RHI MAGNESITA

2022 Sustainability Report

Contents

Find out more in our annual report

We are committed to providing our stakeholders with an in-depth understanding of our operations, plans, and financial performance. To do so, our annual report includes more detailed information and descriptions of our activities, our plans for the future, our financial results, and our business practices.

Download the full report

Our plans, performance and governance

We are RHI Magnesita

We offer refractory products, customised services and innovative solutions that help shape tomorrow's world. Our advanced products are essential for our customers in the steel, cement, metals, glass and chemicals industries to operate. The end markets driving demand for our products include the construction, infrastructure, automotive, machinery, electronics and energy sectors.

Our purpose

Our purpose is to master heat, enabling global industries to build sustainable modern life.

Our values

At RHI Magnesita, we believe in an ethical workplace, performing our roles with integrity, honesty, reliability and in respectful collaboration with each other. Extending these ethical behaviours to interactions with all of our business partners is vital for the long term sustainable success of RHI Magnesita.

Sustainability leadership

Our commitment to sustainability is evidenced by significant CO_2 emissions reduction achieved since 2018. As a leader in the global refractory industry, we have a strong market share in electric arc furnace refractories and have developed proprietary technology for using secondary raw materials without loss of refractory performance. We proudly lead the refractory industry by providing transparency on the CO_2 footprint of each product, allowing our customers to make the right choices to reduce their own Scope 3 emissions from the consumption of refractories.

Sustainability highlights

Diversity

33%

2018: 7%
Share of female Board representative

RHI Magnesita believes that embracing diversity and building inclusion into everything we do is important for the success of our business.

Carbon Intensity

1,75

2018: 1.90
tCO_2/t

A reduction of 8% in carbon intensity as compared to 2018 levels has been accomplished. RHI Magnesita is taking steps to reduce the carbon intensity of its energy sources by switching to more CO_2 efficient options and increasing the use of renewable energy.

Health & Safety

0.20

2018: 0.43
Lost time injury frequency

Our commitment to ensure a safe and healthy workplace for our employees and contractors has grown even stronger due to the COVID-19 pandemic. We have taken all necessary steps to ensure the health, safety and wellbeing of everyone who is a part of our organization.

Recycling rate

10.5%

2018: 3.8%

RHI Magnesita has developed proprietary technology for increasing the use of secondary raw materials with no loss in refractory performance. This reduces customer waste and eliminates CO_2 emissions which would otherwise be released in the mining and processing of new raw materials. In 2022 the Group launched its new recycling and decarbonisation joint venture in Europe MIRECO.

Sustainability

Introduction

We continue to take pride in our leadership position in sustainability. Positioning the Group's products and services ahead of sustainability driven technological change in our customer industries will be essential for long term success, while we are also working hard to improve the sustainability profile of our own business.

Herbert Cordt
Chairman

Our purpose

RHI Magnesita's purpose is to master heat, enabling global industries to build sustainable modern life. Our advanced products are essential for our customers in the steel, cement, metals, glass, energy and chemicals industries. Through the reliable supply of innovative refractory products and services, we enable our customers to sustainably deliver the basic materials that are essential for modern life. We aim to be our customers' partner of choice on their own decarbonisation journeys.

Our sustainability strategy

We strive to be a sustainability leader in our sector. Our sustainability strategy is aligned with and based on the ten Principles of the UN Global Compact (UNGC) covering human rights, labour, environment, and anti-corruption. RHI Magnesita's sustainability strategy is focused on:

- Excellent performance in Health & Safety.
- Climate change mitigation actions.
- Increased use of secondary raw materials to reduce CO_2 emissions.
- R&D investment to develop emissions avoidance, alternative fuels, and carbon capture, storage and utilisation technologies.
- Partnering with our customers to reduce their emissions through innovative refractory products or heat management solutions.
- Building market share in segments that are essential to the transition away from fossil fuels in our customer industries e.g. EAF, direct reduction, electrolysis.
- Sustainable procurement practices.
- Upholding diversity in the workplace.
- Minimising environmental impacts.
- Building strong relationships with all stakeholders including communities, employees and governments.
- Linking debt facilities and management compensation to sustainability performance.

Our 2025 targets

Our 2025 sustainability targets were defined in 2019 based on engagement with internal and external stakeholders, which identified the following areas of materiality for our business: CO_2 emissions, Energy use, recycling, Diversity, Health & Safety, NOx and SOx emissions. These topics were reconfirmed on a materiality analysis realised at the year end of 2022. The results of this analysis will be the base to update the existing targets, and to set up new targets. More details can be seen **here** on our website.

Standards, frameworks and reporting

RHI Magnesita is committed to leading sustainability standards and frameworks. In the period from 01.01.2022 — 31.12.2022, we reported in accordance with GRI Standards. As a supporter of the Taskforce on Climate-Related Financial Disclosures (TCFD), we have identified and quantified the climate-related risks and opportunities. We submitted annual climate reports to CDP in 2022 and scored an A- rating, which is in the Leadership band. In accordance with the EU taxonomy,we report the proportion of our revenue, operating expenditure and capital expenditure for FY 2022 that are taxonomy-non eligible, eligible and aligned. Our integrated management system is compliant with ISO 14001 (environmental), ISO 50001 (energy), ISO 45001 (occupational health and safety) and ISO 9001 (quality). We also report our gender diversity progress to the FTSE Women Leader Review each year.

We are fully committed to open and transparent reporting. As a signatory of the UNGC since 2018, we report annually on our progress, engagement and contribution to the UN Sustainable Development Goals (SDGs), that are most relevant to our business operations. This report acts as our Communication on Progress.

This non-financial report covers all activities, sites, and industrial assets operated or contractually managed by RHI Magnesita N.V. or one of its subsidiaries.

RHI Magnesita commissioned Deloitte Audit Wirtschaftsprüfungs GmbH for an independent third-party limited assurance engagement on the non-financial report for the year ended 31 December 2022, according to Dutch transposition of the NFI-Decree, the Taxonomy Regulation ((EU) 2020/852) and GRI Standards. Please click **here** for more details on the assurance process and conclusions.

Contribution to SDGs

We support the UN Sustainable Development Goals ("SDGs") and have identified these as the goals our business is best placed to actively support.

