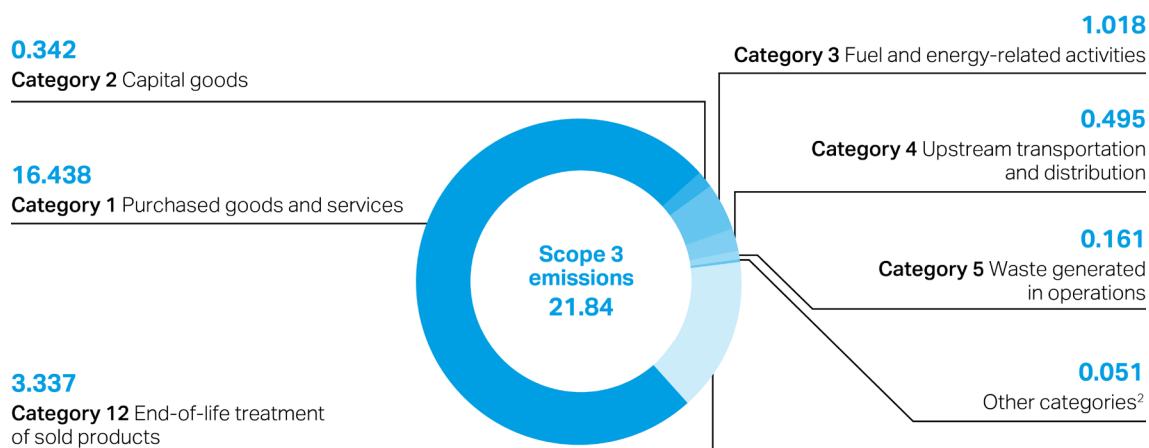
Covestro Group GHG emissions (Scope 1, Scope 2, and calculated Scope 3) in million metric tons of CO₂ equivalents



Scope 3 emissions calculated in fiscal 2021 amounted to 21.84 million metric tons of CO₂ equivalents. Most of our Scope 3 emissions are attributable to categories upstream in our value chain. The categories of "purchased goods and services," "end-of-life treatment of sold products," and "fuel- and energy-related activities" are the main source of our other indirect GHG emissions. Biogenic CO₂ emission equivalents stemming from the value chain totaled 99,052 t CO₂ equivalents in the reporting period in absolute terms and are disclosed separately from the gross volume of Scope 3 emissions in accordance with the GHG Protocol and the WBCSD.

Total Scope 1, Scope 2, and calculated Scope 3 emissions in the reporting period amounted to 27.26 million metric tons of CO₂ equivalents. There is no comparable prior-year value available for Scope 3 emissions, since this is the first year Covestro is calculating this figure.

Composition of Scope 3 emissions categories according to the GHG Protocol in million metric tons of CO₂ equivalents¹



¹ Portfolio-adjusted based on the financial control approach of the GHG Protocol; global warming potential (GWP) factors according to the IPCC's Fifth Assessment Report.

Nonrelevant emissions categories: 8. Upstream leased assets; 11. Use of sold products; 15. Investments. Estimates indicate that these categories account for <1% of Covestro's total Scope 3 emissions. Their levels are therefore insignificant according to the definition in the GHG Protocol.

Nonrelevant emissions categories: 13. Downstream leased assets; 14. Franchises. Covestro does not operate any plants that are leased to third parties and whose emissions are not already included in Scope 1 and Scope 2 emissions reporting. Moreover, Covestro does not own or operate any franchises.

Unreported emissions category: 10. Processing of sold products. Since data could not always be obtained and there are numerous applications for Covestro's products, calculating these emissions would require disproportionate effort. In this case, Covestro refers to the WBCSD guidance, according to which a chemical company whose product portfolio contains a broad range of intermediates is not required to report Scope 3, Category 10 (processing of sold products).

Contributions of Scope 3 emissions from the acquisition of the RFM business in the year 2021 are included to the extent that activity data was available during ongoing systems integration. Accordingly, we include the following Scope 3 categories and elements of the RFM business: 1. Purchased goods and services – only raw materials, 3. Fuel- and energy-related activities, 5. Waste generated in operations, 7. Employee commuting, and 12. End-of-life treatment of sold products.

² "Other categories" includes the following: 6. Business travel; 7. Employee commuting; 9. Downstream transportation and distribution.

[< Supplementary information](#)

Innovation

For Covestro, innovation as a driver for greater sustainability in line with the United Nations Sustainable Development Goals (SDGs) is a core element of our strategy and an integral part of our identity. Our understanding of innovation is broadly defined: We do not rely on traditional research and development (R&D) alone, but rather also on the great potential for creativity throughout the company. We encourage all employees to promote innovation at Covestro.

In order to maintain and reinforce our position in the global arena, we work at all levels in close partnership with the Board of Management member responsible for Innovation to develop new products, refine established ones, and optimize manufacturing and processing procedures. Likewise, application areas business models, and business processes are subject to ongoing review.

Covestro split innovation activities into two core areas in the 2021 fiscal year. For one, we conduct business-related R&D in the business entities, focusing on specific, short- and medium-term R&D issues.

 [See "Innovations in the Segments."](#)

For the second area, the corporate Group Innovation function mainly deals with medium- and long-term sustainability, circular economy, and digital transformation issues. Group Innovation is also responsible for providing a globally harmonized R&D infrastructure as well as providing the reportable segments and their business entities with support for R&D. Group-wide steering committees chaired by the Chief Executive Officer (CEO) network and coordinate the two core innovation areas.

Innovation Management

By managing innovation systematically throughout the Group, we ensure that our ongoing and planned activities and our project pipeline always satisfy the needs of our user and consumer industries. Covestro uses a wide variety of tools to achieve this: For example, we use a standardized method to assess every R&D project and incorporate the resulting findings into ongoing and future projects. The global, digital platform idea.lounge is available for discussing and working on new, creative ideas from all parts of the company. Apart from that platform, an additional digital platform called "Covestro Ideenmanagement" (Idea Management) is available to employees in Germany and is used to manage all suggestions for improvement throughout the company. At Innovation Celebrations, we recognize employee projects from around the world that reflect our broad understanding of innovation. The awards serve to recognize innovative ideas in the "Products and Applications," "Process and Manufacturing," "Business Model and Commercial," "Business Processes," and "Intellectual Property Strategy" categories.

Sustainable R&D-Based Innovation Portfolio

Covestro already has many different sustainable solutions on the market and, going forward, aims to develop and market products even more closely aligned with the SDGs. Attaining this goal means continually changing over our product range to more sustainable solutions. For instance, in R&D we have already begun our pursuit of a much more sustainable project portfolio. This focus enables us to identify and research unconventional and unique approaches early on, and therefore to contribute to the SDGs with our R&D products and technologies.

 [See "Innovations in the Segments."](#)



OUR INNOVATION GOAL



STATUS 2021

54%

of project expenditure

2020: 51%

We want our R&D project portfolio to be aligned with the SDGs. By the year 2025, 80% of project expenditures for research and development are expected to be used in areas that contribute to reaching these goals.

We set high standards for evaluating our projects in line with our ambitious goal and therefore only consider projects that make an additional contribution to the SDGs when measuring our progress. In fiscal 2020, we incorporated a Group-wide assessment process into the existing innovation process that measures our progress on projects to quantify this additional contribution. This involves subjecting all R&D projects to an assessment based on expert interviews with experts in which we ask specific questions to evaluate the impact of the project and its results on all 17 SDGs. Only projects adding specifically measurable value to the SDGs over and above that of solutions currently on the market are included in the measurement of our goal attainment. This assessment matrix was applied to Covestro's R&D portfolio in the 2021 reporting year. In this portfolio, 54% and therefore €40 million (previous year: 51% and €41 million) of R&D project expenditure exceeds our defined threshold. The acquisition of RFM expanded our R&D pipeline, but the integration of these R&D projects into Covestro's project portfolio will not be completely finished until the coming reporting year. For this reason, the above metric includes only the R&D portfolio existing at Covestro prior to RFM's integration into the company.

In fiscal 2021, our total R&D expenditure amounted to €341 million (previous year: €262 million). This mainly went toward developing new application solutions for our products and refining products and process technologies. As of December 31, 2021, 1,477 employees* worked in research and development worldwide (previous year: 1,205), most of them at the three major R&D facilities in Leverkusen (Germany), Pittsburgh (Pennsylvania, United States), and Shanghai (China).

Use of Digital Technologies

We are committed to further pursuing digitalization along with the associated new opportunities for the entire chemical and plastics industry value chain. Covestro utilizes the opportunities arising from digitalization with a comprehensive strategic program and especially the intelligent use of data, thus setting new standards in cooperation with customers. We increasingly anchor digital technologies and work methods in production, along the supply chain, in research and development, in administrative functions, and at all points of contact with customers as well as in the development of new business models. A steering committee for decision-making has been set up, the Digital Governance Body (DiGoB). It is chaired by the Chief Executive Officer (CEO) and tasked with always keeping the specific benefit for our customers front of mind. Another area of focus in the reporting year was switching the technology for delivering data, computing capacity, and predefined services to the cloud.

Last year, the Digital Solutions Lab in Leverkusen (Germany) established a team of digital solutions professionals to provide expert support for developing and implementing digital products and business models. An initial example was the roll-out of our new service that is part of the CLUE (Competitors Landscape User Explorer) platform and makes comparing products available on the market easier. Another team of experts handles data science, algorithms, machine learning, and artificial intelligence (AI). Based on a Group-wide data analytics platform introduced last year, application cases are developed, operationalized, and scaled up, if possible.

* The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training.

An important initiative for further improving the profitability of our R&D activities is the expansion of our high-performance computing cluster at the Leverkusen (Germany) site to create new computing capacity. Digital R&D also uses flexible cloud-based services to accelerate feasibility studies and the early development of applications and models, which can be seamlessly integrated into local high-performance computing clusters. Furthermore, we are working in conjunction with start-up Ware Corp. in Palo Alto (California, United States), and the quantum artificial intelligence team from Google Ireland Ltd., Dublin (Ireland), on the promising quantum computing technology. Complex mathematical problems that exceed the computing capacity of commonly available computers can be solved by providing the necessary software and hardware for this purpose.

 See "Strategic Partnerships and Collaborations."

Highly sophisticated simulation methods illustrating chemical processes and physical phenomena are standard at Covestro and help speed up the development of new or improved products and processes. For this reason, these are increasingly developed in-house at Covestro. Moreover, a global, Group-wide R&D knowledge platform has been built to provide easy access to all search results of recent years and all types of current R&D data. Furthermore, sensor data for selected production and processing systems is available. This helps users obtain data-driven insights into ways to accelerate product development and to improve production. Covestro is also stepping up efforts to improve data quality and data collection processes for developing algorithms to predict material qualities, support product development, and enable better understanding of interconnected information.

We are digitizing laboratories by implementing processes to allow for hands-free documentation using speech recognition and automated data collection from laboratory hardware. During this process, we also aim to increase data quality and workplace safety. The same applies to the automatic collection of processing data from plants. For instance, unusual incidents in process control can be identified more quickly. We continue to use data analysis for production processes, and continually invest in employees and infrastructure to systematically promote digitalization – thereby improving the efficiency of work and production processes using modern data processing and the intelligent interconnection of systems. In addition, a centralized standard system (Covestro Monitoring Platform) was created to provide support such as cost-efficient and predictive maintenance of equipment and plants.

Strategic Partnerships and Collaborations

Covestro aims to increase the efficiency of our research with in-house activities and strategic collaboration with industrial and scientific partners. Bilateral alliances and collaboration in large, publicly funded consortia characterize our partnerships with research facilities and universities as well as with companies along the value chain.

In fiscal 2021, Covestro expanded the COVeC (Covestro Venture Capital) approach and invested in QC Ware Corp., Palo Alto (California, United States), a leading developer of quantum algorithms. Covestro has been working with a QC Ware Corp. quantum chemistry team since the year 2020, which has already led to the development of two patented basic technologies for chemical quantum computing simulations. The investment aims to step up research into the use of quantum algorithms for simulating chemicals and securing a long-term partnership with QC Ware Corp.

 See "Use of Digital Technologies."

 Additional information is available at: <https://www.covestro.com/en/innovation/covestro-venture-capital>

Covestro maintains long-standing and strategic partnerships with various universities. These include RWTH Aachen University (Germany), Tongji University in Shanghai (China), and Carnegie Mellon University in Pittsburgh (Pennsylvania, United States).

Overview of the top three partnerships with universities

Partnerships with universities Important tool for talent recruiting and implementation of innovation strategy	EMEA	 RWTH Aachen University	Focus: • Process development • Basic research	Examples: • Chemical catalysis in various projects (CAT Catalytic Center, QuinCAT) • Electrochemistry (endowed professorship)
	NA	 Carnegie Mellon University	Focus: • Digital technologies and machine learning • Application development	Examples: • Collaboration with start-ups in the university environment • Open innovation competitions (Pittsburgh Penguins Make-a-thon, Hackathon)
	APAC	 Tongji University	Focus: • R&D projects on electric vehicle batteries, 3D printing, and sustainability • Incubator for start-ups and promotion of talent	Examples: • Commercialization of products developed and events with industrial and education partners • Open innovation competitions (Make-a-thon, Hackathon)

The QuinCAT – Quick Incubation in Catalysis incubator supported by the German state of North Rhine-Westphalia is under construction jointly with RWTH Aachen University and will begin operating in the year 2022. The incubator will be a place for developing ideas involving chemicals to enable the founding of a start-up company as a second step. Covestro provides consulting on this process, and will be represented by our CEO on the steering committee when it convenes.

Along with 21 partners from nine countries, including RWTH Aachen University, the collaborative CIRCULAR FOAM project was launched in fiscal 2021 with Covestro as its coordinator. The goal here is to close the material loop for rigid polyurethane foams, which contribute to a significant increase in energy efficiency as insulation in refrigerators and buildings. To date, however, there has been no coordinated waste management or suitable recycling process for this material. This project will develop an end-to-end solution and prepare for implementation of this concept across Europe over the next four years. From the year 2040 onward, this will potentially prevent the generation of 1 million metric tons of waste and the emission of 2.9 million metric tons of carbon dioxide (CO₂) per year, while also saving €150 million in incineration costs. The project receives support from the European Union's Horizon 2020 research and innovation program.

In the interest of closing carbon loops, electrochemical processes offer a good starting point for forward-looking, circular solutions for the energy-efficient manufacture of basic chemicals. In pursuit of this goal, Covestro collaborated with RWTH Aachen University and the Jülich Research Center (Germany) to continue establishing the Competence Center for Industrial Electrochemistry ELECTRA in Aachen (Germany). Facilities were commissioned in Aachen, and the research building is being constructed in Jülich. ELECTRA will be a Competence Center for research on more effective, robust, durable, and safe electrolyzers.

Another example of a collaboration in a consortium project is the Kopernikus project Power-to-X (P2X), which is subsidized by the Federal Ministry of Education and Research. The transportation, industrial, and heating supply sectors need low-emissions solutions if Germany is to achieve climate neutrality by the year 2050. P2X researches one of the most promising approaches: technologies that convert green electricity into other forms of energy or materials, e.g., fuels, heat, and gases, or chemical raw materials and plastics. Along with partners, Covestro is investigating how hydrogen and CO₂ can be converted into polymer building blocks that are urgently needed in the chemical industry. Some promising chemical intermediates have been developed that are being tested for polyurethane and coating applications. Covestro is also investigating the possibility of participating in the third funding phase of the Kopernikus Power-to-X (P2X) project with a concept for chemically scaling of this class of substances.

