Sustainability Report 2021

MATERIAL
TO BUILD OUR FUTURE

Introduction

Ladies and Gentlemen,

The ongoing global trend towards urbanisation and the intensive construction activity in the housing and infrastructure sectors call for sustainable solutions. We are delivering these solutions and, through our products, we are playing a leading role in paving the way to carbon neutrality.

In 2021, we anchored the core topic of sustainability even more firmly in our organisation with the appointment of Dr Nicola Kimm to the Managing Board as Chief Sustainability Officer. We are driving our sustainability agenda and accelerating on our ambitions. For example, we aim to generate half of our Group revenue from sustainable products by 2030. In order to achieve this, we have once again significantly tightened our globally applicable climate targets with the publication of this report in May 2022: by 2030, we want to almost halve our carbon emissions compared with our 1990 levels. With a new reduction target to reach 400 kg of CO_2 per tonne of cementitious material in 2030, HeidelbergCement is setting new standards in the decarbonisation of our industry.

We look at the entire supply chain in our efforts to reduce our carbon emissions. Our CO_2 reduction strategy is based on solid measures at plant and product levels, the implementation of which is well underway. In addition, we are making use of innovative carbon capture, utilisation, and storage (CCUS) technologies: our facility in Brevik, Norway is scheduled to go into operation as early as 2024. By 2030 we will have launched further projects at Edmonton in Canada, Padeswood in the United Kingdom, and Slite in Sweden, among other locations. With the current CCUS projects alone, we aim to cut our carbon emissions by 10 million tonnes cumulatively by 2030. By joining the First Movers Coalition, we are also recognising our responsibility as a purchaser of green products and services.

But global challenges can only be solved by working together. That is why, as a partner of the United Nations Global Compact (UNGC), we are committed to its ten principles in the areas of environmental protection, corruption prevention, labour standards, and human rights. Taking these principles into account and promoting them both within our corporate strategy and in all our business activities is particularly important to us. And so we ask you, our shareholders, employees, customers, suppliers, business partners, and local community representatives, to join us as we take the path towards sustainable and digital transformation!

Yours sincerely,

Dr Dominik von Achten
Chairman of the Managing Board

Ladies and Gentlemen,

At HeidelbergCement's more than 3,000 locations, sustainability is an integral part of our day-to-day business. Thanks to the great commitment of our employees, we made very good progress in 2021. We further reduced our carbon emissions through improvements in our product mix, a lower proportion of clinker, and increased use of alternative fuels as well as green energy sources. To meet the needs of our customers, we launched numerous sustainable products in our markets around the world.

We aim to spearhead the decarbonisation of our sector and promote a circular economy in our value chain. Closing the loop in the material cycle of sand, aggregates, and cement stone is of crucial importance to us and constitutes a major lever for reducing carbon emissions. To increase resource efficiency and protect natural raw materials, we will also scale up our recycling activities, especially with regard to demolition concrete.

In addition to climate protection, issues such as responsible land use, water conservation, occupational health and safety, as well as social responsibility are among the key pillars of our Sustainability Commitments 2030, the guiding principles of HeidelbergCement's sustainability strategy. We also made significant progress in these areas in 2021. For example, we published a new version of our Code of Business Conduct in 2021 and emphasized the importance of human rights and sustainability aspects even more strongly. Through our Quarry Life Award, which was launched for the fifth time in 2021, we address the global loss of biodiversity – one of the three greatest risks to our planet according to the World Economic Forum's Global Risks Report.

We are constantly developing our sustainability reporting in order to increase transparency and create a solid basis for dialogue with you, our stakeholders. In the months and years to come, we will continue to work diligently to drive the issue of sustainability forward – in our strategy as well as in all day-to-day business processes and decisions. I look forward to you being at our side as we do so.

Yours sincerely,

Dr Nicola Kimm
Chief Sustainability Officer
Member of the Managing Board

Contents

How to find your way through the report
To make it easier for you to navigate through the report, we have added links to this PDF file. In the bar at the top edge of the page, you can jump to the individual chapters from any page. The icons operate similarly to those on a website. You can also directly access the chapters from the table of contents.

- Table of contents
- Go forward/back
- Link to HeidelbergCement website
- Link to the specified page or website

COMMUNICATION ON PROGRESS

UN GLOBAL COMPACT

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

We welcome feedback on its contents.

Company Portrait

 Image: The HeidelbergCement headquarters in Heidelberg, Germany.

Organisational structure

HEIDELBERGCEMENT

	Western and Southern Europe	Northern and Eastern Europe-Central Asia	North America	Asia-Pacific	Africa-Eastern Mediterranean Basin	Group Services
Finance	Belgium, France, Germany, Italy, Netherlands, Spain, United Kingdom	Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Czechia, Denmark, Estonia, Georgia, Greece, Hungary, Iceland, Kazakhstan, Latvia, Lithuania, Norway, Poland, Romania, Russia, Sweden, Slovakia	Canada, USA	Bangladesh, Brunei, China, India, Indonesia, Malaysia, Singapore, Thailand	Benin, Burkina Faso, DR Congo, Egypt, Gambia, Ghana, Liberia, Morocco, Mozambique, South Africa, Tanzania, Togo	
Sustain-ability						
Digital Trans-formation				Australia	Israel, Turkey	

Functional responsi-bilities

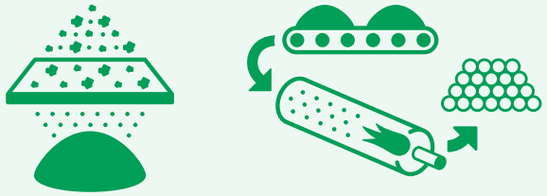
■ Cement ■ Aggregates ■ Ready-mixed concrete-asphalt ■ Service-joint ventures-other

Value chain

Raw materials

- Extraction

The raw materials needed for producing our building materials – limestone for cement production as well as sand, gravel, and hard rock – are generally extracted from our own quarrying sites or obtained by recycling mineral residues and demolition material.



Production

- Cement
- Aggregates
- Concrete
- Asphalt

Our business is based on the production of cement and aggregates, the two essential raw materials for manufacturing concrete.

Customers

- Public-sector projects
- Commercial projects
- Private customers

We supply our products for public-sector and commercial projects as well as to private customers.

Research and development

- CO_2 reduction
- Development of alternative clinkers
- Product innovation
- Recycling

The aim of our research activities is to provide customers with innovative products and to minimise energy consumption and CO_2 emissions by improving processes and creating new formulations.

Procurement

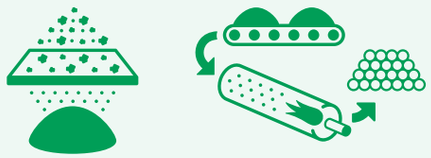
- Raw materials
- Energy
- Logistics
- Maintenance

In 2021, HeidelbergCement procured goods and services with a total value of around €12.5 billion, with around 40% being spent on energy and raw materials.

Vertical integration

HeidelbergCement is one of the world's largest companies for building materials. The core activities of HeidelbergCement encompass the production and distribution of cement, aggregates, concrete, and asphalt. This vertical integration strategy is one of our growth drivers. In future, we plan to further integrate our business activities in urban centers in particular.

Raw materials



Processing into core products

Customers/ markets

Aggregates

We process some of the cement and aggregates into our own concrete and asphalt.

Cement

Asphalt

Ready-mixed concrete

Public-sector clients

Commercial clients

Private customers

Strategy & Management

Image: The Palazzo Italia – created as part of Expo 2015 in Milan, Italy, today part of the Campus Human Technopole.

Sustainability is an integral part of HeidelbergCement's Group strategy. Responsibility for the environment is at the heart of our actions. We have set ourselves the target of being the industry leader on the path to carbon neutrality. Our CO_2 reduction strategy is based on solid measures at plant and product levels, the implementation of which is well underway.

Vision & mission

We want to continue to grow profitably. In the long term, however, we will only be able to achieve our business targets if we generate added value for society as a whole. Consequently, environmental and social targets are integrated alongside economic targets into our business strategy and the remuneration systems of our management. We conserve natural resources, as they form the basis of our business activities, and we take our social responsibility at our various company locations and towards our employees seriously. We want to continue providing our employees with good jobs and valuable qualifications in the future. In our production activities, we focus particularly on ensuring the health and safety of our employees. We want our customers to benefit from the high quality of our products and a close partnership. We maintain respectful relations with our suppliers and expect them to comply with our sustainability standards.

Our business activities are characterised by commercial prudence, the rule of law, and integrity. We promote value creation at our locations and help to increase prosperity and the quality of life in emerging economies in particular. Growth and good returns are also the basis for our investments in cutting-edge technologies to help protect the climate and the environment.

Sustainability Commitments 2030

Our Sustainability Commitments 2030 define the principles, main components, and objectives of HeidelbergCement's sustainability strategy until the year 2030. The Sustainability Commitments 2030 are the cornerstones of HeidelbergCement's sustainability strategy. They were first introduced in 2017, and are regularly revised to reflect environmental and social developments. The Sustainability Commitments 2030 now include several new or updated targets and an even broader range of responsibilities in corporate sustainability management.

The principles outlined in the Sustainability Commitments 2030 are as follows:

- Driving profitability and innovation
- Achieving excellence in occupational health and safety
- Reducing our ecological footprint
- Enabling the circular economy
- Being a good neighbour
- Ensuring compliance and creating transparency

Through our Sustainability Commitments 2030, we are supporting the UN Sustainable Development Goals. In doing so, we aim to help address social, economic, and environmental challenges at a global level.

→ **www.heidelbergcement.com/commitments**

Our new commitments for 2030

CO_2 reduced cement

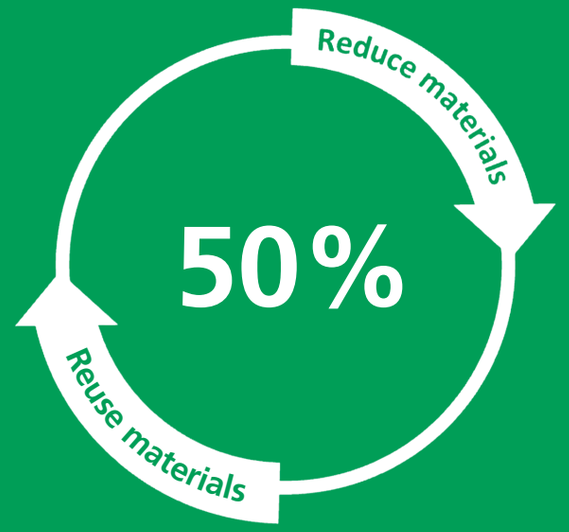
Cut our emissions by almost half[1)]
– the lowest in the cement industry

1) Refers to baseline of 1990 and 750 kg CO_2 per tonne of cementitious material, leading to a reduction of 47%

Sustainable revenue

Double our revenue from low carbon and circular products and solutions to reach 50% of Group revenue

Circular concrete



Offer circular alternatives for half of our concrete products – aiming for full coverage

Sustainability is at the heart of HeidelbergCement's business strategy. Our core principles are reducing CO_2 emissions, promoting resource efficiency, and reducing the need for virgin raw materials. They have been an integral part of our day-to-day business for many years. Our ambition is to lead the change in the construction industry by offering the most sustainable building materials and solutions. This way, we create value for our stakeholders and society as a whole. To this end, we have ramped up our already ambitious carbon reduction targets and significantly raised the standards we have set for ourselves in the area of circular economy. We measure ourselves against these goals. This is why we have also anchored the reduction in CO_2 emissions in the remuneration of the Managing Board and every bonus-eligible employee worldwide.

The focal points of our sustainability strategy until 2030

SUSTAINABILITY COMMITMENTS 2030

The Sustainability Commitments 2030 are the cornerstones of HeidelbergCement's sustainability strategy. They were first introduced in 2017 and are regularly revised to reflect environmental and social developments. The Sustainability Commitments 2030 now include several new or updated targets and an even broader range of responsibilities in corporate sustainability management.

Driving economic strength and innovation

Our goals

- We use all resources as efficiently as possible and target to earn a premium on our cost of capital.
- NEW We will generate 50% of our Group revenue from low-carbon and circular products and solutions by 2030.
- We invest substantially in R&D towards innovative low-carbon production technologies and products, and will advance a portfolio of sustainable products in every Group country.
- We are active in Green Building Councils and similar organisations in order to drive innovation of sustainable products together with our customers.

Achieving excellence in occupational health and safety

Our goals

- We will achieve zero fatalities.
- We will achieve zero lost time injuries.
- We will implement the World Business Council for Sustainable Development's WASH Pledge for access to safe water, sanitation, and hygiene at all production sites.

Ensuring compliance and creating transparency

Our goals

- We ensure compliance with international human rights, anti-corruption, and labour standards through internal control and risk management systems, such as internal audits and a whistle-blower hotline.
- We ensure that our suppliers comply with our Supplier Code of Conduct.
- We ensure that each position is staffed with the most qualified person, independent from gender, origin, beliefs, and/or orientation.

Enabling the circular economy

Our goals

- NEW We will offer circular alternatives for 50% of our concrete products by 2030.
- We will continuously increase the substitution rate of natural raw materials by using by-products or recycled materials.
- We will increase the use of recycled aggregates in our fresh concrete portfolio.

Being a good neighbour

Our goals

- We maintain open and transparent communication about our activities and performance.
- We help improve the living conditions in neighbouring communities.
- Group-wide, we achieve 60,000 hours of corporate volunteering annually.

Reducing our environmental footprint

Our goals

Emissions

- NEW We will reduce the CO_2 footprint of our cementitious products to reach 400 kg CO_2 per tonne of cementitious material in 2030.
- We will reduce the CO_2 emissions from electrical power consumption by at least 65% compared to 1990 by 2030.
- To reduce the supply and transport-related greenhouse gas emissions of our finished products and to support the decarbonation of relevant industries, we engage with all of our partners along the whole value chain.
- We will increase the alternative fuels rate to 45%.
- We will reduce cement production-related SO_x and NO_x emissions by 40% and dust by 80% compared with 2008.
- We will permanently reduce all other air emissions below cement industry average.

Water

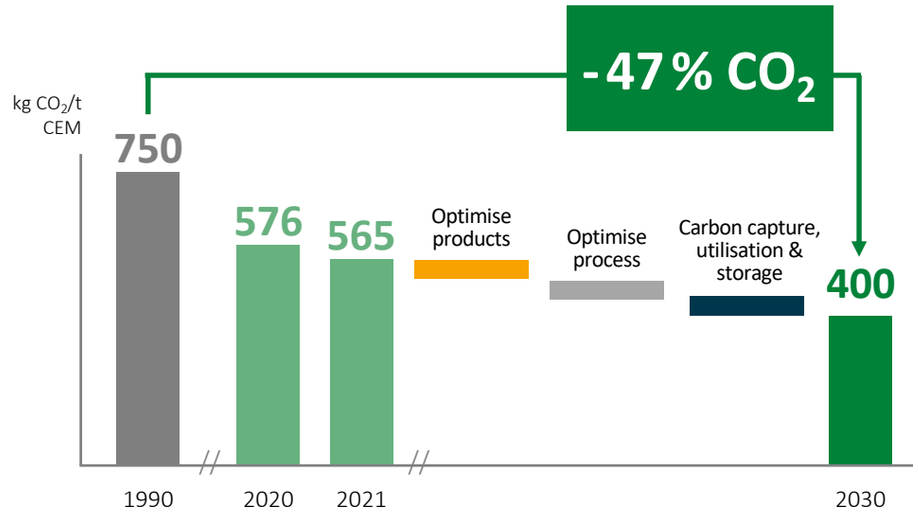
- We aim to reduce water consumption at all operational sites as far as economically and technologically feasible.
- We aim to implement water management plans at all sites located in water scarce areas and will offer own surplus water resources to local users.
- At Group level, all efforts will be combined in a global strategic water consumption reduction plan.

Land use

- All our extraction sites are operated based on an after-use plan agreed with local authorities and in accordance with the needs of local communities.
- We aim to include biodiversity enhancement recommendations in any new after-use plan.
- We want to implement a biodiversity management plan at all business operations located within 1 km of a recognized high biodiversity value area.
- In case of nature-oriented after-use plans, we aim to achieve a positive impact on the biodiversity value at our extraction sites.

The worldwide implementation of our ambitious carbon reduction roadmaps is at the heart of HeidelbergCement's climate strategy: they are based on concrete measures at plant and product level.

We will significantly reduce our carbon footprint until 2030



Significantly reducing our emissions

Within the framework of our "Beyond 2020" strategy, we are significantly advancing our ambitious climate targets. We have again substantially tightened our emission reduction target in spring 2022: By 2030, we want to reduce specific net CO_2 emissions to 400 kg/t of cementitious material. Compared with the base year 1990, this corresponds to a reduction of almost half. We will achieve this by optimising the product mix and through process improvements such as maximising the use of alternative fuels, switching to electricity from renewable energy sources, or investing in plant efficiency.

Our investments towards a circular economy, which we are already implementing today, also make a decisive contribution to the long-term reduction of CO_2 emissions. Among other things, we are working intensively to reduce our CO_2 footprint by closing the carbon cycle and on the development of cements with a reduced clinker content. For various locations, we are also evaluating the use of alternative cement components, such as natural pozzolans or calcined clays.

CCUS – carbon capture, utilisation and storage – is another key component of our climate strategy. Solely with the CCUS projects already launched, we will save 10 million tonnes of CO_2 cumulatively by 2030. We have defined concrete targets for all these measures for all locations worldwide. By 2050 at the latest, we want to achieve "Net Zero" emissions.

→ **Energy and climate protection p. 50f.**

Responsibility & organisation

Effective management systems operated by our various business lines help to ensure a continual process of improvement in accordance with our sustainability strategy. Within the framework of these systems, we have defined areas of responsibility and created structures that support the effective implementation and monitoring of the measures we employ to achieve our sustainability targets. These targets focus on occupational health and safety, compliance, and sustainability.

Occupational health and safety is one of the cornerstones of our company, and it is an area for which all management levels at HeidelbergCement are accountable. Our occupational safety organisation is subordinate to the Chairman of the Managing Board, to whom the Director Group Human Resources, who is responsible for Group Health & Safety, reports directly. H&S advisors support the Managing Board members responsible for the different Group areas in addition to the country managers, who coordinate the measures on a national basis, as well as the line managers at regional and local management level. Individual occupational health and safety measures are defined either by Group Health & Safety or the local units, depending on their nature and impact. Occupational safety measures are part of the personal target agreement for the Managing Board and the operational top management in the various countries. Last but not least, all employees, contractors, and visitors are responsible for following the occupational safety regulations.

The **compliance** organisation is under the authority of the Chairman of the Managing Board, to whom the Director Group Legal & Compliance reports directly. All countries have their own compliance officers with a direct reporting line to the country management. However, responsibility for ensuring that employees' conduct complies with the law and regulations lies with all managers and, of course, with the employees themselves.

Sustainability and environmental protection

Environmental protection is an integral element of HeidelbergCement's strategy. Since September 2021, the topic of sustainability has been a separate Managing Board responsibility. The Chief Sustainability Officer (CSO) heads various internal working groups that deal with the different areas of focus of sustainability at HeidelbergCement.

Sustainability management at HeidelbergCement

These working groups include experts for the various areas of focus, the directors of the Group departments ESG (Environmental Social Governance), Group Strategy & Development/M&A, and Group Communication & Investor Relations, as well as the directors of the technical competence centers. The task of the working groups is to accelerate the progress of operating activities with regard to sustainability and position HeidelbergCement as a company with clearly defined sustainability goals, as formulated in the Sustainability Commitments 2030, for example. The Supervisory Board also addresses different topics connected with sustainability and environmental protection on a regular basis.

The Group departments of the Sustainability Office, which was newly created in December 2021 and reports to the CSO, support future-oriented sustainability activities at Group level in a number of ways. These include defining guidelines and goals, supporting the operating units in the practical implementation of these guidelines and goals, identifying and disseminating improvement measures for achieving the sustainability goals, and coordinating action plans to implement research projects.

→ **Environmental management p. 49f.**

Challenges & strategy

While we minimise the risks for our business and seize new opportunities, we simultaneously develop solutions to environmental and social challenges. This work focuses on the following topic areas:

– **Occupational safety:** HeidelbergCement is a manufacturing company. Occupational health and safety is therefore our highest priority. We use targeted measures to improve our technical and organisational safety standards and to raise awareness of safe working practices. This is aimed not only at our own employees but also at the salaried employees of external companies and third parties.

Our CO_2 reduction targets are consistently anchored **in our global remuneration systems.**

– **Energy efficiency and climate protection:** The production of cement requires a lot of energy. From both an economic and an environmental standpoint, it is therefore imperative that we further increase our energy efficiency. Cement production is also associated with high CO_2 emissions. We accept our share of the global responsibility to limit the rise in worldwide temperature to 1.5°C. Our target is to achieve specific CO_2 emissions of 400 kg per tonne of cementitious material by 2030. We want to reduce our CO_2 emissions to net zero by 2050 at the latest. Our goal and the associated measures are consistent with the road map defined by the International Energy Agency (IEA) to help the industry implement the Paris Agreement. HeidelbergCement was the first cement company to have its targets reviewed and endorsed by the Science Based Targets initiative (SBTi). We are now actively supporting the SBTi's efforts to finalize a 2030 roadmap and criteria for the cement industry in line with the 1.5°C target.

→ **Energy and climate protection p. 50f.**

– **Securing the supply of raw materials and conserving resources:** Our business operations are dependent on having long-term access to mineral-based raw materials in the vicinity of our plants. Such resources are finite, and their local exploitation often leads to conflicts of interest. To us, securing sustainable supplies of raw materials and conserving resources are key strategic tasks. Our strategy of conserving resources in cement production includes the use of alternative raw materials and fuels. In line with the European Union's circular economy targets, HeidelbergCement is involved in research projects investigating the reuse of recycled building materials, for instance in fresh concrete.

→ **Building materials recycling p. 46**
→ **Energy and climate protection p. 50f.**

– **Nature conservation and species protection:** The quarrying of raw materials requires us to temporarily encroach upon a particular region's water supply, soil, and flora and fauna. At the same time, our extensive land use creates new refuges for endangered animal and plant species. We operate our quarries in accordance with international, national, and local environmental legislation. By 2030, we aim to operate all our extraction sites on the basis of an after-use plan agreed together with the respective local authorities according to the needs of individual communities. We also plan to integrate recommendations for the promotion of biodiversity into every new after-use plan.

→ **Land use and biodiversity p. 58f.**

Stakeholder engagement

GRI 102-40, 102-42, 102-43, 102-44

In view of the strong local focus of our business operations, we can only be successful in the long term if we maintain good cooperative relationships with the various stakeholders in society. We are committed to a dialogue based on trust with all such relevant groups – at a local, national, and international level. The resulting exchange of ideas and opinions helps us identify critical issues at an early stage and gain greater acceptance for our activities. Each country organisation is responsible for establishing and maintaining its own relationships with national and local stakeholders. The stakeholder dialogue at international level is managed by the Group departments for communication and sustainability. In spring 2021, we published updated stakeholder management guidelines.

→ **https://www.heidelbergcement.com/en/corporate-citizenship**

Relations with local stakeholders

Most of our plants and quarries are situated near cities and communities. It is therefore a matter of course for us to maintain regular contact with the respective community, government agencies, and local organisations, and to inform them about our activities and planned projects at the location. Plant or site management teams are generally responsible for such stakeholder relationships. Along with personal discussions, we use a variety of other means of communication to keep local stakeholder groups informed and enter into dialogue with them – ranging from traditional newsletters and guidelines to social media and a variety of public participation concepts.

We aim to reconcile the interests of the company with those of the local communities. The concerns of our local stakeholders vary from location to location. In general, they range from simple visit enquiries and appeals for us to support projects and sports, cultural, and educational institutions all the way through to information requests. Stakeholders also raise reservations regarding imminent modernisation and expansion measures as well as complaints about noise and dust pollution from our plants and

quarries. We respond promptly to complaints and provide transparent information wherever possible and practical in order to address uncertainties and misgivings. We also involve local stakeholders at an early stage when planning investment projects, such as by setting up contact offices and holding information and discussion events.

→ Social responsibility p. 78f.

GRI 102-40, 102-42, 102-43, 102-44

Stakeholder dialogue at a national and international level

HeidelbergCement is a member of various associations and initiatives that represent their members' interests vis-à-vis governments, businesses, and the public. These memberships also promote an exchange with other companies and organisations regarding current issues. A case in point is the question of how the industrial transformation towards climate neutrality can be successfully implemented and combined with ambitious climate and environmental protection measures. The focus is on various challenges specific to individual countries or sectors, or relating to industrial policy, particularly with regard to the secure supply of raw materials, carbon pricing, biodiversity, energy, occupational health and safety, as well as social and labour issues. There follows a selection of our activities:

As a founding member of the **Global Cement and Concrete Association** (GCCA), we aim to further strengthen innovation and sustainability at a global level. One of the association's most important tasks is to show how the challenges of construction – in relation to climate protection, for example – can be tackled in the future with the help of concrete. In 2021, HeidelbergCement was instrumental in the development and publication of Concrete Future, the detailed GCCA roadmap that sets out the path to the complete decarbonisation of the industry worldwide by 2050.

→ https://gccassociation.org/

HeidelbergCement and its subsidiaries also work with national **Green Building Councils** in different countries. The goal here is to jointly develop certification systems for sustainable construction and to make the design, construction, and operation of buildings more sustainable. We are also actively involved in the global umbrella organisation of the Green Building Councils, the **World Green Building Council**. And since 2020, HeidelbergCement has been an official partner in the Europe Regional Network (ERN).

→ https://www.worldgbc.org/

Through our memberships in various national associations, we are also represented in the respective European umbrella organisations, such as the European Cement Association (CEMBUREAU), which puts forward the industry's concerns in discussions and negotiations with the European Union and its institutions. As an indirect member of the European Aggregates Association (UEPG), we also present our positions on aggregates to political decision makers. Our interests concerning concrete are represented by the European Ready-Mixed Concrete Organisation (ERMCO) and the European Concrete Platform (ECP).

Furthermore, as a Group headquartered in Germany, we are actively involved at national level in various cross-sectoral climate protection initiatives.

For instance, we are a member of **econsense – Forum for Sustainable Development of German Business.** This network of global German companies views itself as a partner and an expert forum for dialogue with governments, the scientific community, the media, and society. The aim is to promote sustainable development in business and to assume social responsibility collectively.

→ https://econsense.de/about-us/

As one of the companies supporting the **Stiftung KlimaWirtschaft** (climate economy foundation, formerly known as Stiftung 2°) – a business network advocating progressive climate policy at Managing Board level – we develop cross-sectoral approaches and policy concepts for a successful industrial transformation towards climate neutrality.

→ **https://klimawirtschaft.org/english**

→ **Sustainable products p. 44**

GRI 102-40, 102-42, 102-43, 102-44

Direct exchange with political decision makers

In order to further strengthen our dialogue with policymakers, we supplement HeidelbergCement's indirect representation via associations with three Group representative offices in Berlin, Brussels, and Washington. Our aim is to facilitate a direct exchange between political decision makers and contact partners within the company. At numerous events, presentations, and panel discussions in 2021, we were also able to demonstrate in person how HeidelbergCement, as a leading building materials company in Europe, can help to solve social problems. In 2021, our activities focused on new proposals for higher carbon pricing and a carbon border adjustment, the promotion of key low-carbon technologies and the associated infrastructure, as well as the creation of the green lead markets and standards and other political conditions needed to successfully implement our climate neutrality strategy.