Our 2025 targets

Material issue	Targets by 2025 vs 2018 baseline year	Progress in 2022		2018	2019	2020	2021	2022	SDG
1. CO_2 emissions	Reduce by 15% per tonne of product — Scope 1, 2, 3 (raw materials)	CO_2 intensity has been reduced by 8.0% versus the 2018 baseline year. Recycling has outperformed. At Ponte Alta raw material production site in Brazil, a successful switch away from petroleum coke to sustainable sourced charcoal has delivered 18kt of annualised CO_2 emission savings.	Absolute (kt CO_2)[1]	5.483	4.702	4.297	5.050	4.196	
			Relative (t CO_2/t)[2]	1.90	1.89	1.97	1.85	1.75	
2. Energy	Reduce by 5% per tonne of product	By end of 2022, 65% of purchased electricity was from low carbon or renewable sources. This marks an increase of 48% and reduces our Scope 2 emissions to 90 kt.	Absolute energy consumption (GWh)	5.718	5.227	4.577	5.163	4.842	
		In 2022, energy efficiency decreased by 5% compared to 2021. The main reason for that was the increase in sourcing of raw material from the Group's own assets as the new rotary kiln processing dolomite ore in Hochfilzen, Austria, and overall reduced capacity utilisation.	Relative (MWh/t)[2]	2.00	1.97	2.03	1.90	2.02	
3. Recycling	Increase use of secondary raw materials to 10%	Recycling rate of 10.5% in 2022, achieved 2025 target of 10% three years early.	Use of secondary raw materials	3.8%	4.6%	5.0%	6.8%	10.5%	
4. Diversity	Increase women on our Board and in senior leadership to 33%	Gender diversity target of 33% achieved at Board level, further progress required at EMT + EMT direct reports where female representation has increased to 21% from 12% in 2018.	Board	7%	23%	25%	38%	33%	
			EMT and EMT direct reports	12%	17%	25%	22%	21%	
5. Safety	Maintain LTIF at <0.5 (goal: zero accidents)	Health & Safety target to maintain LTIFR below 0.50 achieved.	per 200,000 hours worked	0.43	0.28	0.13	0.19	0.20	
6. NOx and SOx emissions	Reduce by 30% by 2027 (vs 2018)	NOx and SOx reductions proceeding on track. China target achieved in 2021, US in progress (2022): NOx and SOx abatement technologies installed.			China target 2021	North America target 2025	Europe target 2027	South America target 2027	

1. Historical CO_2 emission data were revised to reflect new acquisitions and changes that were made following an external verification process that took place in July 2022.
2. Adaptations in line with the Greenhouse Gas protocol and refinement in reporting result in updated CO_2 and energy efficiency figures for 2018–2022.

Governance

RHI Magnesita is committed to leading governance and sustainability practices, as demonstrated by its commitment to the UN Global Compact and to the reporting of its sustainability performance according to Global Reporting Initiative standards.

At Board level, a dedicated CSC supports the Board, acting as an advisory body to ensure the long-term sustainability of the business. The CSC monitors performance against relevant KPIs and assesses risks and opportunities associated with climate change, environmental, health and safety, stakeholder relations and other ESG risks.

At executive level, The Chief Technology Officer (CTO) and functional leaders are allocated responsibility for delivering the Group's sustainability priorities in their specific areas or regions. The Global Sustainability Team has responsibility for external reporting, reviewing and assessing sustainability-related risks and opportunities and liaising with the Board, management and key external stakeholders (such as ESG ratings agencies) to develop and implement strategies for driving sustainability across our business. The team works in close collaboration with senior leadership, functional and regional business units, plant managers and other internal sustainability stakeholders to determine, monitor and deliver the sustainability strategy and targets.

The Global Sustainability Team provides regular updates on performance to the CSC including an annual review of sustainability performance. A Sustainability Forum has been established to bring together various executives with responsibility for improving sustainability performance.

In 2022, we increased our focus on supply chain sustainability with the creation of a dedicated team to develop our global sustainable procurement strategy and provide guidance to the Group's regional operations. Each region has a sustainable procurement expert who is responsible for driving initiatives such as desktop and on-site supplier assessments. The global sustainable procurement team supports and cooperates with the Global Sustainability Team and reports as required to the CSC.

Ethics and compliance

In 2022, we enhanced and further embedded our compliance policies and procedures and conducted training and communications initiatives in the areas of sanctions and export controls, business partner due diligence, data privacy and anti-bribery and corruption.

Anti-corruption is one of the UN Global Compact's ten principles which we have committed to integrating into our business strategy and operations. We take a zero-tolerance approach to any incidents of fraud, bribery or corruption in our operations and value chain. This approach is set out in our Code of Conduct and the Supplier Code of Conduct.

Comprehensive online training on topics such as business ethics, anti-corruption, data privacy or sanctions and export controls and regular monitoring of the completion rates ensures that all office-based employees, including new hires, are trained. Additional sessions are provided as necessary, for example for sales staff. Anti-corruption and other key compliance topics are regularly included in global and regional communications campaigns.

We regularly conduct compliance risk assessments, such as fraud risk assessments, with results presented to management and the Audit & Compliance Committee each year. We have implemented digital registers, workflows and employee guidelines to address, document and monitor conflicts of interest declarations, gifts and invitations and community investment approvals.

Business partners (e.g. customers, sales intermediaries and suppliers) and transactions such as mergers or acquisitions are subject to a due diligence process. In 2022, additional focus was placed on business partner checks to ensure compliance with sanctions and export control regulations. All sales agents are certified by TRACE International, a leading anti-bribery standard-setting organisation.

We are committed to upholding human rights and labour rights. In 2022, the CSC, on behalf of the Board, approved a Human Rights Policy. 82% of our employees belong to unions, are represented by works councils or are subject to collective bargaining agreements. In 2022, we reviewed our Code of Conduct, implemented a global Anti-Discrimination and Anti-Harassment Policy and launched a new Diversity Charter and online training in diversity and inclusion.

This focus on human rights and labour rights is now being expanded to include suppliers. The Supplier Code of Conduct, which all suppliers are required to commit to, includes provisions addressing both human rights and labour rights. The Board approves an annual statement in accordance with the UK Modern Slavery Act 2015 and California Transparency in Supply Chains Act.

We encourage anyone with ethics or compliance concerns to report them to an independently operated hotline, which is confidential and anonymous. We are firmly committed to whistleblower protection. Reports are independently investigated and appropriate follow-up actions are taken if necessary. The Audit & Compliance Committee receives regular data on cases submitted via the hotline and other channels. In 2022, the hotline and additional reporting channels generated 64 reports (vs 63 in 2021); The majority of reports were Human Resource-related cases with approximately 75% of all reports originating from Brazil. The tendency regarding the high number of cases from Brazil is rooted in the whistleblowing hotline being the preferred escalation route for Human Resource-related queries or concerns in Brazil, where the whistleblowing hotline is frequently used for the escalation of personnel-related queries that are dealt with through different communication channels in other regions.

Sustainability

Our business

Our customers

Product Carbon Footprint

To increase transparency for our customers, the Group completed a major project in 2022 to disclose the CO_2 footprint of each of its c.200,000 refractory products. "Cradle-to-gate" greenhouse gases, from raw material extraction to production and packaging, are included in the calculations which follows the principles of ISO 14067 standard.

The carbon footprint includes all Scope 1 and Scope 2 emissions and part of the Scope 3 emissions associated with the manufacturing of the product. The largest share of Scope 3 emissions arises from the purchase of refractory raw materials that are not sourced from within the Group. Limited data is available from suppliers for the carbon footprint of externally purchased raw material and the Group is continuing to refine its estimates in this area.