In order to further drive the development of the CO₂ technology platform, Covestro has, since the year 2017, coordinated the Carbon4PUR research project sponsored by the European Union (EU). This entails researching the use of industrial waste gases like carbon monoxide as new sources of raw materials for the production of insulation materials and coatings in conjunction with 13 other industrial and scientific partners in Europe. A key success of Carbon4PUR is the identification of new types of catalysts enabling the manufacture of new polyols. With the help of these catalysts, our research partners were able to produce polyols at laboratory scale using carbon monoxide-based gas mixtures. Carbon monoxide (CO) makes up 27% of this unique precursor. The new technology was assessed and deemed to be beneficial both ecologically and economically, and was successfully produced at a semi-industrial scale. Our partners have already demonstrated initial applications for the product: Plastics manufacturer Recticel, Brussels (Belgium), and chemical company Megara Resins, Megara (Greece), have both conducted product tests based on the research results.

In cooperation with Circularise, The Hague (Netherlands), and DOMO Chemicals, Leuna (Germany), Covestro participates in the Circularise Plastics project to develop an open blockchain standard for establishing a data exchange protocol. This is intended to facilitate the identification of materials along the value chain so that the best possible recycling option at the end of the product's life cycle can be determined. The unique thing here is that the stored information is only accessible to those with a justified interest so that sensitive product information remains protected. Based on the success of the initial partnerships, Covestro is also expanding pilot projects with Dr. Ing. h. c. F. Porsche AG, Stuttgart (Germany), and other original equipment manufacturers (OEMs) to enable traceability of the carbon footprint and other sustainability metrics for materials and products along the supply chain and to digitalize this process using blockchain technology.

Process Technology

Another key driver of innovation at Covestro is process technology. All of these activities were combined in the corporate Process Technology function in fiscal 2021 to optimally unlock the resulting potential and to provide the best possible assistance for tackling challenging strategic targets in terms of competitiveness, sustainable growth, and the circular economy. This function is responsible for process technology in Covestro's production activities and supports operations in the segments. The focus is on continual improvement of our production processes, process design for new production facilities, the development of new process technologies, and scaling newly developed products to industrial scale. Success in these endeavors depends materially on maintaining and systematically upgrading of Covestro's technological competencies with a clear focus on our employees, successful networking with internal and external partners, and digital transformation in production and technology.

In recent years, we have developed a number of disruptive processes to technological maturity and implemented them, significantly improving our resource and energy efficiency in particular. For instance, the development of gas-phase phosgenation of toluylene diisocyanate (TDI) at the Dormagen (Germany) and Shanghai (China) sites led to energy savings of up to 60% and a reduction in carbon emissions by 60,000 metric tons per year compared with conventional methods. Another example here is the oxygen-depolarized cathode technology for manufacturing chlorine. This technology is currently being incorporated into the new chlor-alkali facility Covestro is building in Tarragona (Spain) and is already being used in Krefeld-Uerdingen (Germany). In fiscal 2021, this enabled our electrolysis operations to cut carbon emissions by 4,400 metric tons.

 See "Energy Usage."

Other notable examples are cardyon®, a technology used to manufacture CO₂-containing polyether polyols, and the recycling of saline process wastewater in polycarbonate production. Also worth mention is the novel adiabatic-isothermal phosgenation (AdiP) technology we recently began deploying in a pilot plant in Brunsbüttel (Germany) for manufacturing our key product: diphenylmethane diisocyanate (MDI). This technology enables us to conserve up to 40% of the steam and 25% of the electricity normally used per metric ton of product, as well as to reduce carbon emissions by up to 35%. Our intellectual property is protected with a broad portfolio of patents.

 See "Innovation in the Performance Materials Segment."

Recently, important breakthroughs were achieved in the development of processes for manufacturing biobased aniline and other carbon-based polymers as well as optimizing processes and expanding the portfolio of products manufactured from biobased pentamethylene diisocyanate (PDI). We also reached an important milestone in the development of new technologies for recycling plastics in fiscal 2021 with the successful commissioning of a pilot plant at the Leverkusen (Germany) site for the purpose of chemically recycling flexible polyurethane foams, which are used for applications such as mattresses.

Innovations in the Segments

Innovation in the Performance Materials Segment

We work continually in the Performance Materials segment to add new raw materials and optimized processes to our products to develop them into industry standards in the established applications. Our particular focus here is on our core applications – rigid and flexible polyurethane foams for insulation and the automotive and furniture industries. We optimize our products in their applications throughout the entire life cycle based on market requirements. The innovation departments in the business entities and various corporate functions work on this across national boundaries to ensure that processes are improved, e.g., to save energy and cut product costs.

An example is the new process for manufacturing long-chain polyethers with a higher filler content for flexible foams with improved properties. Use of this product increases firmness while also permitting greater air circulation. We also provided application technology assistance for the energy-efficient manufacture of MDI in Brunsbüttel (Germany) using the AdiP process and the use of the product in standardized applications such as polymeric MDIs for rigid foams and specialties.

In the interest of enabling the transition to a circular economy, we deliver resources and contributions to basic research as well as making scaling to industrial scale possible. The previously mentioned use of CO₂ as a raw material, e.g., for cardyon®, and the support of collaborative projects such as Carbon4PUR are two examples of these activities.

Another area of focus is supporting the development of new digital tools for the R&D functions of all business entities and their implementation at our customers' companies. The aim here is to improve the efficiency of laboratory workflows on the one hand and to more efficiently develop new polyurethane products on the other.

 See "Use of Digital Technologies."

Innovation in the Solutions & Specialties Segment

The Solutions & Specialties segment serves a number of specialized industries. In the 2021 reporting year, the segment worked with our customers and partners to introduce and implement various innovations aimed at efficiency, sustainability, and promoting our specialties business.

This year, Covestro took an important step toward achieving our vision of becoming fully circular by launching the world's first climate-neutral* polycarbonate plastic. Mass-balanced raw materials made of biobased wastes and residues** using renewable energy were the key to unlocking this possibility. Firstly, an assessment of climate neutrality was completed by applying the mass-balancing method. This entails allocating the percentage of alternative raw materials used in the manufacturing process to the polycarbonates. Renewable energy is also

* The "climate neutral" label is the result of an assessment of a segment of the product's entire life cycle. In this case, we analyzed the period from resource extraction (cradle) to the factory gate based on ISO standard 14040. The analysis was then critically evaluated for plausibility by TÜV Rheinland AG, Cologne (Germany). The assessment also took into account biogenic carbon uptake based on preliminary data from the supply chain as well as the use of green electricity in the production process. Electricity usage was allocated based on what are known as guarantee-of-origin certificates. Carbon offset certificates were not used.

** Waste and residues of biological origin from agriculture, forestry, or associated industries.

used in the manufacture of mass-balanced products, so the carbon footprint* for the segment of the product's life from resource extraction to manufacture of the product to delivery to the factory gate could be assessed as climate neutral. Covestro's production sites in Krefeld-Uerdingen (Germany), Antwerp (Belgium), and Shanghai (China) are already certified for the production of mass-balanced products according to the ISCC PLUS methodology. The drop-in approach enables fossil-based raw materials to be replaced gradually without requiring that existing processes or workflows be changed. The resulting products are of equally high quality and perform the same as fossil-based polycarbonates.

The Decovery® line of products is a series of partially biobased resins for industrial, architectural, and packaging solutions. These products are based on renewable raw materials and have a smaller carbon footprint than fossil-based raw materials, whereas they have better properties, e.g., strong adhesive properties. They therefore provide a solid starting point for high-quality paints, wooden floor coverings, cladding, adhesives, barrier coatings, and top coats. This enables our customers to meet their environmental and sustainability obligations while using completely biobased materials. An example of this is the development of a biobased acrylic paper with a barrier coating that replaces plastic layers in paper packaging and was certified as completely recyclable by research institute Papiertechnische Stiftung (PTS), Heidenau (Germany).

The use of fossil-based raw materials can also be reduced in the manufacture of wood coatings for furniture. The furniture industry is at the front of the pack in introducing water-based solutions as an alternative to conventional products containing solvents. Bayhydur® eco 701-90, a hardener that is partly biobased, can be used to improve the sustainability of furniture without reducing coating performance.

Biobased polyesters for one-component (1K) stoving systems are likewise already available on the market, but the thermally activated polyurethane hardeners have been a limiting factor to date for maximizing the share of biobased material used while maintaining high performance. Covestro brought to market Desmodur® eco BL 7175, the first partially biobased, thermally activated polyurethane hardener based on an alternative isocyanate. Besides using a greater share of renewable energy in stoving systems, the product performs better than standard types.

In cooperation with our raw material suppliers, we have also expanded our portfolio to include Makrofol® and Plaiton®, partially biobased polycarbonate films made of thermoplastic polyurethane, which are used especially in the textile and consumer goods industries. Moreover, our newly developed Desmopan® EC range includes up to 60% carbon from biomass. Compared to fossil-based thermoplastic polyurethanes, the carbon footprint of these products can be shrunk by more than 20% without compromising quality or performance. Based on this technology, we worked with a customer to develop a biobased foam midsole for a new outdoor trail shoe.

We developed a complete environmentally friendly coating solution in close cooperation with the wind turbine value chain including manufacturer Xinjiang Goldwind Science & Technology Co., Ltd., Urumqi (China), featuring low emissions of volatile organic compounds (VOCs) and excellent durability. It consists of a solvent-free gel coat, an aqueous 2K gel coat, and a polyaspartic-based protective coating for the leading edge. This solution was awarded the 2021 JEC innovation award, which has been the leading prize for the development and use of composite materials for a quarter century.

In terms of household appliances, the latest developments in rigid polyurethane foams for the refrigeration chain address current technical and regulatory challenges being experienced by OEMs. The goal is to improve the sustainability and insulating capacity of these foams and to increase the profitability of refrigerator manufacturing. Enhanced polyols, isocyanates, and catalysts enable refrigerators to be removed from molds more quickly while maintaining wall thickness, which results in higher productivity in production. In the construction industry and household appliance industry, our Baymer® rigid foam systems are a key component in the manufacture of metal composites. One target of this development is to improve the product's inherent flame-retardant quality to obtain a higher fire classification. Here also, the focus is on improving the sustainability of core polyurethane materials: halogen-free rigid foam systems developed on the basis of sustainable raw materials.

* Biogenic carbon uptake is included when calculating the carbon footprint.

On our way to becoming fully circular, we additionally upgraded our portfolio of cardyon®-based elastomers and found an alternative to our proven TDI amine types. The latter deliver improvements in health and environmental protection.

In addition to our goal of striving for a circular economy, improved industrial hygiene standards and meeting new EU safety standards are issues very relevant for the entire value chain. This goes hand in hand with improved workplace safety for employees involved in production and application. Desmodur® ultra and Bayhydur® ultra, Covestro's high-performance crosslinkers for coatings and adhesives, can be used directly in our customers' current formulations. By further reducing residual monomer content in compliance with the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation, they unlock the potential for customers of increased product safety without sacrificing the performance of conventional 2K polyurethane coatings.

The RFM acquisition allowed us to also combine the crosslinking platforms of both units. Thanks to its unique chemical design, the NeoAdd™ PAX product family in particular offers excellent chemical and water resistance and outstanding adhesion to many different substrates. It does not require warming after use, which enables a higher degree of chemical resistance per smaller quantity of product. Moreover, the product is REACH-compliant and, due to its profile, requires reduced labeling compared with other products in the same chemical class. Along with several industry partners, Covestro is successfully introducing this new crosslinker product family in the packaging, industrial wood, and leather processing industries.

In view of the fact that an increasing share of vehicles is electric, the requirements of global transportation and energy markets for the properties and design of electronics applications are changing. We have refined our products to meet this need. An example is the lightweight Bayblend® polycarbonate/ABS blend, which is a suitable solution for various battery modules such as cell holders. It remains stable at both low and high temperatures and therefore guarantees optimal operating efficiency as well as meeting flame-retardancy standards. Covestro and EVBox B.V., Amsterdam (Netherlands), evaluated the use of polycarbonate made from mass-balanced biobased waste and residues for electrical charging stations. EVBox B.V. is scheduled to introduce Makrolon® RE charging stations for the European market in the year 2022.

At K 2016, the world's leading plastics trade fair, Covestro presented its vision of a seamlessly functional vehicle front end, which became a reality in the year 2020 in an electric vehicle using our Makrolon® polycarbonate product. Covestro developed an innovative automotive headlight concept from this material. Compared with conventional solutions, the new modular design has fewer individual parts, which reduces the number of assembly steps required as well as space and cost. On the whole, the new headlight prototype is over 1.5 kg lighter and therefore cuts emissions and expands the vehicle's reach. Thanks to the headlight's modular construction and use of a single type of plastic, the expense and effort of sorting and storing recyclable material also decreases. In addition, technologies for measuring distance and speed and cameras will be incorporated into the headlights in the future. This requires the use of heat-conducting materials to channel away heat generated by the electronics and light sources. With Makrolon®, heat management can be integrated directly into the housing of the new headlight concept.

Head-up displays are being used increasingly in the automotive industry to project images and information in the driver's field of vision. Covestro stepped up its collaboration with WayRay, a technology company specializing in augmented reality products headquartered in Zurich (Switzerland) to create these projections. The holographic optical elements developed by WayRay with Covestro's photopolymer film Bayfol®HX enable users to delve completely into virtual reality regardless of the distance to the object; at the same time, the necessary volume for the projection unit used is reduced. Bayfol®HX is also part of a partnership between Covestro and Meta Materials Inc., Dartmouth (Canada), which specializes in casting lenses. The goal is to use proven technologies to incorporate Bayfol®HX directly into prescription glasses for augmented reality. This highly integrated solution combines embedded functional elements with pre-formed prescription glasses.

In terms of the healthcare market, Covestro concentrates on developing application solutions that meet the growing demand for medical services worldwide. This is directly linked to the SDGs: after all, the products are intended to improve access to medical services in emerging economies. Examples here are the use of Makrolon® in new diagnostic tests for coronavirus infection and the use of Apec® in a newly designed breathable mask.

Electronic bandages worn by patients are already being used widely in various areas of medicine, such as patient monitoring and diagnosis, in line with the increasing digitalization of healthcare. The bandages make numerous vital sign monitoring applications possible and allow people undergoing medical treatment to move around freely. In conjunction with the Accensors division of InnoME GmbH, Espelkamp (Germany), Covestro used Platilon® TPU film and the Baymedix® thermoformable foam to develop a new concept for electronic bandages. These consist of two components: a single-use adhesive patch with sensors and a reusable patch containing the electronics (e.g., measuring technology and electricity supply).

New materials are being introduced for the electronics industry that have excellent insulating, mechanical, and weather-resistant properties and are therefore particularly suitable for the 5G network and the Internet of Things. With a growing portfolio of recycled plastics, customers can meet their own sustainability targets while maintaining high material standards. For applications such as high-speed networks, heat management solutions were developed that reduce weight and complexity while at the same time improving product life, recyclability, and the entire carbon footprint.