In addition, we formulated structures and policies to ensure that our positions remain consistent with those of the industry associations in which we are involved. In particular, we want to ensure that the positions and actions of industry associations are in line with international and European climate protection agreements and the targets set out in our Sustainability Commitments 2030. We have published a new Climate Advocacy and Association Review for 2021.

Climate change is a global issue and should therefore be tackled on a global level. HeidelbergCement advocates for **global level playing field conditions** to enhance effective responses to climate change.

Our lobbying activities represent the positions that HeidelbergCement takes in public.

→ **Climate Advocacy and Association Review 2021**

Dialogue with non-governmental organisations

As a matter of principle, we respond in a transparent manner to all requests from non-governmental organisations and interest groups. We also take critical questions as opportunities to inform people about our sustainability activities and enter into dialogue. The society-wide debate on climate change remained heated in 2021. This discussion is something we generally welcome, because, as an energy-intensive company in the building materials industry, we have a particularly great responsibility towards the environment.

ESG ratings and dialogue with stakeholders who focus on sustainability issues

ESG factors are becoming increasingly important in investment decisions as our shareholders as well as financial analysts and rating agencies want to know how HeidelbergCement integrates the issue of sustainability into its Group strategy. They also want information on the progress made and which results the company has achieved in this regard. We provide data relating to these considerations to rating agencies including CDP, ISS, Moody's, MSCI, and Sustainalytics, respond to enquiries, and engage in open and ongoing dialogue with stakeholders who focus on sustainability issues. Also in the past year, the central concerns discussed were our goals, measures, and strategies with regard to climate protection along with other environmental issues, as well as the occupational safety of our employees and contractual partners, aspects of corporate governance, and respect for human rights.

Selection of our rating results

CDP

In 2021, HeidelbergCement achieved the top grade A in the CDP sustainability rating in the area of climate protection and was therefore ranked on the "Climate Change A List".
In the "Supplier Engagement" area, HeidelbergCement was also awarded an A rating, and an A-rating for "Water Security".
→ **www.cdp.net**

ISS ESG

In 2019, HeidelbergCement received a score of C+ in the ISS ESG (then ISS-oekom) Corporate Rating and is thus authorised to use the ISS ESG Prime Label.
→ **www.issgovernance.com**

Moody's ESG Solutions

In the rating by **Vigeo Eiris**, Moody's ESG rating unit, HeidelbergCement received an overall score of 63 in October 2021, placing it among the three best-rated out of 25 companies in the building materials industry.
→ **www.esg.moodys.io**

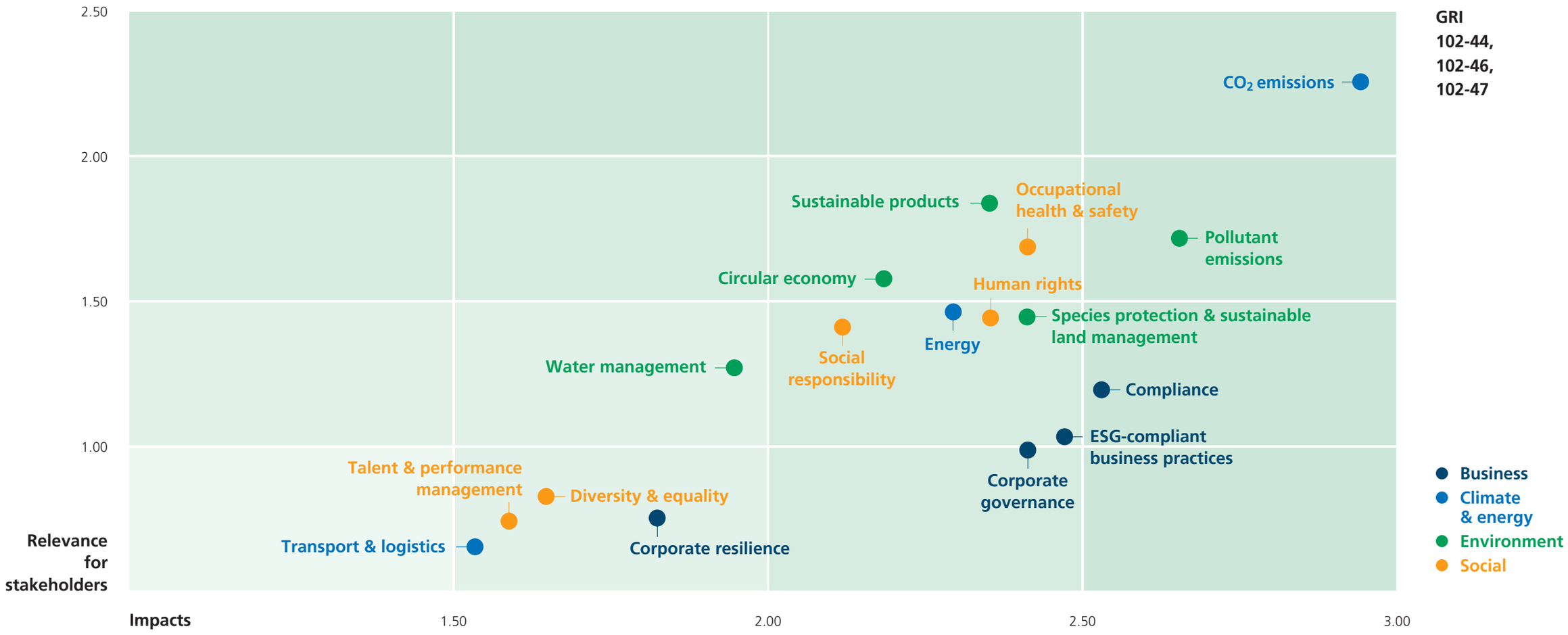
MSCI ESG

In 2021, HeidelbergCement was graded AA in the MSCI ESG Ratings for the sixth time in a row.
→ **www.msci.com**
I Disclaimer

Sustainalytics

In Sustainalytics' ESG Risk Rating, HeidelbergCement achieved a 27.4 score in December 2021, placing it in the medium risk category.
→ **www.sustainalytics.com**
I Disclaimer

Materiality matrix



We identified the sustainability topics that are relevant for HeidelbergCement as part of a materiality analysis at the end of 2020. In the process, topics already identified in the past were compared with the contents of the GRI standards as well as other frameworks and industry requirements. The resulting topics were structured and consolidated to pave the way for the next step: drawing up an analysis from a stakeholder perspective and determining the impact and business relevance. The list comprised 17 topics.

The next step was an assessment from a stakeholder perspective and a determination of the social, economic and environmental impacts of our business activity. We surveyed some 250 people on their assessment - including representatives of the capital market, NGOs, politics and associations, customers, suppliers, competitors and our own employees. This process resulted in the following materiality matrix, the validity of which was confirmed by the Chief Sustainability Officer also for the financial year 2021.

TCFD report

We are constantly striving to expand our data collection and reporting in order to better meet the disclosure interests of our stakeholders. Since September 2020, HeidelbergCement has therefore also been an official supporter of the Task Force on Climate-related Financial Disclosures (TCFD).

In 2017, the TCFD published its recommendations on climate-related financial reporting in the areas of governance, strategy, risk management, and key figures and targets, taking a holistic approach where all topic areas are interlinked and mutually dependent. Globally harmonised reporting based on the TCFD's forward-looking KPIs can thus help assess a company's future resilience to climate-related risks and opportunities, provide relevant information to capital markets, and accelerate the industrial transformation towards a low-carbon economy.

We are convinced that TCFD reporting also benefits us as a company: it enables us to evaluate and develop our business strategy on the basis of objectively identified opportunities and risks (physical risks, transformation risks). With TCFD reporting, we aim to provide our stakeholders with relevant and valid information that enables a comprehensive assessment of HeidelbergCement's adaptability and future profitability.

1 Climate change governance

The response strategy of HeidelbergCement to climate change is based on a structured and comprehensive master plan that involves all relevant company stakeholders and resources. Our focus is on the step-by-step reduction of carbon emissions, with clear milestones. Our target is to achieve specific carbon emissions of 400 kg per tonne of cementitious material by 2030 and to be carbon neutral by 2050 at the latest. The overall responsibility for the achievement of this commitment lies with the Managing Board and in particular with the Board member in charge of sustainability.

To ensure consistent coordination of all global efforts and a careful follow-up of the expected reduction rates, HeidelbergCement's CO_2 Program, supported by a program management office (PMO), was established in 2019. It is chaired by two Managing Board Members and facilitates the coordination of HeidelbergCement's various interdisciplinary working and expert groups contributing to carbon reduction.

All Managing Board members are briefed at least once a month by the directors of the different Group departments on the development of carbon emissions reduction efforts within the Group as well as on relevant political and scientific developments.

The Sustainability Office, which was newly created in December 2021 and reports to the CSO, is a key player in the CO_2 PMO and is responsible for developing the Group's sustainability strategy in close cooperation with the other Group departments. Key strategic documents include the Sustainability Commitments 2030 (describing the company's medium-term sustainability strategy) and the 2030 carbon emission reduction target to reach 400 kg per tonne of cementitious material. The Managing Board is responsible for review and approval of the strategic plan, including the CO_2 roadmaps. The Sustainability Office also regularly reviews the progress and current status of the reduction of greenhouse gas emissions as well as the implementation of all other sustainability goals. The results of these review processes are passed on to the Managing Board so that it can take note of them and comment on them.

Operational responsibility for implementing the sustainability and climate protection goals lies with the respective country management teams. Progress, overall business development as well as any high-level strategic management issues and relevant external influences are reported and discussed in quarterly management meetings with the Managing Board. In addition, risks and opportunities are assessed and taken into account in operational planning.

For all major investments, especially acquisitions, but also divestments, a thorough assessment is executed by different Group functions from a commercial, financial, technical, and sustainability perspective, coordinated by Group Strategy & Development/M&A. The results of such assessments are essential to the Managing Board's approval process. Thus, all investment projects are assessed not only based on financial metrics, but also in terms of their climate-related risk and opportunity profile.

The responsibility of the Supervisory Board regarding climate protection is to monitor, oversee, and advise the Managing Board. One of the Supervisory Board's key tasks is to monitor the risk management system implemented by the Managing Board, a duty executed by the Supervisory Board Audit Committee. To this end, the Audit Committee receives reports twice a year from the Managing Board on the company's risk position, in particular regarding strategic risks, which include climate change-related risks.

2 Strategy and risk management

Analysis of climate change risks is part of HeidelbergCement's overall risk management approach. As part of this process, several potential risks have been identified that might significantly impact the company in the medium and long term. According to the definition of the TCFD, these include physical risks as well as transition risks, which we discuss in more detail below. The process of identifying risks is performed annually for the whole Group and combines bottom-up reporting at country-level with a top-down global analysis of our physical risk exposure. At both levels, risks are assessed qualitatively and, wherever possible, supplemented with quantitative appraisals.

Different time frames are required for the consideration of the business lines of HeidelbergCement, depending on their investment intensity. While the ready-mixed concrete business line requires a more medium-term perspective, the aggregates and cement business is more long-term oriented given the long-term nature of mining permits, the investments involved, and the recultivation obligations after quarrying.

Regarding climate risks, we have defined the following timelines:

- **Short term (current–2025):** This relates to the regular business and financial planning routines as well as existing and readily foreseeable regulatory requirements.
- **Medium term (2025–2030):** The medium term is defined as the time frame that goes beyond regular strategic planning time frames, but for which a strategic roadmap exists.
- **Long term (2030–2050):** Long term refers to any plans exceeding the 15-year time horizon. This includes investments in assets, research and development for new product lines, and strategic investments in new technologies, such as research into carbon capture, utilisation and storage (CCUS) as well as recarbonation.

2.1 Physical climate risks

Physical climate risks are divided into acute and chronic risks. The potential impact of climate change also depends heavily on global developments such as demographic change, economic growth, and efforts to rapidly reduce the CO_2 concentration in the atmosphere. In its analysis of these physical climate risks, HeidelbergCement has therefore considered both the current risk potentials and – for the periods up to 2030 and 2050 – the recognised Representative Concentration Pathways (RCP) scenarios 2.6 (optimistic), RCP 4.5 (stabilisation), and RCP 8.5 (pessimistic) of the Intergovernmental Panel on Climate Change (IPCC).

One industry-specific risk for HeidelbergCement is the dependence of construction activities on weather conditions. Harsh winters with extremely low temperatures or high precipitation throughout the year can have a short-term negative effect on construction activity, with direct consequences for our revenue and operating performance.

There are significant geographical variations in climate risks – in 2021, we placed a special focus on **adapting our locations to new climate conditions.**

The impact of extreme weather scenarios, such as floods or droughts, can lead to damage to our production sites, interrupt the supply to our customers, or have adverse effects on the supply of upstream products to our operations. In recent years, this was the case both in Central Europe and in Africa, with visible effects on the result of operations of the affected operational sites.

There are significant geographical variations in climate risks. According to our analysis, heat and drought are the most important risks associated with the development of climatic conditions. Weather conditions that can cause fires to spread quickly and widely pose a particular danger. Significant geographical differences are evident here, with countries in drier climates more exposed to heat- and drought-related climate risks. HeidelbergCement counters these risks, for example, by choosing water-saving production techniques. Other significant risks for us are meteorological developments that can lead to high precipitation and the flooding of rivers.

In terms of acute risks, i.e. event-driven risks, river flooding is a major concern for our business. Looking at the time frames up to 2030 and 2050, the risk severity of the above-mentioned scenarios increases with the projected absolute greenhouse gas concentration in the atmosphere. Here, too, we see that heat poses a threat to our production sites, especially in the southern hemisphere.

We forecast only marginal increases in risk severity for most climate risks, as many consequences of climate change are already being felt today. More seriously, however, we expect changes due to droughts and dry conditions. According to forecasts, some operational sites that have so far had a low drought risk will become high-risk sites between 2030 and 2050. We are monitoring these long-term effects and are stepping up measures to mitigate risks and adapt to climate change. Our sustainability goal of drawing up water management plans for locations in water-scarce areas will help us to do this.

In 2021, we focused more on adapting our locations to the new climate conditions. Based on a global analysis of all plants and business lines, we have started to analyse in more detail the most important production sites for which we have identified risks. In addition to risk severity, financial and strategic considerations as well as the expected remaining lifespan of the respective plant also play a role in our assessment. The aim is to develop risk-specific adaptation plans for the affected locations in order to reduce their exposure within the next five years. When assessing new locations, we also consider the possible future impact of climate change and plan so that the locations are well adapted from the outset.

However, the flood disaster in Germany, Belgium, and the Netherlands, among others, in July 2021 has also shown that all locations must be prepared for the possible consequences of climate change. That is why we are continuously working on expanding an internal directory of examples of good practice from our plants, which we share across the Group. Versatile and context-specific approaches can be taken. For example, in addition to physical adaptation, operational management processes can also be adapted. We have included some examples from our countries in this report.

2.2 Transition risks

The transition to a low-carbon economy is a global challenge, which must be addressed by businesses and governments alike. Failure in achieving the goals set out in the Paris Agreement will have a significant negative impact on us as a company. We have identified the following current and future risks for the period of the global structural transition to a low-carbon economy.

In our assessment we have used two climate-related scenarios for transition risks. On the one hand, we investigated the future scenarios in a business-as-usual (BAU) setup with moderate environmental protection goals, and on the other hand, we analysed a future scenario with higher climate protection goals based on the IPCC's 1.5 degree climate scenario in order to become carbon-neutral by 2050 at the latest. Expected tightened EU regulations (e.g. maximum emission levels based on best available techniques (BAT), minimum required amount of recycled materials to be used in new constructions, etc.) formed the basis for the latter assessment. The result is the synthesis of information provided by the country operations and the global assessment.

These risks correspond to the breakdown proposed by the TCFD.

Policy and legal risks

In the medium to long term, we see the main risk as being additional climate-related regulations or changes to the design (especially prices) of existing regulatory systems. Cap-and-trade systems carry the risk of high operating costs for the purchase of emission allowances within the regulated countries in the absence of rules ensuring a level playing field around the world for all market participants in an industrial sector. This leads to a clear competitive disadvantage compared with manufacturers from non-regulated countries or from other competing building materials sectors. In 2021, about 45% of our activities were in countries with a cap-and-trade system or comparable CO_2-related taxes with limited financial impact due to partial offsetting. Following the adoption of the EU ETS regulation for the fourth trading period starting in 2021, the EU will see a far-reaching tightening of existing and future CO_2 regulations, especially in connection with wider ambitions surrounding the EU climate protection programme "Fit for 55".

Increasing costs connected with the purchase of emission allowances are anticipated for HeidelbergCement, and the risk of increasing carbon leakage will disadvantage our industrial sector in the EU. To counter these threats, companies and industry associations are in intensive discussions with the European Commission to establish a carbon border adjustment mechanism for selected industries, including the cement industry, to ensure equal terms of competition. The Carbon Border Adjustment Mechanism (CBAM) concept is intended to establish a level playing field between EU manufacturers and importers by 2035 at the latest. Some details, particularly in connection with the EU ETS, are still in the process of being clarified. However, in our estimation, they will also have a significant influence on future price developments.

The northwest coast of Australia: protection against cyclones

Tropical cyclones are occurring more and more frequently on the northwest coast of Australia and are endangering employees and operational processes at the locations there. Therefore, appropriate preventive measures must be taken before a hurricane arrives in order to prevent damage. As the path of a hurricane is often difficult to predict, risk management must be flexible, allowing operations to resume swiftly and ensuring that the clean-up work can be done effectively. In response to this challenge, Hanson Australia's ready-mixed concrete sites have implemented a standard operating procedure for cyclones. Fundamental to the effective management of natural disasters are awareness-raising activities, preparedness checks, and preparations that need to be carried out before the cyclone season begins. During the season, different levels of alarm are defined for the sites, depending on the proximity of the cyclone, and measures for the site (e.g. tying down equipment) and the staff are defined.

To gain experience with all major CO_2 carbon capture technologies, we focus on **research cooperation with external partners** and opportunities for public funding.

The EU regulates other emissions such as SO_X, NO_X, and particulate matter, and stipulates that these are to be within or below the limits that can be achieved by the best available technology (BAT). As countries outside the EU also require their emissions to be within the limits set by the EU, we need to adapt our production facilities worldwide.

Technology risks

The main technological risk is the substitution of existing products with lower-emission ones that will be available in sufficient volumes in the future and are currently being tested on the market, primarily in small quantities. This relates in particular to new alternative binder concepts, which in turn could trigger a shift in customer preferences (see also Market and reputational risks section). We are actively involved in the research and development of potential new product solutions.

Another technology risk in the transition to a low-carbon economy is investing in technologies that are not successful in the market. This risk exists particularly with new processes such as carbon capture and storage (CCS), which may not be efficient enough in the future, while investment decisions are already required today. Some of the important future carbon capture technologies for the cement industry, such as direct separation (LEILAC) or oxyfuel technology, are described in the Research and development chapter.

→ **Research and development p. 40f.**

In order to gain experience with all major carbon capture technologies, HeidelbergCement is pursuing a gradual investment approach based on research cooperation with other partners and, wherever possible, also supported by public funding. On the one hand, this minimises the risk of failed or uneconomic investments and, on the other hand, ensures that HeidelbergCement gains experience with all future-oriented technologies that could be successful in the market. The roll-out costs of new technologies are also considered risks. Current estimates vary widely and depend on several factors, such as economies of scale, which influence the final, currently unknown costs of each technology.

Market and reputational risks

One of the main market risks results from a possible change in consumer preferences that may occur during the transition to a low-carbon economy. Such a change could lead to increased substitution of concrete with other building materials perceived as having a lower carbon footprint, such as wood or steel.

Chennai, India: lowering the ambient temperature

Chennai, in southeast India, has an average temperature of over 30°C. The resulting heat can have a serious impact on the health of the employees in our grinding plant there and affect productivity. Measures to deal with the heat are therefore important. Between 2018 and 2021, more than 6,000 trees were planted at the Chennai plant to enlarge the green areas surrounding the plant. The results were immediately noticeable: the ambient temperature is up to 2°C lower than the temperature one kilometre away. The trees also improve the effectiveness of rainwater utilisation measures, promote biodiversity, and improve the appearance of the site.

Another market risk arises from rising commodity costs, which could be caused at least in part by the transition to a low-carbon economy. We are also seeing an increase in electricity costs, while at the same time the demand for renewable energy is on the rise. As alternative fuels and raw materials are becoming increasingly difficult to procure, owing to rising demand on the one hand and declining availability on the other, we expect a cost increase closely linked to rising CO_2 costs. We are working to secure the necessary quantities of alternative fuels and raw materials for our future production, while also exploring opportunities for a long-term supply of renewable energy generated on site at our plants or from specific power purchase agreements (PPAs) with strategic partners.

We regard the changing investor preferences towards sustainable investments in companies with low CO_2 emissions as a further market risk. This trend could lead to increased financing costs (e.g. when issuing corporate bonds) or lower market capitalisation. Furthermore, we envisage the possibility of negative feedback from certain stakeholders should we delay or fail to achieve our sustainability goals, which could create a reputational risk for the company. These risks can be limited by transparent and regular communication.

Overall, we classify climate risks as a general risk with a possible gradual impact on the Group. In our opinion, the risk outlook is stable compared with the previous year.

2.3 Opportunities

We see HeidelbergCement strongly positioned to play a key role in the transition to a low-carbon and climate-resilient economy. In the medium term, we see an opportunity in the increased demand for durable building materials for the construction of a robust infrastructure protected against the physical effects of climate change. The increasing urbanisation trend and growing world population will also increase the demand for cement and concrete. HeidelbergCement's goal is to achieve carbon neutrality by 2050 at the latest. In addition, we aim to offer a product portfolio that fulfils all requirements of sustainability. We see this as an important prerequisite and at the same time as a great opportunity to increase the use of mineral-based building materials. In the long term, we expect an increased demand for sustainable products, and we are reviewing our entire product portfolio accordingly. We also consider it our responsibility to actively convince customers of the quality of CO_2-reduced products. For example, in Egypt we succeeded in reducing the average clinker content by 8.5% by consistently substituting clinker with limestone on the technical side while at the same time optimizing our product portfolio and working closely with our customers.

With the increasing likelihood of extreme weather events and natural disasters such as flooding and rising sea levels as a result of climate change, we expect a surge in the demand for robust concrete infrastructure, capable of withstanding and protecting against the impact of such events in the affected regions.

The supply of Ecocrete®, a type of concrete that contains up to 100% recycled aggregates, for the reconstruction of the Afsluitdijk dike in the Netherlands can be mentioned as an example of this expected change in customer demand. Thirty-two kilometres of this dike, which protects large parts of the Netherlands against flooding, have been restored or reinforced during this project.

Last but not least, we also see a long-term opportunity in the market for recycled building materials. One key focus of our R&D efforts in recent years has been research into the possible uses for recycled concrete, with a special focus on the recarbonation of the cement paste in recycled fractions. The aim of this process called "enforced recarbonation" is to bind the same amount of CO_2 in the material that was previously released during cement production. The results of our R&D efforts have been very encouraging so far, demonstrating a CO_2 uptake potential close to the amount of CO_2 emitted during clinker production. It was also found that recarbonated cement paste can replace clinker in composite cements. This can contribute immensely to the decarbonation of the industry, and it gives us opportunity to access new and emerging markets with recarbonated products.

2.4 Integration into investment and financial planning

Climate risks are increasingly being integrated into our day-to-day business and management. For example, the variable remuneration of all bonus-eligible employees is linked to our CO_2 reduction target. Moreover, the opportunities and risks associated with our sustainability targets are increasingly being included in our (financial) planning procedures. For example, the carbon footprint of our business operations and their costs, as well as the implementation of the CO_2 roadmap, are already discussed in depth at our quarterly management meetings. In addition, the risks and opportunities of climate change are incorporated into financial planning as follows:

Investment planning

– Substantial investments are required to achieve the targets of our CO_2 roadmap. When planning the corresponding projects, assumptions about possible CO_2 costs or their avoidance and their development are taken into account in the investment planning. This influences the expected profitability of a project and thus the decision whether to implement it or not. The underlying CO_2 price assumptions are based

on developments in particularly relevant regions, such as the EU, and the corresponding targets up to 2030 and 2050. These are used for the most important capital expenditure projects within the strategic planning process (2020-2024) and in the financial assessment to fulfill our due diligence obligation, e.g. for new plants or capacity increases in the cement business area, our most energy- and CO_2-intensive business area. When choosing the fuel type, the cost of alternative fuels is deducted based on the proportion of biomass that is considered CO_2-neutral. This improves the business case for alternative fuel plants and encourages investment in these plants accordingly, leading to emission reductions.

– Climate change also plays a role when it comes to the planning and implementation of takeovers. In the acquisition of new sites and companies,considering climate risks as well as different climate change scenarios and their potential impact is part of our standard due diligence. In addition, we use acquisitions as a strategic tool to achieve the goals of our CO_2 roadmap. The purchase of recycling company Alex Fraser in 2018 is one such example, as it gives us access to alternative raw materials that we need to reduce the clinker content of our concrete.

Financial planning

– We expect climate change to have a significant impact on our operating costs. On the one hand, new regulatory measures are likely to increase our costs for energy-intensive inputs. On the other hand, we see increasing indirect competition for low carbon alternatives, e.g. alternative fuels, which drives these costs up as well. In addition, we are aiming to increase our usage of electricity from renewable energy sources, which comes with additional costs.
– However, by researching and using new technologies to reduce CO_2 emissions, we also expect opportunities or competitive advantages that will have a positive impact on the company's profitability.

Dimitrovgrad, Bulgaria: flood protection in the vicinity of the plant

The agricultural land near our plant in Dimitrovgrad, Bulgaria, was flooded in 2018 as a result of heavy rainfall. Preventive measures were taken to ensure that a recurrence of such events does not cause major damage to the plant. While all critical material is now stored within the facility on higher ground, essential protection measures were implemented outside the facility's perimeter fencing to ensure risk reduction and timely response in the event of imminent flooding of the facilities: flood protection facilities were installed, rainwater drainage is monitored with special care, and a tree belt was planted as a natural protective barrier. All measures were coordinated with the local civil protection authorities.

– HeidelbergCement's assets may be impacted by the effects of climate change, for example through physical climate risks or transition risks, as described before. The respective country management team is committed to developing a strategy that compensates for these impacts and ensures that our market presence is not jeopardized.

3 Targets and key figures

3.1 Targets

Our ambitious climate protection goals have a special strategic role. We want to be the industry leader when it comes to achieving carbon neutrality.

By 2030, we aim to reduce specific net CO_2 emissions to 400 kg per tonne of cementitious material. We will achieve this by optimising the product mix and through process improvements such as maximising the use of alternative fuels, switching to electricity from renewable sources or investing in plant efficiency. Our investments towards a circular economy, which we are already implementing today, also make a decisive contribution to the long-term reduction of CO_2 emissions. CCUS – carbon capture, utilisation, and storage – is another key component of our climate strategy.

For all measures, we have defined concrete targets for all locations worldwide. By 2050 at the latest, we want to become CO_2-neutral across our entire product portfolio and achieve "Net Zero" emissions.