The CO_2 footprint data enables us to (i) better address customer needs with the most suitable technical and sustainable products and solutions; (ii) gain a competitive edge via sustainability criteria in tender processes, and (iii) incorporate sustainability and environmental indicators into our product design and production cycles.

Net zero products

The progressive reduction of CO_2 emissions has become a fundamental target for our customers and RHI Magnesita aims to be the preferred refractory partner as this transition is realised. We are also committed to developing a circular economy in the refractory industry, aiming at a zero-waste product life cycle to preserve natural resources.

RHI Magnesita's 'Net Zero Brick' project addresses both of these customer priorities, reducing CO_2 emissions by 85% and fully utilising reclaimed raw materials to create a refractory containing up to 100% recycled raw materials, excluding graphite and binders. There are now six 'Net Zero' shaped products currently being trialed with customers in real-world conditions. The Group has also successfully developed basic gunning mixes with similar sustainability benefits. The ANKERJET XW low-carbon gunning mix has achieved an 85% reduction in carbon footprint with no loss of performance compared to conventional products.

The increased use of recycled materials improves raw material availability, reduces the cost and resource-intensive process of raw material extraction and processing and significantly reduces CO_2 emissions, with each tonne of recycled material used saving approximately two tonnes of CO_2 emissions.

Digital solutions

RHI Magnesita offers digital solutions and associated physical equipment which achieve CO_2 emission reductions through process efficiencies, such as wear monitoring and gunning repairs to extend the safe working life of refractory linings. Safely extending the working life of refractory linings can achieve significant energy savings for steel producers by reducing the number of heating and cooling cycles required per unit of steel output.

Four main digital solutions contribute to CO_2 savings at our customer sites:

- APO — uses process data to accurately predict the usable lifetime of a refractory. Allows longer safe working cycles, delivering a reduction in energy-intensive heating phases.
- PROIL — optimises steel or metal flow to reduce scrap rate and achieve higher quality, improving energy and CO_2 efficiency.
- VISIR LadleSafe — measures residual thickness of ladle working lining. The information provided allows longer safe running times, reducing the number of energy-intensive heating cycles.
- Ladle Slag Model — optimises the input of slag conditioner, reducing energy demand.

The Group also offers advanced refractory products which enable its customers to substantially reduce GHG emissions by reducing electricity consumption, improving yield and reducing oxygen consumption, saving up to 13kg of CO_2 per tonne of steel produced. Other solutions and products which directly contribute to CO_2 emissions reductions at customer sites include cold setting mixes, EAF direct purging plugs and converter gas purging products.

Our suppliers

Sustainable Procurement

RHI Magnesita seeks to integrate sustainability priorities into its procurement processes.

Supply chain due diligence

Supplier Code of Conduct

The Supplier Code of Conduct requires suppliers to follow the same principles as set out in RHI Magnesita's own Code of Conduct. It is distributed to all suppliers who are then required to confirm compliance.

Supplier assessments through EcoVadis

An assessment system developed with EcoVadis is used to rate potential suppliers for sustainability impacts such as energy use, CO_2 emissions and waste. The ratings resulting from this assessment form an important part of the Group's procurement decision-making process.

An initial phase of supplier assessments was carried out in 2021 based on contract size and risk mapping. The process has continued in 2022, now covering 31% of spending. Our target is to cover two-thirds of the supplier base by 2025, including all suppliers delivering raw materials with a high CO_2 intensity.

Supplier on-site assessments

The Group conducts on-site assessments to evaluate suppliers based on quality, Health & Safety and ESG aspects. In 2022, RHI Magnesita conducted nine on-site assessments, including eight in India and one in Europe (2021: no assessments).

Supplier product carbon footprint

Since the contribution of raw material extraction and processing is the largest single source of CO_2 emissions in the refractory value chain, the Group is seeking to increase the accuracy of its supplier CO_2 emissions data. Accurate information enables the Group to prioritise suppliers with lower emissions to minimise Scope 3 emissions. Engagement on the subject of emissions also highlights to potential suppliers that reducing CO_2 is a key priority for the Group, which is expected to drive changes in supplier behaviour and energy use in the long term.

Our planet

Tackling Climate Change

Driving down carbon emissions is a key priority for RHI Magnesita. In addition to charting our own transition, we want to be a trusted partner to our customers on their journey to a low carbon economy.

The Group's emission reduction plans target a 15% reduction in CO_2 emissions intensity for Scope 1, 2 and 3 (raw materials) emissions by 2025, compared to 2018. Our climate strategy is based on:

1) reducing the carbon footprint of our raw materials, including through the increased use of circular raw materials;
2) increasing energy efficiency in our operations;
3) reducing the carbon intensity of our energy sources; and
4) providing innovative solutions to reduce customer emissions.

Climate governance

The Board of Directors' CSC has responsibility for overseeing RHI Magnesita's climate strategy. The Corporate Sustainability Committee (CSC) regularly reviews climate risks and opportunities, strategy and performance, while the Remuneration Committee reviews and approves bonus payments linked to climate.

The Chief Technology Officer (CTO) reports regularly to both the CEO and Board CSC on a quarterly basis. The CTO is part of the EMT and has responsibility for overseeing the development of the Company CO_2 reduction strategy and its implementation across the organisation.

In 2022, CO_2 considerations were built into key remuneration incentive processes as follows:

- A new internal pricing mechanism was introduced to incentivise sales teams to prioritise products with higher recycled content.
- 25% of the Long-Term-Incentive-Plan (LTIP) payout criteria is linked to the Group's target to reduce CO_2 emissions per tonne against 2018 baseline year.
- Increase of secondary raw material accounts for 10% of the annual bonus for all eligible employees.
- Enhanced monthly monitoring of CO_2 emissions was integrated into the Group's enterprise resource planning tool.

Governance	• Describe the Board's oversight of climate-related risks and opportunities — See **page 89** • Describe management's role in assessing and managing climate-related risks and opportunities — See **page 90**
Strategy	• Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term — See **page 90** • Describe the impact of climate-related risks and opportunities on the organisation's business, strategy and financial planning — See **page 91** • Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario — See **page 90**
Risk Management	• Describe the organisation's processes for identifying and assessing climate-related risks — See **page 91** • Describe the organisation's processes for managing climate-related risks — See **pages 91-92** • Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management. — See **pages 91-92**
Metrics and targets	• Disclose the metrics used by the organisation to assess climate-related risks and opportunities, in line with its strategy and risk management process — See **page 93** • Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks — See **page 93** • Describe the targets used by the organisation to manage climate-related risks, opportunities and performances against targets — See **page 93**

Climate risk

Climate change represents both strategic and operational risks to our business. These are grouped as physical risks and transitional risks.

Physical risks include greater severity of flooding, droughts or other extreme weather events which could disrupt our operations or supply chain.

