



# Climate Transition Plan

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Heidelberg  
Materials

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# Building a net zero future

## Introduction

The world needs smart, sustainable, and resilient infrastructure, buildings, and public spaces. Climate change as one of the major global challenges is for us of highest priority as we are operating in a highly energy-intensive industry.

At Heidelberg Materials, we support the aim of the UNFCCC Paris Agreement to limit global warming to 1.5°C. We have made a clear commitment to help build a net zero future, which is why we are transforming our business and placing sustainability at the core of what we do. Our 1.5°C-aligned climate transition plan serves as a guiding principle and outlines our net zero journey.

## Key elements of our climate transition plan

The following key elements determine the cornerstones of our climate transition plan.

### 1. Governance and stakeholder engagement

We have established robust governance structures that assign responsibility and accountability for our climate transition plan to our Chief Sustainability Officer who is a member of the Managing Board. Our CSO has responsibility for all ESG topics and our climate transition plan at the highest management level, while the Chairman of the Managing Board manages and monitors all climate-related targets in the climate transition plan.

Our CSO oversees the comprehensive implementation of our pathway to a net zero global economy and is responsible for our holistic approach to CO<sub>2</sub> strategic planning, reducing CO<sub>2</sub> emissions along the value chain, and accelerating circularity and sustainability in the whole product portfolio.

Our CSO is responsible for strategic planning as well as for reviewing the progress and status of greenhouse gas emissions reductions and integrating our climate transition activities into our overall business strategy. Our new Sustainability Commitments 2030 clearly focus on our net zero pathway by driving the decarbonisation of our sector.

General Managers for all our operative units are equally responsible for successfully reducing Heidelberg Materials' environmental impact in line with our business strategy. At Group and country level, multidisciplinary teams have been established to ensure, develop, review, and implement our CO<sub>2</sub> reduction roadmaps.

To incentivise the Managing Board and C-suite executives to achieve our transition plan, the variable remuneration of the CEO, Managing Board members, and General Managers is linked to the achievement of the Group-wide CO<sub>2</sub> (reduction) roadmap set by Heidelberg Materials. Besides these senior management positions, the CO<sub>2</sub> component is also part of the variable remuneration component of bonus-eligible employees. They receive a monetary reward for meeting their industrial and operational objectives in line with the set targets and projects on climate-related issues.

With the help of established feedback mechanisms, we ensure that we both track progress and engage with our key stakeholders regarding our climate transition activities on a regular basis. We initiate direct dialogue with them during, for example, our AGMs, regular Capital Markets Days, quarterly conference calls, investor roadshows, and conferences. With regard to customers, we offer a broad variety of customer events in which we discuss and challenge our climate transition plans.

Through these actions, we continuously share the latest developments in our low-carbon products with all customers and promote their usage in order to help reduce the carbon footprint of buildings and construction projects and cut emissions overall. We believe that engaging with all our customers is a must. Therefore, our country-level efforts address our full country portfolio. We take different approaches to our customers, tailored to the specific market. As a global company with a presence across more than 50 countries, we focus on each local market via our sales teams, who are in continuous contact with our customers to understand their needs and expectations. In Germany in 2022, for example, we launched the EcoCrete® brand, which offers a CO<sub>2</sub> reduction of up to 66% per cubic metre of concrete. Several customers have shown interest in this material as it will help to reduce the carbon footprint of their projects. We aim to provide enough information to our customers so that they can make informed decisions, especially when it comes to the carbon footprint. We aim to contribute to our customers' CO<sub>2</sub> reduction by encouraging the use of low-carbon products.

On the supplier side, we are conducting open feedback discussions and surveys, as well as pursuing targets in terms of external green ratings, which are clearly tailored to address our sustainability activities. To ensure the integration of climate transition into the political landscape, we are facilitating an open exchange with policymakers on a global scale. We actively engage with suppliers to learn about them and incentivise them to take measures to reduce their carbon emissions, including encouraging them to set science-based targets for CO<sub>2</sub> reduction.

With our suppliers, we constantly share best practices and encourage them to build transparent and forward-looking supply chains. As a key component of our procurement strategy and policy, we strongly communicate our approach to a more sustainable supply chain in key supplier meetings. Our Responsible Procurement program engages directly with suppliers to increase their commitment to reducing CO<sub>2</sub>. We have set ourselves the SBTi-approved target to cut supplier-related Scope 3 emissions by 25% by 2030 globally compared with 2020 levels. Additionally, we aim to constantly increase the number of suppliers committed to having, at least an appointed member of the company's management team with a responsibility for measuring and reducing their carbon footprint and planning to measure carbon emissions in the near future.