Since the 2021 financial year, the reduction in CO_2 emissions has been anchored in the remuneration of the Managing Board and of every bonus-eligible employee worldwide. This underlines the strategic relevance of our climate protection goals.

3.2 Key figures

Climate protection

	2019	2020	**2021**
Specific net CO_2 emissions (kg CO_2 per tonne of cementitious material)	589.6	576.0	**564.8**
Alternative fuel rate	24.0%	25.7%	**26.4%**
Clinker ratio	74.5%	74.3%	**72.9%**

→ **We report further climate-relevant key figures in the Appendix from p. 87**

Business & Compliance

 Image: Bourse de Commerce in Paris, France.

HeidelbergCement is committed to responsible corporate governance. We aim to achieve our business objectives in accordance with applicable laws and international standards and by means of socially and environmentally responsible methods. Only in this way will our success be sustainable.

Legal compliance

In all the countries in which we operate, we comply with and respect the applicable laws and provisions. They form the legal basis for our business activity. As a globally active company, we are also bound by international standards. We are therefore committed to upholding the principles of the eight core labour standards of the International Labour Organisation (ILO), the OECD Guidelines for Multinational Enterprises, and the United Nations Guiding Principles on Business and Human Rights. We have established comprehensive management processes that allow us to effectively exercise human rights due diligence and that meet the requirements of both the United Nations Guiding Principles and the German government's Act on Corporate Due Diligence Obligations in Supply Chains. HeidelbergCement's position on human rights is our commitment to respect human rights. It addresses employees' working conditions, responsibility at our locations (including the rights of indigenous peoples), the selection of suppliers and customers, and matters relating to compliance with, implementation of, and monitoring of human rights targets.

As a member of the UN Global Compact, we are committed to incorporating its ten principles in the areas of human rights, labour standards, environmental protection, and corruption prevention as integral elements of our strategy, corporate culture, and day-to-day business. In this context, we will increase our involvement in community projects in order to play our part in achieving the UN Sustainable Development Goals. We report to the public annually on our progress on the implementation of projects and the achievement of objectives, in accordance with the rules of the UN Global Compact.

We expect our employees and business partners worldwide to comply with these central guidelines and recommendations. Suppliers are also obliged to comply with our Supplier Code of Business Conduct.

Our management and monitoring structures comply with the company's Articles of Association, the Rules of Procedure of the Managing Board and Supervisory Board, the regulations under the German Stock Company Act, and the German Corporate Governance Code.

Business performance

Revenue for the 2021 financial year increased by 6.3% in comparison with the previous year to €18.7 billion. On a like-for-like basis, revenue grew by 8.0%. The result from current operations rose by 10.6% to €2,614 million. On a like-for-like basis, the increase amounted to 12.0%. The additional ordinary result of €481 million is essentially attributable to the profit from the sale of our business activities in the West region in the USA. The profit for the financial year amounted to €1,902 million. The Group share amounted to €1,759 million. Excluding the additional ordinary result, the Group share increased by 14.3% to €1,561 million. The return on invested capital (ROIC) improved to 9.3%. The dynamic leverage ratio was reduced further to 1.29x.

Responsible tax strategy

HeidelbergCement is represented in more than 50 countries at around 3,000 locations worldwide. We create jobs at our locations – both directly at our production sites and indirectly in upstream and downstream business sectors. We promote economic development with our wages, investment, procurement, and taxes, particularly in economically weak regions. We are aware that tax revenues are an important cornerstone for financing government investments and expenditures. It is part of our corporate responsibility to insist on compliance with applicable tax laws and regulations and to pay taxes in the countries where we are active and generate profits. The values and principles that guide our actions with respect to taxation reflect this understanding and are set out in the HeidelbergCement Tax Principles. Our internal control processes and guidelines are designed to ensure compliance with tax laws and to avoid any violations of applicable laws, thereby protecting our employees and averting any reputational damage. We therefore organise our business transactions on the basis of sound economic, commercial, and legal grounds and facts, and do not use any aggressive or artificial tax arrangements. According to the list of shareholdings, HeidelbergCement has subsidiaries in countries that are considered tax havens; these companies are known to the tax authorities and are not used for tax avoidance purposes.

→ **HeidelbergCement Tax Principles**

90%

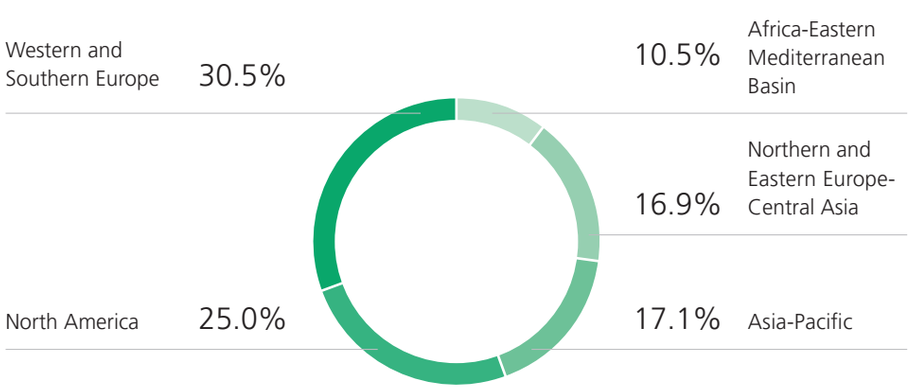
of our procurement volume is invested in the vicinity of our plants or within the respective country.

At our locations, local employees are given management responsibility wherever possible. The proportion of local managers in senior management positions in 2021 was approximately 80%. Each of our plants collaborates closely with local suppliers and service providers. And we invest around 90%[1)] of our procurement volume in the areas immediately surrounding our plants or within the respective country.

Our production and quarrying sites are generally designed for a service life of several decades. To maintain operating permits at our locations over these long periods and to renew our mining concessions at the required intervals, we need the constant support of the public. To achieve this, the key requirement is that we meet the conditions for regulatory approval, particularly in the area of environmental protection.

1) This value is based on an analysis in the countries that use our central SAP system and relates to 50% of the annual global procurement volume.

Revenue by geographical Group areas



The impact of any new investment is taken into account in our due diligence process. Equal weight is given to human rights and business aspects when deciding on investments. We only proceed if our investment criteria are are met, if the planned investment is compatible with our sustainability strategy and if it does not compromise the achievement of our sustainability targets.

Compliance management

The compliance programme, which is firmly anchored in the Group-wide management and supervisory structures, is part of our management culture. It comprises the entire compliance organisation within the Group, including the set-up of guidelines and compliance with them. The compliance management addresses all compliance topics that HeidelbergCement has identified as relevant in the compliance risk assessment. These include, in particular, anti-corruption, competition law, and human rights.

The compliance organisation is under the authority of the Chairman of the Managing Board, to whom the Director Group Legal & Compliance reports directly. Each country has its own compliance officer with a direct reporting line to the country manager. However, responsibility for ensuring that employees' conduct complies with the law and regulations lies with all managers and ultimately with the employees themselves.

We have implemented a compliance programme across the Group, based on our Code of Business Conduct, to ensure conduct that is compliant both with the law and with regulations. We revised our Code of Business Conduct and published a new version in 2021. Human rights and sustainability aspects in particular are now given greater prominence. The Code of Business Conduct requires all employees to adhere to our basic principles of responsible corporate governance, regardless of whether or not such principles have been written into law.

→ **Code of Business Conduct**

The programme is designed to help us achieve our compliance goals. A central element is the self-commitment made by the Group management not to tolerate violations of applicable laws and to impose sanctions. The programme also includes internal guidelines and measures that express the legal provisions in concrete terms. In addition to regular communication of these guidelines, there are compliance letters and video messages to the management and the entire workforce, such as the annual letter from the Chairman of the Managing Board and memoranda on current issues, to raise awareness of the topic of compliance. Furthermore, we have established "SpeakUp", an internet- and telephone-based reporting system accessible across the Group and also to people outside the organisation.

Around 18,000 employees

were registered for the Compliance e-learning programs in 2021.

As well as face-to-face training, employee training is also carried out online. The range of digital courses, which must be completed by specified groups of employees, covers topics such as the Code of Business Conduct (e.g. discrimination and harassment at the workplace), competition legislation, and the prevention of corruption. In order to achieve the goal of a 100% completion rate for all digital compliance training, we require the country managers to additionally report on training attendance to the responsible member of the Managing Board. The group of persons required to attend the online training courses includes, depending on the course, all employees who have a company e-mail address or employees of specific departments and/or managers. These training courses are mandatory for new hires and are repeated approximately every two years. In addition, training sessions were conducted on other compliance topics such as human rights or money laundering. These sessions were also increasingly offered online because of COVID-19.

The entire compliance programme is reviewed on an ongoing basis for any necessary adjustments with regard to current legal and social developments, and it is improved and developed accordingly. We consistently sanction violations of applicable laws and internal guidelines. In addition, corrective and preventive measures ensure that similar incidents do not occur in the future. Non-compliance with our guidelines by an employee may result in disciplinary measures up to and including dismissal. Violations of corruption or competition laws, human rights, or contractual agreements by third parties may result in their exclusion from conducting business with HeidelbergCement or require them to meet certain test conditions. To reinforce our efforts to combat corruption, the country organisations are working on the implementation of individual country measures that were defined as part of the corruption risk assessment. The same applies to competition legislation and the protection of human rights.

Group-wide implementation of the compliance programme is monitored by regular and special audits by Group Internal Audit as well as via special half-yearly compliance reporting by the Director Group Legal & Compliance to the Managing Board and the Audit Committee of the Supervisory Board. The latter monitors the effectiveness of the compliance programme and verifies in particular whether it adequately satisfies the legal requirements and recognised compliance standards. An additional quarterly report regularly informs the Managing Board members with regional responsibility about the most important compliance incidents in their Group areas. The adequacy of HeidelbergCement AG's compliance management system was audited with a focus on corruption prevention by an external auditing company in 2021 on the basis of the auditing standard IDW PS980.

Compliance activities

In 2021, the country organisations of HeidelbergCement once again concentrated their efforts on implementing country-specific measures to tackle corruption and to ensure compliance with competition law, according to their risk profiles. This was backed by appropriate training measures. In the reporting year, almost 18,000 employees across the Group were registered for the Compliance e-learning programmes. Moreover, we intensified our efforts to protect human rights at our own locations – with a focus on safe working conditions and anti-discrimination – and in the supply chain. In addition to training activities, this especially included the implementation of action plans drawn up from the human rights risk evaluations for the country organisations.

Owing to the health protection measures introduced in connection with COVID-19, less face-to-face training was conducted, and we were unable to compensate fully for this by means of virtual training measures. Compliance audits by Group Internal Audit could only be carried out virtually, which meant that individual audits that needed to be carried out on-site had to be postponed.

Human rights in the supply chain

We have been carrying out analyses of human rights risks for several years. This process also explicitly examines the risk of violating the rights of indigenous peoples. In 2021, we continued to systematically assess human rights risks and compile key indicators relating to human rights in each country. The results are analysed jointly by the respective country organisation and Group Compliance. The implementation of the agreed action plans for further risk reduction is reviewed. The aim is to repeat these risk assessments regularly at an interval of approximately three years.

The commitment to human rights aspects in the business context, such as the prohibition of child and forced labour, fair and safe work conditions, freedom of association, and a ban on discrimination, as a central selection criterion for suppliers is consistently driven forward by our supplier management system. This requires our partners to commit to our Supplier Code, which stipulates, for example, compliance with the ILO's core labour standards. We also work with an external partner with whom we assess the top-selling suppliers in North America, Germany, and the United Kingdom, as well as the global suppliers in the Group. This involves analysing the suppliers in terms of the sustainability of their operations – including questions about compliance with human rights. Additional local and global measures to evaluate suppliers from a sustainability perspective are laid down in the Group-wide purchasing policy. We started expanding our system of risk-based supplier management as early as at the end of 2021 in order to meet the requirements of the German Supply Chain Due Diligence Act (LkSG) in good time.

→ **Additional information on the measures taken to establish legally compliant and responsible conduct within the HeidelbergCement Group can be found in our Annual Report 2021 on pages 64–67 and 86–92.**

Compliance reporting system

Our compliance reporting system "SpeakUp", which is obviously also used in the event of potential infringements of human rights and ILO core labour standards, offers employees and external parties the opportunity to report suspected violations of laws or guidelines. Compliance violations can be addressed through a variety of channels, ranging from reports sent directly to specifically authorised contact partners to information submitted via our whistle-blower hotline. All such reports are handled anonymously if desired. Our Compliance Incident Reporting & Case Management Guideline contains instructions and principles for reporting compliance issues, investigating submitted complaints, and protecting those reporting the incidents.

We examine every report we receive and take appropriate disciplinary action in cases of proven misconduct. These measures can range from written warnings to dismissal. We also reserve the right to initiate civil action or press criminal charges. In addition to taking corrective action, we implement preventive measures to help stop similar incidents arising in the future.

In 2021, a total of 238 incidents (previous year: 239) were reported in our case management system and investigated under the supervision of Compliance employees in the country organisation or by Group Compliance. 74% of these cases were reported via our compliance reporting system "SpeakUp", of which 79% were reported online and 21% by telephone. In 26% of all incidents, the reporters used other channels such as e-mails or letters. Most reports concerned employee relations, accounting for 40% of the total number of cases. 15% of the reports related to health and safety, 8% concerned fraud, theft, or embezzlement, and 9% pertained to corruption or conflicts of interest. Other incident categories accounted for lower percentages of the total. Of the 238 incidents reported, 50% proved to be unfounded, while for 16%, no final investigation result had been determined by the editorial deadline. In the case of 35% of the incidents, the investigations revealed that they were at least partially substantiated.

For all substantiated cases, measures were taken, ranging from root cause analysis, changes to policies and processes, and communication and training through to disciplinary action (such as a written warning or dismissal). In 42% of the substantiated cases, disciplinary action was taken, and in 64% of these incidents, preventive measures were implemented.

During the reporting year, the compliance e-learning programmes given to employees across the Group, covering the Code of Business Conduct and anti-corruption issues, had completion rates of 94% and 95% respectively.

Our compliance reporting system **„SpeakUp"** enables employees and external parties to report suspected violations of laws and policies – **anonymity is guaranteed** if desired.

In the reporting year, electronic training on cartel law was also assigned to employees who work in sales or purchasing, have management responsibility or otherwise have contact with competitors, customers and suppliers, achieving a completion rate of 92%. There were also other compliance activities in the area of cartel law (seminars, lectures, and other measures).

The country organisations are required to report performance indicators on the human rights situation. Apart from cases on health and occupational safety, three cases of discrimination were reported in connection with human rights issues, one of which was confirmed, and two cases of harassment, also with one complaint upheld. Remedial action was taken in both confirmed cases. We also investigated one case involving complaints about unfair working conditions at suppliers working for us in Togo. An action plan to protect workers' rights was drawn up and implemented in consultation with the suppliers' management.

Product & Innovation

 Image: Europe's currently largest 3D-printed residential building in Wallenhausen, Bavaria.

GRI 102-40, 102-43

Our goal is to offer a fully carbon-neutral product portfolio by 2050 at the latest. We are convinced that concrete has the potential to become the most versatile and sustainable building product when considered across its entire life cycle, from production to recycling. A significant part of our research and development work is aimed at achieving this goal: minimising energy consumption and CO_2 emissions, and thereby also reducing our environmental impact and costs, by means of innovative products as well as process improvements and new cement and concrete formulations.

Focus on customers

Our close proximity to the market enables us to provide our customers with extensive advice and develop our products in close consultation with them. The responsible departments and employees are directly incorporated into the organisation of the respective national subsidiaries and develop cements, aggregates, and concretes that are optimally adapted to local needs. This development work is often carried out in close cooperation with our customers. However, our work does not end with the product, but also includes providing the customers with expert advice on product usage.

In order to continually deliver more value to our customers and offer them the high-quality solutions they expect, we need to look beyond mere product innovation. By truly understanding our customers and their needs, we are able to optimise not only our products but also our services. We believe that this creates greater customer value, which brings major benefits, such as differentiation, loyalty, advocacy, and sustainable growth.

HeidelbergCement uses the Net Promoter System (NPS®) to optimise the customer experience. In 2018, full customer journey mapping was introduced to deepen our customer insights. In recent years, over 2,500 optimisations based on customer feedback have been made to improve the experience we offer our customers. We treat all the customer data we collect confidentially and in line with GDPR, and we do not pass on any information to third parties.

Applying digital technologies to our core business

To build great digital tools, we need to understand the people who will use them. We use the knowledge gained from conversations with our customers to design and deliver solutions that address their specific needs.

Throughout our entire value chain, from raw materials mining, production, and logistics to the interface with the customers, digitalisation plays a crucial role. HeidelbergCement has set itself the target of becoming the leading technology group in the building materials industry. By introducing digital solutions, we intend to significantly increase our efficiency and reduce costs in production and administration. Our digital transformation strategy is centered on the three digital pillars HConnect, HProduce, and HService. While HConnect aims to cover more than 75% of our global sales volume via digital interfaces to customers by 2025, HProduce and HService will focus primarily on improving efficiency and reducing costs. In September 2021, digitalisation was added as a Managing Board responsibility, which is headed by the Chief Digital Officer.

1,024

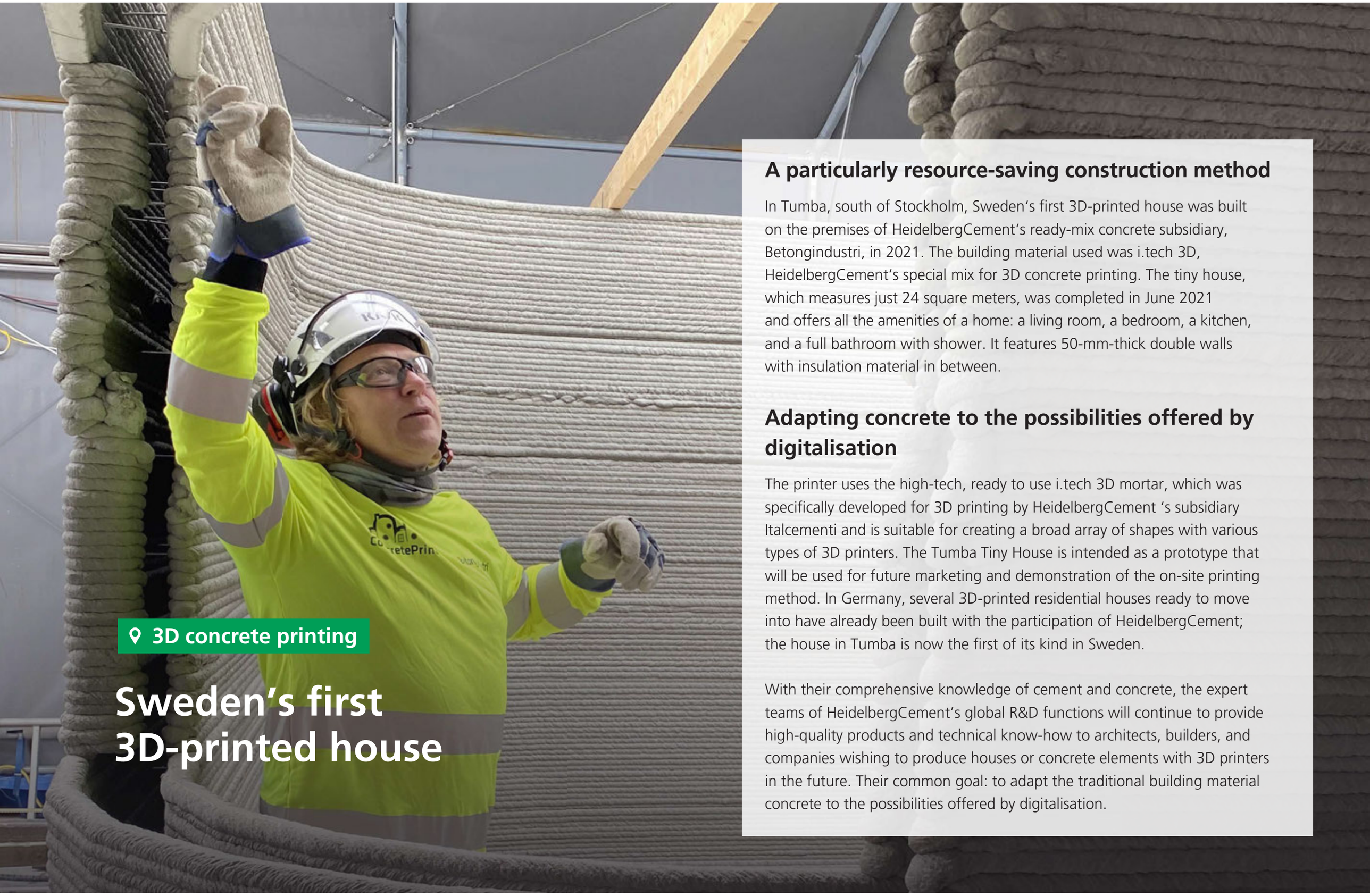
employees worked in research and development in 2021. Cooperations with institutes and universities complement our own R&D and innovation activities.

Research & development

The aim of research and development (R&D) at HeidelbergCement is to develop innovative products as well as process improvements and new formulations, in order to minimise the use of energy, CO_2 emissions, and hence costs.

Focus and intensity of our research and development activities
Research and development activities at HeidelbergCement can essentially be divided into the following areas of focus:

- **Innovative concrete systems:** The main priority is the development and improvement of binders and concretes with optimised properties and innovative functionalities. In 2021, we focused on further developing 3D concrete printing technology.
- **Development of cements and concretes with improved carbon footprints:** We are developing composite cements and concretes with less clinker and cement. Reducing the proportion of clinker in cement is the most important lever when it comes to minimising energy consumption and CO_2 emissions during production and helps to preserve natural raw materials.
- **Circular economy with concrete:** We are working on innovative recycling technologies that will make it possible to completely reuse waste concrete in fresh concrete. We are also researching processes to incorporate CO_2 in our products by means of carbonation, which allows us to use building materials for CO_2 storage.
- **Development of new technologies for CO_2 reduction:** We are raising the proportion of biomass fuels, exploring the use of hydrogen, and increasing the electrification of our processes. We are developing projects for carbon capture, utilisation, and storage (CCUS).
- **Development of advanced automation solutions:** With the help of artificial intelligence, we are looking for solutions to reduce energy consumption, keep our equipment in perfect condition, and maintain consistent product quality.



3D concrete printing

Sweden’s first 3D-printed house

A particularly resource-saving construction method

In Tumba, south of Stockholm, Sweden’s first 3D-printed house was built on the premises of HeidelbergCement’s ready-mix concrete subsidiary, Betongindustri, in 2021. The building material used was i.tech 3D, HeidelbergCement’s special mix for 3D concrete printing. The tiny house, which measures just 24 square meters, was completed in June 2021 and offers all the amenities of a home: a living room, a bedroom, a kitchen, and a full bathroom with shower. It features 50-mm-thick double walls with insulation material in between.

Adapting concrete to the possibilities offered by digitalisation

The printer uses the high-tech, ready to use i.tech 3D mortar, which was specifically developed for 3D printing by HeidelbergCement ‘s subsidiary Italcementi and is suitable for creating a broad array of shapes with various types of 3D printers. The Tumba Tiny House is intended as a prototype that will be used for future marketing and demonstration of the on-site printing method. In Germany, several 3D-printed residential houses ready to move into have already been built with the participation of HeidelbergCement; the house in Tumba is now the first of its kind in Sweden.

With their comprehensive knowledge of cement and concrete, the expert teams of HeidelbergCement’s global R&D functions will continue to provide high-quality products and technical know-how to architects, builders, and companies wishing to produce houses or concrete elements with 3D printers in the future. Their common goal: to adapt the traditional building material concrete to the possibilities offered by digitalisation.

Organisation and fields of activities in the area of R&D and innovation

Our global competence centers Competence Center Cement (CCC), Competence Center Materials (CCM), Competence Center Readymix (CCR), and the Global Research & Development (GRD) and Technologies & Partnerships teams pool the knowledge in our Group and make it available to all operating units.

Technology and innovation: The CCC assists our cement plants by providing specialist knowledge on all technical matters, from securing raw materials and improving production and maintenance to process control and quality assurance. The CCC also coordinates all strategic projects from the feasibility study to commissioning at the targeted level of performance.

Similarly, the CCM supports the aggregates business area across the Group with programmes for continuous improvement and performance management. Its tasks also include the planning and implementation of projects as well as digitalisation and automation. In addition, the CCM offers training and further education.

The CCR, a comparable organisation for the ready-mixed concrete business line, focuses on the continuous optimisation of raw materials and logistics costs and of the profit margin.

Expenditure on research and development

Total expenditure on research and development amounted to €123.6 million (previous year: 120.0) in the reporting year, corresponding to 0.7% of Group revenue. The following table shows a breakdown of expenses for the last three years for each field of activities.

Expenses for research & development

€m	2019	2020	**2021**
Central R&D and innovation[1)]	15.3	13.4	**12.8**
Technology and innovation	61.6	52.3	**50.7**
Customer-related development and technical service	56.7	54.3	**60.1**
Total	133.5	120.0	**123.6**

1) Including capitalised expenses

Expenses for the development of basic technologies are shown under Central R&D and innovation. Expenses for process innovations can be found in Technology and innovation, while the expenses for the local optimisation of products and applications according to the wishes of our customers are included in Customer-related development and technical service.

The development projects that were capitalised as investments include, among others, low-carbon concretes as well as new composite cements. In 2021, capitalised development costs totalled €0.8 million (previous year: 1.0), which corresponds to around 0.7% of total expenditure on research and development.

Employees in research and development

In the 2021 financial year, a total of 1,024 people (previous year: 1,031) were employed in research and development. The personnel breakdown and development over the last three years is shown in the following table.

Employees in research and development

	2019	2020	**2021**
Central R&D and innovation	97	91	**75**
Technology and innovation	342	309	**298**
Customer-related development and technical service	644	631	**651**
Total	1,083	1,031	**1,024**

Research cooperation

Cooperation with institutes and universities at both a local and global level complements our own R&D and innovation activities. At a global level, we refer in particular to our participation in the research network INNOVANDI. The network includes cement and admixture companies as well as 40 leading international universities, which all work together to carry out fundamental research.

In terms of product development, we prefer bilateral cooperation with individual universities in order to complement our own expertise. In some cases, cooperative projects with universities are supported by public funding.

Alternative raw materials for improving the carbon footprint

One of the most important ways of reducing CO_2 emissions in cement manufacturing is the use of alternative raw materials that are produced as by-products or waste in other industries. A very large share of these alternative raw materials comes from the metalworking industry. Moreover, coal-fired power plants supply ash as well as synthetic gypsum. By using these materials, and thus avoiding waste, we actively promote the circular economy. The systematic assessment of the suitability of all materials used ensures the best and most consistent product characteristics.

HeidelbergCement generally uses alternative raw materials in two phases of the production process: in the combustion process for the production of clinker, which is the most important intermediate product in the manufacture of cement, and as additives that allow us to reduce the proportion of CO_2-intensive clinker in cement.

To produce clinker, we make use of used foundry sand, for example, or lime sludge from drinking water purification systems in order to reduce the consumption of finite natural resources. When we develop new types of cement with less clinker, we also use further components such as blast furnace slag from steel production operations as well as fly ash, a by-product from coal-fired power plants. Moreover, in Africa, for example, we use ground rock from local quarries as an additional component in cement production, thereby replacing imported clinker with local raw materials. In the Netherlands, Germany, and France, we are investigating whether the fines from concrete recycling can be used as a cement ingredient in order to fully close the loop in concrete recycling.