Transitional risks range from new regulatory frameworks and the rising price of CO_2 emissions allowances to the viability and customer acceptance of emerging technologies.

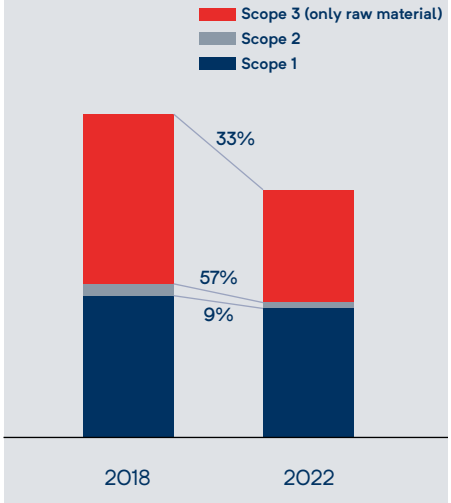
In 2022, two climate scenarios (representative concentration pathways 2.6 and 8.5) were considered based on the Intergovernmental Panel on Climate Change Fifth Assessment Report to update RHI Magnesita's modelling and risk analysis. This exercise concluded that physical risks remained unchanged, whilst there were new developments to assess in transitional risks, for example in the case of emissions legislation developments in Europe. Full details of risk assessments can be found in the Group's 2022 TCFD report (see Appendix — **Pages 89-93**).

Climate strategy

Our short-term target is a 15% reduction in emissions intensity by 2025 in Scope 1, 2 and 3 (raw materials) compared to the 2018 baseline year. We are working to reduce our emissions by investing in recycling, using alternative energy sources and increased energy efficiency. We are also carrying out research and development on carbon capture and storage technology and the use of hydrogen as an alternative to fossil fuels.

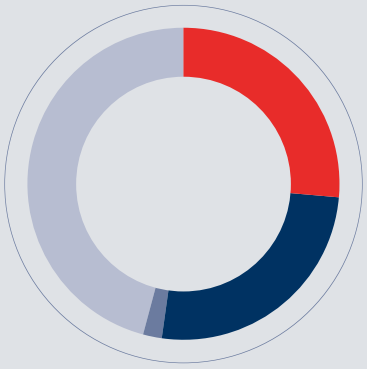
In 2022, total CO_2 emissions (Scope 1, 2 and 3 — raw materials) were 4.2 million tonnes and our emissions intensity has reduced by 8%. Since the baseline year of 2018, the Group has exceeded its targets in recycling but this has been offset by slower progress on switching to alternative fuels which is now uncertain due to disruption in the market for natural gas. If reliable supplies of natural gas are not secured by 2025 the Group may fail to meet its CO_2 intensity reduction target, with the current estimated outcome excluding fuel switches at 12%.

Our Carbon Emissions Reduction 2018 vs. 2022



Our planet continued

Carbon emission per Scope



Scope 1; of which geogenic emissions	26.5%
Scope 1; of which fuel-based emissions	25.8%
Scope 2; electricty	2.1%
Scope 3; emissions only raw material	45.6%

In accordance with GHG Protocol, biogenic emissions are reported independently from the scopes. In 2022, our biogenic emissions were 13 thousand tonnes.

Recycling and the circular economy

RHI Magnesita is leading the refractory industry in the use of circular raw materials. For every tonne of waste refractory material that is re-used, approximately two tonnes of CO_2 emissions, which would otherwise have been emitted in the extraction and processing of new raw material, can be saved.

Historically, the use of circular raw material in the industry has been limited because of the reduced effectiveness of refractories made with recycled material. RHI Magnesita has developed new technology for using circular raw material without impacting performance.

The Group's recycling target is to increase use of circular raw material to 10% of raw material by 2025 and in 2022 we have already achieved over 10% (2021: 6.8%). Due to the geogenic CO_2 emissions and energy consumption involved in the processing of new raw material, increasing the recycling rate is an effective route for the Group to reduce its CO_2 emissions in the short term. Working towards this not only develops the circularity of our business but is also the single most important contributor to achieving our 2025 emissions reduction target.

Around half (2022: 51%) of our Scope 1 CO_2 emissions are geogenic, released from carbonate minerals during processing. Replacing these virgin raw materials with recycled or circular raw materials avoids these emissions. Reaching our target of 10% recycled content will therefore avoid up to 300,000 tonnes of CO_2 and 150,000 tonnes of landfill waste per year. Early achievement of the 10% target was due to improvements in the collection and processing of circular raw material. We have identified four key drivers of success in recycling:

- Improving the flow of spent refractories to our recycling centres from customers and traders.
- Developing new sites and technologies to process spent refractories.
- Increasing consumption of recycled raw materials across our product range without impacting performance.
- Growing customer awareness and sales of products with high recycled content.

In H1 2022, a new joint venture between RHI Magnesita and Horn & Co Group was established in which the Group holds a 51% stake. A new brand for the joint venture, MIRECO has been established which is intended to be an open platform servicing all participants in the refractory production cycle. MIRECO will be active across Europe, including the Balkans and Türkiye, with a local-for-local approach. Further investment is planned at Mitterdorf, Austria, in 2023 to install automated sorting technology.

We are also investing in new recycling facilities and processing technologies outside of Europe. In 2022 we installed a magnesia carbon brick treatment plant in Brazil and in 2023 a new magnesia carbon treatment station in India and a recycling centre in South America are planned.

The impact of increasing the use of recycled raw material is now visible to our customers after the launch of carbon footprint datasheets for all products. Developing more recipes with higher recycling content is another key focus. The ANKRAL LC (low carbon) series of bricks for the cement industry includes up to 50% recycled content. Trials of new basic refractory mixes are also underway for products with 20–50% recycled content. These brands are already well established in Europe and the concept is now starting to gain momentum in the China & East Asia region.

Decarbonisation of refractory production

Refractory production is a 'hard to abate' industry. Raw material processing generally uses fossil fuels for ignition and burning of carbonate rock, which results in significant geogenic CO_2 emissions. These geogenic emissions are classified as Scope 1 when resulting from the Group's own production or Scope 3 in the case of externally purchased raw materials.

Significant energy is also required for firing of products in the refractory manufacturing stage. Further emissions are generated in the shipping and distribution of refractory products to customers worldwide.

Through its investment in research and development of emissions avoidance or reduction technologies, the Group has developed a theoretical pathway to decrease its Scope 1, Scope 2 and Scope 3 (raw materials) carbon emissions from refractory production to close to zero. The required measures have been prioritised in order of deliverability, with those items that are fully within the control of the Group to be expedited.