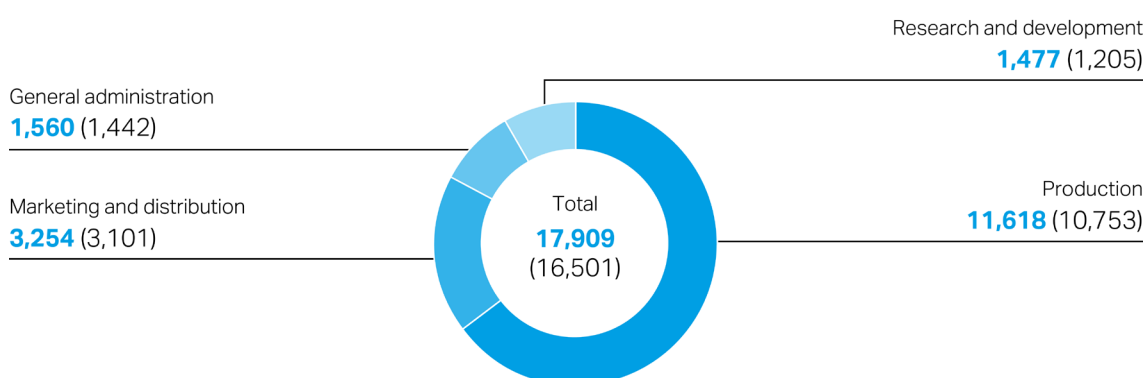
Employees

The multifaceted abilities and personal efforts of all employees contribute materially to Covestro's success. All employees have both the freedom and the mandate to act and contribute in line with the company's goals, values, and culture. Covestro thus promotes a working environment that is shaped by unconventional thinking, the effective exchange of knowledge, creative problem-solving, constructive feedback, and collegial cooperation. We aim to empower each of our employees to work to their full potential. Our managers are responsible for facilitating and supporting these objectives in close collaboration with our employees. In this way, we can work together to make an ongoing contribution to the company's success. Our social responsibility as a company and an employer is based on our unreserved commitment to supporting and fostering human rights in our sphere of influence. In the interest of encouraging a transparent exchange of information, employee questions and comments are collected via the Sli.do software – anonymous or not – and regularly addressed and answered live by the Board of Management in video messages and virtual global meetings like town halls meetings and WeAre1 talks. (These discussions are mostly unedited, apart from inappropriate language and statements targeting individuals.)

As of December 31, 2021, Covestro had 17,909 employees worldwide (previous year: 16,501). At the reporting date, the Group also had 581 employees in vocational training worldwide (previous year: 551), 568 of whom were based in Germany (previous year: 543).

 See note 9 "Personnel Expenses and Employee Numbers" in the Notes to the Consolidated Financial Statements.

Employees by division¹



¹ The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training.

Corporate Values and Corporate Culture

Covestro is proud of its corporate values, summarized as C³: curious, courageous, and colorful. Curiosity drives us to think beyond the horizon and allows us to create innovative and unexpected solutions for our customers. Courage helps us identify opportunities where others see limitations. Diversity promotes employee engagement and creativity; multiple viewpoints make us successful. These values guide all of the Group's employees and are reflected in their daily thoughts and actions.

Our "We Are 1" corporate culture is based on Covestro's values and behaviors, and is an integral part of our strategy. Our employees influence and shape this corporate culture. A culture filled with life by our employees enables us to pursue our strategy and therefore contributes to Covestro's success now and far into the future. Our corporate culture empowers employees, especially our management staff, to always act responsibly, to strive for continual improvement, to nurture collaborative teamwork, and to be outstanding leaders.

Our cultural dimensions and key behaviors

Acting responsibly	Wanting better	Winning together	Leading forward
We think and act like owners!	We innovate and transform!	We are passionate about our customers!	We help each other grow!
We solve problems and get the right things done!	We stay curious and learn!	We connect and collaborate!	We motivate and empower!
We take care of ourselves and others!	We are open-minded and inclusive!	We have courage!	We set a future direction!

Human Resources Profile and Focus

Digital transformation, demographic change, and the trend toward individualization – freedom of choice and self-determination – are changing our work and the ways we do it. Our human resources (HR) activities therefore focus on the development and implementation of initiatives that sustainably support our business success in view of these changes, while at the same time encouraging professional development and engagement across the board. In this context, our HR strategy is derived from our overarching Group strategy and is also aligned with our corporate values and understanding of a common corporate culture. The four strategic action areas of HR activity are employee engagement, skills development, leadership, and the work environment.

Due to the coronavirus pandemic, we have stepped up our efforts to enable employees to work remotely. In the future, we would like to continue to offer this work opportunity to interested employees and are continually evaluating the options and conditions to do so. A new company-wide works agreement signed in the 2021 fiscal year enables employees in Germany to work outside the office for up to 80% of their working hours per month in the future, if their responsibilities, the company's requirements, and their workplace are suitable for flexible working. This regulation will enter into force as soon as the coronavirus pandemic situation normalizes. Similar rules were also implemented at our other sites worldwide, some of which are more limited or more flexible than those in Germany.

In addition to other HR goals, Covestro's Board of Management is dedicated to promoting diversity, equity, and inclusion as well as ensuring our employees have the qualifications to meet the demands of today's continually changing working world. We are confident that employees can best unlock their full potential through new work experiences, exchanging information and teaming up with others, and learning independently with the help of the training resources provided by the company. Together, employees at all levels of the company set the standards for success, develop future-proof skills, and interact with one another on a basis of mutual respect. Workplace health and safety is a fundamental requirement.

The chief objective in incorporating the workforce of the Resins & Functional Materials (RFM) business acquired from Koninklijke DSM N.V., Heerlen (Netherlands), is to integrate these new employees into Covestro's work environment as quickly and completely as possible, both in terms of administrative and organizational concerns. Most of the necessary steps have already been taken or are in the planning stage. Various communications initiatives, workshops, and trainings have been held to meld the two corporate cultures and determine a unified strategy. These continue to be a regular part of the change management process. We regularly assess our employees' perception of our progress and the effectiveness of this cultural integration process using specialized employee surveys distributed in the acquired business. The surveys to date indicate a high degree of satisfaction and identification with Covestro while at the same time supplying us with important insights and jumping-off points for improvement. A total of 82% of participants agreed with the statement that they are proud to be part of the Covestro family.

Winning Qualified Employees and Promoting Covestro's Employer Brand

Our goal is to be an attractive employer to candidates worldwide. Covestro aims to recruit qualified employees for the company, ensure their professional and personal development, and retain talent for the long term. We therefore strive to reinforce our employer brand through diversity and raise awareness of our company among new target groups.

We take responsibility worldwide for the professional futures of young people and maintain close contacts with leading universities like RWTH Aachen University (Germany), the University of Pittsburgh (Pennsylvania, United States), and Tongji University in Shanghai (China). Covestro is also involved in international student networks, such as Enactus, a global organization for university students, and continue to steadily expand these partnerships. We bring in university students to take part in professional internships worldwide each year. This gives them insight into our company's operations as well as personal experience with Covestro as an employer. In fiscal 2021, we offered 364 internships around the globe.

We also take an active role in helping young people in various countries begin their professional lives by partnering not only with conventional colleges and universities, but also with organizations such as Stiftung Deutsche Sporthilfe, where we support top athletes in starting their careers. In addition to giving support to students, we provide alternative routes to joining the working world. In Germany, for example, 184 young people were able to start their careers with Covestro in fiscal 2021. Covestro offers vocational training in a number of scientific and technical professions. If the vocational training is completed successfully, trainees are guaranteed a position with the company.

During the coronavirus pandemic, Covestro organized events such as virtual career fairs in other countries in addition to these activities in Germany. These were held in conjunction with universities in Spain, including Universidad de Barcelona, Instituto Químico de Sarriá (IQS) in Barcelona, and University Rovira I Virgili in Tarragona.

As an employer, Covestro received major awards again in the reporting period. In the current ranking by Universum, Stockholm (Sweden), Covestro was named one of the top 100 employers for students of health and medicine in China and among the 50 best for young professionals in the sciences in Germany.

Promoting diversity and inclusion is a key factor in our appeal as an employer. In fiscal 2021, we again posted a year-over-year increase in the share of women in the trainee cohort in Germany. This effort is supported by other initiatives, including a change in our target group-oriented images for our "Junge Frauen in der MINT-Ausbildung" (Young Women in STEM) recruiting campaign in Germany. The abbreviation STEM stands for science, technology, engineering, and mathematics in paths of study and careers.

A campaign in the United States was also launched on LinkedIn on Women's Equality Day (August 26, 2021). Particularly notable is our participation in the Disability Equality Index. This is a benchmark comparison supporting inclusion and equality for people with disabilities in the United States. Covestro was recognized as one of the best employers for people with disabilities for the first time in this rating.

In addition, we improved our corporate website and revised our global career pages. As a result, all of our career websites were combined into one global site where candidates can find global as well as local content using our new intuitive navigation. The site features entry-level opportunities, information on Covestro as an employer, and, for the first time ever, a look at diversity, equity, and inclusion at Covestro. What is more, we pursued our "We Are 1" culture in fiscal 2021 by more tightly integrating the activities of the worldwide staff of our communications department and improving our social media presence. Each month, our global Instagram account @Covestro features a Covestro intern from a different country. We are increasingly using social media channels in other countries as well to increase our appeal as an employer and attract employees. In Mexico, we added Facebook as another recruiting channel in the reporting year, and in China an employee recommendation program was established on the WeChat platform to inspire production workers to apply for jobs with Covestro.

[Supplementary information >](#)

We welcome applications from all candidates, irrespective of their ethnic origin, nationality, religion, ideology, gender, age, disability, and/or sexual identity. We are committed to the principle of treating all candidates fairly and avoiding discrimination of any kind.

In the reporting year, we hired a total of 2,639 new employees worldwide, the majority (1,800 FTEs) of whom joined Covestro with the acquisition of the Resins & Functional Materials (RFM) business from Koninklijke DSM N.V., Heerlen (Netherlands).

New hires¹ by age group, gender and region in fiscal 2021

	EMLA		NA		APAC		Total	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Women	309	11.7	88	3.3	221	8.4	618	23.4
< 30 years	87	3.3	21	0.8	35	1.3	143	5.4
30 to 49 years	158	6	37	1.4	165	6.3	360	13.7
≥ 50 years	64	2.4	30	1.1	21	0.8	115	4.3
Men	1,087	41.2	300	11.4	633	24	2,020	76.6
< 30 years	242	9.2	65	2.5	108	4.1	415	15.8
30 to 49 years	478	18.1	149	5.6	471	17.9	1,098	41.6
≥ 50 years	367	13.9	86	3.3	54	2	507	19.2
Total	1,396	52.9	388	14.7	854	32.4	2,638	100.0

¹ The number and percentage of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. Percentages represent the distribution of new hires. Unlike in prior years, this figure does not include employees in vocational training.

One newly hired individual did not state their gender. This information was not included in the presentation above for data protection reasons.

A total of 1,109 employees worldwide left the Group in fiscal 2021. Employee attritions in the different regions and age groups varied widely in some cases. The number of attritions is below the prior-year figure, mainly due to the decline in divestments in the year under review.

Attritions¹ by age group, gender and region in fiscal 2021

	EMLA		NA		APAC		Total	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Women	114	5.6	49	7.9	110	7.8	273	6.7
< 30 years	24	8.2	8	10.9	21	16.7	53	10.8
30 to 49 years	50	4.5	20	6.6	73	6.3	143	5.6
≥ 50 years	40	6.1	21	8.6	16	14.2	77	7.6
Men	437	5.6	162	7.6	237	6.7	836	6.2
< 30 years	48	5.1	19	8.7	45	12.5	112	7.4
30 to 49 years	147	4.3	53	5.6	156	5.8	356	5.0
≥ 50 years	242	7.0	90	9.5	36	7.7	368	7.6
Total	551	5.6	211	7.7	347	7.0	1,109	6.3

¹ The number and percentage of employees are calculated on the basis of full-time equivalents (FTEs). The attrition rate is calculated as the ratio of the total of all employer- and employee-initiated terminations, the end of fixed-term contracts, retirements, and deaths to the average number of employees (FTEs). Unlike in prior years, this figure does not include employees in vocational training. There were no attritions of employees who did not provide gender information.

[< Supplementary information](#)

Promoting and Developing Employees

Well educated and trained staff is crucial for ensuring that the company can develop further, and is essential to the company's success. We believe in lifelong learning and therefore support our employees in obtaining additional training, both personal and professional, in all career phases.

To this end, we offer a wide range of customized continuing education options for all employees through our in-house learning concept. Numerous in-person classes are available worldwide along with virtual training sessions, each of which focuses on a different target group. In-person training was possible only to a limited extent in view of the coronavirus pandemic. Courses were increasingly held online so that employees could continue to have suitable continuing education choices.

In the 2020 fiscal year, we began restructuring our training systems and strategy, an effort that continued in fiscal 2021. Improving self-directed learning was our priority to provide employees with flexible options for developing their skills. To this end, we focused on further updating our learning management system (LMS) by adding content and improving user friendliness. Another priority was to promote knowledge transfer within the company, to create in-house training sessions using suitable tools, and to train in-house trainers (train-the-trainer program). These initiatives serve to further develop educational content in-house and to analyze the content required (including e-learning content) to create a type of knowledge market. Learning on the job was further reinforced and a mentoring program launched at Covestro to ensure that knowledge is transferred during day-to-day operations.

Our people development activities include working on an updated, more agile approach to performance, development, careers, and our talent portfolio. For instance, we intend to introduce new initiatives in line with our "We Are 1" culture that are streamlined, transparent, and intuitive. The aim is for management staff, other employees, and the company to grow, deliver high performance, develop, and be successful now and in the future. This requires all of our employees, especially our management staff, to approach their work from a development perspective and be ready to learn new skills and approaches.

The ENGAGE global initiative launched in the fourth quarter of 2019 to measure and improve employee engagement continued again in the year 2021. All employees worldwide can provide feedback several times a year by filling out a voluntary, anonymous online survey. This helps us understand what is important to our employees in terms of work environment and day-to-day operations. The results are then shared transparently with the employees. Team discussions are held so that employees and supervisors can collaboratively decide on measures to continually improve the working situation.

The rate of participation in the employee survey conducted in May 2021 exceeded 70%. Over the time we have been conducting the surveys, we have observed a steady increase in the overall engagement score, which is derived from two questions about job satisfaction and recommending Covestro as an employer. In addition, there are also several other questions about various topics.

Compensating Employees Transparently and Competitively

Offering fair compensation in line with the market independent of gender and other diversity criteria is an essential prerequisite for recruiting, retaining, and motivating qualified employees. Covestro therefore combines a base salary reflecting the duties of a position with performance-related compensation components and extensive additional benefits to create an internationally competitive pay package, about which employees are informed transparently.

Tasks and responsibilities are classified on the basis of a job evaluation conducted without considering the individuals in the positions. For management functions, a standardized evaluation method is used if the job evaluation has not already been stipulated by a local collective agreement. Based on this classification, the amount of the base salary in all countries is aligned with standard compensation levels in the respective region. Regular compensation benchmarking is conducted to ensure this is maintained for the long term.

Through a bonus program, the Group-wide Covestro Profit Sharing Plan (Covestro PSP), we have made it possible for our employees to participate in the success of the company each year with a uniformly calculated bonus payment. In addition, management-level employees participate in the Prisma global compensation

program, which bases payments on the Covestro share price, including comparisons with our competitors, and in this way rewards the long-term changes in the company's share price. Since the tranche launched in the year 2021, this program has included a sustainability component comprising a reduction target for carbon emissions and other greenhouse gases such as nitrous oxide.

☐ See "Short-Term Variable Compensation" and "Long-Term Variable Compensation."

Furthermore, a global budget is available from which management-level staff can promptly grant individual performance awards to recognize outstanding conduct, commitment, and the performance of their employees in regard to our corporate values.

☐ See note 21 "Other Provisions" in the Notes to the Consolidated Financial Statements.

As in previous years, the Covestment share participation program was offered once again in fiscal 2021 and provided employees with the opportunity to purchase Covestro shares at a discount. A total of 99% of Covestro's global workforce in 16 countries is thus able to purchase Covestro stock at discounted prices. Around 40.4% of all eligible employees worldwide took advantage of this offer. The participation rate was 51.3% in Germany, 30.2% in the United States, and 50.8% in China.