At Group level, the proportion of secondary raw materials in cement production during the reporting period was 11.8%. The clinker proportion in cement was 72.9%.

Sustainable products

Sustainable building materials with the lowest possible carbon footprint are playing an increasingly important role for us and our customers. In line with our Sustainability Commitments 2030, we are making substantial investments in researching and developing innovative low-carbon production technologies and products, and advancing a portfolio of sustainable products in every Group country. In dialogue with our customers, the responsible staff in the Group countries explore the need for new sustainable products for their respective markets. The development of these products is often supported by the Global Research & Development department.

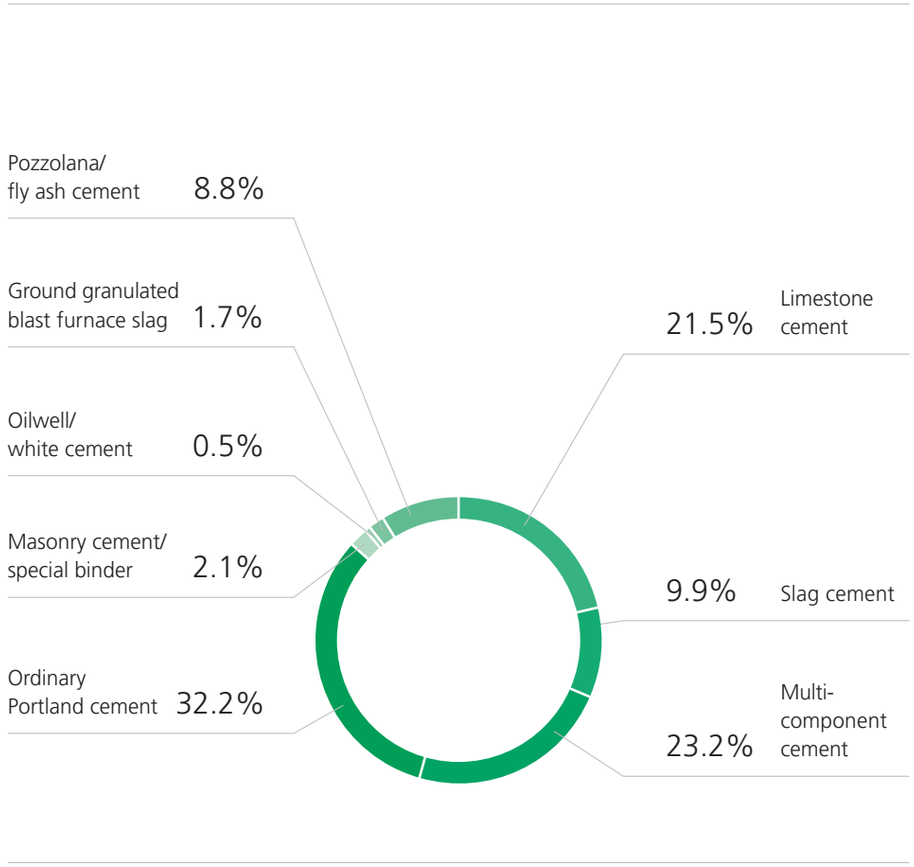
The topic of sustainable products is assigned to the Group department ESG Programs. This is part of the Sustainability Office, which was created in December 2021 and is headed by the Chief Sustainability Officer (CSO).

Building with climate friendly cement and concrete

Thanks to the use of by-products from other industrial sectors for the production of clinker and cement and the recycling of demolition concrete we are able to manufacture concrete in a more resource-efficient way and thus lower CO_2 emissions. A significant part of our research and development work is aimed at developing new cement and concrete formulations in order to minimise energy consumption and CO_2 emissions, and thereby also reduce our environmental impact and costs. Our German subsidiary Heidelberger Beton, for example, offers a comprehensive portfolio of sustainable concretes under the brand name EcoCrete®, which, depending on the application, offer up to 66% CO_2 reduction per cubic metre of concrete in comparison with the industry reference. This reduction is achieved purely technically and without compensatory measures.

→ **Research and development**

Cement type portfolio



Besides reducing our carbon footprint through the use of alternative raw materials and efficient process technologies, our research laboratories are also working on products intended to improve the energy efficiency of buildings. Lightweight concrete and especially infralight concrete are characterised by good thermal insulation properties and can, when used correctly, contribute towards significant energy savings throughout a building's service life. Due to the excellent thermal insulation that infralight concrete provides, it is not necessary to have additional insulating layers.

Innovative building materials

Expanding the sustainable concrete portfolio in Germany

Up to 66% CO_2 reduction per cubic metre of concrete

The roll-out of local, sustainable product portfolios in the Group countries is a key element of HeidelbergCement's climate strategy. Under the EcoCrete® brand, our German subsidiary Heidelberger Beton is uniting its comprehensive portfolio of sustainable concretes. Depending on the application, EcoCrete® offers between 30% and 66% CO_2 reduction per cubic metre of concrete compared with the industry reference value. This reduction is achieved purely technically and without compensatory measures.

Use of optimised cements and recycled materials

The introduction of EcoCrete® on the German market is representative of the individual CO_2 roadmaps implemented at all levels of the company and in all Group countries. In addition to CO_2 savings through the use of optimised cements, EcoCrete® is available in particularly resource-saving versions with a recycling content of at least 10%. Also part of the concept are the 100% use of green electricity, the use of recycled water and the complete recyclability of the concrete in the event of subsequent demolition.

Digitalisation and automation in the construction industry also support the development of new building technologies, such as 3D printing with concrete. In 2020, for example, our building material solution developed specifically for 3D printing – i.tech® 3D – was used in pilot applications to print a two-storey house and a multi-family residential unit in Germany. The technology was further developed in the reporting year in order to expand its range of applications and optimise costs. With i.tech® 3D, concrete usage can be reduced by up to 70%, with correspondingly large CO_2 savings.

Concrete building material solutions as a contribution to the energy transition

The energy and CO_2 life cycle balance of buildings can also be significantly improved by implementing modern climate concepts using concrete. At our new headquarters, for example, the need for heating and cooling was significantly reduced by means of concrete-core activation. In this process, concrete suspended ceilings are used for heat storage in conjunction with efficient surface heating or cooling.

The development of products to support the energy transition is also particularly important to us. Among these products are special concretes such as Powercrete® and Heatcrete®. Thanks to its outstandingly high thermal conductivity, Powercrete® can be used to lay high-voltage cables underground and ensure their optimum performance. Heatcrete® is a special concrete for high-temperature heat storage; its particularly high thermal conductivity and heat capacity make it a perfect medium for mass energy storage.

Reducing the carbon footprint of the construction industry: Through resource efficiency, co-processing of waste materials and recycling of concrete, we want to contribute to a **functioning circular economy.**

Concrete recycling as a contribution to the circular economy

Throughout its entire service life, concrete binds CO_2 from the air to form limestone. This natural carbonation process also continues during concrete recycling. As a result, about one fourth of the CO_2 emitted in the production of the basic material cement is already reabsorbed over the whole product life cycle of concrete.

With our increasing engagement in the production of recycled aggregates, we are making a contribution to the circular economy and thus also to sustainable construction. Our subsidiary Alex Fraser – one of the largest building materials recycling companies on the east coast of Australia – recycles more than 3 million tonnes of demolition concrete and several hundred thousand tonnes of asphalt every year. The majority of this recycled material is currently still used in road construction. However, there are specific plans to increase the use of demolition concrete in the production of fresh concrete in the future.

Through our participation in the Dutch concrete recycling company Rewinn B.V., Amsterdam, which we established together with local partner Theo Pouw BV, Utrecht, Netherlands, we are able to produce up to 250,000 tonnes of aggregates from recycled concrete annually. These are already used in numerous applications, such as the production of fresh concrete. For example, we market Ecocrete®, a concrete with up to 100% recycled coarse aggregates, through our Dutch subsidiary Mebin.

As part of our research activities, we are also driving forward the targeted processing of recycled concrete components, as well as their recarbonation and reuse in building materials – particularly in the context of the increasing scarcity of traditional cement additives such as blast furnace slag and fly ash. In the C^2inCO_2 research project, the natural carbonation reaction of concretes during their life cycle is to be accelerated in a targeted manner and on an industrial scale in order to bind CO_2 again as calcium carbonate in recycled concrete components so that they can be used in the production of construction materials.

→ **Innovations for climate protection p. 53f.**

Through our engagement in various initiatives and associations, we want to promote and accelerate developments in the area of sustainable construction and market transformation. We are actively involved in the German Sustainable Building Council (DGNB) and as an official partner in the Europe Regional Network (ERN) of the World Green Building Council. Through our participation in relevant committees, such as the DGNB's Construction Products Advisory Council and the ERN's EU Whole Life Carbon Roadmap Technical Working Group, we provide support on issues specifically relating to building materials in the DGNB certification system for buildings or in connection with the ERN's positioning on issues concerning building materials.

Concrete Sustainability Council

As a founding member of the Concrete Sustainability Council (CSC), we are involved in the ongoing development of a certification system for sustainably produced concrete. The goal of the CSC is to further increase the transparency of sustainable activities within the cement and concrete industry. The CSC certificate attests to a company's environmentally, socially, and economically responsible production methods, taking into account the entire value chain. With the certification of concrete and its production chain, we anticipate greater social acceptance of the product and of the entire industry.

In 2021, ready-mixed concrete plants in Germany, Italy, the USA, and Turkey obtained CSC certification, as did cement plants in Germany, Italy, and Turkey, and sand and gravel plants in Germany, Belgium, and the Netherlands. Our cement plant in Lengfurt, Germany, was the first cement production site in the world to be awarded a CSC platinum certificate – the highest level of certification. Likewise, our subsidiary Heidelberger Beton GmbH was the first concrete manufacturer in the world to receive this top certification for two of its production sites.

Collecting data about sustainable products

As a measure of our increased focus on the production and distribution of sustainable building materials, we intend to begin reporting on the revenue generated with these products in the 2022 reporting year. The sustainability of our products in the cement and concrete business line is measured by their contribution to the reduction of CO_2 emissions. The sustainability of our products in the aggregates and asphalt business lines is measured by their contribution to the circular economy.

Production & Supply Chain

 Image: Baltic Sea Science Center in Skansen, Sweden.

HeidelbergCement's sustainability strategy focuses on climate protection, environmental responsibility, and ensuring the permanent availability of resources. This has given rise to our objective of operating sustainable production processes at all of our operational sites worldwide. We also expect our suppliers to be aware of our standards: that is why a Code of Conduct forms the basis of all of our partnerships, and our contractors have to commit themselves to upholding this code.

Strict rules for environmentally responsible production processes apply at our approximately 3,000 locations. Our suppliers must also commit to a code of conduct and are assessed accordingly.

Environmental management

Environmental protection is an integral element of HeidelbergCement's business strategy, which is defined by the Managing Board in consultation with the Supervisory Board. Since September 2021, the topic of sustainability has been a separate Managing Board responsibility, with the Chief Sustainability Officer (CSO) taking charge of sustainability matters and coordinating all activities at Group level. The Group departments of the Sustainability Office, which was newly created in December 2021, also report to the CSO. Their role is to support future-oriented sustainability activities at Group level in a number of ways. These include defining guidelines and goals, assisting the operating units in the practical implementation of these guidelines and goals, identifying and disseminating improvement measures for achieving the sustainability goals, and coordinating action plans to implement research projects.

At country level, we have developed the ESG governance structures and appointed an ESG Coordinator for each country. ESG Coordinators are also in place for the Group areas in order to support those responsible in the various countries.

As HeidelbergCement has a decentralised structure, the individual country organisations take responsibility for all areas of our operating activities, including compliance with legal provisions and regulatory conditions. This also covers the correct recording and transmission of all necessary production, operating, consumption, and emissions data that HeidelbergCement is obliged to provide by law or by regulations, or has committed itself to providing voluntarily. Every plant manager is essentially responsible for the environmental management of their respective plant.

The internal monitoring of all operating data relevant to the environment is carried out by the competence centers of the various business lines. The data is also checked by the ESG Group department and an external certifier before being published.

More than 98%

of our integrated cement plants had a certified environmental management system at the end of 2021.

In the reporting year, there were isolated violations of environmental protection laws from ongoing business activities that resulted in fines or non-financial penalties. At the time of reporting, there were 13 known cases involving amounts of over US$10,000. These included, for example, penalties for late reporting of relevant emissions data. We analyse each case to derive changes and improvements.

In an effort to place environmental protection on a firmer footing at our production locations and achieve continual improvements in this area, we are introducing certified environmental management systems at all of our cement plants worldwide are introducing. We are guided by the ISO 14001 international standard, but also use locally recognised environmental management systems. At the end of 2021, 98.2% of our integrated cement plants were operating with a certified environmental management system.

Energy & climate protection

Due to the high temperatures needed to burn limestone, the production of cement consumes a lot of energy and thus causes combustion-related CO_2 emissions. In the calcination process, the raw material is heated to temperatures as high as 1,450°C, which leads to further, process-related CO_2 emissions from the limestone.

This is why climate protection is a fundamental part of our environmental policy, as is also reflected in our Sustainability Commitments 2030 and our Climate Policy, which was revised at the start of 2021. In these documents, HeidelbergCement has set itself the objective of reducing its ecological footprint. We accept our share of the global responsibility to limit the rise in worldwide temperature to 1.5°C. Our target is therefore to reduce our specfic CO_2 emissions per tonne of cementitious material by 47% compared with the 1990 level and reach 400 kg per tonne of cementitious material by 2030. By the end of 2021, a reduction of approximately 25% had already been achieved.

To further reinforce our commitment to climate protection, HeidelbergCement signed the Business Ambition for 1.5°C commitment in June 2021 and, as part of this global initiative, committed to reducing our CO_2 emissions to net zero by 2050 at the latest. Similarly, the company joined the UN Race to Zero campaign in the run-up to the 2021 climate summit in Glasgow. We also actively support the SBTi's efforts to develop a roadmap and criteria for the cement industry in line with the 1.5°C target.

To reduce our carbon footprint, we will, for instance, increase the proportion of alternative fuels in the fuel mix to 45% by 2030. At the same time, we plan to further intensify the use of alternative raw materials in order to decrease the clinker ratio – i.e. the proportion of clinker in cement. By using waste materials and by-products from other industries as alternative raw materials and fuels, we also promote the circular economy. So that we can offer our customers throughout the world a carbon-neutral concrete in the future, we are investigating a number of measures, including the option of capturing and utilising CO_2 emissions in the product life cycle over the long term. It is HeidelbergCement's view that concrete has the potential to become the most sustainable building material.

Climate protection

	2019	2020	**2021**
Specific net CO_2 emissions (kg CO_2 per tonne of ementitious material)	589.6	576.0	**564.8**
Alternative fuel rate	24.0%	25.7%	**26.4%**
Clinker ratio	74.5%	74.3%	**72.9%**

Participation in the European Union's emissions trading system

HeidelbergCement currently has 44 facilities in 13 countries that participate in the EU Emissions Trading Scheme (EU ETS). As in previous years, the compliance requirements for the past financial year were met without incident. Following the start of Phase IV (2021-2030) and the preceding publication of the new allocation rules for emission allowances as well as the product-specific benchmark for the cement industry, the "Fit for 55" package of measures for the EU's climate policy was presented in mid 2021. Instead of the previously envisaged emission reduction of 43% by 2030 compared with 2005, the package aims at a reduction of 61% in emissions within the EU ETS over the same period. In this context, both the annual cap on emissions is expected to be significantly reduced from the middle of Phase IV, and a further tightening of free allocations will be implemented. In addition, it has been decided to introduce a Carbon Border Adjustment Mechanism (CBAM) from 2026 for selected industries, including the cement industry. More details on the planned phased introduction are expected in the course of 2022.

Emissions trading systems outside Europe

Emissions trading systems are also being further expanded outside the EU. With the end of Phase III of the EU ETS, the UK launched its own emissions trading system in 2021. The implementation of a national emissions trading system in China as a follow-up to the pilot projects in some provinces will initially only be set up for the energy sector. No decision has yet been taken on the exact timing of the cement industry's inclusion in the national trading system by the end of 2022. In Canada, we are currently operating under a CO_2 tax and emissions trading schemes at provincial level. Here, at the same time, a minimum price has been introduced at national level, which sets a price floor for Canada's individual emissions trading systems in the coming years. Further emissions trading systems in the Asia-Pacific region and Europe, the Middle East and Africa are currently in preparation.

Alternative fuels

Cement production with climate-neutral fuel mix

Successful pilot to eliminate fossil fuel CO_2 emissions

In September 2021, a cement kiln at the British Ribblesdale plant of HeidelbergCement's subsidiary Hanson UK was successfully operated on a net zero fuel mix as part of a world-first demonstration. In the trial, the proportion of fuels in the cement kiln's main burner was gradually increased to a wholly net zero mix made up of tanker-delivered hydrogen as well as biomass components (meat and bone meal) and glycerine, generated as by-products of other industries. If fully implemented for the whole kiln system, nearly 180,000 tonnes of carbon dioxide could be avoided each year at Ribblesdale alone compared to using fossil fuels, such as coal.

Project results are shared as best practice examples

In the project led by the UK Mineral Products Association (MPA) and with support from the UK's Department for Business, Energy and Industrial Strategy (BEIS), Hanson UK has thus for the first time successfully used a mix of 100 percent climate-neutral fuels, including hydrogen, for commercial-scale cement production. Project results will be published and shared with cement producers and other energy-intensive industries globally, with the aim of maximising the environmental benefits of the technology.

Innovations for climate protection

HeidelbergCement takes a leading role when it comes to climate protection research projects and invests in particular in studies into innovative techniques for the capture and utilisation of CO_2. By using various technologies, we aim to capture CO_2 in its purest form in order to either utilise or safely store it. Cement and concrete companies can also support the circular economy through resource efficiency, co-processing of waste materials, and concrete recycling, including its forced carbonation. We test a variety of minerals for CO_2 absorption and the possibility of using them to produce marketable building products.

By doing so, we also fulfil our obligation under the Low Carbon Technology Partnerships Initiative (LCTPi), which aims to scale up deployment of low-carbon technologies in industry.

Current research projects investigating carbon capture

LEILAC (Low Emissions Intensity Lime And Cement)

The EU-funded LEILAC (Low Emissions Intensity Lime And Cement) project, in which HeidelbergCement is one of the strategic partners, aims to demonstrate the technical and economic feasibility of process technology designed to capture CO_2 in its purest form when it is released as the raw material is heated. In 2019, construction of the 60-metre-high demonstration calciner at our cement plant in Lixhe, Belgium, was completed and process trials began. In 2020, a decision was made to scale up the LEILAC technology to an industrial scale. After a very successful first phase of the LEILAC project in Lixhe, HeidelbergCement will work together with Australian technology company Calix and a European consortium to build a facility four times as large at the HeidelbergCement plant in Hanover. Key aspects of the LEILAC 2 project include the further scale-up of the technology to industrial standard, the complete integration of the process into an existing cement plant, and the use of renewable energies to supply heat to the plant so as to ensure climate-neutral carbon capture.

→ **www.project-leilac.eu**

AC²OCEM – ongoing development of oxyfuel technology for carbon capture

In the oxyfuel process, the rotary kiln is supplied with pure oxygen instead of ambient air, which facilitates carbon capture. To further develop the oxyfuel technology, HeidelbergCement participates in the AC²OCem project, which aims to drive forward the use of technologies for the capture of CO_2 in the cement industry and is co-financed by the ACT (Accelerating CCS Technologies) European development programme. As part of the AC²OCem project, the first-generation oxyfuel technology, which aims to modify existing kiln lines, and the second-generation oxyfuel technology will be investigated for use in new systems.

→ **http://ac2ocem.eu-projects.de/**

catch4climate – applicability of oxyfuel technology to cement plants

In order to further develop the oxyfuel technology for carbon capture, HeidelbergCement participated in a joint research project to construct an oxyfuel kiln line together with four other European cement manufacturers as part of the catch4climate pilot scheme. Together with Buzzi, Dyckerhoff, Schwenk, and Vicat, HeidelbergCement hopes that catch4climate will create the necessary conditions for large-scale use of low-energy and therefore more cost-effective carbon capture technologies at cement plants, in order to allow the CO_2 to be used subsequently as a raw material for other industrial processes, for example. To this end, there are plans to build and operate a demonstration plant on a semi-industrial scale on the site of the cement plant in Mergelstetten, southern Germany. The aim is to use the CO_2 obtained in this trial to manufacture climate-neutral synthetic fuels, such as kerosine for aviation.

Current research projects investigating carbon utilisation and storage

Long-term storage of CO_2

CCS Brevik, Norway

The world's first large-scale facility for carbon capture in the cement industry has been under construction at the Brevik cement plant in Norway since 2021. This facility will use amine technologies to capture 400,000 tonnes or 50% of the plant's emissions annually from 2024. The aim of the project is to demonstrate that carbon capture and storage (CCS) is a viable, safe, and cost-effective technology. At the end of 2020, Norway's government and parliament approved the implementation of this major project. According to the planned schedule, the CO_2 emissions captured as part of the project will be transported to an underground storage site below the North Sea from 2024. On the basis of the know-how developed in Brevik, several feasibility studies are currently being conducted to scale up the technology so that up to 100% of a cement plant's CO_2 emissions can be captured and stored in the future.

→ **https://www.norcem.no/en/CCS**

CCS Slite, Sweden

By 2030, we plan to develop a completely climate-neutral cement plant at our site in Slite on the Swedish island of Gotland. The facility in Slite will be designed to capture up to 1.8 million tonnes of CO_2 per year, equivalent to the plant's total emissions. In addition, the use of biobased fuels for the production of cement in Slite will be increased. A feasibility study is currently addressing questions concerning technology choices, environmental impact, legal aspects, financing, logistics, and energy supply. According to the plans, the captured CO_2 will be transported to a permanent storage site below the North Sea.

Edmonton, Alberta, Canada

At our cement plant in Edmonton, Alberta, we are developing North America's first industrial-scale carbon carbon capture, utilisation, and storage solution in the cement industry, with the aim of capturing around 780,000 tonnes of CO_2 each year in the future. The captured emissions will be transported via a pipeline and permanently stored. A feasibility study supported by the organisation Emissions Reduction Alberta (ERA) was successfully completed at the start of 2022. Subject to the granting of carbon sequestration rights and regulatory approvals, the project could go into operation as early as 2026.

HyNet North West

We are also planning a carbon capture facility at our Padeswood cement plant in the United Kingdom. In cooperation with the government-sponsored consortium HyNet North West, it will be connected to the proposed CO_2 transport and storage system. This project will be implemented using hydrogen as an energy source. A CCS feasibility study is already being conducted at the site to establish a clear basis for planning and provide a cost estimate for the next phase. The project is expected to reduce regional carbon emissions by up to 10 million tonnes a year by 2030, including up to 800,000 tonnes from Hanson's Padeswood cement plant.

→ **https://hynet.co.uk/**

Capture activity scheduled to start in 2030

HeidelbergCement is planning to convert its plant in Slite on the Swedish island of Gotland into a completely climate-neutral cement plant. The size of the capture facility at the Slite plant of its Swedish subsidiary Cementa will be designed to capture up to 1.8 million tonnes of CO_2 annually – equivalent to the plant's total emissions. Full capture of the plant's CO_2 emissions is planned to be achieved by 2030. The captured CO_2 will be safely transported to a permanent storage site several kilometers deep in bedrock under the sea.

Key role on the road to climate neutrality

The pioneering project supports Sweden's ambitious CO_2 emission reduction targets. In its construction, HeidelbergCement can benefit from valuable experience with CCUS technologies from Norway and other countries: in Brevik, Norway, the world's first large-scale carbon capture facility in a cement plant is currently under construction, with the aim of capturing 400,000 tonnes per year, or 50% of the plant's emissions, from 2024.

Carbon Capture & Storage

Capturing up to 1.8 million tonnes of CO_2 per year

Use of CO_2 in algae cultivation

In cooperation with our Dutch partner OmegaGreen, we launched a large-scale research and demonstration project at our Safi cement plant in Morocco in 2018 to use CO_2 captured from the cement kiln to breed microalgae and therefore to manufacture fish food and other animal feed. In Safi, we are producing approximately 25,000 kg of microalgae annually on a 0.5 ha area. The algae farm is operated by a local team, which means that new and sustainable jobs have been created in Safi in an innovative field. Similar exploratory research projects have already been carried out in Sweden, Turkey, and France. Options for transferring the project to large-scale production are now being investigated, and preparations are under way to market the algae that we produce.

Recarbonation of cement dust in concrete recycling processes

We see the increasing importance of resource efficiency and the circular economy as an opportunity to develop new business models. HeidelbergCement is already active in the recycling business in several countries and is working on the targeted processing of recycled concrete components, as well as their recarbonation and reuse in building materials.

By recarbonating the cement component obtained from concrete recycling, we can return CO_2 to the cement and concrete materials cycle. This approach requires access to sufficient quantities of demolition concrete, the ability to process it cost-effectively, and the sustainable management of the material streams of recycled material and CO_2.

CO2MIN – incorporation of CO_2 into concrete

In 2017, HeidelbergCement launched the CO2MIN project in collaboration with RWTH Aachen University and the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany. This project aims to investigate the potential of natural minerals for absorbing CO_2 and the possibility of using them to produce marketable building materials. Besides natural minerals like olivine and basalt, industrial waste products such as slag are also being tested. The research and development programme, initially planned to run for three years, was supported by €3 million in funding from the German Federal Ministry of Education and Research (BMBF) and subsequently extended by a further year to the end of 2020 in order to gain fundamental insights into the carbonation potential of the materials studied. Among other things, the results provide the basis for more far-reaching R&D activities on the topic of recarbonation.

C^2inCO_2 – calcium carbonation for the industrial use of CO_2

The C^2inCO_2 project – calcium carbonation for the industrial use of CO_2 – explores the potential of adding CO_2 to recycled waste concrete, so that it can be used as a building material. By developing optimised preparation processes and efficient carbonation methods, it addresses the two key elements that are needed to close the CO_2 and materials cycle in the cement and concrete industry. The three-year project is supported by the German Federal Ministry of Education and Research as part of the CO_2-WIN funding initiative. With a funding volume totalling €3.2 million (overall budget: 6.0 million), C^2inCO_2 is the biggest project funded in the tender. Alongside HeidelbergCement as the project coordinator, thyssenkrupp IS, Loesche, Sika, the universities of Aachen and Weimar, and the Fraunhofer Institute for Building Physics are also contributing to the implementation of the concept.

→ **https://co2-utilization.net/en/projects/co2-mineralization/c2inco2/**

Reduction of Scope 2 emissions

HeidelbergCement has committed to reduce its Scope 2 CO_2 emissions – i.e. indirect emissions from purchased energy – by 65% between 2016 and 2030. We are using various strategic measures to achieve this objective. These include investments in our own facilities for the generation of green electricity as well as long-term power purchase agreements (PPAs) to secure the supply of electricity from renewable energies. We are also implementing energy efficiency measures to reduce electricity consumption and generate electricity from waste heat.