The first stage of CO_2 emissions reduction is to be delivered through measures which can be implemented by the Group without significant external support, including increased use of recycled raw materials, fuel switches and energy efficiency measures. It is estimated that these measures could deliver an absolute reduction of around 1 million tonnes of CO_2 emissions, or 20% of the baseline total by 2035. Beyond this initial reduction, decarbonisation measures become progressively harder to deliver. Recycling has a natural ceiling since refractories are consumed during use and only residual materials can be reclaimed, whilst fuel switches to natural gas only offer a partial reduction. The pathway for stages 2 to 4 is reliant on the provision of (i) new infrastructure or renewable energy sources such as hydrogen by outside parties; (ii) the use of technologies which do not yet exist or are not proven at pilot or production scale and (iii) significant capital

expenditure, which may not be possible for the Company to generate from its existing operations, obtain from its finance providers or receive via government funding.

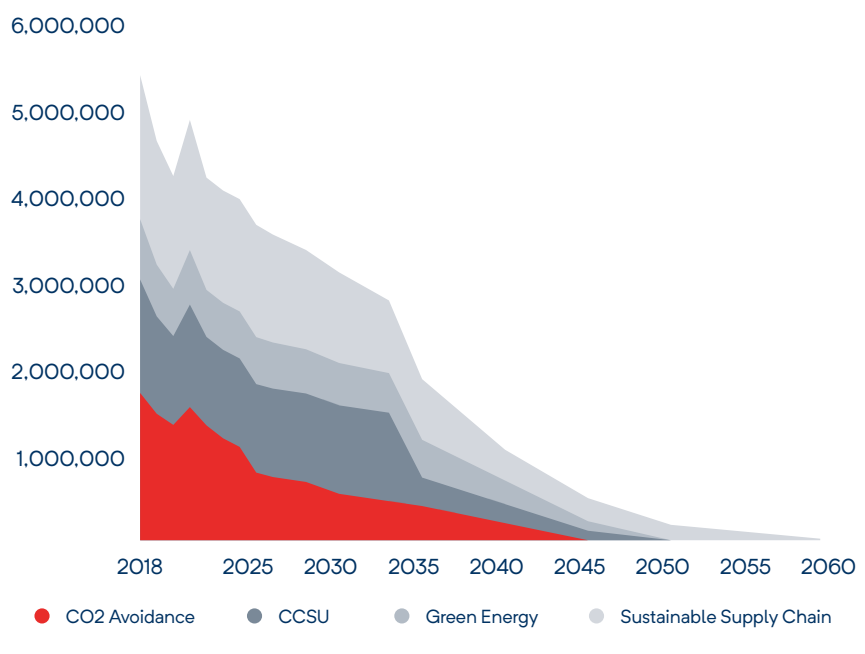
The costs of emitting carbon, which could provide an incentive to accept higher capital expenditure and operating costs for the purposes of reducing CO_2 emissions, apply in certain jurisdictions and provide a business case for reducing emissions in those geographies. Estimates of future potential CO_2 costs are built into the Group's financial forecasts and planning decisions. However, the Group has a global production and customer network and competes with other refractory producers who are not subject to additional CO_2 costs.

Our decarbonisation commitment

Working within these limitations, the Group is committed to:

1. leading the refractory industry by decarbonising its operations as fast as sustainably possible;
2. annually updating its decarbonisation pathway based on the latest developments in technology, infrastructure and estimated capital expenditure;
3. continuing to invest in the development of new technologies to avoid CO_2 emissions, proving our technical readiness to use alternative low-carbon energy sources and to capture CO_2 emissions for storage or utilisation;
4. offering our customers enabling technologies for their own low-carbon production technologies together with low-carbon products and heat management solutions (with full transparency on carbon footprint) to enable them to reduce their Scope 3 CO_2 emissions from the purchase of refractories;
5. lobbying governments to invest in the necessary infrastructure to decarbonise the refractory industry and other energy intensive industries, including additional renewable energy generation, hydrogen supply networks, CO_2 transportation and storage and carbon capture and utilisation technologies; and
6. working with partners in the private sector to develop new renewable energy solutions, hydrogen energy networks and carbon capture and utilisation technologies.

Theoretical decarbonisation pathway



Offsetting carbon emissions

The Group has significant CO_2 emissions within its own value chain and there are large emissions savings that can be delivered for its customers through improved heat management or other solutions. The Board therefore considers that the priority should be to allocate capital and other resources to reducing the Group's own CO_2 footprint and the emissions of its customers rather than investing in carbon offset projects. The Board believes that taking this approach will deliver a faster, greater and more sustainable decrease in net CO_2 emissions than could be delivered by allocating capital to offsets.

2022 decarbonisation update

Partnership and industry co-operation

RHI Magnesita supports industry partnerships for the development of carbon capture and usage technologies. These include the K1-MET consortium in the Austrian steel industry and the Industrial Advisory Board of the EU-funded MOF4AIR project, a development of the new Metal Organic Framework for capturing CO_2.

In 2022, we progressed a joint programme with the University of Leoben to research the possibility of re-mineralisation of captured CO_2. RHI Magnesita also takes part in broader multilateral platforms to address the most complex sustainability challenges such as the Verbund X Accelerator 2022.

In terms of industrial partnerships, the Group is working with other major CO_2 emitters in Austria and Germany to address key regional constraints such as power access and options to use or transport CO_2. Our customers in the cement, steel and chemical industries face the same challenges and are working to develop similar technologies. An early definition on the future of industrial hubs which could utilise CO_2 and benefit from pipeline access for hydrogen and CO_2 transport will have wider benefits across several different industries.

Carbon capture and utilisation

In 2022, trials were progressed to assess technologies which could be used for CO_2 capture at our raw material production sites.

Addressing climate change

RHI Magnesita Decarbonisation Plan

	2018	2019	2020	2021
Key dates regulations	• Bonn Climate Change Conference • Year of climate extremes • US National Climate Assessment • UN Emissions Gap Report • IPCC Special Report on 1.5°C	• UN Climate Change Conference in Madrid • Bonn Climate Conference • EU Sustainable Finance Disclosure Regulation (SFDR)	• COVID 19 Pandemic • UN Climate Change Dialogues (Virtuals) • Adoption EU Hydrogen Strategy	• EU Taxonomy • TCFD — Aligned Disclosures mandatory in UK • Establishment of International Sustainability Standards Board (ISSB) • Chinese Emissions Trading Scheme (ETS) — power sector only
Key milestones[1]	• Set up 2018 as baseline • Set up 10% reduction target of our CO_2 emissions by 2025 • Set up 10% recycling rate of SRM	• Committed to invest €50 million in new and emerging technologies • Austrian sites operate with 100% green electricity • Upgraded CO_2 emission target to -15% by 2025	• Launched Ankrall low carbon bricks • Project Railway in Hochfilzen, Austria • Rated B at CDP Climate report — first submission	• Performed climate risk assessment for all sites • Launched net-zero brick project • Achieved 48% of purchased electricity from low-carbon or renewable sources (German sites operate 100% with green electricity) • Performed oxyfuel trials in Breitenau

1 Future milestones may vary depending on technology development and external support, provided for illustrative purposes only