We acknowledge that our climate commitment also needs to be mirrored in our political engagements at global, regional, and local level in order to support the transformation of our industry. We advocate for comprehensive carbon pricing systems coupled with a level playing field to enhance effective responses to climate change. We ensure global governance and alignment of our advocacy work and our activities in associations through our interdisciplinary task forces, which include experts from Group staff functions and operations. Interdisciplinary working groups comprising experts from different departments are responsible for the topics of CO<sub>2</sub> management, sustainable land management, sustainable construction, social responsibility, sustainability strategy, and risk management, as well as sustainability ratings and reputation. Several of these topics, such as CO<sub>2</sub> management, are further coordinated by steering committees, which report to the Managing Board.

## 2. CO<sub>2</sub> roadmaps

Heidelberg Materials' transition plan is underpinned by robust country and site level roadmaps that consider the long-term plan and a yearly improvement in each of the reduction levers: alternative fuels, biomass, process efficiency, clinker incorporation factor, etc.

The CO<sub>2</sub> roadmaps have been drafted by the country teams in close collaboration with Heidelberg Materials global expertise: Competence Center Cement, Competence Center Ready Mix, ESG, Strategy and Development, Technologies and Partnerships, Procurement and Commercial. The Managing Board members with responsibility for the respective areas are closely involved in the development of the roadmaps to ensure the highest management-level engagement in the process.

Once the roadmaps are considered ready by the countries, they are being reviewed and challenged through different iterations by a panel of internal stakeholders, including the CSO, to be refined. Finally, the roadmaps are submitted for approval by the Managing Board. Once they have been approved by the Board, the ESG and Technical departments engage in an annual implementation review, punctuated by regular tracking.





### 3. Risks and opportunities

The analysis of climate-related risks is part of Heidelberg Materials' overall risk management approach, and climate-related risks are fully integrated into the Group's regular risk management process. We are considering short (current-2025)-, medium (until 2030)- and long-term (2030-2050) time horizons for the climate-related risks. The process of identifying climate-related risks is performed regularly a) bottom-up on a decentralised basis by the country management b) top-down from a global perspective by the ESG and Group Insurance and Corporate Risk departments. General macroeconomic data as well as other industry-specific factors and risk information sources serve as auxiliary parameters for the process, as does the internal risk catalogue, which records the various financial and non-financial climate-related risk categories. Climate-related risks are then consolidated in our company-wide Risk Map, with regard to any potentially critical economic impact on our company.

According to the definition of the Task Force on Climate-related Financial Disclosures (TCFD), climate-related risks include both physical risks and transition risks. Physical climate risks are divided into acute and chronic risks. In our analysis of physical climate risks, we are therefore considering both the current risks and – for the periods to 2030 and 2050 – the recognised scenarios (Representative Concentration Pathways) RCP 2.6 (optimistic), RCP 4.5 (stabilisation), and RCP 8.5 (pessimistic) of the Intergovernmental Panel on Climate Change (IPCC).

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<sub>2</sub> concentration in the atmosphere. The transition risks that we identified as the most important for HeidelbergMaterials are of different nature and encompass risks such as changes in climate-related regulations, substitution of existing products with lower-emission ones, reputational risks as well as market risks resulting from a possible change in consumer preferences. These risks are actively monitored and mitigated as part of our own journey towards a low-emission economy.

Regarding climate-related opportunities, the cement industry can make a decisive contribution in the transition to a low-emission and climate-resilient global economy. The urbanisation trend and growing world population are expected to increase the demand for cement and concrete. In the medium term, we see opportunities in a growing demand for durable building materials produced using resource-efficient processes for the construction of resilient infrastructure. With the increasing likelihood of extreme weather events and natural disasters, such as flooding and sea level rise due to climate change, the importance of robust concrete infrastructure capable of withstanding and protecting against the impacts of such events in the regions affected is growing.

Our strategic position on climate protection and circularity validates our many years of research and the attention we have given to exploring possible uses for recycled concrete. Another focus is on the recarbonation of cement in recycled fractions. The aim of this process called “enforced recarbonation” is to store the same amount of CO<sub>2</sub> in this material as was previously released during the cement production process. The results of our R&D efforts are encouraging, demonstrating a CO<sub>2</sub> uptake potential close to the amount of process greenhouse gases emitted during clinker production. This can contribute immensely to the decarbonisation of the industry, and it gives us the opportunity to access new markets with decarbonated products.

With the continuous expansion of our CCUS activities, we expect to reduce costs and increase revenue. Firstly, capturing and storing CO<sub>2</sub> removes the need to purchase emission certificates. The financial effect will increase as we emit less CO<sub>2</sub> and as the price of carbon certificates rises. Secondly, we expect a significant revenue effect in the medium term due to higher sales prices for sustainable products. We anticipate that these two effects will exceed the expected annual investment costs of expanding our CCUS projects.