Since the beginning of 2021, HeidelbergCement has signed agreements with pilot projects on various continents for an additional 150 MW of renewable energy generation from wind and solar, with 350 GWh of total electricity production expected per year.[1)] Some of these projects will produce green electricity for HeidelbergCement from as early as 2022. In Poland, HeidelbergCement has worked with BayWa AG to build the country's first new, subsidy-free large-scale solar park, thereby securing 50 GWh of green electricity per year for HeidelbergCement. In Togo, HeidelbergCement is investing in local solar parks that produce 23 GWh per year and supply the country with green energy.

The new projects that have already been launched will alone reduce HeidelbergCement's Scope 2 emissions by more than 150,000 tonnes per year. Further renewable energy projects are in the planning stage, some of which are expected to be completed as early as 2025. The Group Energy Procurement department constantly reviews new activities in numerous Group countries in order to further expand the proportion of green electricity in the coming years.

1) This is equivalent to the amount of electricity used by 270,000 German citizens, at an annual consumption rate of 1.3 MWh per capita.

Alternative fuels

Many waste materials and by-products from other industries serve as valuable raw materials for HeidelbergCement. We use these resources as alternatives to finite natural raw materials and fossil fuels in the production of cement. In this way, we are helping to conserve resources and solve the problems associated with waste disposal faced by municipalities and industrial companies near our plants. At the same time, these efforts are also reducing our CO_2 emissions. The waste-based biomass used, which accounted for around 42% of the alternative fuel mix in 2021, makes a special contribution here, as it is considered climate-neutral under European legislation.

Alternative fuels replace natural resources

HeidelbergCement aims to increase the proportion of alternative fuels used across the Group, helping us to meet our commitment to reduce CO2 emissions to almost half of 1990 levels by 2030. The project is being led by a working group comprising experts from various Group areas and departments.

We were able to further increase the proportion of alternative fuels in the overall fuel mix again in 2021. This predominantly relates to the use of processed and quality-assured waste, such as unrecyclable household waste or biogenic waste materials (e.g. dried sewage sludge or waste wood), as well as waste products from other industries. Co-processing as a fuel in clinker kilns is a worthwhile option that supports a circular economy, as this not only uses the waste's energy content but also embeds its mineral components into the clinker. The waste is co-processed without any residue. Furthermore, the use of alternative raw materials and fuels is always part of an official approval procedure. In addition to the completely different process management of waste incineration plants and cement plants, the high temperatures in the clinker combustion process and long incineration periods in particular lead to the safe destruction of organic

compounds and, compared with all other combustion processes, provide the best conditions for complete burnout, coupled with the lowest emissions.

During the reporting year, we also implemented further measures to increase the use of alternative fuels. For example, in our cement plant in Couvrot, France, we realised a project to feed alternative fuels into the calciner.

In 2021, the proportion of alternative fuels in the fuel mix was 26.4%. By 2030, we intend to raise this figure to 45%. Through the Alternative Fuel Master Plan, we aim to further increase the proportion of alternative fuels again in 2022 and set goals at country level for reducing CO_2 within the CO_2 Master Plan.

Use of hazardous materials

The careful handling of hazardous wastes is a key element of every country's waste disposal infrastructure. For most types of hazardous waste, reuse in cement plants has proved to be a safe means of disposal and utilisation. The high temperatures of over 1,450°C and long incineration period in the kilns ensure that all harmful components are completely destroyed. This has been confirmed by measurements taken by independent state-certified institutes.

Land use and biodiversity

We only extract worthwhile deposits if they can be exploited in an environmentally compatible and economical manner. Before making any decision concerning the development of a new quarry or the expansion of an existing one, the company first conducts an extensive approval process in line with the corresponding laws and regulations. Our sites are operated in accordance with relevant international, national, and local environmental legislation, and environmental impact assessments are generally prepared as a pre-requisite for the approval of quarrying activities. Through this process, we manage our impact on biodiversity in line with the sequential steps of the mitigation hierarchy: avoid, minimise and mitigate. HeidelbergCement also regularly uses the Integrated Biodiversity Assessment Tool (IBAT) to assess the potential implications of new regulatory developments.

Concepts for the limitation of land consumption

For environmental and economic reasons, we strive to limit land consumption when planning our quarrying and reclamation activities. As a matter of principle, the authorised raw material supply is always completely extracted in order to minimise land consumption. We therefore prefer to expand existing quarries rather than develop new sites. When constructing production and plant facilities, we also take care to use as little land as possible.

Subsequent use and reclamation

Reclamation plans are now an integral part of approval processes. These plans define the goals and timetable for the reintegration of a quarry into the surrounding landscape. Even while a quarry is still in operation, we reclaim those areas of the quarry that are no longer used. In 2021, the proportion of quarries with after-use plans was 87%. We have pledged to raise this figure to 100% by 2030 at the latest.

Biodiversity management at our quarries

As early as 2010, we began to collect and analyse information about the biodiversity value of our quarries. In cooperation with our partner, BirdLife International, we conducted a study to determine how far our quarries are from areas of recognised high biodiversity value in Europe, Africa, and Asia. The study has now been extended to cover all our active extraction sites worldwide. We are collecting data about the proportion of active quarries in areas with a high level of biodiversity and for which biodiversity management plans are being implemented. A further study was carried out in 2021, which showed that the proportion of corresponding mining

sites has increased. This is due to the increasing number of locations designated as areas of high biodiversity. Around 40% of our quarries currently have biodiversity management plans in place. We aim to increase this to 100% by 2025.

Protecting biodiversity and habitats

We believe in helping to conserve habitats and biodiversity features throughout the life cycle of our quarries. Even during the extraction phase at an operational site, we can create optimal conditions for threatened species that are associated with early stages of ecological succession. Through the reclamation process, we are also able to create new habitats, such as wetlands and species-rich grasslands, and integrate biodiversity features into any intended subsequent use. In Europe in particular, our quarries are now important refuges and stepping-stone habitats for specially protected species such as the sand martin, the yellow-bellied toad, the eagle owl, and the Eurasian otter, which are accordingly also the focus of numerous biodiversity projects.

Cooperation with nature conservation organisations

We work with many local nature conservation organisations worldwide. Our partner organisations help us to minimise our impact on the environment and promote biodiversity at our quarrying sites and in their surroundings.

In 2021, we celebrated the tenth anniversary of our partnership with BirdLife International. To mark this milestone, a virtual event took place in October at which a cooperation agreement was signed for the next three years and a joint statement on restoration was published. In the run-up of the anticipated EU nature restoration law, the signatories are calling on the European Commission to develop legally binding and scientifically substantiated restoration goals based on strong governance mechanisms. The declaration also contains a number of demands for political decision makers to support the raw materials sector's contribution to restoring nature throughout Europe.

In addition, as part of a cooperation initiated by HeidelbergCement between our industrial sector and BirdLife Europe, a code of conduct to protect biodiversity – the Extractive Sector Species Protection Code of Conduct – was drawn up and subsequently adopted by the European Commission in October 2021. This code of conduct offers a standardised approach to maximising biodiversity at extraction sites while complying with European legislation and continuing quarrying activities.

During the reporting year, HeidelbergCement once again supported BirdLife International's Spring Alive project. This project aims to encourage children in Europe and Africa, as well as their families and teachers, to take an interest in migratory birds. In 2021, the focus was on the question "How can we protect bird nests?". Despite pandemic-related complications, creative thinking allowed the initiative to go ahead – virtually, in some respects.

→ **www.birdlife.org**

In 2021, HeidelbergCement also participated in the Society for Ecological Restoration (SER) biennial conference, including the worldwide Make a Difference Week, when volunteers are invited to take part in restoration efforts. As part of this initiative, HeidelbergCement organised activities in Indonesia, Russia, Czechia, and Ghana. Work focused on planting trees that provide sources of nectar and pollen for pollinators and help to preserve habitats for other species.

Biodiversity

Together for Nature – HeidelbergCement and BirdLife International celebrate 10 years of partnership

Protecting biodiversity at extraction sites

HeidelbergCement works with many local nature conservation groups worldwide. Since 2011, we have been partnered with the largest international nature conservation organisation, BirdLife International. Together we aim to minimise negative environmental impacts and promote biodiversity in and around our quarries. Over the past decade, BirdLife International and its national partner organisations have helped us maximise the role our extraction sites can play for biodiversity, through imparting knowledge, sharing best practice, and working on the ground with our operational staff to engage and empower. More than 40 biodiversity projects have been initiated worldwide since the start of this cooperation.

2021: new Code of Conduct means great news for business and biodiversity

In 2021, which marks the tenth year of their partnership, Heidelberg-Cement and BirdLife worked with the sector to develop a Code of Conduct for species protection, with a focus on temporary habitats. This code will now support the colonisation and management of protected species in active quarries, yet still enable economic activities to continue – a win-win situation. The document is in full accordance with the EU Birds and Habitats Directives and has been highlighted by the European Commission as a best practice example of NGO-business collaboration.

Quarry Life Award

HeidelbergCement's research and education competition, the Quarry Life Award, is targeted at researchers, university students, and non-governmental organisations as well as our neighbours in the communities where our facilities are located. All of these groups are invited to develop and – provided they qualify to participate in the competition – implement ideas for biodiversity-related projects at our company's quarries worldwide. In this way, we want to promote the evaluation of the quarries' biological value and support the development of new methods that benefit scientists and government authorities as well as our company. The competition is held every three years, and the fifth edition of the Quarry Life Award was launched in May 2021. HeidelbergCement will open its quarries and gravel pits from January to September 2022 so that the selected projects can be realised. At the end of 2022, the winners will be awarded at national and international level.

→ **www.quarrylifeaward.com**

Reduction of specific emissions (g/t clinker)

Local environmental impact

Air pollutants and noise

In addition to addressing the issues of dust and noise, HeidelbergCement faces a particular challenge in terms of the air pollutant emissions from the cement business line. While dust and noise are emitted from different points in the production process, nitrogen oxides, sulphur oxides, and other air pollutants are mainly emitted from kiln lines. There are national legal limits that must be observed by all production locations. As part of its Sustainability Commitments 2030, HeidelbergCement has also pledged to reduce air pollutants. By 2030, we aim to reduce the emissions of sulphur oxides (SO_X) and nitrogen oxides (NO_X) generated in our cement production by 40% – and dust emissions by 80% – in comparison with 2008 levels. This is in addition to our objective to continuously reduce all other air pollutant emissions, bringing them down below the average of the industry. The reduction target for dust emissions was already achieved in 2020.

We monitor emissions of air pollutants on an ongoing basis. By using new filter technologies and innovative production processes, we reduce pollutants and thus mitigate the impact of our activities on the environment and neighbouring communities. In 2021, existing electrostatic precipitators were replaced by modern fabric filters in order to reduce dust emissions at various cement plants, including Deva in Romania, Citeureup in Indonesia, and Pukrang in Thailand. We also modernised the kiln cooler filters at the Ketton cement plant in the United Kingdom and, at the end of the year, began the same process at the plant in Buktarma, Kazakhstan.

In order to reduce NO_X emissions, selective non-catalytic reduction (SNCR) systems were commissioned and optimised at our Jingyang, Fufeng, and Zhujiang cement plants in China during the reporting year.

Waste materials

Our primary focus in terms of waste management concerns kiln dust, which is sometimes a by-product of clinker production. This dust has to be removed from the kiln systems at several facilities in order to prevent disruptions to proper kiln operations. We generally use the kiln dust as an alternative raw material in the production of certain types of cement, thereby improving our ecological efficiency. In some exceptional cases, the locally produced cement type portfolio prevents us from fully recycling the dusts. A second possibility for us is to use the kiln dust as a raw material for the production of special concrete. If no other option is available, it can be deposited in underground landfill sites in a controlled process. The local operating permit at each plant specifies the allowable amount of process-related waste products and how it is to be used.

Water management

HeidelbergCement has committed itself to the goal of minimising the impact of its activities on natural water resources. We comply with stringent environmental regulations to ensure that our raw material quarrying will not endanger local bodies of surface water or groundwater resources.

Water is hugely important for our production processes and is used, for example, when washing gravel and sand as well as for cooling or cleaning transport vehicles. It is also one of the source materials for concrete manufacturing and becomes part of the building material during its production. We obtain some of the water we use from the public water supply, but the majority comes from our own approved well systems or from rivers and lakes. All direct withdrawals are heavily regulated and closely monitored by governments worldwide. The local operating permit at each plant specifies the allowable amounts of water extraction and recirculation. Some of the water – the water used for cooling, for instance – evaporates and is released into the atmosphere. The cleaning water that accumulates when transport vehicles are washed is fully recycled. We dispose of the domestic wastewater accruing at our company buildings via the municipal wastewater systems.

265.9 l

was the specific water consumption per tonne of cement in 2021.

A water reporting system based on the GCCA guidelines has been introduced at all of our company's cement plants. The specific water consumption amounted to 265.9 litres per tonne of cement in 2021. We work continuously to reduce our water consumption, for example, by switching to closed cooling circuits. We have therefore also started to introduce measurement systems and key figures on water reporting in our aggregates and ready-mixed concrete business lines. Key figures were consolidated and reported on Group level for the first time in 2021.

Based on a global water-risk study, we have drawn up a Group-wide guideline concerning sustainable water management in the cement, aggregates, and ready-mixed concrete business lines. To do this, we made use of the World Resources Institute's online Aqueduct database, which provides information on water risks worldwide. For 2021, the study shows that around 38% of our plants are located in regions where water scarcity is projected for 2030. There were no significant changes compared with 2020. Back in 2015, in response to the first water-risk study, we began developing individual water management plans for those plants in regions suffering from water scarcity. The plans include concepts and measures to ensure careful use of scarce water resources and enable local stake-

By 2030,

all plants in water-scarce regions will have **water management plans** in place. In the 2021 CDP company ranking, we once again achieved an A- rating in the „Water Security“ category.

holders to become involved so that the water utilisation concepts support the common good and thus minimise local water risks. Implementation of these plans will begin at those locations where water scarcity is an especially urgent problem. These activities were continued in 2021 and will be expanded over the next few years. Our objective is to have water management plans in place by 2030 for all plants in regions affected by water scarcity. Alongside this process, we are developing a global strategic water reduction plan, which aims to coordinate the work at Group level and reduce water consumption locally, wherever economically and technically possible. Because we are facing a water surplus in other regions of the world, where we need to pump off large quantities of water in order to operate our quarries, it does not make sense to define a general global reduction target for the Group based on water withdrawal rates.

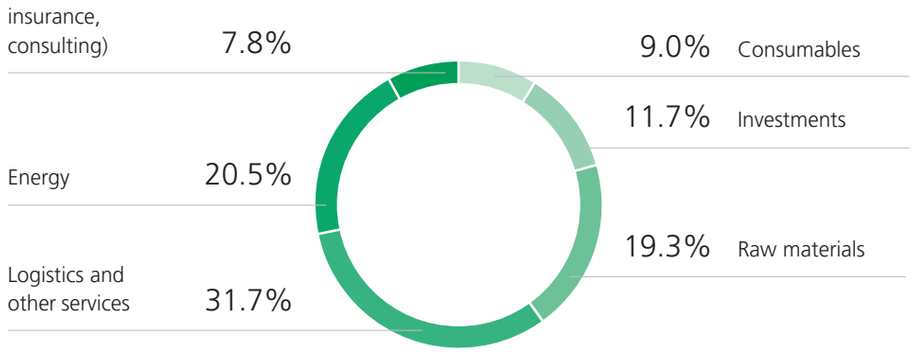
In 2021, we once again reported on the key figures for water from 2020 and on our strategy and governance on this topic to the CDP.

→ Selection of our 2021 rating results p. 19

Management of supplier relations

In the reporting year, HeidelbergCement procured goods and services with a total value of €12,470 million. This corresponds to 66.6% of total revenue.

Expenditure by category



HeidelbergCement strives to ensure compliance with sustainability standards in the supply chain. Group-wide purchasing guidelines therefore provide clear instructions regarding our supplier relations and purchasing activities. The most important tool used for this purpose is our Supplier Code of Conduct, which we consistently communicate to our global and local suppliers, who are obligated to act in line with the principles defined in the Code. The Code incorporates the key elements of the SA 8000 International Social Accountability Standard, the ISO 14001 international environmental standard, and the principles of the International Labour Organization (ILO). If a supplier fails to abide by the Code and does not correct a weakness or deficiency that has been identified, this can result in the termination of the contractual relationship. The Supplier Code of Conduct was revised again in 2021 to accommodate the requirements of Germany's new Supply Chain Due Diligence Act (LkSG). The new version of the document was published in January 2022.

In addition, we have begun to proactively communicate our standards for a sustainable supply chain to our suppliers. These clear requirements, which go beyond the Supplier Code of Conduct, have been addressed in supplier discussions held by the country and Group procurement organisation since the end of 2021 and have also been published on HeidelbergCement's homepage.

→ **Responsible Procurement**

The Responsible Procurement project, launched in 2021, will pick up on and resolutely build on the achievements of the Supplier Sustainability Initiative, which started in 2017. The project aims to raise awareness of and demand greater sustainability from our global supplier base. With SAP Ariba Risk, a system for global risk assessment has been selected that, in addition to internal HC risk assessment, also supports the analysis of risks based on information from external sources. Together with our sustainability partner Avetta, we have begun the integration of the Avetta platform into SAP Ariba Risk so that the content collected by Avetta will also be available in Ariba. In cooperation with Avetta, further suppliers were reviewed according to defined sustainability criteria in 2021.

We are working toward a **transparent, sustainable and future-oriented** approach to procuring products and services by going beyond the legal requirements for business practices.

Measures for 2022

The SAP Ariba platform, which was introduced in 2021, will be gradually rolled out in more countries and should be available to all HC countries by the end of 2022. As part of the Responsible Procurement project, further requirements of the LkSG will also be implemented, such as screening direct suppliers using a risk-based approach and comprehensive reporting.

Employees & Employment

 Image: Employee at the entrance to HeidelbergCement's headquarters in Heidelberg, Germany.

HeidelbergCement has around 51,000 employees worldwide. Their achievements make us one of the leading companies in our sector. That's why it is crucial to provide them with attractive working conditions. As a manufacturing company, we also attach particular importance to occupational safety and the protection of our employees' health.

With the "Beyond 2020" strategy and in light of the increasing pace of change in the business world, it is important to provide guidance to employees and managers. With our corporate purpose "Material to build our future", we strengthen our common identity and emphasise what we stand for and what we want to stand for as a company. In addition, our four culture principles serve as a guide in the Group for cooperation and interaction.

Principles

For us, a good personnel policy means having due and proper regard for our employees with their range of talents and wealth of experience. And it therefore means creating the right conditions to allow them to do their job with efficiency and dedication. This includes fair remuneration and tailor-made qualification opportunities in addition to a non-discriminatory working environment and flexible conditions that allow them to achieve a work-life balance. Another area of particular importance to us as a manufacturing company is occupational safety and the protection of our employees' health. We are proud of the international nature of the workforce at our headquarters and in our technical centers in Heidelberg and Leimen, which is made up of local managers and employees from 60 countries. Our staff form the foundation of the worldwide success of HeidelbergCement.

Our Leadership Principles prescribe binding rules for personnel management. They concern, for example, respectful behaviour towards co-workers, employee development, and a commitment to our company's strong feedback culture. The main leadership principles are embedded in standard human resources processes and described in detail in HeidelbergCement's Human Resources Guidelines.

We believe that law-abiding and ethical behaviour is a key requirement of good leadership and of all employees. This is why the Managing Board has approved a Code of Business Conduct that is binding across the Group and specifies our values as well as the ethical and legal standards upheld at our company. In particular, this includes non-discriminatory employment conditions and an open and fair dialogue with employee representatives.

→ **Code of Business Conduct**

HeidelbergCement is also committed to upholding the core labour standards of the International Labour Organization (ILO), the OECD Guidelines for Multinational Enterprises, and both the Universal Declaration of Human Rights and Guiding Principles on Business and Human Rights developed by the United Nations. Moreover, we have enshrined this commitment in our Leadership Principles. We expect our employees and our business partners worldwide to comply with these central guidelines and recommendations.

51,209

people were employed by HeidelbergCement at the end of 2021 at around 3,000 locations in over 50 countries.

Employment and co-determination

Development of the number of employees worldwide

At the end of 2021, the number of employees at HeidelbergCement stood at 51,209 (previous year: 53,122). The decrease of around 1,900 employees essentially results from two opposing developments. On the one hand, around 2,600 jobs were cut across the Group as a result of portfolio optimisations, the realisation of synergies, efficiency enhancements in sales and administration, as well as location optimisations. On the other hand, around 700 new employees joined the Group in North America, Australia, at the Nordic Precast Group in Northern Europe, and elsewhere.

GRI 102-41

Dialogue with employee representatives

HeidelbergCement has a long tradition of employee co-determination, which has demonstrated its worth at our locations in Germany. Members of the employee committees at the individual locations form the General Council of Employees for HeidelbergCement AG as well as the Group Council of Employees. Moreover, employees are equally represented on the Supervisory Board. Group management and employee representatives also engage in a continuous, constructive dialogue in the European Council of Employees. This council supplements the information and consultation processes that take place at a local level in the individual European countries.

In addition, there are trade unions and similar organisations in nearly all of the countries in which HeidelbergCement operates. As required by our Code of Business Conduct, we also engage in a fair and open dialogue with representatives of these organisations.

In the event of a reorganisation or job cuts, we work in close consultation with employee representatives to achieve a socially responsible solution. For example, we initially examine the possibility of transferring employees within the Group. If this is not feasible, we try to cushion the individual impact through retraining, early-retirement schemes, outplacement, and severance payments.

Remuneration policy & working time regulation

Our remuneration systems are based on performance and results in accordance with the market standards for internationally operating companies in our sector. Alongside fixed remuneration governed by a collective agreement or an individual work contract, our employees also receive variable remuneration elements based on their individual performance and on corporate success. Our CO_2 reduction targets are consistently anchored in our global remuneration systems as well: the full variable remuneration can only be achieved if both the financial targets and the sustainability target are met. This regulation has applied to all members of the Managing Board and to every bonus-eligible employee worldwide since the start of the 2021 financial year.

We consciously aim to achieve a high variable element as part of the total remuneration of our managers in order to directly reflect the connection between personal performance and corporate success.

The employees in our foreign subsidiaries benefit from attractive remuneration systems that correspond to the respective local market conditions. Collective regulations apply to more than half of the Group's employees.

Personnel costs and social benefits

Expenditure on wages, salaries, social security costs, costs of retirement benefits, and other personnel costs increased by 2.7% in comparison with the previous year to €3,108 million (previous year: 3,025). This corresponds to a share in revenue of 16.6% (previous year: 17.2%).

The amount of the contribution to the pension scheme at HeidelbergCement is based on accepted market standards. In Germany, we have created a matching model of contributions from the employer and the employees within the framework of the pension scheme. In countries without statutory retirement or health insurance, we support our employees at least in line with local practices.

Working time regulation

In our working time regulations, we conform to the legal requirements in effect at our locations. We promote adherence to these regulations by means of our compliance system, which enables employees to individually report possible violations (passive monitoring). To promote flexible working time options, we offer models such as flexitime, working time accounts, part-time work, and leaves of absence to our employees in many countries. Older employees have the option of switching to partial retirement. The part-time ratio at HeidelbergCement AG is 9.9% (previous year: 10.7%); for the Group as a whole, it is at 2.5%.

Occupational health & safety

Occupational health and safety has top priority at HeidelbergCement and is an integral part of our key corporate values. Our declared aim is to achieve "zero harm". With effective preventative measures, we intend to minimise the risk of accidents and injuries as well as the risk of occupational illness. Our principles for protecting the workforce are specified in our Group policy on occupational health and safety.

→ www.heidelbergcement.com/occupational-health-and-safety

Responsibility and organisation

At HeidelbergCement, all management levels are accountable for occupational health and safety. Our occupational safety organisation is subordinate to the Chairman of the Managing Board, to whom the Director Group Human Resources, who is responsible for Group Health & Safety, reports directly. The Managing Board members responsible for the different Group areas are in turn supported by H&S advisors who report to them.

Each country also has an H&S advisor reporting directly to the country manager, who coordinates the measures within the relevant country. The regional and local management levels in a country are also supported by H&S advisors.

Occupational health and safety measures designed to tackle any weak points are defined by both Group Health & Safety and the local units. Occupational safety measures are part of the personal target agreements of the members of the Managing Board and operational top management in the countries, who break down these measures to the relevant target groups at location level. Last but not least, all employees, contractors, and visitors are responsible for following the occupational safety regulations.

98%

of our locations have an occupational health and safety management system in place.

Occupational health and safety management systems, such as the internationally accepted ISO 45001 standard, have already been implemented in 98% of our locations. These systems require a structured approach from the local line management with planning, clear safe work procedures, responsibilities, and controls to ensure an ongoing improvement process and thus prevent accidents.

We place great emphasis on cooperation on matters of preventive occupational health and occupational safety with the employee representatives, who represent more than 97% of our entire workforce.

To support our processes, we use HC-Protect throughout the Group. Provided by Intelex, this is a standardised software solution in which all accidents involving our own employees and those from external companies are recorded and necessary corrective actions are documented and tracked. An accident event cannot be closed in HC-Protect until the causes of the accident have been analysed and documented and corrective or preventive actions have been defined. We share the findings across the Group in the form of safety alerts in order to prevent similar accidents at other locations. Fatal accidents are also discussed by the Managing Board.

In addition, we place special emphasis on the preventive recording of unsafe conditions in the workplace so that they can be remedied and accidents prevented. We therefore record in HC-Protect any near misses or unsafe conditions observed during safety conversations or plant inspections and determine appropriate corrective actions and the target date with the responsible parties right away. This data is used at all management levels for monthly reporting.

Targets and commitments

In all countries, occupational health and safety is subject to various strict legal requirements that have to be fulfilled. Furthermore, as a member of the Global Cement and Concrete Association (GCCA), HeidelbergCement complies with its requirements. These have been integrated into our internal standards.

As part of our Group policy on occupational health and safety, we have defined a set of cardinal rules that are mandatory for all employees and contractors. They relate especially to those activities that have been identified as main risk areas for accidents. They include in particular all transport activities, both at the locations and during shipping to the customer, working at height and in confined spaces, as well as working on and with running machines. These main risk areas for accidents are therefore also addressed in specific Group standards and must be translated into local regulations.

Through intensive training measures, we aim to ensure that everyone affected remains aware of these risk areas in order to decrease the number of accidents – especially those resulting in fatalities. We ensure compliance with the defined safety requirements through regular safety inspections, for example, as well as safety conversations between line managers and employees.

Occupational safety as a management task

In 2021, we trained our employees in a range of occupational safety topics that are both legally mandated and defined internally. We want to raise awareness of risks and reduce the number of accidents, especially those resulting in fatalities. After a fatal accident at the end of 2020, for example, we shot an educational film to make employees aware of the risks involved in working on assembly lines. This film has been incorporated into various training activities.

We make use of conventional training in classrooms or on site in addition to e-learning courses, which are only ever used to supplement face-to-face training. Owing to the pandemic-related restrictions, face-to-face training only took place in 2021 if hygiene and distancing rules could be observed. Occupational safety topics account for around 52% of all training hours at HeidelbergCement, corresponding to an average of approximately 13 hours per employee across the Group.