- Russia invasion in Ukraine — Gas supply crisis
- COP 27
- EU CBAM
- CDP Methodology changes
- EU CSRD
- Aluminium and Cement included in Chinese ETS

- Mandatory ESG reporting in India from 2023
- Paper and chemicals to be included in Chinese ETS from 2024

- 55% GHG emission reduction against 1990 levels in EU
- 50–52% GHG Emissions reduction against 2005 levels in US

- Net-zero targets for US, EU and UK

2022

- Launched MIRECO
- Achieved 2025 target of 10% recycling rate
- Implemented fuel switch project in Ponte Alta, Brazil. (charcoal use)
- 6 products containing up to 80% recycled material are part of RHI Magnesita's portfolio
- Rated A– at CDP Climate report

2025

- Implement fuel switch projects in York and Hochfilzen
- Achieve 15% recycling rate
- Increase the use of green electricity
- Implement the use of SRM at rotary kilns

2030

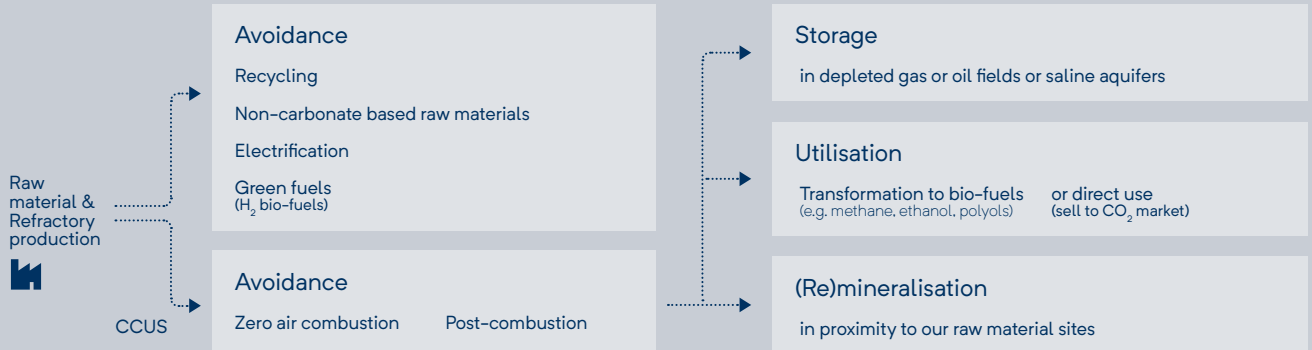
- Implement fuel switch projects in Brumado and Chizhou
- Increase recycling rate
- Further use of SRM in rotary kilns
- Achieve 100% green electricity
- Increase the rate of hydrogen firing in tunnel kilns

2050

- Achieve oxyfuel firing in all rotary kilns
- Increase recycling rate
- Implement green energy (H_2 and electrification) for tunnel kilns
- Implement CCUS technologies
- Address sustainable supply chain (Scope 3)

Our planet continued

Understanding our reduction measures



In collaboration with a major equipment supplier, a high-density sinter was produced at a test centre in Bethlehem, Pennsylvania, whilst achieving a high level of CO_2 enrichment in the offgas with an efficient sealing concept. Proving this concept is a key step towards large scale CO_2 capture and storage or utilisation.

Research continues on the use of various other post-combustion processes for carbon capture including chemical separation, cryogenic processes and membranes. In the area of carbon utilisation, our focus in 2022 was to investigate options to re-mineralise CO_2, fixing it permanently in a solid state.

Alternative fuels including hydrogen and biofuels

Hydrogen is a potentially carbon-free energy source which offers a promising alternative to fossil fuels for use in high temperature processes. In addition to lab trials for calcination and sintering, the Group is testing the use of hydrogen in production processes. The first pilot will be conducted at the Marktredwitz plant in 2023, including an assessment of the possibility to generate hydrogen on site.

Reducing the carbon intensity of energy

We are continuing our efforts to reduce the carbon intensity of our energy sources. However, in Europe the switch from CO_2 intensive petroleum coke to more CO_2 efficient natural gas in our plants has been postponed due to uncertainty over natural gas supply. To secure energy for our European operations through the winter of 2022-23, the Group has installed multi-fuel burners to be able to use alternative fuels such as fuel oil and liquid petroleum gas. The use of these alternative fossil fuels may result in higher CO_2 intensity at these sites in the short term. We continuously monitor energy markets to ensure that we use the least CO_2 intensive fuel possible.

At the Ponte Alta raw material production site in Brazil, a successful switch away from petroleum coke to sustainably sourced charcoal has delivered 18kt of annualised CO_2 emissions savings (4kt in 2022).

We continue to reduce the CO_2 intensity of purchased electricity. In Brazil and Türkiye, we switched to a fully green electricity supply in 2022. The Group is also investigating potential for solar generation at several of its sites. By the end of 2022, 65% of purchased electricity was from low carbon or renewable sources. This marks an increase of 48% and reduces our Scope 2 emissions to 90kt (2021: 147kt).

Energy use

	2019	2020	2021	**2022**
Total consumption (GWh)[1]	5.227	4.577	5.163	**4.842**
MWh/t[1]	1.97	2.03	1.90	**2.02**

1. Refinement of historical data to reflect new acquisitions in 2022.

In 2022, RHI Magnesita consumed 4.842GWh of energy, an absolute decrease of approximately 6% compared to the prior year. (2021: 5.163GWh). The main reason for lower energy consumption was a lower production volume in 2022 compared to 2021.

The Group has a target to increase its energy efficiency by 5% by 2025 compared to 2018. In 2022, energy efficiency decreased by 6% compared to 2021. The main reason for that was the increase in sourcing of raw material from the Group's own assets as the new rotary kiln processing dolomite ore in Hochfilzen, Austria, was commissioned and ramped up; and overall reduced capacity utilisation. At our Radenthein site in Austria we replaced primary energy with waste heat for drying, saving around 4 GWh per year. At Tlalnepantla, Mexico, improved process control enabled energy savings of c.0.5 GWh and at Niederdollendorf, recipe modifications reduced firing temperature from 1500°C to 1300°C, resulting in a significant decrease in energy required. We continue to roll out the implementation of ISO 50001 across all our operations and by end of 2022, 34% of sites had implemented ISO 50001.

Reducing NOx and SOx emissions

Our target is to reduce our nitrogen oxides (NOx) and sulphur oxides (SOx) emissions by 30% by 2025 compared to 2018. The target was achieved in China in 2021 and the current focus is now on North America. We significantly reduced NOx emissions in York, Pennsylvania, by implementing a two-stage combustion process in the rotary kilns. SOx reduction appliances have also been installed and are successfully reducing emissions.