## 4. Targets

Our ambitious climate protection commitment has a special strategic role to play. Already validated by the SBTi and aligned with a 1.5°C pathway, our 2030 targets are to reduce specific net CO<sub>2</sub> emissions to 400 kg per tonne of cementitious material and cut our specific emissions from purchased electricity by 65%. Under the SBTi framework, our commitment is as follows:

**“Heidelberg Materials commits to reduce gross Scope 1 and 2 GHG emissions by 26.7% per tonne of cementitious material by 2030 from a 2020 base year\*. Within this target, Heidelberg Materials commits to reduce gross Scope 1 GHG emissions by 24% per tonne of cementitious material and Scope 2 GHG emissions by 65% per tonne of cementitious material within the same time frame\*. Heidelberg Materials also commits to reduce absolute Scope 3 GHG emissions from purchased goods and services by 25% within the same time frame.”**

### Reducing our Scope 1 CO<sub>2</sub> emissions



We will achieve this, among others, by optimising the product mix and making process improvements, such as maximising the use of alternative fuels, switching to electricity from renewable energy sources, and investing in plant efficiency. Heidelberg Materials is a signatory of the Race to Zero and Business Ambition for 1.5°C campaigns, confirming the commitment to limit global warming to 1.5°C and achieve net zero carbon emissions by 2050 at the latest. To achieve Net Zero by 2050 at the latest, Heidelberg Materials will maximize all conventional levers and extend measures to scale up new technologies, such as carbon capture, utilisation, and storage (CCUS). At the same time, we will increase our efforts in the circular economy, for example by offering circular alternatives for half of our concrete products.

CCUS is a key component of our climate strategy. Our facility in Brevik, Norway, is scheduled to go into operation as early as 2024. By 2030 we will have implemented further projects at Edmonton in Canada, Padeswood in the United Kingdom, and Slite in Sweden, among other locations. Just with the CCUS projects already launched by Heidelberg Materials, we aim to cut our carbon emissions by 10 million tonnes cumulatively by 2030.

Heidelberg Materials calculates and reports its Scope 1 and 2 emissions in accordance with the CO<sub>2</sub> and Energy Accounting and Reporting Standard for the Cement Industry and its Scope 3 emissions in accordance with the Cement Sector Scope 3 GHG Accounting and Reporting Guidance from the WBCSD. Our emissions reduction targets are in line with the 1.5°C pathway and include an absolute reduction of 25% in purchased cement and clinker.

In February 2023, the Science Based Targets initiative (SBTi) validated Heidelberg Materials' 2030 CO<sub>2</sub> reduction targets in accordance with its new 1.5°C framework. The commitments towards the SBTi are consistent with Heidelberg Materials' own previously communicated target to reduce specific net CO<sub>2</sub> emissions to 400 kg per tonne of cementitious material by 2030. In terms of our targets, we have committed to separate reduction targets:

- Scope 1: a reduction of 24% vs 2020 per tonne of cementitious material (specific emissions)
- Scope 2: a reduction of 65% vs 2020 per tonne of cementitious material (specific emissions)
- Scope 3: a reduction of 25% vs 2020 in absolute emissions from purchased clinker and cement

For direct CO<sub>2</sub> emissions (Scope 1) for the cement business line, process emissions as well as fuel-related emissions are considered. In alignment with the GCCA definitions, CO<sub>2</sub> emissions from using biomass as a fuel are considered as being climate neutral. For our aggregates business line, we report our Scope 1 emissions based on the fuel consumption on site and apply appropriate emission factors to derive the associated CO<sub>2</sub> emissions.

To calculate indirect emissions related to the consumption of electricity (Scope 2) for our cement and aggregates business lines, we apply the Greenhouse Gas Protocol Scope 2 Guidance (2015) and report location-based emissions by making use of emission factors provided by the International Energy Agency (IEA).

For the other indirect emissions (Scope 3), we report in alignment with the recommendations of the GCCA and Cement Sector Scope 3 GHG Accounting and Reporting Guidance about the four most material categories (purchased materials, fuels, up- and downstream transportation and distribution). Emissions relating to purchased materials are based on the volumes of main raw materials we procure externally and cover our cement and ready-mix business lines. We apply emission factors from the GCCA EPD tool (based on EcoInvent). Emissions from purchased fuels are reported for the cement and aggregates business lines and are calculated using the latest Defra well-to-tank factors (UK Government GHG Conversion Factors for Company Reporting 2022). Upstream and downstream transportation and distribution information is collected annually for all our activities. We calculate the overall CO<sub>2</sub> emissions by using transported volumes and – if necessary – estimates of distances travelled as well as emission factors from the GCCA EPD tool.

## 5. Financial planning

The achievement of our 2030 and 2050 targets depends on the realisation of several projects and initiatives that are outlined at country and plant level. This entrepreneurial activity is accompanied by a consistent allocation of capital. With net investments of €1.1 billion per year, including €100 to €150 million in conventional CO<sub>2</sub>-saving measures, we have reached the required level of investment to operate our production sites efficiently and to meet market requirements. A detailed overview of the annual expenditure on research and development, CAPEX, and OPEX is incorporated on a yearly basis in the annual report.