In addition to the conventional training activities, the above-mentioned safety conversations also play a central role as a preventive measure against accidents. During these conversations between managers and employees, both safe and unsafe behaviour in the relevant situation are discussed and, if necessary, safer procedures are agreed. We record the results of these conversations in HC-Protect so that, for example, we can detect local pockets of unsafe behaviour. Since 2017, we have more than tripled the number of safety conversations held within the Group.

We have also placed a stronger focus on potential fatal incidents (PFIs) in order to set them apart from the multitude of less critical incidents. Incidents that could have been fatal are flagged as PFIs in HC-Protect and must then be investigated in full, even if no one was harmed. The incident can only be approved and closed by a manager once a complete root cause analysis has been carried out and corrective actions have been defined.

Development of accident figures

Occupational health and safety is one of the core values of our Group and therefore a fundamental element of our work processes. Our priority is to ensure that employees return home healthy at the end of the working day. In 2021, we were unfortunately only able to decrease the accident frequency rate across the Group slightly, by 1.7%.

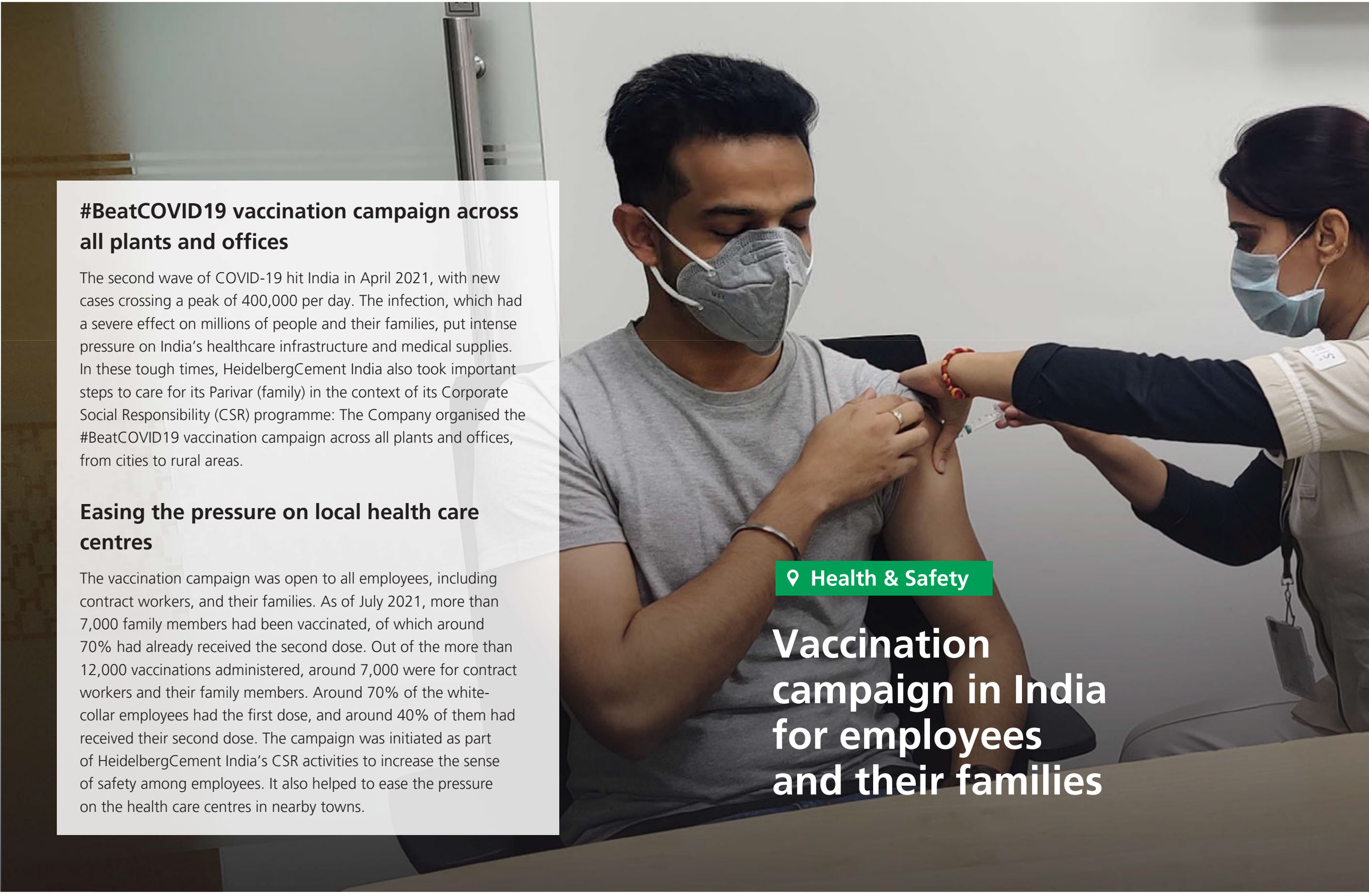
However, there were no fatalities among our own employees due to occupational accidents. This is the first time that we have achieved a major subgoal of our Sustainability Commitments 2030.

Although we were also successful in reducing the number of deaths of employees from external companies, a fatal accident did occur in which an employee from an external company was killed in a fall at one of our plants.

Accident trends for the HeidelbergCement Group

	2019	2020	**2021**
Lost time injury frequency rate[1)]	1.5	1.6	**1.6**
Lost time injury severity rate[2)]	80	86	**95**
Fatality rate[3)]	0.7	0.4	**0.0**

1) Number of accidents (with at least one lost working day) suffered by Group employees per 1,000,000 working hours
2) Number of lost working days resulting from accidents suffered by Group employees per 1,000,000 working hours
3) Number of fatalities of Group employees per 10,000 Group employees



Health & Safety

Vaccination campaign in India for employees and their families

#BeatCOVID19 vaccination campaign across all plants and offices

The second wave of COVID-19 hit India in April 2021, with new cases crossing a peak of 400,000 per day. The infection, which had a severe effect on millions of people and their families, put intense pressure on India's healthcare infrastructure and medical supplies. In these tough times, HeidelbergCement India also took important steps to care for its Parivar (family) in the context of its Corporate Social Responsibility (CSR) programme: The Company organised the #BeatCOVID19 vaccination campaign across all plants and offices, from cities to rural areas.

Easing the pressure on local health care centres

The vaccination campaign was open to all employees, including contract workers, and their families. As of July 2021, more than 7,000 family members had been vaccinated, of which around 70% had already received the second dose. Out of the more than 12,000 vaccinations administered, around 7,000 were for contract workers and their family members. Around 70% of the white-collar employees had the first dose, and around 40% of them had received their second dose. The campaign was initiated as part of HeidelbergCement India's CSR activities to increase the sense of safety among employees. It also helped to ease the pressure on the health care centres in nearby towns.

Occupational health

The general illness rate at HeidelbergCement has been low for many years and amounted to 1.3% of all hours worked in 2021.

Noise-induced hearing impairment was the most frequent cause of cases of occupational illness acknowledged in recent years. In addition, some employees suffered from back problems and other musculoskeletal disorders or respiratory illnesses.

In 2021, we therefore introduced a further Group standard, which harmonises preventive health care with regard to protection against dust, noise, and vibrations and the previous local approaches. This standard addresses hazards that are responsible for most occupational illnesses and provides management with guidelines for monitoring these hazards.

As a first step towards implementing the new standard on preventive health care, all countries carried out target/actual analyses in the reporting year and defined measures to address the identified gaps. To prevent job-related illnesses, we check our work sites habitually for exposure to factors hazardous to health, such as noise or dust, and regularly send our employees for medical examinations conducted by occupational health specialists. Employees trained as first aiders can provide first aid in emergencies at all operational sites.

In countries with less-developed statutory healthcare systems, our subsidiaries offer comprehensive health check-ups for all employees and in some instances for their families. In regions where HIV/AIDS, Ebola, or malaria frequently occur, the local units have set up programmes to advise the employees and inform them of the risks. These services are mostly offered through our own medical stations or the medical staff of in-house clinics.

We were able to draw on these competences and put in place suitable protective measures in order to respond swiftly and pragmatically to the COVID-19 pandemic as well as offer preventive services for addressing the particular psychological stresses resulting from this situation.

The steps taken in 2020 regarding travel restrictions and protective measures at the individual locations in response to the COVID-19 pandemic were continued in the reporting year and adapted to the relevant local infection situations and regulations in order to prevent the spread of the virus. These steps included training staff on hygiene measures, providing disinfectants, installing physical partitions, dividing working groups into smaller teams, switching to virtual meetings, closing canteens, and, if permitted by local authorities, having employees vaccinated by company doctors. We record all COVID-19 cases in the Group in HC-Protect so that we can respond appropriately to each outbreak.

Human resources development

Talent management

Qualified and motivated employees are an important prerequisite for the success of HeidelbergCement. Identifying our employees' talents, developing them, and – in competition with other companies – retaining those employees within the Group are therefore at the core of the Group-wide personnel policy. We use the HeidelbergCement competence model to do so. This model defines the essential professional and personal capabilities and skills that are critical for the success of our business. It thus enables the respective superiors to perform systematic, Group-wide assessments of performance and potential in accordance with standardised regulations and serves as a basis for the strategic development of managers and successor planning. Superiors and employees discuss development opportunities and prospects within the framework of structured appraisal interviews. The dialogue is primarily targeted at upper

and middle management, those in specialist roles, and future executives. It helps us to attain three goals:

- To fill key positions worldwide with top-class candidates from within the business
- To develop top talent at HeidelbergCement in a targeted way
- To retain employees in the Group for the long term by means of personalised development planning

Ongoing training

For HeidelbergCement, forward-looking HR management means consistently investing in training, that is to say, employing and training qualified talent. The proportion of apprentices in Germany in 2021 was 4% (previous year: 4%). The retention rate of these apprentices stood at 70% (previous year: 79%).

Technical skills are essential in ensuring the functionally sound operational management of process technology and maintenance in our plants. For a few years already, we have offered multilingual e-learning courses about cement production, specifically developed by the German Cement Works Association (VDZ).

In the second year of the pandemic, we were very well adjusted to the new training situation. The number of training participants increased by 47% compared with the previous year, while the total number of training hours rose by 13%. This was due to the further expansion of virtual training formats.

As in the previous year, a focus of our training programmes throughout the Group was on occupational safety, which made up around 52% (previous year: 54%) of the total training measures. Other priorities were specialist training, which made up 32% (previous year: 31%), and the training of our managers, which made up 4% (previous year: 4%).

We also continued to focus our activities on dealing with the challenges of mobile working. Training and information materials were offered on the professional use of digital programs for virtual communication and collaboration as well as on how to deal personally with the new work and life situation and on the topics of mental health and resilience.

Our extensive training programmes in virtually every work area are characterised by practical and business-oriented learning and enable our employees to develop their skills.

The Cement Academy of the Competence Center Cement (CCC) offers seminars and training sessions around the world for the engineers and technicians at our cement plants. The Aggregates Academy of the Competence Center Materials (CCM) offers training for the employees in the aggregates business line. To supplement our classroom courses, we offer various web-based learning programmes, including the multilingual Cement Manufacturing Curriculum, on which more than 3,000 employees are enrolled. We continue to provide our process control operators with regular training on a simulator.

Our Aggregates Academy also continued its employee training offer in the aggregates business line. Over 120 training sessions on the topic of aggregates were held in eight countries. These were carried out locally for the plant management teams in the form of practical training at production sites and as virtual training on account of the pandemic.

Strengthening digital competences

From an HR perspective, this involves building and expanding our digital competences, supporting change processes for digital transformation, and further digitalising personnel processes and systems. Our efforts are focused on fundamental digital media skills as well as topics related to specific functions. To increase the transparency of our digital activities for employees, a platform was set up to provide information on the key global digitalisation projects and the tools used within the Group. We used external training databases to significantly expand our e-learning courses on various digitalisation topics in the past year.

The use of virtual communication and collaboration tools was again a focus of our training in the past year, for which we offered both in-house and comprehensive digital training and certification courses from external partners (Microsoft certification tracks).

Management training

The motivation and skills of our managers play a crucial role in determining how well HeidelbergCement positions itself among its global competitors and how well-prepared the Group is for future challenges. To equip our managers for their future tasks, we offer training programmes tailored specifically to the needs of our company. This applies both to traditional topics, such as strategy, leadership, and management, or the method of capital expenditure budgeting, and to special training topics, for instance in the area of technology. Uniform training content ensures that a common understanding of strategy, integrated management approach, and leadership is developed everywhere.

Securing and advancing future executives

Since 2013, HeidelbergCement has been awarded the trainee seal of the German Initiative für karriereförderndе und faire Trainee-Programme (initiative for career-enhancing and fair trainee programmes) each year for its high-quality programmes for the advancement of future executives. As a member of the Fair Company initiative, we have been voluntarily committed to the creation of fair working conditions for trainees and young professionals since 2004 and have carried the Fair Company seal since then.

In the reporting year, we continued our efforts to advance future executives. We offer university graduates international trainee programmes focusing on the areas of technology, sales, finance, HR, and procurement, as well as interdisciplinary trainee programmes. In 2021, we hired 185 (previous year: 198) university graduates. The programmes were therefore still maintained at a good level in spite of the pandemic.

Moreover, we continued to work on expanding our programmes for the advancement of future executives and strengthening our recruitment of university graduates and graduates with first professional experience worldwide. In 2021, 1,117 (previous year: 455) people took part in programmes that prepared them for more advanced tasks. Through a special programme, we equip highly qualified engineers in the cement business for senior engineering positions. The participants undergo individually tailored training programmes that allow them to gain the necessary knowledge, skills, and experience to prepare them for the next stage of their career. Spending time at cement plants that are operated in exemplary fashion in different countries is a key element of the programme's success.

Diversity management

Diversity as a factor for success

In the Group-wide personnel policy, we aim for a mix of diverse nationalities, personalities, skills, and experience when putting together teams. We see the diversity in our workforce in terms of cultural and ethnic origin, gender, age, mental and physical abilities, and sexual orientation and identity as an asset to our global teams. It is also reflected in our presence in international markets, our customer structure, and our business environment. We are convinced that this diversity, in harmony with an appreciative corporate culture, has a positive effect on our innovative strength and the commitment of our employees, thus increasing the overall performance of our company. We aim to achieve diversity in the following ways:

- Local country management and therefore an international management team
- An international workforce at the Group headquarters
- A complementary composition of management and other teams (internationality, expertise, experience, age, gender, etc.)
- Women in management positions reflecting the proportion of women in the total workforce in Germany

Our goal is to attract and advance highly qualified and committed employees around the world who can bring various social and professional skills to our company and thus contribute to our business success.

With the international composition of our management team, we intend to benefit from a broad range of experience from different cultural backgrounds. This is linked to our goal of being able to respond flexibly and quickly to global challenges as well as local market needs. The proportion of local managers at the upper management level amounts to around 80%.

Employees from

60 countries

work at our Heidelberg headquarters.

At the Group headquarters, we consciously aim to ensure that the workforce is composed of employees from the countries in which we operate. We benefit considerably from their local knowledge, and this also improves cooperation with the local personnel. We have 922 employees at the Group headquarters and at our technical centers in Heidelberg and Leimen, with around two-thirds of these employees coming from Germany and one-third representing 59 other countries.

In early 2013, we signed the Diversity Charter as an affirmation of all our activities in this area to date and as a public statement of our respect for diversity. As in previous years, HeidelbergCement took part in activities connected with German Diversity Day in 2021.

→ **www.charta-der-vielfalt.de/en/**

Women in leadership positions

For us, diversity also means that we reflect the ratio of women to men in our workforce as a whole when hiring to fill management positions. In accordance with legal requirements, we have set targets for the proportion of women in the first and second leadership levels below the Managing Board: by 30 June 2022, the proportion of women in Germany in the first and second leadership levels below the Managing Board is to be increased to 15%. In addition, at least one woman is to be a member of the Managing Board by 2025.

In Germany, we again increased the share of women in the first (17%) and second (19%) leadership levels below the Managing Board in 2021, thus achieving a value above the target value, as already in the previous year. In addition, Dr Nicola Kimm became the first woman to be appointed to the Managing Board with effect from 1 September 2021. We want to continue this positive trend. In the first half of 2022, the Managing Board will determine a correspondingly adjusted target for the proportion of women in leadership positions in Germany in the first two levels below the Managing Board.

We have worked on the promotion of women in the past few years and achieved significant success. The proportion of women in programmes for the advancement of future executives across Germany is 31% (previous year: 31%) and therefore significantly higher than the proportion of women in the total workforce. A big challenge remains the development in operational functions, such as sales and plant management, especially, since the number of women studying technical subjects relevant for building materials production is still rather small. Experience in these areas is a key qualification for assuming higher leading positions. We intend to develop and introduce programmes in these areas that will make it easier to access and generate interest in the processes and workings of our plants.

The global NOW – Network of Women at HeidelbergCement is an initiative that brings together female employees worldwide. NOW is implemented on a country-by-country basis through a personal exchange of information and experiences, as well as special, one-off events. It aims, among other things, to support the network's members in developing their career potential and to increase awareness throughout the company of the changing demands on working and living environments.

Improving work-life balance

In the race for the best employees, we adapt ourselves globally to social changes. In terms of what we offer to encourage a good work-life balance, we focus on flexible working time models and mobile forms of work. Because of the small size of our locations, cooperation with external networks has proven itself, for example in terms of children's day care and holiday programmes or caring for family members. Employees benefit from having easy access to a professional and flexible network at reasonable costs. As part of our FIT for FAMILY initiative, we have entered into cooperation with day-care centers for the location in Heidelberg, Germany. These arrangements mean we have our own quota of places to offer our employees.

Generation management

Our Group, too, is faced with the consequences of demographic change. Around 11% (previous year: 11%) of our employees are under the age of 30. The majority of the employees are aged between 30 and 49, making up around 52% (previous year: 51%) of the Group's total workforce, and 37% (previous year: 38%) of our employees are over 50 years of age. We are responding to the effects of demographic change with numerous measures adapted to regional requirements. In Germany, for example, we have continued to develop our health management activities and have incorporated them in the FIT for LIFE initiative. This includes a prevention programme for the early diagnosis of illnesses and risk factors, but primarily focuses on the initiative of individuals to adopt a healthy lifestyle. In the future, our health management activities will continue to focus on preventing typical age-related health risks and supporting health-conscious behaviour. We are therefore specifically promoting company sports activities for all age groups.

Society & Corporate Responsibility

 Image: The Parco della Costituzione in Albignasegno close to Padua, Italy.

"Being a good neighbour" means tying the knot between business and social development. It is important to us that people in the areas surrounding our approximately 3,000 locations worldwide are involved in our business activity and benefit from our products as well as the jobs that we create. This generates win-win situations for HeidelbergCement and local communities. In line with our principle "think global – act local", we also take measures that protect the environment and promote social progress.

GRI 102-40, 102-43

Social responsibility

Good cooperative relationships with the communities in the areas where we are active are indispensable for our business operations and one of the keys to our success. In these areas, we establish business contacts, capitalise on local know-how, and maintain a dialogue with our neighbours. By making this voluntary commitment to society, we strengthen the exchange of ideas and achieve long-term socio-economic added value for local communities.

We have made an explicit commitment to social responsibility in the Leadership Principles adopted by our Managing Board. Taking social responsibility and maintaining good relationships with our stakeholders are therefore management tasks. Together with the site managers, all country managers are responsible for these tasks in their respective countries. This also includes analysing local requirements as well as selecting, implementing, and monitoring charitable projects. Funding decisions for individual countries and locations are made by the country managers within their budgetary framework. Group-wide, the financial scope of this social engagement amounts to around €9 million annually. A more detailed breakdown of expenditure can be found on our website:

→ **www.heidelbergcement.com/en/corporate-citizenship**

In addition, the Group-wide Corporate Social Responsibility Policy defines the general criteria and objectives related to our social engagement. This engagement is focused on three areas in which we have specific expertise and can achieve the best results for society:

- **Infrastructure:** We provide practical help in the construction and preservation of buildings and infrastructure by making products, financial means, and expertise available.
- **Environment:** We support initiatives that promote environmental protection, improve local environmental quality, and strengthen the diversity of nature at our locations.
- **Education:** We promote education and training based on the specific needs of the communities around our locations.

The exact wording of our CSR Policy can be found here:

→ **https://www.heidelbergcement.com/en/corporate-citizenship**

We have also defined clear evaluation criteria to ensure that our activities are both transparent and effective. We support projects, initiatives, and organisations that are active at our locations or to which we have a direct link. We attach great importance to ensuring that the guidelines and principles of these organisations align with our own corporate philosophy.

In 2021, the Group took further steps to strengthen its management and reporting processes and improve the structure of our social engagement in the various countries. The aim is to make this engagement more systematic and more transparent, as well as more efficient and targeted. In addition to developing internal guidelines on structuring CSR programmes and on the topic of corporate volunteering, we have delivered appropriate training. Our cooperation with Group Internal Audit has been expanded and further audits have been carried out, particularly in connection with donations and CSR activities. The Group also pursues a decentralised

Our target:

60,000 hours

of voluntary charitable work per year

approach in this area, and the various countries can contact the ESG (Environmental Social Governance) department for content-related support as required.

As part of our Sustainability Commitments 2030, we defined concrete performance indicators that will allow us to measure the quality of our relationships with the communities at our locations. These indicators are already being tracked internally but cannot yet be reported externally owing to the variety of source data and recording systems used across the Group. This will be possible in the future thanks to a digital management and reporting system, which is currently being introduced. We therefore plan to report on the following performance indicators in the future:

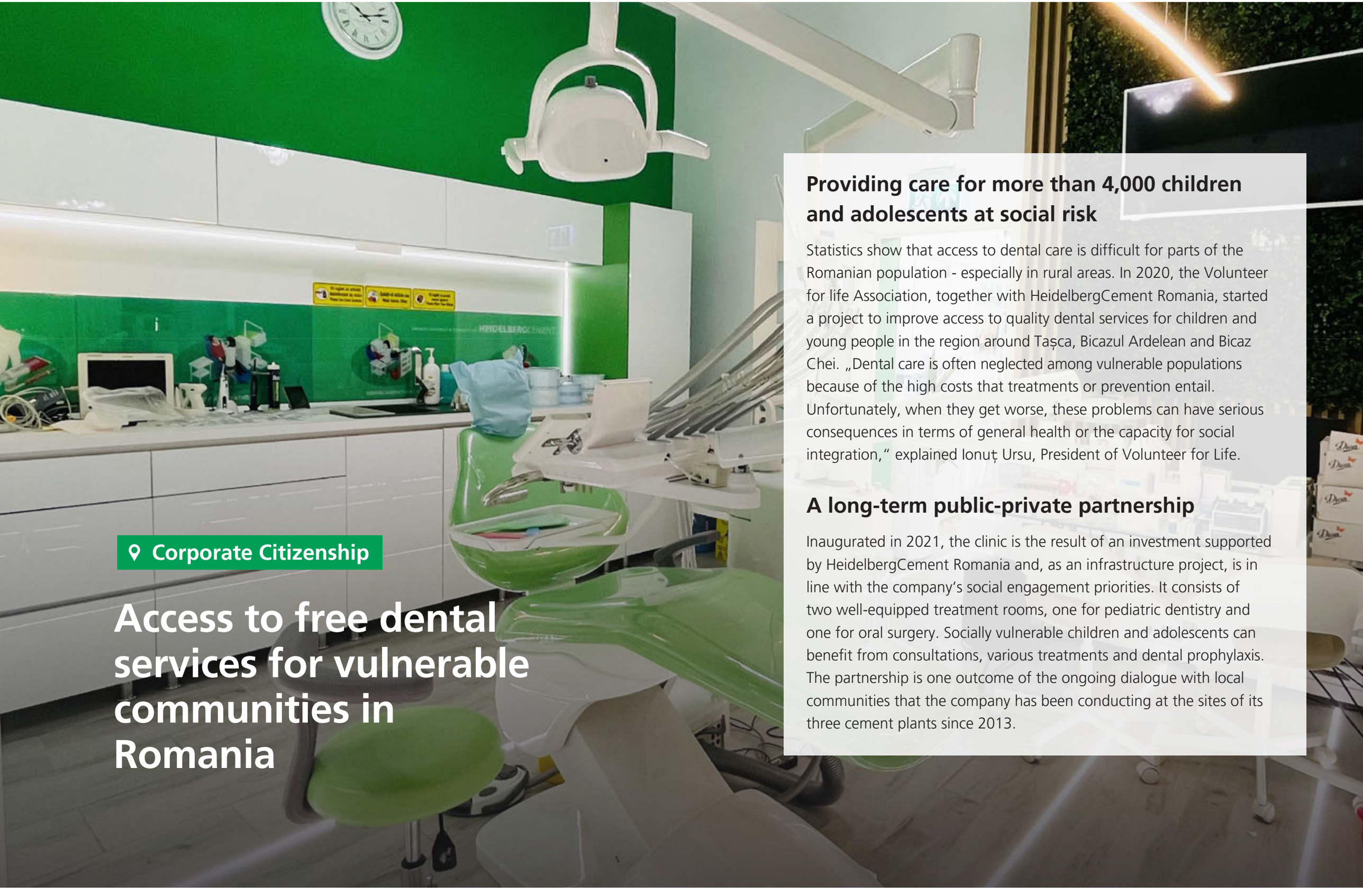
- Percentage of locations with a community engagement plan target: >99%)
- Total value of annual donations (monetary/material donations)
- Number and type of development programmes supported by HeidelbergCement
- Hours of voluntary charitable work per year (target: 60,000 hours per year)

Social engagement at our locations

We took various measures and promoted a number initiatives during the reporting year. At our plants in Egypt, we supported local communities, for example by donating clothing and food in connection with Eid al-Fitr. Another focus in 2021 was on strengthening and initiating volunteer programmes. At some locations, neighbourhood initiatives were implemented in 2021 through corporate volunteering. For example, programmes were set up in Bosnia-Herzegovina and for employees at our headquarters through which they have been able to engage in community activities during working hours.

In Germany, we have been pursuing the project "Kooperation Industrie-Schule" (KIS) for many years at our headquarters in Heidelberg and at several of our operational sites. The activities include, for example – depending on the location – plant and quarry tours, special lectures at schools, and career exploration measures. By providing KiTec boxes (in cooperation with Wissensfabrik Deutschland e.V.), we want to help spark an interest in technology and nurture the next generation of engineers.

We also provide supplementary teaching material on loan, covering topics such as petrology or hydrology. Unfortunately, owing to the COVID-19 pandemic, it was not possible to carry out as many activities as usual.