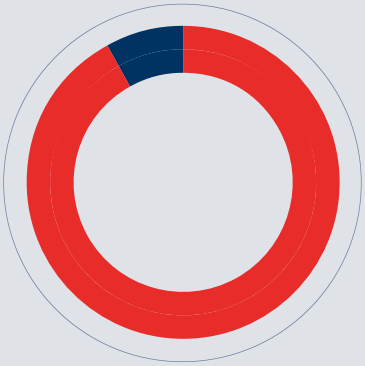
Protecting biodiversity

The Group is committed to protecting biodiversity at its operational sites and taking every possible step to minimise its impact on local plant and animal life. At the Brumado mine and raw material processing site in Brazil the Group is required to restore land to its prior state after use, including the planting of native vegetation which matches that found in the local area. For this purpose and for wider community benefits, over 20,000 seedlings were grown in the on-site tree nursery and planted inside and outside RHI Magnesita's properties by employees and community members in 2022.

Water stewardship

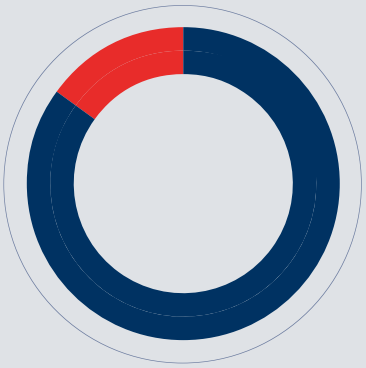
In 2022, we drew 12.1 million m³ of water from surface and groundwater sources, with 15% of this consumption taking place in areas at risk of water scarcity. At Bhiwadi, India, a modification to the cooling system reduced water consumption by 17% and at Flaumont, France, a water underground storage system was implemented to protect nearby rivers from waste water emissions.

Our energy use by source



- Energy use from non-renewable sources 92%
- Energy use from renewable sources 8%

Our Water Use



- Water consumption in non-scarce areas 85%
- Water consumption in water scarce areas 15%

Case Study — Environment

Release of wild animals in the legal reserve of RHI Magnesita

On November 29, 2022, the Centro de Triagem de Animais Silvestres (CETAS) of Vitória da Conquista held together with the RHI Magnesita's Environment team, the release of 164 birds (rescued from animal trafficking), and jiboya at Serra das Éguas, within the legal reserve of RHI Magnesita in Brumado. In Brazil, birds are the mostly captured and sold animals in the illegal market. The most targeted species are psittaciformes (macaws, parrots and parakeets), passerines (birds), dendrobatids (poisonous and coloured frogs), primates and lepidopterans (butterflies). Moreover, nine out of ten animals trafficked die before reaching their final destination. The release held within the legal reserve of RHI Magnesita shows how important is the preservation of native areas and the commitment of RHI Magnesita with environmental sustainability.

Our people and communities

Goal: we aim for 33% women in leadership roles by 2025.

A culture that supports people in reaching their potential

Customer focus is the centre of our culture, which has four key dimensions: innovation, openness, pragmatism and performance. To drive and maintain our culture we must attract, develop and retain a diverse and high-performing workforce. Our colleagues expect and deserve an inclusive, safe and empowering work environment. Employees from over 90 countries bring with them a wide range of experiences, backgrounds, and perspectives. We support and encourage a mindset of lifelong learning, and personal and professional growth.

In 2018, we introduced the 'culture champions' network with over 60 employees worldwide engaging with colleagues on a regular base to promote our corporate culture and this work continued in 2022. In 2023, the cultural champions will include the theme of unconscious bias in their activities.

In 2022, we introduced a new global anti-harassment policy as a further step towards our diversity and inclusion commitment.

RHI Magnesita will continue promoting diversity amongst its employees including in management positions, where good progress has been made to date but further efforts are required to meet our 2025 target.

Developing our leaders

Developing an internal talent pool of future leaders has always been a key focus at RHI Magnesita and we are building our leadership pipeline through strategic succession management. Succession planning secures a sustainable pipeline of internal high performers for our most senior and critical positions, which includes future female leaders. With our global footprint, we aim to reflect the geographic diversity of our business and we have appointed female leaders to senior roles in each of our five regions. We also seek to increase representation from different age groups to enable us to benefit from a multi-generational workforce.

Through our global trainee programme, we aim to attract and retain young talent as the future leaders of our business. In 2022, we introduced a second cohort of global trainees with a 57% female intake.

In 2022, we reported to the FTSE Women Leaders Review.

33%

Of female leaders by 2025

104

Manager roles held by women

5

Women on the Board of directors

This year, we launched the "New Leaders Programme" in Europe, which offers training to newly appointed leaders to help them to excel in their roles. The programme addresses key trends such as digitalisation, decarbonisation, and increasing complexity and volatility in global markets, focusing on leadership in times of change and uncertainty.

Succession planning and leadership development for RHI Magnesita means sharing one fundamental goal: getting the right people with the right skills in the right place.

Building a diverse and inclusive workforce

As one of our key core values, diversity is promoted within our corporate culture. We are committed to providing equal opportunities for all employees, regardless of age, gender, skin colour, ethnicity, sexual orientation or disability.

Through our diversity and inclusion strategy, our goal is to provide a culture of inclusion and wellbeing for all our employees. RHI Magnesita believes that companies should reflect the world around us. Embracing diversity and building inclusion into everything we do is important for the success of our business and helping us connect with the customers that we serve. The diversity of our employees is key to this, as it gives rise to new ideas and approaches.

We require a broad range of talent and perspectives from a varied workforce, which we assess based on gender diversity, international representation, and generation management.

In December 2021, a new diversity strategy was launched including the adoption of our Diversity Charter. In 2022, key initiatives have included a survey of the needs of female leaders, trainee workshops, external events participation, global anti-discrimination and diversity training and a LinkedIn learning diversity campaign.

Gender diversity

Our internal women's network helps to shape our gender diversity agenda. Its intended refreshment in 2023 will focus on promoting global and regional measures to improve diversity, keep track of progress and co-ordinate roll out of diversity initiatives with line functions

Board female representation at the 2022 year end was 33%. Currently, 21% of all senior leadership positions are held by females (2018: 12%) including the EMT and their direct reports. RHI Magnesita's goal is to increase the share of female leaders at both Board and EMT plus direct report level to 33% by 2025.