☐ See note 21 "Other Provisions" in the Notes to the Consolidated Financial Statements.

Supplementary Information >

In the year under review, 69% of our employees worldwide (mainly in Central Europe, Brazil and most of our employees in China) were subject to collective bargaining or company agreements. At various country subsidiaries, the interests of the workforce are represented by elected employee representatives who have a right to be consulted on certain decisions affecting the workforce.

As of December 31, 2021, 77% of the workforce had access to a company pension plan. At all locations, personnel policy is aligned with the statutory requirements, such as those for severance, pre-retirement, and retirement payments. For instance, in Germany employees are able to transfer salary and time components (converted into money) into a long-term account. The accumulated balance can then be used at a later date for certain legally defined purposes such as pre-retirement leave.

< Supplementary information

Promoting Diversity, Equity, and Inclusion

We work to make the world a brighter place. Diversity, equity, and inclusion (DEI) are key components of our corporate culture. We advocate for a working environment in which various skills, talents, experiences, and points of view are welcome, and everyone is treated with dignity and respect, both within and outside of our company. We also believe that a diverse workforce and inclusive environment are important drivers of innovation, sustainability, employee engagement, and business success. Our goal is to create an environment at Covestro in which all employees can give their best each and every day.

Covestro's DEI strategy is derived from our values and based on three core principles: Colleagues, Company, and Community. These are three essential factors for building a strong, diverse, equitable, inclusive, and innovative work culture at our sites. The Colleagues principle encompasses all activities that aim to make Covestro's workforce more diverse. These include building and maintaining our employer branding. The Company pillar brings together all of Covestro's efforts to promote inclusion, such as creating a global framework for employee networks. Our Community efforts comprise our partnerships with others to establish a foundation for more diversity in society. This includes activities such as our participation in the "Klischeefrei" (Cliché Free Initiative) initiative. The interaction between the initiatives of all three pillars will ultimately result in greater diversity and inclusion in the company. We promote engagement among our employees and external partners; support efforts to recruit, retain, and ensure the professional development of our employees; expand our supplier diversity; and contribute to directing Covestro's business strategy.

In the year 2021, Covestro published its first global report on diversity and inclusion, which presents information on our DEI strategy, as well as facts and figures, and regional examples documenting Covestro's progress in this area.

+ Additional information is available at: www.covestro.com/en/company/strategy/people-and-culture

Our diversity, equity, and inclusion strategy



Colleagues – Build, Engage and Develop a Strong, Diverse Workforce

Employee networks are a key factor in involving our staff even more in driving diversity. We want to bring people with similar interests or concerns together in these networks, and promote an exchange of inspiration and ideas. Covestro has many different themed employee networks worldwide. The globally active UNITE network focuses on all issues of concern to the LGBTIQ (lesbian, gay, bi, trans, intersex, queer) community, and the Compass network is for employees interested in gender equity. In the 2021 fiscal year, our employees launched several new networks across the globe, including a women's network, a spinoff of UNITE in Mexico, a network for fathers in Germany and one for working mothers in China.

Company – Establish an Inclusive, Supportive Work Environment and Culture for Everyone

Covestro knows that companies are more successful when they pursue gender equity and is committed to greater representation of women. We strive to promote diversity and equity at all levels for all genders. In the year 2021, we stepped up our commitment in this regard, setting an independent global target for the entire workforce in addition to meeting legal requirements in Germany. The Board of Management has agreed to build a measurably more diverse work environment and to attain the goal of Covestro's total workforce comprising 40% women by the year 2029. At the end of the reporting year, women made up 23% of our worldwide headcount.

📖 See "Promotion of Equal Participation of Women and Men in Leadership Positions."

At the end of the year 2020, Covestro joined the UN Women's Empowerment Principles (WEPs) initiative along with the UN Global Compact to promote gender equity. The initiative features seven defined principles that guide the participating companies in supporting women in the workplace and in society.

Despite the coronavirus pandemic, we sent a clear signal in favor of diversity and in May 2021 held a roadshow at our four sites in Shanghai (China) on the topic of diversity, equity, and inclusion. On May 18, 2021, we participated in the ninth Day of Diversity in Germany held by the "Charta der Vielfalt" (Diversity Charter) initiative with virtual sessions for all employees.

Community – Achieving Business Objectives through Community Engagement, Supplier Diversity, and Customer Interaction

Promoting diversity is the mission of society as a whole in which each of us shares part of the responsibility. Covestro takes this responsibility seriously and thus proactively promotes diversity. We are confident that we need to work shoulder-to-shoulder with various outside parties beyond pursuing our own activities. This is the only way diversity will be permanently integrated into the company as well as society. For this reason, we are further expanding our cooperation with various partners.

In Germany, we work with Väter gGmbH in Hamburg (Germany), which promotes work-life balance from the personal and business perspective. We also joined the "Klischeefrei" (Cliché Free Initiative) initiative in the year 2021 and its advocacy for career and degree choice free of gender clichés. Covestro supports the "Future of STEM Scholars Initiative (FOSSI)" by the American Institute of Chemical Engineers (AIChE) in New York (New York, United States). FOSSI grants scholarships to students with STEM degrees from historically black colleges and universities (HBCUs). These scholarships also include internships that help candidates develop leadership qualities and offer mentoring options in the participating companies. Covestro supports a FOSSI scholarship recipient with a grant of nearly USD 50,000 over a period of four years. In China, we hosted the Qiantan Forum, where various employers from the area around our office building in Shanghai came together for a panel discussion to promote the building of a diverse, equitable, and inclusive work environment.

Our diversity, equity, and inclusion goals and culture are being integrated further into the company by way of global action plans and regional implementation teams for all pillars and with the support of the CTO, who is the sponsor of these efforts and a member of the global DEI committee. Global decisions are additionally made by Covestro's full Board of Management.

[Supplementary information >](#)

Employee Metrics on Diversity and Internationality

As of December 31, 2021, Covestro had 17,909 employees worldwide comprising 83 different nationalities, 76.9% of whom were male and 23.1% were female. Members of the Board of Management and of the Executive Leadership Team (executives at the two highest contract levels below the Board of Management) represented nine different nationalities.

The majority of Covestro's employees (56.5%) worked in the EMLA region. The APAC region accounted for 27.6% of our employees, while 15.9% of the workforce was based in the NA region.

Employees¹ by employment status, region, and gender in fiscal 2021

	EMLA		NA		APAC		Total
	Women	Men	Women	Men	Women	Men	
Employees with permanent contracts	2,056	7,859	626	2,216	1,343	3,491	17,591
Employees with temporary contracts	76	129	–	2	39	68	314
Total	2,132	7,988	626	2,218	1,382	3,559	17,905

¹ The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training. Four employees worldwide did not state their gender. This information was not included in the presentation above, which results in deviations in the total number of employees.

Permanent employees¹ by type of employment and gender in fiscal 2021

	Women	Men	Total
Part-time	806	2,130	2,936
Full-time	3,419	11,665	15,084
Total	4,225	13,795	18,020

¹ The number of employees (headcount) is stated irrespective of their degree of employment. The figures do not include employees in vocational training. Four employees worldwide did not state their gender. This information was not included in the presentation above, which results in deviations in the total number of permanent employees.

The percentages of male and female employees by employee group have remained largely constant.

Percentage of employees¹ by employee group and gender in fiscal 2021

Employee group	Women	Men	Total
Board of Management and Executive Leadership Team	+0.1%	+0.2%	+0.3%
Middle management	+2.5%	+9.0%	+11.5%
Junior management	+6.7%	+17.1%	+23.8%
Skilled workers	+13.8%	+50.6%	+64.4%
Total	+23.1%	+76.9%	+100.0%
Employees in vocational training	+21.2%	+78.7%	+100.0%

¹ The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training. Four employees and one trainee worldwide did not state their gender. This information was not included in the presentation above, which results in deviations in the total number.

Percentage of employees¹ by employee group and age group in fiscal 2021

Employee group	< 30 years	30 to 49 years	≥ 50 years	Total
Board of Management and Executive Leadership Team	+0.0%	+0.1%	+0.2%	+0.3%
Middle management	+0.0%	+5.6%	+5.9%	+11.5%
Junior management	+0.8%	+15.3%	+7.7%	+23.8%
Skilled workers	+10.2%	+34.0%	+20.2%	+64.4%
Total	+11.0%	+55.0%	+34.0%	+100.0%

¹ The number of permanent or temporary employees is stated in full-time equivalents (FTEs). Part-time employees are included on a pro-rated basis in line with their contractual working hours. The figures do not include employees in vocational training.

[< Supplementary information](#)

Designing Healthy Working Conditions and Work Models

Our basic principles include the constant improvement of working and organizational conditions and the identification of factors that either promote or are detrimental to health.

 See "Health and Safety."

In this context, we offer our employees an extensive selection of preventive health measures featuring programs and initiatives that promote good health. Our focus here is not only the health of individual employees but also current environmental influences, which we actively address, something that became particularly evident during the coronavirus pandemic. We offered virtual sessions and initiatives worldwide (including training on mental health, ergonomics, exercise breaks, etc.) to support employees in this new situation for most, both in working from home as well as in dealing with the changed framework conditions at the company's sites.

We are aware that our management staff has a significant influence on the performance and wellbeing of our employees. Against this backdrop, we launched an extensive program to help our executives to perform their roles as leaders and put in place a healthy work environment.

The corporate Human Resources function is aided in this effort by the corporate Group Health, Safety and Environment, Law, Intellectual Property & Compliance, and Corporate Audit functions. They ensure that all internal guidelines and all relevant standards and labor law requirements are met.

 See "Integrated Management System for Health, Safety, Environment, Energy, and Quality."

We also offer modern working conditions to our employees, so that they can be successful in a changing working environment and balance their professional and personal interests. In many countries, we exceed our legal obligations, e.g., by offering solutions such as flexible working hours, part-time work, working from home, and remote work, if this is compatible with operational requirements. A direct dialogue with our employees is also particularly important to us. In this regard, we take into account national and international notification duties.

At Covestro, our social responsibility as a company and employer also includes creating fair working conditions that are based on mutual respect and appreciation among employees and particularly ensure safety, health, and wellbeing in the workplace. Our sustainable personnel policy also features a strong social safety net for our employees.

 See "Social Responsibility," "Human Rights," and "Compliance."

Covestro actively raises awareness of healthy lifestyles with a stable committee structure for workplace health management and a range of initiatives and projects tailored to the individual needs of our employees. This is particularly true in regard to the challenges facing us as a result of digital transformation, demographic change, and the trend toward individualization, or freedom of choice and self-determination for individuals, which are all changing our work and the ways we do it. Against this backdrop, Covestro has decided to roll out a digital platform in the year 2022 to enable employees to participate in a broad range of health-promoting activities.

We offer comprehensive workplace health management whose focal points are continually developed further in response to health surveys. Our intention is to ensure that all employees have access to suitable and affordable health services such as sports programs, regular medical check-ups, help in overcoming illness and on-site medical care, particularly with regard to psychosocial counseling. The nature and scope of the health promotion programs differ around the world with regard to the respective country-specific level of development and access to national health systems. We offer our employees comprehensive measures aimed at preventing illness or maintaining good health, in many cases exceeding statutory requirements.

Covestro was named to the excellence level as one of the three best companies in the chemical industry in the Corporate Health Award (CHA) 2021 given by initiators EUPD Research Sustainable Management GmbH, Bonn (Germany), and Handelsblatt Media Group GmbH & Co. KG, Düsseldorf (Germany). The CHA is a prestigious award for excellent corporate health management in Germany in which companies are recognized for their above-average commitment to the health of their employees and pursuit of a sustainable HR strategy.

[Supplementary information >](#)

Work-Life Balance

We support work-life balance for our employees. For instance, partnerships with day care centers and financial support for vacation care for school-age children are among the solutions we offer to make combining work with family responsibilities easier. The programs offered by Covestro can differ from site to site.

Provided it is compatible with operational requirements, Covestro allows employees to take extended leave from work for personal projects such as scientific research, university studies, or other purely personal reasons. Employees around the world take advantage of this offer from time to time.

[< Supplementary information](#)

New, Flexible Working Environments for Improved Contact and Communication

Work environments, work content, and working methods are undergoing constant changes due to digital transformation and the increasing speed of change and complexity at our workplace. In order to meet these ever-changing requirements, Covestro provides a modern working environment that promotes flexible ways of working.

We call this work environment our C³ way of working based on our C³ values. At the heart of this philosophy is our conviction that all our employees, regardless of their status in the hierarchy, need working environments suitable to their duties to be able to work effectively. In this way, we want to enable changes in perspective and drive creativity in the company. Open-plan office environments combined with flexible work concepts encourage contact and the exchange of information across team and departmental boundaries and thus strengthen communication and interdisciplinary cooperation. Active change management prepares employees for and involves them in shaping new work environments. To achieve this, we provide not only the appropriate facilities, but also the IT infrastructure and media technology that works simply and intuitively.

Our philosophy applies particularly to cases such as moving into or creating new workspaces. We have already implemented this flexible working concept at many sites, including in Brazil, in Switzerland, in Taiwan, Greater China, in Thailand, and in China. Another new office building, which we use as our new corporate headquarters, opened for business in November 2020 at the Leverkusen (Germany) location. Due to the coronavirus pandemic and the protective measures we put in place, only very few employees have worked there in-person so far. The rest of our employees will gradually move into the building in conjunction with the return to other buildings once health protection regulations permit this.

Our managers play a special role in this system. In addition to implementing established leadership standards and modern work methods, they increasingly collaborate with their employees to develop flexible and customized solutions to support Covestro's efforts to extract maximum potential from this new work environment.

Health and Safety

The continuous improvement of a safe work environment is a key component of Covestro's corporate responsibility and a topical focus of our human rights due diligence activities. Covestro adheres to the applicable standards, domestic regulations, and laws. These regulations aim to prevent injuries, equipment breakdowns, and transportation incidents, as well as preserving the health of our employees in the workplace and during work-related activities. This also applies to partner companies (contractors) who work for our company within the scope of operational activities. Detailed rules and regular checks are instrumental in meeting these goals, as are safe production processes, plants, and transportation. Another priority is protection of the environment, and safe handling and use of products as part of our product stewardship.

Safety incidents that – under other circumstances – could have led to a High Potential Event (HPE) are examined using a set of criteria we have defined that includes their potential effects. Events classified as HPEs are treated similarly to events that have actually occurred and require detailed root cause analysis and communication. Promoting safety awareness among employees is essential for minimizing dangerous situations during day-to-day operations. In fiscal 2019, the Team Resource Management training was set up as part of our Safeguard program to further increase safety awareness and safe conduct among our staff. Due to the coronavirus pandemic, we could only begin to roll out the in-person training in the third quarter of 2021. It is scheduled to continue in 2022 and beyond.

For the 13th time, the CEO Health & Safety Award, now with a health component, was presented in the reporting year. All employees were encouraged to submit suggestions for improving occupational health and safety. The ideas presented were selected by a jury of internal experts, and staff was subsequently called on to choose their personal favorites. The most highly rated suggestions were recognized by our CEO at the virtual Covestro Health & Safety Day in September 2021.

Occupational Health and Safety

Our safety management activities take into account requirements and standards applicable around the world. We continually update our safety management system in line with our corporate culture. The safety of our employees and the protection of their health in the workplace are a focal point of this work, as is preventing potential effects on the environment and harmful health effects caused by leaks at production facilities, or accidents involving hazardous goods and other transportation accidents. Our integrated Health, Safety, Environment, Energy, and Quality (HSEQ) management system is a major contributor to achieving these goals.