In January 2023, we placed a sustainability-linked bond with an issue volume of €750 million and a term until 2032. In view of the bond maturities coming up in 2024, it is being considered to issue additional bonds for refinancing in 2023, depending on the market situation. In financing management, the focus will remain on sustainable financing in 2023. Heidelberg Materials aims to increase the share of sustainable financial instruments to over 70% by 2025.

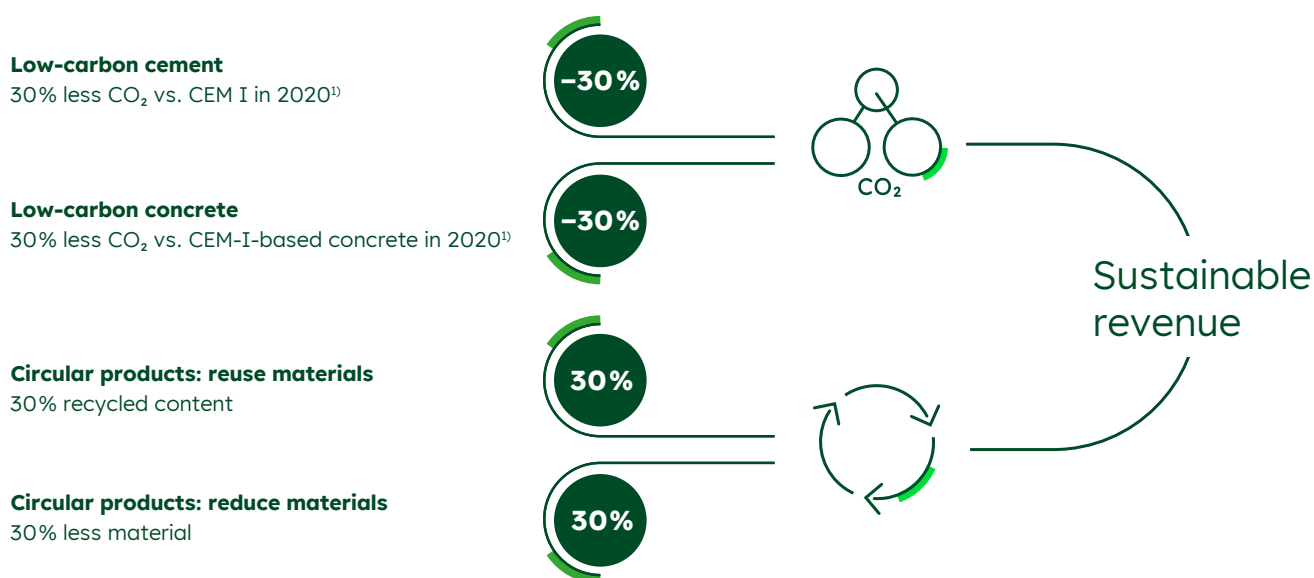


## 6. Production and products

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. In dialogue with our customers, the responsible staff in the Group countries explore the need for new sustainable products for their respective markets. We accept our responsibility to continuously reduce the carbon footprint of our production processes so that we will be able to provide carbon-neutral concrete to all our customers by 2050 at the latest.

The topic of sustainable products is assigned to the Group department ESG Programs in the Sustainability Office. The use of by-products from other industrial sectors for the production of clinker and cement and the recycling of demolition concrete allow us to manufacture concrete in a more resource-efficient way and thus with lower CO<sub>2</sub> emissions.

### Criteria for sustainable products



1) -30% vs. GCCA CEM1 in 2020, translates to <552 kg CO<sub>2</sub>/t cementitious and <5.5 kg CO<sub>2</sub>/m/MPa

A significant part of our research and development work is aimed at developing new cement and concrete formulations to minimise energy consumption and CO<sub>2</sub> emissions, and thereby also reduce our environmental impact and costs. Our German subsidiary Heidelberg Materials Beton, for example, offers a comprehensive portfolio of sustainable concretes under the brand name EcoCrete®, which, depending on the application, can reduce CO<sub>2</sub> by up to 66% per cubic metre of concrete in comparison with the industry reference. This reduction is achieved by technical means alone and without compensatory measures.

We invest in new technologies for the mitigation of process carbon emissions from clinker production, such as carbon capture, utilisation, and storage. Our R&D efforts to develop innovative low-carbon production technologies and products receive highest priority. This also comprises the enhanced use of recycled concrete along the whole production value chain in order to conserve natural resources, minimise wastage of valuable construction materials, and support our goal of providing carbon-neutral concrete to all of our customers by 2050 at the latest.