Corporate Citizenship

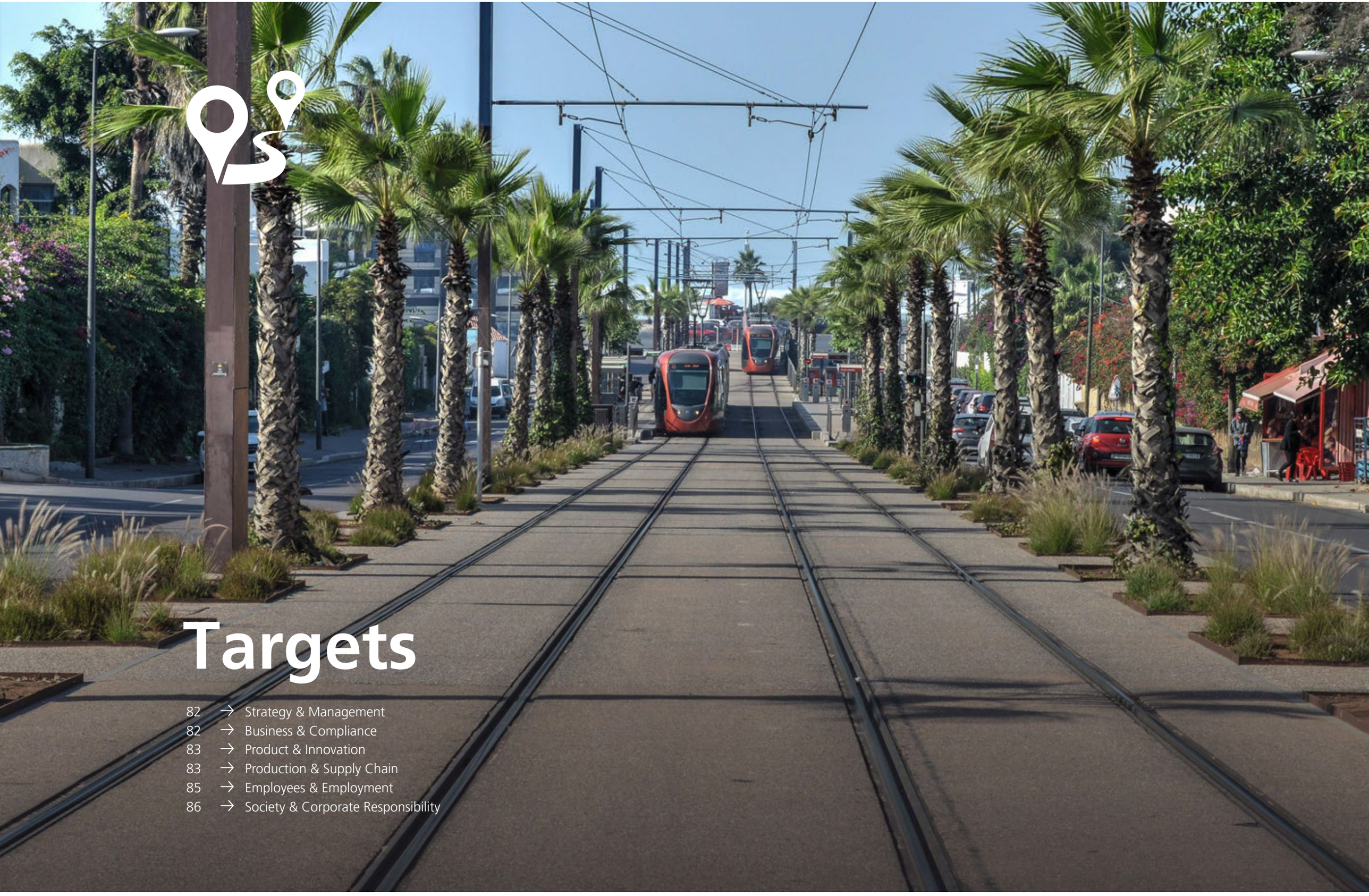
Access to free dental services for vulnerable communities in Romania

Providing care for more than 4,000 children and adolescents at social risk

Statistics show that access to dental care is difficult for parts of the Romanian population - especially in rural areas. In 2020, the Volunteer for life Association, together with HeidelbergCement Romania, started a project to improve access to quality dental services for children and young people in the region around Tașca, Bicazul Ardelean and Bicaz Chei. „Dental care is often neglected among vulnerable populations because of the high costs that treatments or prevention entail. Unfortunately, when they get worse, these problems can have serious consequences in terms of general health or the capacity for social integration," explained Ionuț Ursu, President of Volunteer for Life.

A long-term public-private partnership

Inaugurated in 2021, the clinic is the result of an investment supported by HeidelbergCement Romania and, as an infrastructure project, is in line with the company's social engagement priorities. It consists of two well-equipped treatment rooms, one for pediatric dentistry and one for oral surgery. Socially vulnerable children and adolescents can benefit from consultations, various treatments and dental prophylaxis. The partnership is one outcome of the ongoing dialogue with local communities that the company has been conducting at the sites of its three cement plants since 2013.



Targets

Strategy & Management

Target	Measures	Achieved in 2021	Deadline	Status	Page
Ensuring sustainable profitability through the effective management of all processes.	Commitment to sustainable cement production at industry and association level: continuation of the reporting on the implementation of the GCCA guidelines for cement production.	In 2021, the environmental and occupational safety indicators were once again subjected to an external audit in line with GCCA obligations.	Ongoing	■	→ 17, 62, 69, 88–97
	Strengthening and digitalisation of efficient ESG management and reporting structure on country, area, and Group level.	With the newly created position Chief Sustainability Officer, responsibility for ESG issues has been anchored in the Managing Board in 2021 as well. The topic of sustainability at Group level has been organisationally combined under the umbrella of the "Sustainability Office" headed by CSO Dr Nicola Kimm since 1 December 2021. The introduction of a new IT platform for the collection of ESG data was driven forward with the aim of rolling it out from 2022.	Ongoing	■	→ 14f., 21f., 49f.

Business & Compliance

Target	Measures	Achieved in 2021	Deadline	Status	Page
Further development of the Group compliance management programme and of Group compliance activities with regard to current developments.	Realisation of concrete measures to protect human rights, including implementation of a human rights analysis. Target: Risk assessment for all countries in which HeidelbergCement is active. Between 2018 and 2020, one-third of the country organisations are audited each year.	By the end of 2020, we had carried out an initial human rights risk assessment as planned in the country organisations where we have sole management control, with the exception of countries where we only operate terminals. The action plans developed are currently being implemented. We agreed with a joint venture partner to also include Hungary, Bosnia-Herzegovina, and Croatia, where intial steps were made in 2021 but the assessement have not yet been finalised. Review of human rights risk assessments for the other countries has started as scheduled to ensure the three-year cycle.	Ongoing	■	→ 32–37
Continuous improvement of customer satisfaction.	Introduction of the Net Promoter System® (NPS) at HeidelbergCement in 2015 – for the ongoing analysis of customer satisfaction and needs, in order to continuously improve the customer experience and our business results.	Net Promoter System® introduced in 40 countries. Net Promoter Score® for HeidelbergCement Group: 2019: 49 2020: 55 2021: 59	Ongoing	■	→ 39
Efficient use of resources in order to earn a premium on our cost of capital.	Disciplined investment and cash flow management. Continuation of programmes to increase efficiency.	ROIC of 9.3%, driven by solid return and portfolio optimization.	Ongoing	■	→ 32, 88

■ Target achieved ■ Target partly achieved ■ Target not achieved ☐ New target

Product & Innovation

Target	Measures	Achieved in 2021	Deadline	Status	Page
Continuous innovation of products and services, especially in the areas of CO_2 reduction and incorporation of recycled material.	Continuation of the activities in the area of research and technology. This includes participation in and coordination of a research project in Germany to develop practice-oriented concepts for the use of recycled aggregates in concrete production.	Consistent continuation of research and cooperation in the areas of low-carbon concretes and cements, building materials recycling, and special concretes.	Ongoing	■	→ 28, 40–47, 53–56

Production & Supply Chain

Target	Measures	Achieved in 2021	Deadline	Status	Page
All integrated cement plants are to operate with a certified environmental management system.	Implementation of an action plan for the Group-wide control and monitoring of the ongoing introduction of certified environmental management systems.	98.2% of all integrated cement plants worldwide operate with an environmental management system. The number was 97.4% in 2019. Due to the COVID 19 pandemic, not all certifications could be carried out as planned in 2020 and 2021.	2021	■	→ 50, 90
We reduce Scope 1 carbon emissions from our cement production operations to reach 400 kg per tonne of cementitious material by 2030.	Investment in research in the following areas: energy efficient production processes, CO_2 capture and use, composite cements with reduced clinker content, and new clinker technologies. Increased use of alternative fuels and biomass. Investment in research into technologies for carbon capture and recycling.	As at 2021: – Reduction of approx. 25% to 565.0 kg CO_2 per tonne of cement	2025/2030	■	→ 10–13, 50f., 91
We reduce our Scope 2 carbon emissions from electrical power consumption by 65% by 2030 compared to 2016.	Investment into own renewable electricity production and power purchase agreements with electricity providers.	Rollout of a Group strategy by the Group Energy Purchasing department to show the countries local options for purchasing green electricity or options for producing their own green electricity. Initiation of various projects to increase the share of renewable electricity, including long-term agreements or direct investments in solar/wind power in various Group countries. Planning and implementation of energy efficiency measures to reduce electricity consumption or generate electricity from waste heat.	2030	■	→ 57, 91
Lowering clinker content of cement to below 68%.	Development of new composite cements. Use of alternative raw materials.	As at 2021: – Clinker proportion: 72.9% (previous year: 74.3%)	2025	■	→ 40f., 51, 92
Increasing the share of alternative fuels used to 45%.	Focus on three waste flows: sorted fractions of household and domestic waste with high calorific values, sewage sludge, and hazardous waste.	As at 2021: – Proportion of alternative fuels: 26.4% (previous year: 25.7%)	2030	■	→ 57f., 92

■ Target achieved ■ Target partly achieved ■ Target not achieved ☐ New target

Production & Supply Chain

Target	Measures	Achieved in 2021	Deadline	Status	Page
All production sites will have a comprehensive and efficiency-oriented digital water recording system in place and follow a standardised water reporting procedure by 2023/2025.	Monitoring of water consumption and introduction of key figures on water reporting in all business lines.	– Monitoring of water consumption in the cement business line – Specific water consumption in 2021: 265.9 l/t cement (previous year: 271.9 l/t cement) – Gradual implementation of key figures on water reporting in our aggregates and ready-mixed concrete business lines continued	2025	■	→ 23f., 62f., 94
All sites in water scarcity areas will have implemented own water management plans by 2030 and will have engaged with local community representatives on water consumption and offer own surplus water resources to local users.	Implementation of water management plans with a focus on water consumption reduction measures at all sites located in water scarcity areas. Initiation of community dialogue focusing on water availability for production sites in water scarce areas.	– Development of individual water management plans for a sample of cement plants initiated. – Development of water management plans for a sample of aggregates and readymixed concrete sites initiated.	2030	■	→ 62f., 94
Measuring emissions of heavy metals, volatile organic compounds (VOC), and dioxins/furans at all locations.	Individual measurements of all substance groups mentioned at all continuously operated kiln plants by external, certified measuring institutes at least once a year.	As at 2021: – 94 kilns report on mercury emissions (previous year: 95) – 85 kilns report on dioxins/furans (previous year: 91) The decrease is due to travel restrictions during the COVID-19 pandemic, as not all measurements could be carried out by the responsible institutes as planned.	Ongoing	■	→ 12, 61, 93
Lowering emissions per tonne of clinker (reference year: 2008): – Dust: by 80% – Nitrogen oxides: by 40% – Sulphur oxides: by 40%	Continuous optimisation and modernisation of processes (best available technology, or BAT) in the cement plants.	As at 2021: – Dust: –88% – Nitrogen oxides: –22% – Sulphur oxides: –34%	2030	■	→ 12, 61, 93
Restoration plans for 100% of the active quarries for cement and aggregates (in Europe, Africa, and Asia).	Continuous expansion of restoration plans.	As at 2021: Restoration plans for 87% of the quarries (previous year: 80%)	2030	■	→ 12, 58–61, 93
All sites comply with a minimum reclamation standard as defined by the Quarry reclamation guideline, with corresponding plans developed for each extraction site. Reclamation provisions need to be available and secured.	Definition of minimum reclamation standard. Review of existing reclamation plans and provisions.	Minimum standards for reclamation have been defined and published internally, reviews underway across the Group countries.	2025	■	→ 12, 58–61

■ Target achieved ■ Target partly achieved ■ Target not achieved □ New target

Production & Supply Chain

Target	Measures	Achieved in 2021	Deadline	Status	Page
HC business operations located within 1 km of a recognised high biodiversity value area are to implement a biodiversity management plan.	Development of training documentation and manuals; provision of corresponding training on site. Continuous expansion of biodiversity management plans.	As at 2021: Biodiversity management plans for 41% of the respective sites (previous year: 54%)	2030	■	→ 12, 58–61, 93
To determine a consolidated Group value of the impact of biodiversity, net impact studies will be undertaken at all extraction sites.	Development of a methodology for net impact assessments.	First methodological approach developed and rolled out in pilot projects at sites in Canada, Germany, France, Spain, Togo, UK, and US.	2025	■	→ 58–61

Employees & Employment

Target	Measures	Achieved in 2021	Deadline	Status	Page
Reduction of accident frequency and the accident severity indicator to zero for Group employees.	Further intensification of proactive measures such as the performance and analysis of safety conversations, the reporting of near-accidents with the corresponding measures, continuation of the "Clean site/Safe site" initiative, updating of Group standards.	As at 2021: – Accident frequency rate: 1.6 (previous year: 1.6) – Accident severity indicator: 95 (previous year: 86) Occupational safety topics accounted for around 52% of all training hours at HeidelbergCement, corresponding to almost 13 hours per employee.	Ongoing	■	→ 12, 68–72, 97
Reduction of the number of fatalities to zero for Group employees.	Further intensification of proactive measures such as the performance and analysis of safety conversations, the reporting of near-accidents with the corresponding measures, continuation of the "Clean site/Safe site" initiative, updating of Group standards.	As at 2021: – Fatality rate: 0.0 (previous year: 0.4)	Ongoing	■	→ 68–72, 97
Full implementation of the World Business Council for Sustainable Development's WASH Pledge at all of HeidelbergCement's production sites.	Performing a yearly self-assessment to monitor the success of the implementation, and publication of the results. Aspects monitored include compliance with local and national regulations and laws, the supply of drinking water to the workplace, and access to sanitation and hygiene at the workplace. Investments into water infrastructure at sites not yet fully compliant.	Implementation of the self-assessment regarding the fulfilment of the requirements in all Group countries. Implementation of improvement measures at all non-compliant sites.	2021	■	→ 68–72
Share of women in management positions (first level) in Germany: 15%. Share of women in management positions (second level) in Germany: 15%.	Targeted support of women by means of appropriate management programmes and programmes for the advancement of future executives.	The target was achieved in 2020. As at 2021: – Share of women in management positions in Germany: 16.7% at first level below Managing Board, 19% at second level below Managing Board – Share of women in programmes for the advancement of future executives in Germany: 30.9%	2022	■	→ 75f., 96

■ Target achieved ■ Target partly achieved ■ Target not achieved ☐ New target

Employees & Employment

Target	Measures	Achieved in 2021	Deadline	Status	Page
Sustainable talent management.	Key positions are filled internally with top-class candidates worldwide.	As at 2021: – 32% of all positions are filled internally (worldwide) – 32% of all positions within Group and Global functions at the headquarters are filled internally	Ongoing	■	→ 72–74, 95f.
Promoting diversity in the workforce.	Promoting an international composition of the workforce at Group headquarters, bringing together different cultures, talents, and experiences, and reflecting the company's presence on international markets.	As at 2021: – 336 international employees from 60 countries at Group headquarters (of a total of 922 employees)	Ongoing	■	→ 75f., 96

Society & Corporate Responsibility

Target	Measures	Achieved in 2021	Deadline	Status	Page
Ensuring transparent communication with stakeholders.	Strengthening of contact with stakeholders and intensification of dialogue on both local and Group levels. All sites should implement a "Community Engagement Plan" to guide the interaction with the local key stakeholders.	Continuation of numerous stakeholder dialogue initiatives in the Group countries. Due to the COVID-19 pandemic, some activities could not be carried out as planned. The gradual introduction of community engagement plans at all sites was continued.	2023	■	→ 16f., 78–80
Support for the economic and social development of neighbouring communities.	Provision of in-kind and monetary donations for non-profit organisations as focusing on the topics education, environment, and infrastructure.	Strengthening of the CSR management structures. Rollout of internal guidelines to improve CSR management. Implementation of numerous projects to support the local communities.	Ongoing	■	→ 78–80
60,000 hours annually of corporate volunteering across the Group.	HeidelbergCement offers own employees incentives for voluntary community work executed during their working or leisure time.	Implementation of structured volunteering programs in some countries and continuation of existing programs in others. Due to the COVID-19 pandemic, some activities could not be carried out as planned.	2025	■	→ 78–80

■ Target achieved ■ Target partly achieved ■ Target not achieved □ New target

Appendix

Key figures

Strategy & Management

		2019	2020	**2021**	Unit	Assurance[1)]
Revenue/result	Revenue	18,851	17,606	**18,720**	€ million	✓
	Result from current operations before depreciation and amortisation (RCOBD)	3,580	3,707	**3,875**	€ million	✓
	Result from current operations (RCO)	2,186	2,363	**2,614**	€ million	✓
	Profit/loss for the financial year	1,242	–2,009	**1,902**	€ million	✓
	Group share of profit	1,091	–2,139	**1,759**	€ million	✓
	Dividend per share	0.60	2.20	**2.40**	€	✓
	Earnings per share	5.50	–10.78	**8.91**	€	✓
Investments in tangible fixed assets	Including maintenance, optimisation, and environmental protection measures	1,183	969	**1,419**	€ million	✓
Depreciation and amortisation		1,394	1,344	**1,261**	€ million	✓
Balance sheet	Equity (including non-controlling interests)	18,504	14,548	**16,659**	€ million	✓
	Balance sheet total	38,589	32,335	**33,711**	€ million	✓
	Net debt	8,410	6,893	**4,999**	€ million	✓
Material costs and other operating expenses		7,586	6,483	**7,305**	€ million	✓
Expenses on research and development		133.5	120.0	**123.6**	€ million	✓
Group sales	Cement and clinker:					
	– Western and Southern Europe	29.9	28.2	**30.4**	million t	✓
	– Northern and Eastern Europe-Central Asia	23.9	23.6	**24.6**	million t	✓
	– North America	16.1	15.6	**15.7**	million t	✓
	– Asia-Pacific	35.8	32.9	**34.7**	million t	✓
	– Africa-Eastern Mediterranean Basin	19.5	21.2	**21.1**	million t	✓
	– Total	125.9	122.0	**126.5**	million t	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

Strategy & Management

		2019	2020	**2021**	Unit	Assurance[1)]
Group sales	Aggregates:					
	– Western and Southern Europe	83.5	78.2	**84.0**	million t	✓
	– Northern and Eastern Europe-Central Asia	48.2	48.7	**49.8**	million t	✓
	– North America	128.1	125.9	**128.3**	million t	✓
	– Asia-Pacific	39.8	36.1	**36.6**	million t	✓
	– Africa-Eastern Mediterranean Basin	8.9	7.4	**7.7**	million t	✓
	– Total	308.3	296.3	**306.4**	million t	✓
	Ready-mixed concrete:					
	– Western and Southern Europe	18.4	17.2	**18.2**	million m^3	✓
	– Northern and Eastern Europe-Central Asia	6.8	6.0	**6.2**	million m^3	✓
	– North America	7.7	7.8	**7.4**	million m^3	✓
	– Asia-Pacific	12.0	10.6	**10.4**	million m^3	✓
	– Africa-Eastern Mediterranean Basin	5.3	5.0	**5.1**	million m^3	✓
	– Total	50.7	46.9	**47.4**	million m^3	✓
	Asphalt:					
	– Western and Southern Europe	3.6	3.5	**3.7**	million t	✓
	– North America	5.0	5.0	**4.4**	million t	✓
	– Asia-Pacific	2.3	2.3	**2.0**	million t	✓
	– Africa-Eastern Mediterranean Basin	0.4	0.3	**0.3**	million t	✓
	– Total	11.3	11.0	**10.4**	million t	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

Strategy & Management

		2019	2020	**2021**	Unit	Assurance[1]
Cement type portfolio	– Ordinary Portland cement	37.6	37.4	**32.2**	%	–
	– Limestone cement	18.1	19.7	**21.5**	%	–
	– Pozzolana/fly ash cement	8.3	7.7	**8.8**	%	–
	– Slag cement	12.2	10.3	**9.9**	%	–
	– Multi-component cement	20.1	21.5	**23.2**	%	–
	– Oilwell/white cement	0.5	0.5	**0.5**	%	–
	– Masonry cement/special binder	1.6	1.1	**2.1**	%	–
	– Ground granulated blast furnace slag	1.7	1.7	**1.7**	%	–
Management systems	Share of integrated cement plants with a certified environmental management system (ISO 14001 or similar)	93.5	97.4	**98.2**	%	–
	Share of active aggregates production facilities with a certified environmental management system (ISO 14001 or similar)	n/a	40	**41.4**	%	–
	Share of integrated cement plants with a certified energy management system (ISO 50001 or similar)	–	–	**34.7**	%	–
	Share of operational sites with a certified occupational health and safety management system (ISO 45001 or similar)	–	–	**98**	%	–

Product & Innovation

		2019	2020	**2021**	Unit	Assurance[1]
Sustainable construction	Production volume of recycled aggregates (100% recycled content)[2]	–	4.6	**3.3**	million t	–
	Share of recycled aggregates in total aggregates production[3]	–	1.6	**1.1**	%	–
	Share of alternative raw materials contained in other building materials such as asphalt	–	9.4	**9.8**	%	–
	Number of memberships in Green Building Councils and Sustainable Infrastructure Councils	13	13	**15**	number	–

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.
2) The lower volume in 2021 compared with 2020 results from changes in reporting scope (e.g. divestment of the business on the US West Region). Value for 2020 on a like-for-like basis: 3.3 million t.
3) The lower share in 2021 compared with 2020 results from changes in reporting scope (e.g. divestment of the business on the US West Region). Value for 2020 on a like-for-like basis: 1.1%.

Production & Supply Chain

		1990	2019	2020	**2021**	Unit	Assurance[1]
Reduction in CO_2 emissions	Cement business line:						
	– Absolute gross CO_2 emissions (Scope 1)	82.6	72.6	67.9	**69.0**	million t	✓
	– Absolute net CO_2 emissions (Scope 1)	81.0	68.3	63.6	**64.6**	million t	✓
	– Specific gross CO_2 emissions per tonne of cementitious material (Scope 1)	759.6	621.6	610.1	**598.7**	kg CO_2/t	✓
	– Specific net CO_2 emissions per tonne of cementitious material (Scope 1)	751.8	589.6	576.0	**564.8**	kg CO_2/t	✓
	– Absolute CO_2 emissions from external electrical power and thermal energy production (Scope 2)	6.6	5.4	4.9	**4.8**	million t	✓
	Aggregates business line:						
	– Absolute CO_2 emissions from fuels (Scope 1)	–	0.48	0.40	**0.49**	million t	–
	– Specific CO_2 emissions from fuels (Scope 1)	–	1.63	1.52	**1.62**	kg CO_2/t	–
	– Absolute CO_2 emissions from external electrical power and thermal energy production (Scope 2)	–	0.30	0.24	**0.26**	million t	–
	– Specific CO_2 emissions from external electrical power and thermal energy production (Scope 2)	–	1.02	0.92	**0.87**	kg CO_2/t	–
	All business lines:						
	– CO_2 emissions from purchased materials (Scope 3)	–	9.4	8.9	**8.1**	million t	✓
	– CO_2 emissions from purchased fuels (Scope 3)	–	3.9	3.5	**3.7**	million t	✓
	– CO_2 emissions from upstream and downstream transportation and distribution (Scope 3)	–	9.4	8.9	**8.2**	million t	✓
Energy/raw materials	Absolute energy consumption:						
	– Cement	450,860	362,911	343,099	**353,640**	TJ	✓
	– whereof clinker production	385,973	307,996	290,535	**297,377**	TJ	✓
	– Aggregates	n/a	9,281	8,181	**9,586**	TJ	–
	Specific energy consumption:						
	– Cement	4,186	3,132	3,108	**3,093**	MJ/t	✓
	– whereof clinker production	4,359	3,573	3,574	**3,590**	MJ/t	✓
	– Aggregates	n/a	31.6	30.6	**31.6**	MJ/t	–
Waste[2]	Waste generated:						
	Total waste generated	–	–	–	**1,276.7**	kt	–
	– whereof non-hazardous waste	–	–	–	**93**	%	–
	– whereof hazardous waste	–	–	–	**7**	%	–
	Waste disposed:						
	– Share of waste sent to re-use, recovery, or recycling	–	–	–	**66**	%	–
	– Share of waste directed to disposal	–	–	–	**34**	%	–

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

2) Waste figures include cement and aggregates business lines. Values were consolidated at Group-level for the first time in 2021 and are partially based on estimates or calculations. We are in the progress of setting up a comprehensive waste recording and reporting system at Group level and expect data quality to improve in the next years.

Production & Supply Chain

		1990	2019	2020	**2021**	Unit	Assurance[1)]
Energy/raw materials	Fuel mix for clinker production:						
	– Hard coal	52.5	44.2	38.2	**41.7**	%	✓
	– Lignite	0.0	1.7	2.1	**1.9**	%	✓
	– Petroleum coke	8.6	19.6	23.4	**18.9**	%	✓
	– Natural gas	17.1	9.6	10.3	**10.6**	%	✓
	– Light fuel oil	0.6	0.2	0.2	**0.2**	%	✓
	– Heavy fuel oil	16.0	0.4	0.2	**0.2**	%	✓
	– Other fossil fuels	2.2	0.3	0.0	**0.0**	%	✓
	– Alternative fossil fuels	2.8	14.8	15.8	**15.4**	%	✓
	– Biomass	0.2	9.1	9.9	**11.2**	%	✓
	– Proportion of biomass in mix of alternative fuels	6.3	38.1	38.6	**42.0**	%	✓
	Alternative fuel mix for clinker production:						
	– RDF	1.6	25.7	27.5	**26.1**	%	✓
	– Waste oil	29.0	3.6	3.0	**2.6**	%	✓
	– Used tyres	17.1	9.8	9.5	**9.8**	%	✓
	– Solvents	30.8	6.0	7.0	**6.8**	%	✓
	– Dried sewage sludge	0.0	1.7	1.8	**1.7**	%	✓
	– Meat and bone meal	0.0	3.4	3.3	**3.2**	%	✓
	– Agricultural waste and waste wood	0.0	6.0	7.7	**9.3**	%	✓
	– Other biomass	6.3	26.9	25.8	**27.8**	%	✓
	– Other alternative fuels	15.1	16.8	14.3	**12.8**	%	✓
	Alternative fuel rate (incl. biomass)	3.0	24.0	25.7	**26.4**	%	✓
	Clinker content in cementitious material	82.0	74.5	74.3	**72.9**	%	✓
	Proportion of alternative raw materials:						
	– Clinker	n/a	2.9	3.3	**3.8**	%	✓
	– Cement	n/a	11.3	11.4	**11.8**	%	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

Production & Supply Chain

		2008	2019	2020	**2021**	Unit	Assurance[1]
Emissions	Absolute NO_X emissions	84,571	110,079	99,983	**102,203**	t	✓
	Specific NO_X emissions	1,585	1,273	1,230	**1,235**	g/t clinker	✓
	Absolute SO_X emissions	27,007	31,639	26,085	**27,543**	t	✓
	Specific SO_X emissions	506	366	321	**333**	g/t clinker	✓
	Absolute dust emissions	17,043	5,454	2,930	**3,250**	t	✓
	Specific dust emissions	319	63	36	**39**	g/t clinker	✓
	Proportion of clinker produced in kilns with continuous or discontinuous measurement of all emissions	49	78	70	**67**	%	✓
	Proportion of clinker produced in kilns with continuous measurement of dust, NO_X, and SO_X emissions	63	87	88	**86**	%	✓
	Mercury:						
	– Specific emissions	n/a	0.038	0.020	**0.018**	g/t clinker	✓
	– Number of kilns reporting	n/a	106	95	**94**		–
	Dioxins and furans:						
	– Specific emissions	n/a	0.056	0.053	**0.042**	µg TEQ/t clinker	✓
	– Number of kilns reporting	n/a	108	91	**85**		–

		2019	2020	**2021**	Unit	Assurance[1]
Biodiversity and conservation of resources	Proportion of quarries in areas with a high biological value, with biodiversity management plan	48	54	**41**	%	✓
	Proportion of active quarries with a restoration plan	81	80	**87**	%	✓
Water management (aggregates)[2]	Total water withdrawal	–	–	**243.8**	million m³	–
	Total water discharge	–	–	**201.7**	million m³	–
	Total water consumption	–	–	**42.1**	million m³	–
	Specific water consumption for aggregates	–	–	**139.9**	l/t	–
Water management (ready-mixed concrete)[2]	Total water withdrawal	–	–	**10.5**	million m³	–
	Total water discharge	–	–	**1.5**	million m³	–
	Total water consumption	–	–	**9.0**	million m³	–
	Specific water consumption for ready-mixed concrete	–	–	**192.9**	l/m³	–

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.
2) Values were consolidated at Group level for the first time in 2021 and are partially based on estimates or calculations. We are in the progress of setting up a comprehensive water recording and reporting system at Group level and expect data quality to improve in the upcoming years.