An integrated information management system (IIMS) implemented throughout the Group exists for reporting and processing work-related accidents and incidents, as well as potential hazards. The IIMS makes it possible to identify trends in a timely manner so that corresponding short-term corrective and long-term improvement measures can be implemented if necessary. The company's safety experts, supported by external expertise if needed, analyze the background circumstances and the consequences. The results of the root cause analysis conducted after an incident occurs and the corrective measures taken are published throughout the Group in order to raise employees' safety awareness. As a result, everybody can better assess comparable hazards and situations and proactively remedy them. We continued to face enormous health and safety challenges due to the coronavirus pandemic in the year under review. Our Corporate Security professionals were the central point for consolidating information on country-specific conditions and reporting to the Board of Management. In this way, we were able to fulfill the requirements of the pandemic plan developed and implemented by Covestro. Local measures supplemented globally applicable preventive measures, and Covestro introduced various measures to help prevent coronavirus outbreaks at Covestro's sites.

Safety and Accident Prevention

Over the long term, we want to prevent all workplace accidents and work-related occupational diseases. For this reason, we regularly analyze the accident rate by site as well as by region and type of accident. The fluctuations observed indicate to us the structural differences that are discussed in analyzing and determining measures to be taken with the sites and segments, and adapted to local requirements.

Activities that led to accidents in the year 2021

Recordable incidents	Movement (stumbling/ falling)	Mechanical work	Chemical contact	Traffic and transportation	Other	Total
Employees	18	25	6	1	3	53
Contractors	5	10	1	0	5	21
Total	23	35	7	1	8	74

We classify accidents at Covestro according to the American Society for Testing and Materials (ASTM) standard E2920-14 to devote particular attention to the life-threatening or life-changing accidents among the entirety of the accident data. In the year 2021, three contacts with chemicals and one hand injury were classified as serious.

Covestro processes recordable workplace accidents and illnesses involving the company's own staff and contractors as part of the recordable incident rate (RIR) and lost time recordable incident rate (LTRIR), as per Standard 1904 issued by the U.S. Occupational Safety and Health Administration (OSHA). The RIR is calculated as a ratio of the total number of recordable workplace accidents and illnesses to hours worked (standardized to 200,000 working hours per year). The LTRIR is calculated as a ratio of lost time in days to the same hours worked figure. We calculate the number of hours worked by our employees based on the number of employees in the Group and multiply this figure at country level by the average working hours in the member states of the Organisation for Economic Co-operation and Development (OECD) or the International Labour Organization (ILO). If no OECD or ILO data is available, then we use the average number of hours worked at Covestro.

The number of hours worked by our contractors is calculated using a methodology that includes various categories for recording working hours, broken down by electronic or manual timekeeping or obtained using supplier invoices. The figure can also be calculated based on valid assumptions (estimates). At sites with fewer than 50 Covestro employees, no contractor working hours are counted, so these are not included in the incident rates calculation. We apply controls and other measures at the global level as well as individual site level to prevent possible errors in calculating contractor working hours. Implementation of this system continued in fiscal 2021.

In the 2021 fiscal year, we documented 31.8 million total hours worked (THW) for our employees (previous year: 29.5 million THW). For contractors, 15.6 million THW (previous year: 16.7 million THW) were reported. This results in the following rates according to OSHA:

Work-related accidents¹

	2020	2021
Recordable incidents		
in relation to Covestro employees	35	53
in relation to contractor employees ²	26	21
Recordable incident rate (RIR)		
in relation to Covestro employees	0.24	0.33
in relation to contractor employees ²	0.31	0.27
Recordable incidents in connection with days lost		
in relation to Covestro employees	20	33
in relation to contractor employees ²	19	15
Lost time recordable incident rate (LTRIR)		
in relation to Covestro employees	0.14	0.23
in relation to contractor employees ²	0.23	0.19
Fatal injuries		
in relation to Covestro employees	0	0
in relation to contractor employees ²	0	0

¹ Includes work-related accidents and illnesses taking into account all fully consolidated companies, provided that they are part of the consolidation scope.

² Employees of partner companies contracted by Covestro whose accidents occurred on one of our company premises.

In the reporting year, the number of workplace accidents involving our employees went up to 53 (previous year: 35), increasing our employees' RIR by 0.09 points. The RIR of our contractors' employees declined by 0.04 points.

Process and Plant Safety

We aim to ensure the safety of processes and plants in a way that avoids unacceptable risks to our employees, our neighbors, and the environment. We therefore conduct extensive, systematic safety assessments at regular intervals. Loss of Primary Containment (LoPC) is an early indicator for all Covestro plants, which is reported consistently throughout the world and is integrated into the Group's safety reporting.

Covestro applies the German Chemical Industry Association's (Verband der Chemischen Industrie, VCI) guidelines on documenting plant safety performance indicators. The reporting criteria are thus aligned with the updated and globally harmonized definition by the International Council of Chemical Associations (ICCA). A LoPC event comprises

- the release of chemicals classified according to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) exceeding the defined volume thresholds within one hour,
- a reportable injury according to OSHA criteria to an employee or contractor as a result of product release or the release of energy,
- the release of energy (e.g., fire, explosion) that leads to damage with direct costs totaling more than €2,500,
- an evacuation officially declared outside the plant.

We use the LoPC incident rate (LoPC IR) to determine the number of LoPC incidents per 200,000 TWH per year by Covestro employees and contractors. In the year 2016, the ICCA adjusted the volume thresholds used to identify incidents and published these changes, which are binding for its members starting in the year 2020. We applied these volume thresholds at Covestro so that our statistics would be comparable within the chemical industry and the benchmark. Very low volume thresholds mean that seven less significant incidents are systematically documented and investigated as LoPC events. For instance, the volume threshold for chlorine is one kilogram. In the reporting year, our LoPC IR was 0.69 (previous year: 0.64).

Every LoPC incident as well as minor and near-miss incidents are carefully analyzed to determine their causes, and the results and corrective actions taken are publicized throughout the Group. The criteria (e.g., low thresholds or nonhazardous substance releases) were selected so that even releases of substances or energy that have no impact on employees, neighbors, or the environment are systematically recorded. This contributes to maintaining the integrity of our facilities. The global exchange of experiences relevant to safety is intended to help maintain the existing high standard of procedural and plant safety within the company. Globally binding standard processes and their uniform implementation also contribute to this effort.

Corporate Security

The safety and security of employees, plants, data, and information as well as uninterrupted workflows and processes are particularly important to Covestro. This is why Covestro's safety strategy systematically focuses on meeting these safety and security targets. The corresponding duties and responsibilities are assigned to various departments of the responsible corporate functions. The corporate functions of Law, Intellectual Property & Compliance, Information Technology & Digitalization, and Production Management therefore have special authority to effectively counter current and future risks and threats, especially those that are virtual or digital. Decision-making and management bodies focusing on risk, compliance, and crisis management as well as on information security management have been established.

[Supplementary information >](#)

Hazard Avoidance

Repairs, inspections, and technical modifications frequently require work that is potentially hazardous. Such jobs are performed individually or pooled and performed at one time during plant downtimes, which are planned well in advance. A work permit process is applied here. In addition to a precise description of the work to be performed, this includes a hazard assessment and a determination of the required safety and protective measures. All individuals involved in the work are informed of these parameters and must confirm receipt of this information with a signature. The responsible facility, participating technical crews, and, if necessary, additional safety officers monitor adherence to the measures and safe work performance.

[<Supplementary information](#)

Environmental and Transportation Safety

We work continually toward maximum safety during transportation of our products. We report all incidents at all sites operated by Covestro worldwide in line with our internal directives. These are documented according to defined criteria such as quantity of loss of containment, material hazard class, degree of personal injury, and blocked transportation routes. In the case of certain hazardous materials, we record and categorize all leaks starting with as little as five kilograms, according to our Corporate Commitment. Global events on transportation safety are held at regular intervals. Here, corrective measures are developed and implemented based on actual incidents, and tried-and-tested approaches are exchanged.

Product Stewardship

To Covestro, product stewardship means comprehensively evaluating health, safety, and environmental risks in connection with the use and handling of our products. We want our products to be safe throughout their entire life cycle – from research to production and marketing to their intended use by customers and all the way to disposal. Product stewardship is also a focus of our human rights due diligence activities.

Monitoring the quality of our products and their suitability for particular applications is anchored in our corporate functions and segments. Safe transportation, qualification for specifically regulated applications, and marketability are centrally managed at Covestro, as is the obligation to report to the Board of Management on these matters.

The safe use and application of our products have high priority. It is very important to us to communicate product safety information transparently and comprehensively. In addition to the documents required by law, we therefore provide supplementary information and offer training as part of the global product strategy of the International Council of Chemical Associations (ICCA). Furthermore, specially trained employees throughout the company work closely with suppliers, customers, industry associations, and the public. Covestro thus aims to ensure the effective communication and observance of health, safety, and environmental information along the entire supply chain.

Management of Product Stewardship

Product stewardship involves both compliance with statutory requirements and voluntary commitments. Here we also take into account the so-called precautionary principle as explained in Principle 15 of the Rio Declaration of the United Nations and communication COM(2000) 1 of the European Commission. This important means of protecting consumers and the environment within the context of risk management may be used in special cases in which, according to an objective and comprehensive scientific evaluation, material or irreversible harm to people and the environment may occur, but the risk of this cannot be determined with sufficient certainty. In this regard, we follow the corresponding principles of the European Commission when applying the precautionary principle. These include especially the proportionality of the protective measures taken, an examination of the benefits and the disadvantages of all relevant options, as well as the review of the measures taken in light of new scientific developments. Arbitrary decisions cannot be justified by invoking the precautionary principle.

As a contribution to the safe handling and use of chemicals, risk assessments are carried out applying recognized scientific principles such as those described by the European Chemicals Agency (ECHA) in its Guidance on Information Requirements and Chemical Safety Assessment. A determination is made based on a hazard assessment and exposure estimation as to which additional information is required for the risk characterization of a product.

All product groups at Covestro undergo a multiple-step product assessment process. At first, we identify chemicals that are subject to statutory regulations and document the corresponding regulations. We then examine the risk potential of our products. During this process, we also identify substances for which only limited use or marketing are permitted based on the applicable laws and regulations. These include, for example, Substances of Very High Concern (SVHC) as classified in accordance with the European Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and substances covered by the European regulation on greenhouse gases. Substance compositions in all regions are checked with the help of IT systems against lists of regulated substances so that noncompliance with regulatory requirements would be identified reliably. Should the assessment or new findings reveal that it is not safe to use a certain chemical, we take the necessary risk mitigation measures. Those can range from technical measures such as protective gear and revised application recommendations to the withdrawal of support for a certain application or the substitution of a substance. In this case, an adequate replacement must be sought which can be produced in an economical and technically feasible way. Finally, we produce safety data sheets and labeling for all chemicals in up to 40 different languages, including chemicals that are not subject to any legal obligation. In this respect Covestro also exceeds the statutory requirements by making these safety data sheets publicly available.

We collect, document, and analyze all information about the safe and compliant use of our products in a global information system, which provides the basis for further improvements. This includes product surveillance and reporting on product-related and compliance incidents. Our global regulations for the Group contain rules and

guidance on when and how this information is to be used. For example, this has helped us improve the information on the safe handling of our products and provide customers with specific training. Furthermore, workshops, and online training sessions for our employees contribute to solidifying the understanding and importance of product stewardship in the company.

For fiscal 2021, we know of no material incidents of noncompliance with regulations or voluntary codes – either concerning the health and safety impacts of products and services, or relating to product information and labeling.

The optimization of products and processes is a continuous task of the chemical industry and is integral to our commitments as part of the Responsible Care™ initiative. This is an initiative by the chemical industry that aims for continual improvement by companies in the areas of environment, safety, and health, regardless of the legal requirements. We also participate in the further development of scientific risk assessments through our involvement in associations and initiatives. International associations such as the European Chemical Industry Council (Cefic) and ICCA are working to improve the scientific assessment of chemicals and research new testing methods. Moreover, they monitor implementation of legal regulations. Covestro is actively involved in industry association activities. Furthermore, we endorse the initiatives of the World Health Organization (WHO) and the European Union (EU) to improve health and the environment, for example with the further development of human biomonitoring through an alliance with the German Chemical Industry Association VCI and the German Federal Ministry of the Environment.

Implementation of Regulations and Voluntary Programs Pertaining to Chemicals

Covestro adheres to the applicable regulations pertaining to chemicals, such as REACH in Europe and the Toxic Substances Control Act (TSCA) in the United States. These regulations are aimed at protecting human health and the environment from the risks posed by chemicals, and thus shape our activities as a manufacturer, importer, and user of chemicals. We have established internal regulations to adequately address the range and complexity of the relevant requirements. They guide our employees in fulfilling regulatory requirements.

Substances registered according to REACH are assessed by regulators. This can result, for example, in additional testing requirements, new risk management measures, or inclusion in the REACH authorization or restriction procedure. A number of Covestro substances are also affected by this procedure, which restricts the use of particularly hazardous substances or can lead to their substitution or prohibition. The restriction on diisocyanates published in the Official Journal of the EU in August 2020 is one example of a restriction. In this case, labeling of diisocyanates had to be modified by February 2022, but this will not affect their availability. However, all users of products containing diisocyanates at a concentration of more than 0.1% of the residual monomer must be trained in their use by August 2023. Covestro supports this process and advocates for the practical and effective implementation of this requirement, for instance in the preparation of training materials. As part of the European chemical industry, we furthermore made a voluntary commitment to review and improve the REACH registration dossiers by the year 2026.

We ensure that substance assessments comparable to those meeting the high standards of REACH or the TSCA will also be applied at Covestro sites that are not subject to these regulations. The relevant procedure is established in the corporate regulation on “Product Stewardship” in the attachment entitled “Substance Information and its Availability.” When it comes to purchased substances, we are dependent on information provided by our suppliers.

Another example of our commitment to Responsible Care™ is the worldwide support we provide for customers for safely handling large quantities of reactive products through tank-farm safety assessments.

Covestro has also committed to compliance with animal welfare policies during toxicological and ecotoxicological testing.

+ Additional information is available at:

<https://solutions.covestro.com/-/media/covestro/corporate/productsafetyfirst/resources/statement-on-animal-studies-en.pdf>

We support the Global Product Strategy (GPS), a voluntary commitment by the chemical industry initiated by the ICCA. Its objective is to improve knowledge about chemical products, especially in emerging countries and countries of the Global South, and thus increase safety in the handling of these products. GPS is accessible at Covestro through the Product Safety First internet portal and is available worldwide. On this website, we inform our customers and other interest groups about safety-relevant properties and the safe handling of our products.

Substances That Are the Subject of Public Debate

Covestro is following the scientific discussion about the chemical bisphenol A (BPA), an important raw material for various plastics, e.g., polycarbonate. Critics, but also some authorities, are concerned that risks could result for users and the environment if traces of BPA are released from products.

Based on numerous scientifically valid and high-quality studies, Covestro is confident that BPA can be safely used in all areas of application supported to date. By participating in regulatory processes, Covestro works actively to dispel uncertainties and answer open questions. In addition, we continue to advocate for more objective discussions based on all of the scientific data in cooperation with the PlasticsEurope association, the American Chemistry Council (ACC), and the China Petroleum and Chemical Industry Federation (CPCIF). Covestro is involved in the discussions and provides information to customers and the public on this issue through associations, on the Covestro website, and through direct contacts.

Per- and polyfluoroalkyl substances (PFAS) are a subject of public discussion due to possible undesirable effects on people and the environment. PFAS are essential chemicals in a number of mainly industrial products, including many high-tech applications, often on account of their ability to resist heat and chemicals. PFAS are a challenge for all segments of industry, including chemicals, because various regulatory initiatives intend to limit the use of PFAS.

As a user of PFAS, we monitor the regulatory debate and support proportionate, implementable, and enforceable regulations based on robust scientific results and a reliable assessment of risks. We already include in our safety data sheets in the EU any PFAS that are classified as SVHC by REACH and are contained in our products at a concentration of more than 0.1% by weight.

Environmental Impact of Own Operations

Our business activities also have an impact on the environment: Covestro uses water for, among other things, cooling and cleaning, processes that result in wastewater containing various substances. Our production processes also generate waste, which we dispose of according to local guidelines or hire licensed companies to dispose of or recycle. In addition to the aforementioned greenhouse gases, other emissions into the air are also released into the atmosphere as permitted by the relevant authorities.

 See "Climate Neutrality."

Water and Wastewater

Covestro takes a holistic view of water as a resource: We take not only our water usage and the related problems of water scarcity and quality into consideration, but also the wastewater we generate and the growing concern about plastic waste in the oceans. This is underscored in our Corporate Commitment on Water.

 Additional information is available at: www.covestro.com/en/sustainability/service-downloads/policies-commitments

We assessed risk at our production sites to examine water availability, quality, and accessibility. In our production activities, we strive to use water several times and to recycle it. Covestro primarily generates wastewater from once-through cooling systems and production. All wastewater is subject to strict monitoring and analysis according to the applicable legal regulations before it is discharged into disposal channels.

 See "Water Usage."

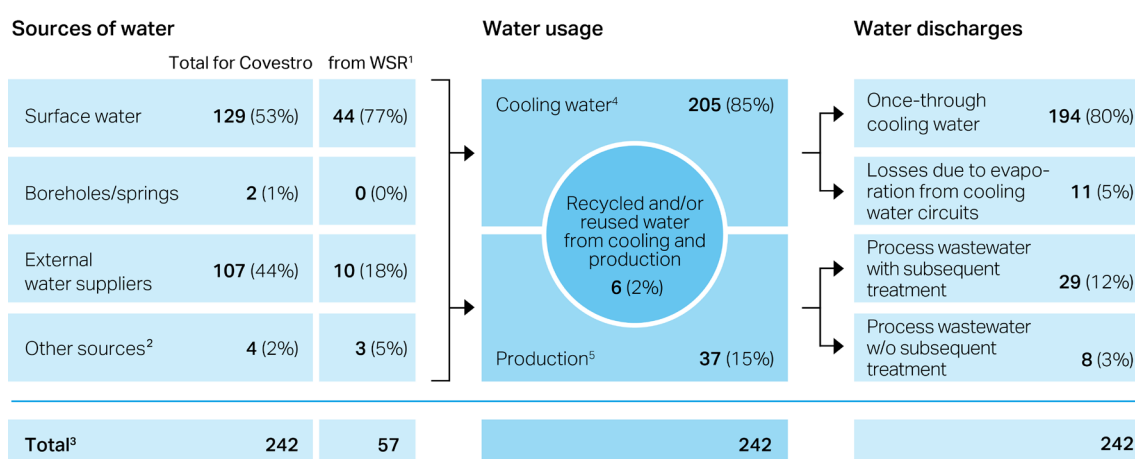
[Supplementary information >](#)

Water Usage

The availability and accessibility of clean water is vital for our production sites. As part of our Corporate Commitment on Water issued in the year 2017, we initiated and have continually refined a global risk assessment of all of our production sites covering water availability, quality, and accessibility.

Since last year, our risk-based water approach has included potential regulatory risks at our production sites in addition to physical risks such as water scarcity and quality. This approach is followed at main production sites currently exposed to a high risk of what is known as water stress and, during the reporting year, was further rolled out to other sites identified in the course of the update. Water stress includes water scarcity as well as other factors such as water quality and access to water. We identify locations subject to water stress using recognized tools, such as the Aqueduct Water Risk Atlas by the World Resources Institute and the Water Risk Filter by the World Wide Fund for Nature (WWF). In addition, we have internal exchanges with the experts at each site. Sites located in current water stress regions account for 24% of our total water usage. By analyzing the local water management at the sites, risks can be spotted at an early stage and potential for improvement can be identified. For instance, the production site in Antwerp (Belgium) launched a program in the year 2018 to reduce water consumption and increase the percentage of recycled water used. Moreover, in the year 2021, the site along with 50 other chemical and pharmaceuticals companies joined a project called Learning Network Water organized by Essenscia, the Belgian Federation for Chemistry and Life Sciences Industries. The project aims to develop action plans for water protection and circular water usage and to provide a platform for members to learn from one another.

Use of water in the year 2021 (million cubic meters)



¹ Water stress regions taking into account overall physical risks such as water shortages, water scarcity, and flood risk, not including the acquired Resins & Functional Materials (RFM) business.

² E.g., rainwater.

³ Differences between the volumes of water drawn and discharged can be explained in part through unquantified evaporation, leaks, water used as a raw material in products, and condensate from the use of steam as a source of energy.

⁴ Also includes water for irrigation purposes.

⁵ Total from production processes, sanitary wastewater, and rinsing and purification in production.

At 242 million cubic meters, overall water usage in the Group is slightly below the previous year's figure. One reason for the decrease is improved water monitoring at one of our US sites. The majority of the total volume of water used by Covestro (some 80%) is once-through cooling water. This water is only heated and does not come into contact with products. It can be returned to the water cycle without further treatment in line with the relevant official permits. The total volume of once-through cooling water was 194 million cubic meters in the reporting year.

Some of the water used can be recycled in various ways. For instance, recycled water can be used again in the same process multiple times, e.g., for cleaning or cooling purposes. It is also possible to reuse water from upstream processes in subsequent steps. This permits corresponding quantities of fresh water to be conserved each year. In the reporting year, the volume of recycled water used stood at 6 million cubic meters (previous year: 5 million cubic meters).

We currently calculate our total water consumption according to GRI Standard 303-5 (2018), which involves determining the difference between total water used and total water discharged. In the reporting year, total water usage is calculated at –0.5 million cubic meters. The negative figure is explained by sources such as water arising from reactions during chemical production processes.

Our goal is to minimize wastewater emissions, which depend largely on our production volumes and the current product portfolio, as much as possible.

The volume of process wastewater saw a year-over-year increase of 5%. The proportion of process wastewater purified or otherwise treated (e.g., incinerated) at a wastewater treatment plant operated by Covestro or a third party amounted to 78% worldwide. Following an analysis, another 22% was categorized as environmentally safe and returned to the water cycle. In the reporting year, the percentage of evaporation losses rose to a total of 11 million cubic meters.

Various emissions into water also increased somewhat in line with the higher volume of process wastewater.

Emissions into water (1,000 metric tons p.a.)

	2020	2021
Phosphor	0.02	0.03
Nitrogen	0.27	0.29
TOC ¹	0.46	0.55
Heavy metals	0.0041	0.0056
Inorganic salts	727	737

¹ Chemical oxygen demand (COD), calculated based on total organic carbon (TOC) values: 1.65 (TOC × 3 = COD).

Work on the collaborative Re-Salt project, which was launched in the year 2016 by the Federal Ministry of Education and Research (BMBF) for the purpose of recycling salt-laden industrial process water, was successfully completed. Another research project called RIKovery was launched to carry on salt water recycling activities. This project supported by the BMBF builds on the successful Re-Salt project and continues research into the treatment of process wastewater. The goal is to further increase concentrations and reduce the amount of energy required so that even more salt and water can be recovered. Over the three-year project term, Covestro is working with additional industrial, plant engineering, and research partners to achieve goals including taking the next technological step to increase the circular usage of process wastewater.

[< Supplementary information](#)

Waste

From an economic considerations perspective, Covestro's manufacturing processes apply a maximum of efficiency when it comes to the use of materials; compared with other chemical companies, these result in relatively small volumes of waste. We observe and evaluate our manufacturing processes on an ongoing basis to minimize material consumption and disposal volumes as much as possible. This is achieved by safe disposal channels with separation according to the type of waste and economically expedient recycling processes. However, production fluctuations, building demolition and refurbishment, and land remediation can also influence waste volumes and recycling paths. In fiscal 2021, the total volume of waste we generated increased. The reason was mainly additional volumes of hazardous production waste, particularly the waste volume from the acquired Resins & Functional Materials (RFM) business. We determine specific opportunities for waste reduction with targeted projects and put these into practice within the context of our existing manufacturing processes. For instance, in the manufacturing process for our toluylene diisocyanate (TDI) product, our Dormagen site began testing a new procedure that significantly reduces the resulting process waste volumes in the year 2019. The insights gained from this project can be transferred to additional plants at other Covestro sites. Our large-scale TDI production facility in Shanghai (China) is currently being equipped with this technology after a pandemic-related break.

Covestro also supports the reuse and treatment of its materials in accordance with economic and environmental criteria. Some of the waste created by our production processes with a high heating value is burned as fuel to generate steam for our production facilities.

Our commitment to the topic of sustainability plays an increasingly vital role with regard to the purchasing of packaging materials. We have implemented an approach to address this: When procuring packing materials, Covestro reviews in principle whether and to what extent used or reconditioned packaging can be used in the place of new packaging. For instance, Covestro uses post-consumer regrind plastic barrels for waste transportation. Drums made of recycled plastic replace plastic drums from virgin material. Thus, Covestro uses fewer raw materials, reduces emissions, and has established the initial building blocks for a circular economy in the area of transportation and packaging.

Covestro also supports initiatives such as Operation Clean Sweep (OCS) that focus on preventing plastic particles from entering waterways and oceans. We have introduced global measures to minimize the loss of plastic pellets on the way from production to the finished product at our customers' locations. In fiscal 2018, we urged our partners in the supply chain to join the initiative; at the same time, we are continually monitoring its progress. However, due to the pandemic we were unable to review our progress in fiscal 2021. Covestro started work on a proposal for an external certification system for the entire plastics value chain in cooperation with the PlasticsEurope association and other members in the 2019 fiscal year. The initial test runs were held in the year

2021, and the system is being rolled out to PlasticsEurope members starting in fiscal 2022. Covestro had already added the topic of OCS to Covestro's health, safety, environment, energy, and quality (HSEQ) certifications in the year 2020. The next step will be to review and assess the relevant sites using the measures developed and obtain an independent certificate no later than the end of the 2023 fiscal year. The results will be documented in a report. The aforementioned list includes systematic environmental aspect analyses, risk assessments, preventive measures, targets, improvement measures, and employee training. Corrective measures must be taken in the case of identified deviations. We are further reviewing how we can make OCS targets part of the sustainability issues covered by contracts with logistics partners.

[Supplementary information >](#)

Waste and Recycling

In nearly all countries, the law stipulates exhaustive reporting on waste volumes and waste streams, a requirement complied with accordingly by Covestro's sites. In Germany, for example, there are waste-tracking procedures between the source of the waste and its disposal that enable end-to-end traceability of the waste flows. In fiscal year 2021, we revised the classification of waste according to waste categories and the corresponding methods of disposal in our in-house waste data reporting to better reflect topics such as the circular economy. Our definitions were also better harmonized worldwide. Only the definition of hazardous waste remains subject to locally applicable rules. Based on this documentation, we prepare and evaluate our waste report, which is published annually. This year, other waste disposal categories were introduced to obtain a more granular picture of our waste management activities.

Waste generated (1,000 metric tons p.a.)

	2020	2021
Total waste generated	175	264
Non-hazardous waste generated	68	75
Hazardous waste generated ¹	107	189
of which hazardous waste from production	103	184

¹ Definition of hazardous waste in accordance with local laws.

Waste by means of disposal (1,000 metric tons p.a.)

	2020	2021 ¹
Total volume of waste treated	175	264
Recovery	49	205
recycled waste	49	61
thermally recycled waste (with energy recovery) ²	–	144
Disposal	123	48
incinerated waste (without energy recovery)	106	33
hazardous waste removed to landfill	3	3
nonhazardous waste removed to landfill	14	12
Other³	3	11

¹ A variance between the volume of waste generated and waste disposed of may arise due to the different times the waste is generated or disposed of and any resulting internal temporary storage.

² New reporting category from the 2021 reporting period onward. These volumes were previously reported in the incinerated or recycled waste category.

³ Disposal method cannot be unambiguously allocated to the above disposal/recovery methods, e.g., chemical-physical waste treatment.

Air Quality

In addition to greenhouse gases, Covestro's business activities result in other emissions into the air.

 See "Circular Economy and Climate Neutrality" and "Production and Value Creation."

These other emissions into the air stem mainly from burning fossil fuels in order to generate electricity and steam. Emissions are also recorded and analyzed as part of determining the Group's environmental impact. The impacts are assessed annually in the environmental management process with the Chief Technology Officer (CTO). In terms of other air emissions, the reported NMVOC emissions rose in particular. These additional emissions resulted chiefly at the sites operated by the Resins & Functional Materials business (RFM) acquired from Koninklijke DSM N.V., Heerlen (Netherlands).

Other important direct air emissions (1,000 metric tons p.a.)

	2020	2021
CO	0.28	0.31
NO _x	0.59	0.62
SO _x	0.04	0.04
Dust	0.10	0.10
NMVOC ¹	0.13	0.16
ODS ²	0.0001	0.0002

¹ Non-methane volatile organic compounds (NMVOC).

² Ozone-depleting substances (ODS).

[< Supplementary information](#)

Sustainability in the Supply Chain

Covestro regards adherence to sustainability standards within the supply chain as a fundamental factor in value creation and an important lever for minimizing risks. Working conditions and health effects on workers in the supply chain are particularly important to us, which is why they are a focus of our cross-divisional Human Rights Task Force. In addition, both current and new Covestro suppliers must meet not only economic standards but also social, ethical, and environmental standards as well as those related to corporate responsibility. All required standards are defined in Covestro's Supplier Code of Conduct, the basis for our collaboration with suppliers; the Code is available online in 13 languages. The Code is derived from the principles of the UN Global Compact and our Corporate Commitment on human rights. It is integrated into the electronic ordering systems and contracts across the Covestro Group. New and renewed supply agreements in particular generally contain special clauses requesting that suppliers adhere to the sustainability requirements outlined in the Code of Conduct and entitling Covestro to verify compliance.

 See "Human Rights."

 Additional information is available at: www.covestro.com/en/company/profile/procurement/sustainability-in-procurement/supplier-code-of-conduct

Covestro has set ambitious measurable targets through 2025 aimed at systematically promoting sustainability in supplier management. All suppliers must comply with our code of conduct, which they commit to by accepting the conditions of our purchase orders or contracts. In addition, relevant suppliers* with a regular purchasing value exceeding €100,000 per year are assessed. In the year under review, around 93% (previous year: 95%) of our total purchasing value was attributable to these target-relevant suppliers. They comply with Covestro's sustainability requirements by meeting the minimum result as defined by us in the supplier evaluations described below. In addition, we work closely with our strategically most important suppliers to improve their sustainability performance. We have also incorporated this approach into our sustainability goals.

Evaluation Methods and Processes of the Together for Sustainability (TfS) Initiative

Covestro is a member of Together for Sustainability AISBL, Brussels (Belgium), a joint initiative undertaken by the chemical industry that now includes 34 companies. This nonprofit organization pursues the goal of establishing a program of global standards for responsibly sourcing goods and services and standardizing supplier evaluation methods worldwide. Covestro supports all criteria by the TfS initiative concerning the areas of ethics, labor & human rights, health and safety, and the environment.