Production & Supply Chain

		2019	2020	**2021**	Unit	Assurance[1)]
Water management (cement)	Total water withdrawal	59.8	60.2	**60.3**	million m³	✓
	– whereof in areas with water scarcity	–	15.7	**16.7**	million m³	–
	By source:					
	– Surface water	32.0	29.1	**28.6**	million m³	✓
	– Groundwater	8.4	9.4	**8.9**	million m³	✓
	– Seawater	3.5	2.9	**3.5**	million m³	✓
	– Municipal / potable water	4.8	4.5	**5.1**	million m³	✓
	– External waste water	0.0	0.0	**0.0**	million m³	✓
	– Quarry water used	9.5	11.8	**11.5**	million m³	✓
	– Harvested rain water used in processes	1.6	2.5	**2.5**	million m³	✓
	Total water discharge	29.6	29.5	**29.5**	million m³	✓
	– whereof in areas with water scarcity	–	6.6	**6.7**	million m³	–
	By place of discharge:					
	– Surface water	24.4	24.7	**23.9**	million m³	✓
	– Groundwater	0.1	0.1	**0.1**	million m³	✓
	– Seawater	3.9	3.3	**3.9**	million m³	✓
	– Off-site water treatment facility	0.7	0.9	**1.1**	million m³	✓
	– Discharge to beneficial third party / other	0.6	0.5	**0.5**	million m³	✓
	Total water consumption (water withdrawal minus wastewater discharge)	30.2	30.7	**30.8**	million m³	✓
	– whereof in areas with water scarcity	–	9.0	**10.0**	million m³	–
	Quarry water not used	61.9	73.4	**69.5**	million m³	–
	Specific water withdrawal for clinker	693.3	739.5	**727.9**	l/t	✓
	Specific water withdrawal for cement	514.6	533.0	**520.3**	l/t	✓
	Specific water discharge for clinker	343.3	362.3	**355.9**	l/t	✓
	Specific water discharge for cement	254.8	261.1	**254.4**	l/t	✓
	Specific water consumption for clinker	350.0	377.2	**372.0**	l/t	✓
	Specific water consumption for cement	259.8	271.9	**265.9**	l/t	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

Employees & Employment

		2019	2020	**2021**	Unit	Assurance[1)]
Employees and employment	Number of employees as at 31 December:					
	– Western and Southern Europe	15,608	15,250	**15,040**	employees	✓
	– Northern and Eastern Europe-Central Asia	11,251	11,097	**11,101**	employees	✓
	– North America	9,047	8,585	**7,637**	employees	✓
	– Asia-Pacific	13,190	12,629	**12,460**	employees	✓
	– Africa-Eastern Mediterranean Basin	5,498	5,175	**4,886**	employees	✓
	– Group Services	454	388	**85**	employees	✓
	– Total	55,047	53,122	**51,209**	employees	✓
	Employee turnover:					
	– Western and Southern Europe	12	8	**12**	%	–
	– Northern and Eastern Europe-Central Asia	12	9	**12**	%	–
	– North America	20	16	**36**	%	–
	– Asia-Pacific	9	6	**10**	%	–
	– Africa-Eastern Mediterranean Basin	5	4	**16**	%	–
	– Total	11	8	**15**	%	–
	Voluntary fluctuation rate	8	6	**12**	%	–
	Number of total hires	6,085	4,193	**10,511**	FTE	–
	Internal hire rate	29	29	**32**	%	–
	Personnel costs and social benefits:					
	– Wages, salaries, social security costs	2,975.1	2,822.9	**2,908.8**	€ million	✓
	– Costs of retirement benefits	179.2	167.4	**164.2**	€ million	✓
	– Other personnel costs	33.1	35.1	**35**	€ million	✓
	– Total	3,187.4	3,025.4	**3,108.0**	€ million	✓
	Proportion of part-time employees (Group)	2.3	2.3	**2.5**	%	–
	Proportion of part-time employees (HeidelbergCement AG)	11.3	10.7	**9.9**	%	✓
	Age structure (Group):					
	– Younger than 30	11.7	10.6	**11.2**	%	✓
	– 30–49	51.8	51.2	**51.8**	%	✓
	– 50 and older	36.5	38.1	**37.0**	%	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.

Employees & Employment

		2019	2020	**2021**	Unit	Assurance[1]
Diversity	Share of female employees (Group)	13	12.9	**13.9**	%	✓
	Share of female employees N-1 & N-2 with leadership responsibility (Group)	–	15.5	**18.3**	%	–
	Share of female employees in programmes for the advancement of future executives (Group)	17.8	16.3	**15.0**	%	–
	Share of female employees (Germany)	15.3	15.9	**15.9**	%	✓
	Share of female employees N-1 with leadership responsibility (Germany)	10	16	**17**	%	✓
	Share of female employees N-2 with leadership responsibility (Germany)	14	16	**19**	%	✓
	Share of female employees in all management positions independent of leadership responsibility (Germany)	–	21.1	**22.4**	%	–
	Share of female employees in programmes for the advancement of future executives (Group)	31.2	30.8	**30.9**	%	✓
	Share of female employees in revenue-generating functions	–	9.9	**11.0**	%	–
	Share of local managers in senior management positions (Group)	79.7	80.4	**81**	%	✓
	Proportion of disabled employees:					
	– Germany	4.4	3.8	**4.1**	%	–
	– HeidelbergCement AG	4.3	3.8	**3.9**	%	–
	Number of employees in Germany as at 31 December[2]	–	–	**4,500**	employees	–
Apprenticeships and employee training	Employees in programmes for the advancement of future executives	490	455	**1,117**	individuals	✓
	Training hours per employee	26.3	21	**24.98**	hours	–
	Structure of training hours:					
	– Management training	6.8	4.0	**3.9**	%	✓
	– Soft skills training	3.4	3.7	**4.9**	%	✓
	– Specialist training	27.6	30.7	**31.7**	%	✓
	– Occupational safety training	48.2	53.7	**52.4**	%	✓
	– Language courses	7.8	2.4	**2.3**	%	✓
	– Other	6.1	5.5	**4.9**	%	✓
	Percentage of trainees in Germany	4.1	3.8	**3.7**	%	✓
	Percentage of trainees retained as permanent employees in Germany	90	91	**70.5**	%	✓

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA).
According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.
2) Nationality Split: German 3,926 employees (87%) / Romanian 68 employees (2%) / Turkish 54 employees (1%) / Italian 48 employees (1%), Indian 47 employees (1%), Other 357 employees (all below 1.0% threshold, total: 8%)

Employees & Employment

		2019	2020	**2021**	Unit	Assurance[1]
Occupational health and safety	Lost time injury frequency rate (LTIFR)[2]	1.5	1.6	**1.6**		✓
	Lost time injury frequency rate (LTIFR), cement business line	1.1	1.2	**1.2**		✓
	Lost time injury frequency rate (LTIFR) for contractors	1.7	2.3	**1.8**		–
	Lost time injury severity rate[3]	80	86	**95**		✓
	Lost time injury severity rate, cement business line	62	58	**48**		✓
	Fatality rate[4]	0.7	0.4	**0.0**		✓
	Fatality rate, cement business line	0.8	0.0	**0.0**		✓
	Number of fatalities:					
	– Group employees	4	2	**0**	individuals	✓
	– Employees of other companies	10	3	**1**	individuals	✓
	– Third parties	11	4	**2**	individuals	✓
	– thereof outside our plants	10	4	**2**	individuals	✓
	Lost time injury frequency rate (LTIFR) by region:					
	– Western and Southern Europe	2.6	2.2	**3.4**		–
	– Northern and Eastern Europe-Central Asia	1.7	2.1	**1.6**		–
	– North America	1.2	1.6	**1.0**		–
	– Asia-Pacific	1.0	0.9	**0.7**		–
	– Africa-Eastern Mediterranean Basin	0.6	1.1	**0.9**		–
	Occupational illness rate[5]	1.16	0.47	**0.28**		–
	Illness rate[6]	1.11	1.37	**1.30**		–
	Proportion of employees represented by H&S committees	99.9	97.5	**97.7**		–
	Proportion of employees represented by H&S committees with trade union representation[7]	94.3	94.7	**92.6**		–

1) External assurance of the key figures for 2021 within the framework of the Annual Report 2021 or in line with our obligation with regard to the Global Cement and Concrete Association (GCCA). According to the GCCA Sustainability Framework, baseline/historical data must be adjusted following acquisitions or divestments.
2) Number of accidents (with at least one lost working day) suffered by Group employees per 1,000,000 working hours
3) Number of lost working days resulting from accidents suffered by Group employees per 1,000,000 working hours
4) Number of fatalities of Group employees per 10,000 Group employees
5) Number of officially recognised occupational illnesses suffered by Group employees per 1,000,000 hours worked
6) Proportion of working hours lost due to illness relative to the total number of working hours (excluding Egypt, Morocco, and North America, as the general illness hours are not recorded there)
7) The lower proportion is due to the lack of appropriate trade unions in several countries.

About this report

GRI 102-40, 102-45, 102-46

HeidelbergCement is publishing a Group Sustainability Report for the thirteenth time. In this publication, we explain how the company is fulfilling its economic, environmental, and social responsibilities and report on the progress we have made in 2021. The report is aimed at our employees, investors and analysts, and business partners as well as political players and non-governmental organisations.

Report content and organisation

This Sustainability Report has been prepared according to the GRI Standards of the internationally recognised Global Reporting Initiative (GRI). This report has been created in accordance with the GRI Standards: "Core" option. At the same time, it is our annual progress report (Communication on Progress) on the status of the implementation of the ten principles of the UN Global Compact (UNGC).

→ **GRI content index p. 99f.**

When deciding on the most important sustainability themes for the articles in our report, we were guided by the GRI principles (materiality, stakeholder inclusiveness, sustainability context, completeness). We continuously refine our reporting processes in line with these standards.

→ **Materiality analysis p. 20**

HeidelbergCement endorses the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), and is listed as an official supporter of TCFD-aligned disclosure since September 2020. We have included the recommended disclosures in the Strategy and management chapter of this report.

→ **TCFD report p. 21f.**

Precise definition and methodology of the report

This Sustainability Report for 2021 deals with the 2021 financial year, which runs from 1 January to 31 December. The key facts and figures included in this report correspond to those in the consolidated financial statements and the Group management report of HeidelbergCement's Annual Report 2021. This also applies to the facts and figures concerning our employees. In 2016, we adjusted the consolidation of the key environmental figures to the international accounting standards. In accordance with the revenue consolidation process, joint ventures are not taken into account, even retrospectively. We report our key figures for environmental performance and occupational safety according to the guidelines of the Global Cement and Concrete Association (GCCA). The guidelines in their original wording:

→ **https://bit.ly/GCCAGuidelines**

Some of the key figures on environmental protection and occupational safety from the cement business line were once again subject to an independent limited assurance and are marked as such in this report. As a member of the GCCA, we are required to have these key figures reviewed. The results of this audit can be found on our website:

→ **https://www.heidelbergcement.com/en/sustainability-report**

Data collection

Methods and systems that have been defined across the Group are used to collect data at our business locations. Internal reporting and consolidation of the data take place via centralised electronic KPI data management systems at the Group; here, the key figures are checked for completeness and credibility. Uniform Group-wide definitions of all the relevant key figures, as well as process guidelines for the reporting processes, are available on the intranet.

Information about the editing process

This Sustainability Report is published in German and English. The editorial deadline was 15 May 2022. The previous Sustainability Report was published in June 2021. In line with this annual reporting cycle, the next report will be published in 2023.

Disclaimer of liability

We have compiled the information and key figures contained in this report with extreme care. All of the contents of this report were examined by the employees responsible for this task. However, we cannot completely exclude the possibility that this report includes erroneous information. The report and the information contained in it do not constitute a test of compliance with the current laws, legal regulations, or recognised sustainability practices in the industry.

GRI content index

The Sustainability Report 2021 was available to the Global Reporting Initiative (GRI) for the implementation of the GRI Materiality Disclosures Service. The correct positioning of the materiality disclosures (102-40 to 102-49) in the report was confirmed by the GRI Services team.

GRI 101: Foundation 2016
GRI 102: General disclosures 2016

GRI standard		Page	Comments	UNGC principles
Organisational profile	GRI 102-1: Name of the organisation	→ **105**		
	GRI 102-2: Activities, brands, products, and services	→ **6–8**		
	GRI 102-3: Location of headquarters	→ **17, 66**		
	GRI 102-4: Location of operations	→ **6, 33, 67**		
	GRI 102-5: Ownership and legal form	→ **AR 2021 p. 21**		
	GRI 102-6: Markets served	→ **6–8**		
	GRI 102-7: Scale of the organisation	→ **32, 66/67, 88**		
	GRI 102-8: Information on employees and other workers	→ **68, 95**		6
	GRI 102-9: Supply chain	→ **7, 63**		
	GRI 102-10: Significant changes to the organisation and its supply chain	–	In the reporting year, there were no significant changes.	
	GRI 102-11: Precautionary principle or approach	→ **22–24**		
	GRI 102-12: External initiatives	→ **4, 11/12, 16/17, 21, 32, 47, 51, 66, 75**		
	GRI 102-13: Membership of associations	→ **17, 47**		
Strategy	GRI 102-14: Statement from senior decision-maker	→ **2/3**		1–10
	GRI 102-15: Key impact, risks, and opportunities	→ **11–16, 82–86**		
Ethics and integrity	GRI 102-16: Values, principles, standards, and norms of behaviour	→ **11, 32, 34, 64, 66**		10
	GRI 102-17: Mechanisms for advice and concerns about ethics	→ **34–36**		10
Governance	GRI 102-18: Governance structure	→ **14/15, 21/22; AR 2021 p. 86/87**		
	GRI 102-19: Delegating authority	→ **14/15, 21/22**		
	GRI 102-20: Executive-level responsibility for economic, environmental, and social topics	→ **14/15, 21/22, 34, 35, 49, 68/69, 82**		
	GRI 102-21: Consulting stakeholders on economic, environmental, and social topics	→ **AR 2021 p. 87**		
	GRI 102-22: Composition of the highest governance body and its committees	→ **AR 2021 p. 88–92**		

GRI standard		Page	Comments	UNGC principles
Governance	GRI 102-23: Chair of the highest governance body	→ **AR 2021 p. 89**		
	GRI 102-24: Nominating and selecting the highest governance body	→ **AR 2021 p. 90**		
	GRI 102-25: Conflicts of interest	→ **AR 2021 p. 11, 92**		
	GRI 102-26: Role of highest governance body in setting purpose, values, and strategy	→ **14/15, 21/22, 49**		
	GRI 102-27: Collective knowledge of highest governance body	→ **AR 2021 p. 11**		
	GRI 102-29: Identifying and managing economic, environmental, and social impacts	→ **15, 21–23, 35**		
	GRI 102-30: Effectiveness of risk management processes	→ **22**		
	GRI 102-31: Review of economic, environmental, and social topics	→ **22; AR 2021 p. 70/71**		
	GRI 102-33: Communicating critical concerns	→ **AR 2021 p. 87**		
	GRI 102-35: Remuneration policies	→ **11, 14, 28, 30, 67/68; AR 2021 p. 95/96, 118**		
	GRI 102-36: Process for determining remuneration	→ **AR 2021 p. 93/94**		
	GRI 102-38: Annual total compensation ratio	→ **AR 2021 p. 119**		
Stakeholder engagement	GRI 102-40: List of stakeholder groups	→ **16–18, 39, 78, 98**		
	GRI 102-41: Collective bargaining agreements	→ **67**		3
	GRI 102-42: Identifying and selecting stakeholders	→ **16–18**		
	GRI 102-43: Approach to stakeholder engagement	→ **16–18, 39, 78**		
	GRI 102-44: Key topics and concerns raised	→ **16–18, 20**		
Reporting practice	GRI 102-45: Entities included in the consolidated financial statements	→ **98**		
	GRI 102-46: Defining report content and topic Boundaries	→ **20, 98**		
	GRI 102-47: List of material topics	→ **20**		
	GRI 102-48: Restatements of information	–	In the reporting year, the information was not restated.	
	GRI 102-49: Changes in reporting	–	In the reporting year, there were no changes regarding the material topics.	
	GRI 102-50: Reporting period	→ **98**		
	GRI 102-51: Date of most recent report	→ **98**		
	GRI 102-52: Reporting cycle	→ **98**		
	GRI 102-53: Contact point for questions regarding the report	→ **105**		
	GRI 102-54: Claims of reporting in accordance with the GRI Standards	→ **98**		
	GRI 102-55: GRI content index	→ **99–104**		
	GRI 102-56: External assurance	→ **49, 98**		

Material topics

GRI standard		Page	Comments	UNGC principles
GRI 201: Economic performance 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12**		7
	GRI 201-1: Direct economic value generated and distributed	→ **32, 68, 78, 88, 95**		
	GRI 201-2: Financial implications and other risks and opportunities due to climate change	→ **23–28**		7
	GRI 201-3: Defined benefit plan obligations and other retirement plans	→ **68, 95; AR 2021 p. 178–183**		
	GRI 201-4: Financial assistance received from government	→ **26, 43, 53–56**		
GRI 202: Market presence 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **33, 75**		6
	GRI 202-2: Proportion of senior management hired from the local community	→ **33, 75**		6
GRI 203: Indirect economic impacts 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 33/34, 78/79, 86**		
	GRI 203-2: Significant indirect economic impacts	→ **11/12, 33/34, 78/79**		
GRI 204: Procurement practices 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11, 33**		
	GRI 204-1: Proportion of spending on local suppliers	→ **33**		
GRI 205: Anti-corruption 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 14, 32, 34–37**		10
	GRI 205-1: Operations assessed for risks related to corruption	→ **34; AR 2021 p. 65**		10
	GRI 205-2: Communication and training about anti-corruption policies and procedures	→ **34–37**	We do not report trained employees broken down by region and employee category, as these are covered in the data and we do not consider it valuable to break them down further.	10
	GRI 205-3: Confirmed incidents of corruption and actions taken	→ **37**		10
GRI 206: Anti-competitive behaviour 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 14, 32, 34–37**		
	GRI 206-1: Legal actions for anti-competitive behaviour, antitrust, and monopoly practices	→ **37; AR 2021 p. 81**		
GRI 301: Materials 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 16, 46, 49/50, 57, 83**		7–9
	GRI 301-1: Materials used by weight or volume	→ **8, 90**	We do not report on the weight or volume of the materials used, as this information is relevant to competition and is subject to confidentiality.	7, 8
	GRI 301-2: Recycled input materials used	→ **43, 57, 90**		7, 8
GRI 302: Energy 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11–13, 15, 27, 30, 39/40, 49/50, 57, 90**		7–9
	GRI 302-1: Energy consumption within the organisation	→ **30, 50, 57/58, 91/92**		7, 8
	GRI 302-3: Energy intensity	→ **91**		8
	GRI 302-5: Reductions in energy requirements of products and services	→ **44–47**		7–9

GRI standard		Page	Comments	UNGC principles
GRI 303: Water and effluents 2018	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 23/24, 45, 49/50, 62/63, 84**		7, 8
	GRI 303-1: Interactions with water as a shared resource	→ **11/12, 23/24, 62/63**		
	GRI 303-2: Management of water discharge-related impacts	→ **62/63**		
	GRI 303-3: Water withdrawal	→ **94**		7, 8
	GRI 303-4: Water discharge	→ **94**		8
	GRI 303-5: Water consumption	→ **94**		
GRI 304: Biodiversity 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 14, 16, 22, 49/50, 58–60, 84/85**		8
	GRI 304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	→ **58/59, 93**	We do not report on the details for each extraction site, as this is not possible due to the large number of extraction sites involved.	8
	GRI 304-2: Significant impacts of activities, products, and services on biodiversity	→ **16, 58/59**		8
	GRI 304-3: Habitats protected or restored	→ **59**	We do not report the details of each protected or restored habitat, as this is not possible given the large number.	
GRI 305: Emissions 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11–16, 21–23, 30, 39–40, 44–47, 49–57, 61, 83/84**		7–9
	GRI 305-1 Direct (Scope 1) GHG emissions	→ **30, 91**		7, 8
	GRI 305-2: Energy indirect (Scope 2) GHG emissions	→ **30, 91**		7, 8
	GRI 305-3: Other indirect (Scope 3) GHG emissions	→ **91**		8
	GRI 305-4: GHG emissions intensity	→ **30, 51, 91**		8
	GRI 305-5: Reduction of GHG emissions	→ **13, 30, 40, 44, 50–52, 57**		
	GRI 305-7: Nitrogen oxides (NO_X), sulphur oxides (SO_X), and other significant air emissions	→ **61, 93**		7, 8
GRI 306: Waste 2020	GRI 103: Management Approach 2016 (incl. 103-1, 103-2, 103-3)	→ **11/12, 49/50, 62, 83**		8
	GRI 306-1: Waste generation and significant waste-related impacts	→ **54, 56, 62**		
	GRI 306-2: Management of significant waste-related impacts	→ **11/12, 13, 16, 30, 43, 46, 51, 53, 56/57, 62**		
	GRI 306-3: Waste generated	→ **91**		
GRI 307: Environmental compliance 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 32/ 33, 49/50, 58**		8
	GRI 307-1: Non-compliance with environmental laws and regulations	→ **50**		8
GRI 308: Supplier environmental assessment 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 32, 49, 64**		8
	GRI 308-2: Negative environmental impacts in the supply chain and actions taken	→ **64**		8
GRI 401: Employment 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11, 66, 76**		6

GRI standard		Page	Comments	UNGC principles
GRI 401: Employment 2016	GRI 401-1: New employees hires and employee turnover	→ **67, 95**	We do not report data on new hires and employee turnover by gender and age group because the data is not available. We are currently rolling out a global system as the basis for future data collection and reporting, and plan to start reporting the data most likely from financial year 2024.	6
GRI 402: Labour/ management relations 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **66/67**		3
	GRI 402-1: Minimum notice periods regarding operational changes	→ **67**		3
GRI 403: Occupational health and safety 2018	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 14/15, 27, 66, 68/69, 85**		1, 6
	GRI 403-1: Occupational health and safety management system	→ **69**		
	GRI 403-2: Hazard identification, risk assessment, and incident investigation	→ **68–70**		
	GRI 403-3: Occupational health services	→ **72**		
	GRI 403-4: Worker participation, consultation, and communication on occupational health and safety	→ **69, 97**		
	GRI 403-5: Worker training on occupational health and safety	→ **69/70, 73**		
	GRI 403-6: Promotion of worker health	→ **69, 72, 76**		
	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	→ **68**		
	GRI 403-8: Workers covered by an occupational health and safety management system	→ **69, 90**		
	GRI 403-9: Work-related injuries	→ **70, 97**	We do not report on documentable work-related injuries and injuries with serious consequences, because the data is not available. These are covered in the disclosures on occupational health and safety.	
GRI 404: Training and education 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11, 66, 72–74**		6
	GRI 404-1: Average hours of training per year per employee	→ **96**	We do not report average training hours by gender and employee category because the data is not available. We are currently rolling out a global system as the basis for future data collection and reporting, and plan to start reporting the data most likely from financial year 2024.	6
	GRI 404-2: Programs for upgrading employee skills and transition assistance programs	→ **67, 72–74**		6
	GRI 404-3: Percentage of employees receiving regular performance and career development reviews	→ **72/73**		1, 6
GRI 405: Diversity and equal opportunity 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **66, 75/76, 85/86**		6
	GRI 405-1: Diversity of governance bodies and employees	→ **66, 75/76, 95/96; AR 2021 p. 91/92**		6

GRI standard		Page	Comments	UNGC principles
GRI 405: Diversity and equal opportunity 2016	GRI 405-2: Ratio of basic salary and remuneration of women to men	→ **67**	We do not report on the ratio of basic salary and remuneration of women to men because the data is not available. We are currently working on the implementation of a new global HR system and a global job architecture to enable analyses of compensation data.	
GRI 406: Non-discrimination 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **12, 66**		6
	GRI 406-1: Incidents of discrimination and corrective actions taken	→ **37**		6
GRI 407: Freedom of association and collective bargaining 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **12, 36, 64**		2, 3
	GRI 407-1: Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	→ **12, 36**		2, 3
GRI 408: Child labour 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **12, 36, 64**		2, 5
	GRI 408-1: Operations and suppliers at significant risk for incidents of child labour	→ **12, 36**		2, 5
GRI 409: Forced or compulsory labour 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **12, 36, 64**		2, 4
	GRI 409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labour	→ **12, 36**		2, 4
GRI 412: Human rights assessment 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 32, 34–37, 64, 82**		1, 2
	GRI 412-1: Operations that have been subject to human rights reviews or impact assessments	→ **34–36**		2
GRI 413: Local communities 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 16/17, 78/79, 86**		1
	GRI 413-1: Operations with local community engagement, impact assessments, and development programs	→ **16/17, 78/79**		1
GRI 414: Supplier social assessment 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11/12, 32, 35/36, 49, 64**		2
	GRI 414-2: Negative environmental impacts in the supply chain and actions taken	→ **37, 64**		2
GRI 416: Customer health and safety 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **39**		
	GRI 416-1: Assessment of the health and safety impacts of product and service categories	–	HeidelbergCement sells standardised products whose effects have been analysed in detail. Specific safety data sheets are required for all these products.	
GRI 418: Customer privacy 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **32, 39**		
	GRI 418-1: Substantiated complaints concerning breaches of customer privacy and losses of customer data	–	We are not aware of any justified complaints regarding violations of the protection or loss of customer data.	
GRI 419: Socioeconomic compliance 2016	GRI 103: Management approach 2016 (including 103-1, 103-2, 103-3)	→ **11, 14, 32, 34**		
	GRI 419-1: Non-compliance with laws and regulations in the social and economic area	→ **37; AR 2021 p. 64/65**		

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