As a member of TfS, Covestro is responsible for monitoring and auditing the sustainability performance of its suppliers. TfS supports this effort by providing the infrastructure for online assessments and on-site audits of suppliers by third parties. The results of these supplier evaluations can be shared via an online platform. During the reporting year, Covestro once again played an active role in all TfS work streams in designing and improving the TfS program and the associated evaluation process.

In order to avoid duplication of audits, increase acceptance by suppliers and save resources, TfS and the European Chemical Industry Council (Cefic) have entered into a partnership aiming to work jointly on audits of logistics service providers in particular. Cefic uses the SQAS (Safety & Quality Assessment for Sustainability) system for this purpose, a standardized assessment process for European logistics service providers and chemicals distributors that covers quality, safety, environmental, Responsible Care, and corporate social responsibility criteria. The SQAS reports prepared by Cefic are recognized by TfS as equivalent to a TfS audit report.

Using a standardized TfS assessment process, Covestro evaluates whether the suppliers maintain the required sustainability standards. A structured prioritization process is then carried out to select the suppliers to be evaluated and either an online assessment or an on-site audit initiated for these suppliers – provided that there are no current results. In prioritizing the suppliers for these evaluations, Covestro considers a combination of country and commodity risks. The risk assessment for country and material groups that we use for our risk analysis is based on recognized external sources.

* Because integration of the systems of the acquired Resins & Functional Materials (RFM) business is ongoing, RFM's procurement volume was included only in part in determining the target-relevant suppliers for fiscal 2021. Only the year 2021 was considered for RFM's procurement volume.

EcoVadis SAS (EcoVadis), Paris (France), an established external provider accredited by TfS, conducts the online assessments. It evaluates the degree to which suppliers' business practices are aligned with sustainability principles. The questionnaire suppliers complete for the online assessment is based on internationally recognized sustainability standards and includes 21 sustainability criteria grouped into the categories of environmental protection, labor and human rights, ethics, and sustainable procurement. The section on sustainable procurement also inquires about the extent to which the sustainability standards of upstream suppliers are considered. Certain suppliers that do not engage in wholesale trade and do not employ more than 25 people receive an abbreviated questionnaire that does not address the topic of sustainable procurement.

The questionnaire is dynamically adapted by EcoVadis depending on factors such as the industrial sector, company size, and country risk. Suppliers must document their responses to the questionnaire with corresponding supporting documents. The EcoVadis analysts assess supplier responses and supporting documents under consideration of international standards, such as the UN Global Compact, and consolidate the data into a scorecard available online that shows results by category. This scorecard information includes a detailed overview of identified strengths and areas for improvement as well as a weighted overall result for the suppliers analyzed.

External, independent auditors trained and accredited by TfS or Cefic conduct on-site audits of selected companies – and follow-up audits, if necessary, based on defined sustainability criteria. For the purpose of monitoring the quality of the audits, the initiating TfS member takes part in audits selected on a random basis and evaluates them using a standardized checklist.

Covestro analyzes and documents the online assessments and on-site audits. The number of supplier evaluations conducted and the overall results are reviewed regularly and reported to the Chief Technology Officer. In the event of noncompliance with our sustainability requirements, we work with suppliers to define specific improvement measures and corresponding targets, and Covestro constantly verifies the implementation of the required improvements.

Due to the continuing coronavirus pandemic and its effects on our suppliers, the number of supplier evaluations conducted was down slightly from the previous year, totaling 807 in the reporting year (previous year: 846).

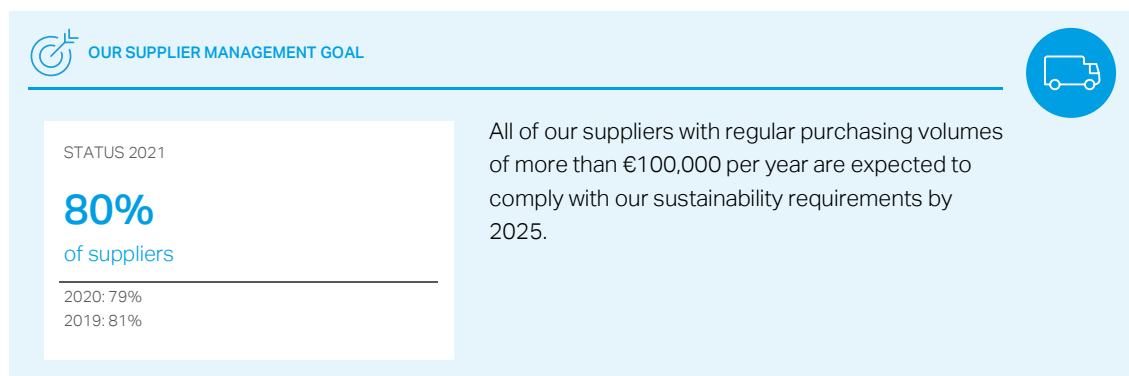
Key data from the sustainability evaluations of Covestro's suppliers¹

	2020	2021
Supplier evaluations conducted in the reporting year	846	807
of which through online assessments	812	788
of which through on-site audits	34	19
Total supplier evaluations conducted	1,706	1,690
of which through online assessments	1,540	1,585
of which through on-site audits	166	105

¹ Online assessments (conducted by external, independent, TfS-accredited provider EcoVadis) and on-site audits (conducted by external, independent, TfS- or Cefic-accredited auditors) of Covestro's suppliers, both initiated by Covestro and shared within the TfS initiative, are taken into account. Only assessments of our active suppliers that are no more than three years old are included.

Supplier Evaluation Results*

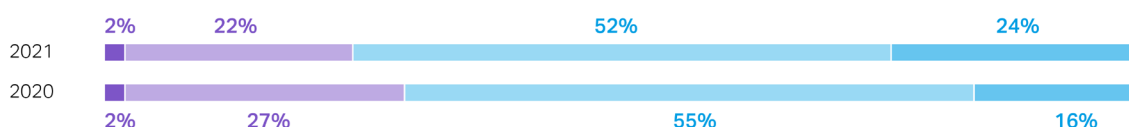
At the end of fiscal 2021, the number of supplier evaluations whose results met our sustainability requirements amounted to 1,211 (previous year: 1,204). Of these supplier assessments, 861 involved our target-relevant suppliers, who account for 80% (previous year: 79) of our target-relevant purchasing value. Furthermore, 61 of our target-relevant suppliers who underwent a repeat assessment in fiscal 2021 have improved compared with their previous results.



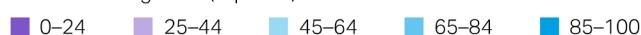
In the year 2021, assessment results considered critical by Covestro were identified for seven target-relevant suppliers (previous year: nine); that is, these suppliers failed to meet the required minimum result by a significant margin. Covestro responds to such infractions with specific action plans and demands that the suppliers in question implement appropriate corrective measures; supplier assessments will be conducted in future to verify compliance.

The share of online assessments in which suppliers met the minimum result we defined – 45 out of 100 possible points – was 77% for the online assessments conducted in the year under review (previous year: 71%). Thanks to our joint efforts toward continually improving our sustainability performance, the results of the online assessments improved year over year.

Overall results of the online assessments completed in the reporting year



EcoVadis rating scale (in points):



The share of on-site audits in which suppliers met the minimum result we defined – 45 out of 100 possible points – was 100% for the on-site audits conducted in the year under review (previous year: 100%).

None of the supplier assessments conducted revealed any indication of child or forced labor. In addition, Covestro had no cause to terminate a supplier relationship in the reporting year or in the previous year solely on account of an externally determined result or a serious sustainability deficit, e.g., human rights violations like child labor or forced labor.

* The results provided by the external providers EcoVadis SAS and Together for Sustainability AISBL as well as the European Chemical Industry Council, AISBL (Cefic) were not subject to the audit by KPMG AG Wirtschaftsprüfungsgesellschaft.

[Supplementary information >](#)

Worldwide Supplier Evaluations through the TfS Initiative*

Since the start of the TfS industry initiative in the year 2011, the now 34 members of TfS have evaluated the sustainability performance of a total of 16,083 suppliers through online assessments and have performed 2,518 on-site supplier audits.

All of the results from the online assessments and on-site audits are available to members of the initiative on an online platform, thereby enabling continual monitoring of suppliers with a view to improvements. The TfS initiative also benefits suppliers because their standardized evaluations can be viewed by all TfS members. This means they do not have to complete multiple evaluation surveys by various (potential) customers.

In fiscal 2021, TfS members conducted a total of 5,817 online assessments and 284 on-site audits across the globe.

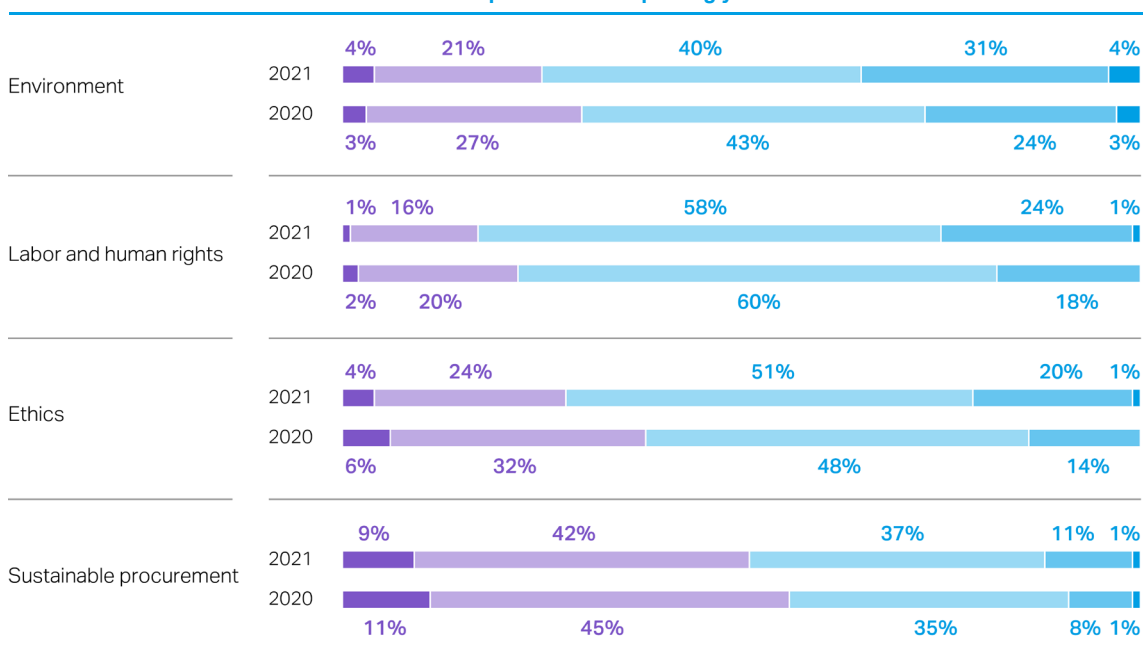
The TfS initiative celebrated its 10th anniversary in September 2021. In addition to a review of the milestones and success stories of previous years, the future of TfS and trends and issues relating to sustainable supply chains and companies in the next 10 years were also discussed.

➕ Additional information is available at: www.tfs-initiative.com

Detailed Results of the Supplier Evaluations*

We regularly analyze the results of the online assessments in the areas of environment, labor and human rights, ethics, and sustainable procurement. The results of the assessments carried out in the previous year and the reporting year are summarized in the following chart:

Detailed results of the online assessments completed in the reporting year



EcoVadis rating scale (in points):

0-24 25-44 45-64 65-84 85-100

The detailed results in all areas indicate a positive trend (increased share of online assessments reaching a score of 45 or higher).

* The results provided by the external providers EcoVadis SAS and Together for Sustainability AISBL as well as the European Chemical Industry Council, AISBL (Cefic) were not subject to the audit by KPMG AG Wirtschaftsprüfungsgesellschaft.

In analyzing the supplier evaluations for the year 2021, we identified deviations from our sustainability requirements in all listed areas. This was due to factors including missing documentation of policies and measures relating to waste management, water management, and energy, as well as a lack of occupational safety measures such as a failure to install signage at emergency exits or exceeding the weekly working hours according to the TfS standard.

Procurement of Key Products

In fiscal 2021, the procurement spending of Covestro's main sites in Germany, the United States, and China accounted for 76% of Covestro's global spending. Most of this amount –82% – went to local suppliers in the individual countries.

Conflict Minerals

The Dodd-Frank Act in the United States obligates companies to disclose the origin of certain raw materials to prevent that so-called "conflict minerals" such as tin, tungsten, tantalum, and gold (3TG) from the Democratic Republic of Congo or neighboring states enter their products through the supply chain. European Union Regulation (EU) 2017/821, which entered into force on January 1, 2021, stipulates an expanded duty for companies to perform human rights due diligence for the 3TG that includes all global conflict and high-risk regions.

Using a structured survey process, we verify that our suppliers and their upstream suppliers are only obtaining materials which do not originate from conflict regions. Confirmations are documented centrally in the respective material/supplier combinations in our database.

Our requirements regarding conflict minerals are clearly communicated in our Supplier Code of Conduct. Covestro has obtained confirmations of compliance as regards conflict minerals from 100% of the suppliers from whom it actively purchases and who were identified as potentially affected by this issue. We update a list of potentially affected suppliers on an ongoing basis, and monitor the validity of all existing supplier confirmations. To date, there have been no critical results and no need for action regarding this issue.

[< Supplementary information](#)

Sustainability Training and Dialogue

For Covestro, it is important for our own procurement staff, in particular, to have a comprehensive understanding of the significance of sustainability in the supply chain. Awareness of this issue was raised among employees again in fiscal 2021 in company-wide sustainability training plus region- and country-specific training on evaluation methods and processes.

During the reporting year, we continued to promote the implementation of four strategic principles in procurement (reliability, sustainability, cost transformation, and innovation). Moreover, our regional program management in the EMLA, NA, and APAC regions is working on permanently improving our sustainability program.

 [See "Procurement."](#)

Dialogue and close collaboration are essential in enabling suppliers to successfully comply with Covestro's sustainability requirements. We therefore offer our suppliers a range of opportunities for training and dialogue. This provides the foundation for building reliable relationships and enables us to identify and eliminate issues at an early stage. Continually improving our suppliers' sustainability performance is a priority for Covestro and is supported by the TfS initiative, which regularly organizes supplier days and promotes further training, among other activities. TfS provides a wide range of information materials and various online training courses on its website. In fiscal 2021, nine online courses were offered in various languages.

 [Additional information is available at: \[www.tfs-initiative.com\]\(http://www.tfs-initiative.com\)](#)

Social Responsibility

Human Rights

Human rights are the foundation of Covestro's social responsibility efforts. We are committed to respecting and safeguarding human rights on the basis of the United Nations (UN) Guiding Principles on Business and Human Rights. In various working groups in industry associations, Covestro advocates for compliance with various national action plans and laws on corporate human rights due diligence. As a company, we clearly take responsibility for respecting human rights in all of the Covestro Group's activities and throughout global supply chains and value chains, as well as for guarding against violations of human rights.

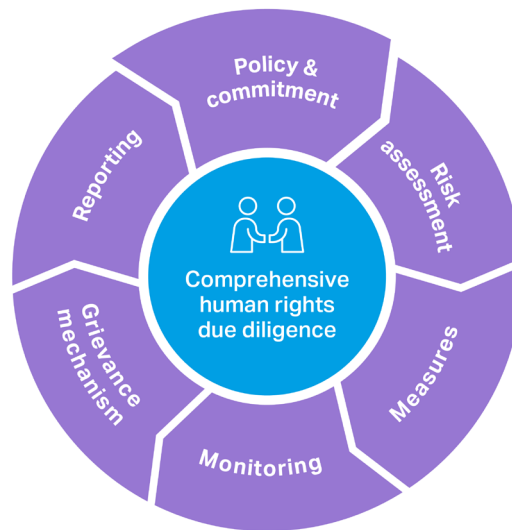
Our cross-departmental Human Rights Task Force, which was established in the year 2020, is responsible for fully integrating human rights requirements into our company's activities. The overarching management approach is based on the UN's Guiding Principles on Business and Human Rights, the core elements of the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains, which will enter into force in 2023, and the French law on human rights due diligence. We regularly monitor other national and international laws and legislative initiatives such as the planned European Union (EU) law on corporate due diligence in supply chains.

The Task Force works under the leadership of the corporate Sustainability & Public Affairs function and has permanent members from the following corporate functions: Group Health, Safety and Environment, Group Procurement, Human Resources, Law, and Intellectual Property & Compliance. A broader group of professionals from Quality Management, individual business entities, along with risk management experts also participate. The human rights-related responsibilities of the Task Force include developing and implementing the comprehensive management approach, systematically assessing risks, prioritizing and monitoring the implementation of individual measures, planning and conducting trainings, reporting to the Board of Management, and communicating about this issue in general. The individual corporate functions are responsible for, among other things, identifying and assessing risks and developing measures. These measures are designed and implemented in the segments and corporate functions in consultation with the Task Force. In the reporting year, Covestro anchored the responsibilities for individual human rights focal areas in the company. A handbook was developed in the reporting year to support the corporate functions in applying a risk-based approach for managing high-priority human rights issues. It describes in detail the responsibilities of the employees assigned to human rights issues and serves as general guidance for analyzing risks and determining appropriate measures.

Comprehensive Human Rights Due Diligence Process

Covestro has established a comprehensive due diligence process to safeguard human rights in our business activities. This overarching management approach is a continual process comprising the six core elements described below. We have defined responsibilities, frequency, processes and tasks, and the required communication as well as the monitoring approach for each of these core elements.

Human rights due diligence process



Policy and Commitment

The principles of our human rights due diligence are delineated in various Corporate Commitments, corporate regulations, and in our Supplier Code of Conduct. In these documents, we have specified key international conventions and principles as the basis of our conduct. A key component of our commitment is zero tolerance toward child labor, forced labor, and human trafficking. In the reporting year, we once again made a public statement on slavery and human trafficking ("Corporate Commitment against Slavery and Human Trafficking") to underline our position. Our corporate commitment to safeguarding human rights is an integral part of Covestro's operating policies and procedures. It states our clear expectation that our employees and business partners around the world conduct themselves in accordance with these principles.

+ Additional information is available at: www.covestro.com/en/sustainability/service-downloads/policies-commitments

Risk Analysis

The starting point for human rights due diligence is a risk analysis that identifies and assesses actual or potential negative impacts on human rights that Covestro could cause either directly or indirectly as a result of its business activities, value chain, or products. Potentially affected persons could include Covestro's own employees, contractors, suppliers, customers, consumers, or even neighboring communities. Covestro conducts a comprehensive risk analysis every three to four years. The last one was in fiscal 2019. Between those analyses, relevant information obtained from internal and external sources is taken into account by the Task Force. The comprehensive and ongoing risk analysis covers all of Covestro's production and distribution sites, the supply chain, as well as the use phase and end-of-life of our products.

The comprehensive risk analysis first identifies all potential human rights risks. The potential risks are then discussed with selected business entities and corporate functions and are prioritized for further management, depending on the severity of the potential human rights violation. Potential human rights violations assigned the highest degree of severity always take top priority for us. The human rights focal areas we have identified primarily relate to working conditions and health effects on workers and contractors at Covestro's sites and in the supply chain. Other identified focal areas include the potential impact of collecting and processing waste from our products, export controls, and the possible effects of our operations on the communities surrounding our sites.

Measures

In accordance with the risk-based approach recommended in the UN's guidelines, we assess the suitability of our existing measures in the identified high-priority categories for preventing or mitigating negative impacts on human rights. Many measures in the areas of health and safety, product stewardship, compliance, human resources, and sustainable supplier management have long been integrated at Covestro and aim to prevent or mitigate negative human rights impacts.

☐ See "Employees," "Health and Safety," "Product Stewardship," "Compliance," and "Sustainability in the Supply Chain."

In the year under review, additional measures were implemented in the corporate Human Resources function to demonstrate that we prevent child and forced labor in our facilities. In the area of export control, identified measures were realized and the relevant employees trained.

Effectiveness Monitoring

Appropriate qualitative and quantitative indicators along with internal and external sources are used to assess Covestro's human rights measures to review their effectiveness in preventing negative impacts on human rights. In the year 2021, the selected corporate functions and segments reported on a monthly basis to the Human Rights Task Force on the implemented measures and their effectiveness.

Grievance Mechanism

Covestro expressly encourages reporting of possible human rights violations in the Group as well as at suppliers' companies. We use a whistleblower tool for reporting violations in the supply chain since October 2021, which consists of a worldwide hotline and an online tool. Covestro therefore enables employees and third parties to anonymously inform us of potential incidents at our suppliers. We follow a defined process to investigate potential human rights violations and include any findings in future risk analyses.

☐ See "Compliance."

Reporting

Every year, Covestro communicates its human rights activities to the public in its annual report. Moreover, the Task Force reports regularly (no less than once a year) to the Board of Management on the status of human rights due diligence and the systematic integration of these requirements into Covestro's management systems.

Inclusive Business

Our Inclusive Business activities are an important aspect of our sustainability strategy. This business model focuses specifically on unmet needs of communities in underserved markets. Our collaborative approach offers scalable solutions to reach as many people as possible in these markets. We collaborate with our customers as well as governmental and nongovernmental organizations to develop affordable solutions based on our technologies and products to benefit underserved communities and regions by improving living conditions. Our employees concentrate on three regions – the Indian subcontinent, Southeast Asia, and Eastern and Southern Africa – with the main goal of implementing innovative solutions in the fields of affordable housing, food security, and water and sanitary facilities. In terms of food security, one of the areas we are actively engaged in is to fight against post-harvest losses, which are all losses that occur after the harvest (e.g., as a result of improper storage). They are an economic challenge particularly for smallholder farmers. Solar greenhouse dryers and cold storage, which are developed with industry partners within inclusive business, contribute substantially toward improving the financial situation of these farmers by reducing post-harvest losses. In addition, these innovative solutions help develop new sales markets – for instance, in Ethiopia or Tanzania – for Covestro.



OUR INCLUSIVE BUSINESS GOAL



STATUS 2021

3.2 million

people

2020: 1.1 million people

2019: 0.7 million people

We want 10 million people in underserved markets to benefit from our solutions by the year 2025. The goal is to improve their standard of living primarily through affordable housing, sanitation, and food security.

We want our solutions to improve the lives of 10 million people in underserved markets by the year 2025. By the end of the year under review, we reached 3.2 million people with inclusive business solutions (previous year: 1.1 million people). Covestro defines this figure by including people who potentially benefit from our activities as part of their work or daily life. These individuals include farmers and their families, school children, and other people who are positively impacted by completion of our projects or installation of our solutions.

Participating governmental and nongovernmental organizations helped us collect the data. The data collected as part of a defined process is reviewed at local and global level, and the processes are continuously refined. In fiscal 2021, the methodology for calculating the number of people reached was optimized. Instead of calculating the number of persons reached once immediately after implementing our inclusive business solutions, we now determine the cumulative number of all people reached over the years since the solution was installed. The Board of Management is informed annually about these global activities.

In the year 2021, we once again concentrated on collaboratively developing new, affordable solutions with partners who passed a due diligence review in advance. These solutions are financed by governmental and non-governmental organizations. Our work in consortia – always preceded by our standard due diligence process for new partners – also ensures that the relevant segments of the population profit from the jointly developed end products.

Our inclusive business activities were severely affected by the global coronavirus pandemic in the year 2021, as they were in the previous year, due to measures such as worldwide travel restrictions. Our activities in Africa and Southeast Asia felt the impact in particular. With the exception of a pilot project in Kenya, the announced water supply project was unable to begin operations. Due to the pandemic, the announced installation of solar greenhouse dryers already delivered in South Africa was successfully executed after an 18-months delay. None of our projects on the Indian subcontinent were canceled, but in most cases implementation was delayed. In Batticaloa (Sri Lanka), the project co-financed by KfW DEG (Deutsche Investitions- und Entwicklungsgesellschaft mbH) for purchasing sanitary facilities was once again delayed because of the pandemic.

Africa

In Africa, the main focus in the year 2021 was on food security. In the reporting year, we were able to continue our partnership with Tshwane University of Technology in Pretoria (South Africa). The students at the university are working on various research projects that use solar greenhouse dryers with a focus on alternative methods for drying traditional African fruits. We worked on another project in Tanzania in the year under review. Our collaboration with Community Forest International and the installation of the solar dryer system financed by the EU helped up to 2,000 local spice growers and their families in Mtambwe Dayaauf (Tanzania). Initial projects were launched in Ethiopia as well. As part of the develoPPP program of the Federal Ministry for Economic Cooperation and Development (BMZ), Covestro signed a contract with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn (Germany). The three-year project is scheduled to roll out in fiscal 2022. After initial drying systems are successfully deployed in various regions of Ethiopia, this program will support craft-based businesses with technology transfer so that they can manufacture dryers themselves. The use of imported equipment is not just for demonstration purposes: It is intended to help coffee growers demonstrably improve their harvest by increasing the quality of the coffee beans. Training of the local population in production and use of the systems is part of the project.

Indian Subcontinent

In the reporting year, our inclusive business activities on the Indian subcontinent primarily targeted drinking water and sanitary facilities as well as food security and affordable housing. We continued to participate in the Fecal Sludge Management & Toilet Program, for instance. Using solar dryers in Khammam (Telangana, India) and Unnao (Uttar Pradesh, India), we successfully demonstrated the advantages of polycarbonate-based drying equipment for drying fecal sludge. Our planned direct participation in public tenders in fiscal 2022, particularly in the area of drying fecal sludge, will enable us to seamlessly connect the organic waste management and food security value chains with the aim of protecting public health in the region.

In the year under review, the regional Inclusive Business team reacted to the global coronavirus pandemic and its impact on the Indian subcontinent by focusing in particular on setting up health centers and school buildings in India as well as marketing innovative solar water supply units in Bangladesh. We worked with Engineering Projects India to submit an application to build a health center to the government of the Indian state of Karnataka.

From the beginning of our activities there, the use of our solutions on the Indian subcontinent was recognized and recommended by various organizations such as the United Nations Department of Economic and Social Affairs (UN DESA), the Solar Impulse Foundation, KfW DEG, and NABARD (National Bank for Agriculture and Rural Development) Consultancy Services. These developments have led the regional team to concentrate on projects such as the water supply in Khulna and Bagerhat (Bangladesh) and various categories of solutions, including food security, in India.

Southeast Asia

Our inclusive business activities also continued in Southeast Asia in the reporting year. Specifically, our initiative in Vietnam launched in the year 2020 under the GREAT program by the Australian Department of Foreign Affairs and Trade remained active. By the end of the year 2021, this had benefited more than 2,000 women, most of whom belong to ethnic minorities.

Joint work on the Coffee Innovation Fund project by GIZ on the solar drying of coffee beans in fiscal 2020 helped Covestro's Southeast Asia team obtain financing for additional projects for our project partners from the Agri Innovation Fund in Laos and Cambodia in the reporting year. With the help of solar greenhouse dryers, the coffee farmers there were able to reduce coffee bean loss and cut drying times while increasing drying efficiency.

Social Engagement

Covestro also aims to contribute to sustainable development through social engagement. As one of the world's largest polymer companies, Covestro uses its position to work with different organizations in numerous regions around the world to advance projects for protecting the environment and improving and supporting the welfare of society. Donations, sponsorship programs, and partnerships are active expressions of Covestro's commitment to local registered charities in the vicinity of Covestro's sites and to various organizations in countries in which the company does business. Covestro maintains long-standing and strategic partnerships with various universities, for example. This includes cooperating with renowned partners throughout the world, such as RWTH Aachen University (Germany), Tongji University in Shanghai (China), and Carnegie Mellon University in Pittsburgh (Pennsylvania, United States).

 See "Strategic Partnerships and Collaborations."

As an innovative company, we focus on innovation, local social management, promoting education, and sharing information about technology. Our focal areas are determined with the help of the Board of Management. What is more, we consider it our duty and corporate responsibility to quickly provide help during natural disasters without unnecessary bureaucracy.

There is a Group-wide directive in place that stipulates approval criteria for donations by Covestro along with the underlying responsibilities and decision-making processes. A transparent approval process with the participation of compliance experts, among others, ensures that the funds are received by those who need them and are disbursed to recognized organizations in accordance with our guidelines. We define recognized organizations as organizations with an extremely low risk of corruption that are known by the general public. Donations must be handled responsibly, and this is ensured by making it a requirement that approval is obtained for annual donation

plans in advance from local compliance officers and local executives, department heads, or plant managers. The managers of the corporate Sustainability & Public Affairs function must also be included in all donation activities. Sustainability & Public Affairs additionally provides support for planning and participation in partnerships and donation processing.

In the reporting year, Covestro provided assistance during natural disasters in Germany and China, among other things, donating materials and amounts in the mid-six-digit euros and giving employees days off to help with relief efforts so that local support could be provided quickly. We also partnered with virtual donation site betterplace.org, which coordinates and supports donation drives across Germany. Covestro employees all over the globe were given the opportunity to donate to selected organizations using the intranet, with the company matching each donation up to a total of €175,000. As a result of the coronavirus pandemic, Covestro donated IT equipment for virtual learning to educational institutions worldwide, in addition to masks and disinfectants.

Alliance to End Plastic Waste

Another strategic focal area of our social engagement efforts is aligned with our corporate vision. We recognize the public's interest in how plastic waste is dealt with. Covestro not only actively contributes to ensuring the full circularity of its own products, but also channels plastic products at the end of their life cycle to controlled material streams so they do not pollute the environment. We do so particularly as an active founding member of the Alliance to End Plastic Waste. This global network of companies strives to minimize, manage, and reuse plastic waste – and above all, prevent plastic waste from entering the environment. By the end of the year 2023, USD 1.5 billion (around €1.3 billion) is expected to have been provided for this purpose by the network. More than 65 companies from the chemical, plastic, consumer goods, and waste management sectors currently participate in this initiative.

For Covestro, the Alliance is a key component of the strategic Circular Economy program to close product loops worldwide. The Alliance identifies, invests in, and manages economically viable and sustainable waste collection and recycling solutions in cities with the support of strategic partners. Furthermore, the Alliance unlocks market opportunities for recycled materials and promotes the development of improved recycling processes and potential closed-loop products. These measures aim to transform unused and improperly disposed of plastic waste into sources of raw materials. The Alliance also advocates for sustainable consumer habits.

Covestro contributes to the Alliance not only financially, but also through the expertise of Covestro professionals and executives, including our Board of Management. Moreover, Covestro additionally contributes by currently pursuing a total of 13 partnerships and our own projects that concentrate primarily on researching and developing new recycling methods, and identifying and setting up waste-based raw material streams. The Alliance issues an annual progress report, which also includes summaries and assessments of its members' contributions. By the end of the year 2021, Covestro's total contribution amounted to €12.3 million (€7.2 million).