Diversity needs Decision, Development & Dedication

RHI Magnesita's 2022 Programme for Gender Equality

Progress of measures, agreed in December 2021, to be executed in 2022:
100% = Ready to be launched

Decision
for diverse leaders

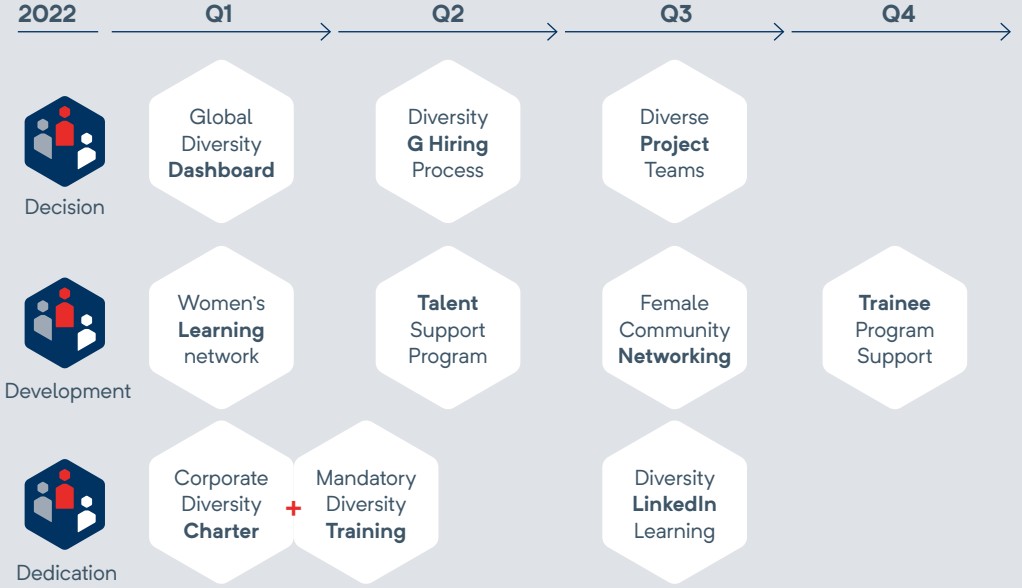
Hire and promote diverse people. Leaders and HR are accountable for execution of future organisation.

Development
of diverse people

Fill the pipeline. Train and support diverse talents. Empowerment of diverse people is key to prepare them for future roles.

Dedication
for a diverse environment

Create and promote a workplace of equity and inclusion: fair working conditions & high awareness at leadership.



Our people and communities continued

Health & Safety

Our employees and contractors are entitled to a safe and healthy workplace. Since the COVID-19 pandemic, this fundamental employer obligation has taken on even greater significance and we have worked hard to protect health, safety and wellbeing of everyone who works with us.

During 2022, we continued to follow COVID-19 safety protocols. Routine testing helped to protect the safety of our workforce and the continuity of our business.

We strengthened the presence of regional Health & Safety coordination and execution and established a culture of communication, benchmarking and knowledge sharing across the regions.

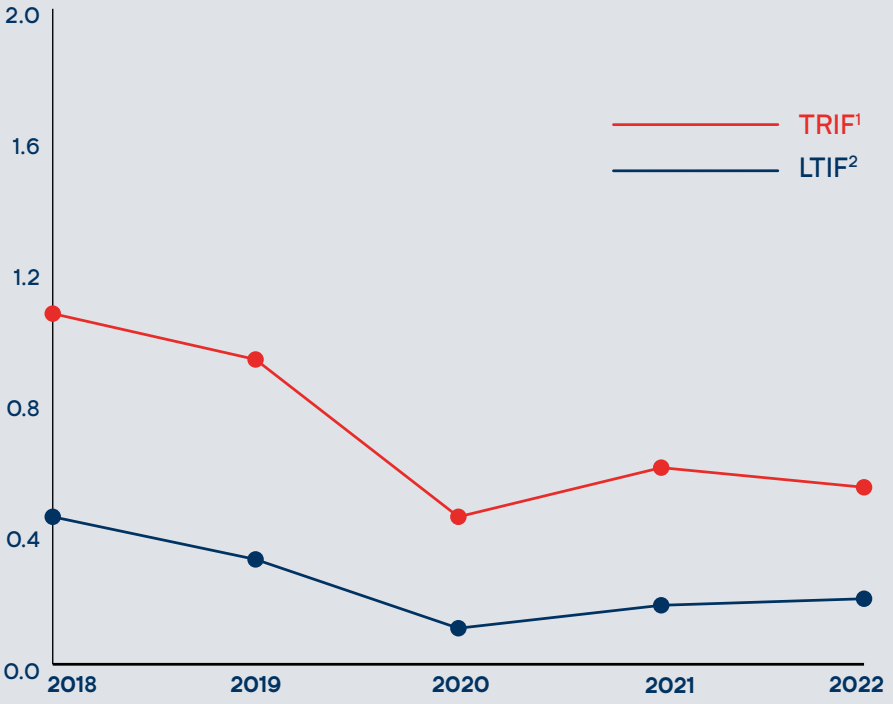
High plant loads combined with reduced staffing due to COVID at the beginning of the year were contributory factors behind a slight increase in LTIF from 0.19 in 2021 to 0.20 in 2022. However, TRIF decreased from 0.61 to 0.54 in 2022. Most regrettably, one contractor died as a result of a workplace traffic accident in India. An urgent investigation into the root causes of this incident was carried out and changes were made to relevant guidelines worldwide to improve safety procedures.

We continued to progress our occupational health & safety programmes, seeking to balance leading and lagging indicators in order to be more pro-active and less reactive. Leading indicators are helping our employees to understand the strengths and weaknesses of their safety efforts, giving direction and insights into the typical behaviour and conditions that precede any incident. We have almost doubled our Preventive Rate indicator compared to last year, demonstrating ongoing improvement in our safety awareness culture and we are extending implementation of ISO 45001 standards to our refractory installations business. Overall, RHI Magnesita proceeds to accelerate the standardisation with a global Health & Safety Management System and its certification by an external notified auditing body including local needs.

Hence, in 2022, the following operational sites have achieved a successful certification against ISO45001 Occupational Health & Safety Management System:

- Anhui (Brick & Sinter) (China)
- Visakhapatnam (India)
- Cuttack (India)

Health & Safety performance



1. Total recordable injury frequency rate per 200,000 hours.
2. Lost time injury frequency rate per 200,000 hours.

As a developer of natural resources and major employer in the areas close to our operations, fostering a strong and positive relationship with our host communities is essential to our success. Our sites are located in diverse regions and it is essential for use to understand local context. We regularly engage and consult with our stakeholders, seeking to understand and respect their interests and priorities.

The Group operates a community investment programme in all of its key operational regions, seeking partnerships with local non-governmental organisations (NGOs) or delivering projects using in-house resources or volunteering where appropriate. Each project is designed to bring about long-lasting social improvements.

Our pillars

Our approach to community investment has been developed based on the UN Global Compact, focusing on three main pillars:

Education

Our investments seek to make education accessible, equitable and of a high quality, leading to relevant and effective learning outcomes.

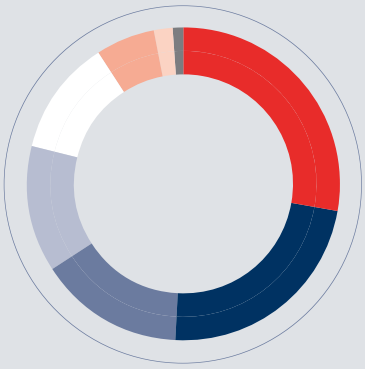
Youth Development

We aim to create and support programmes that engage young people in intentional, dynamic and valuable ways while recognising and enhancing their strengths.

Environment

In addition to the multiple initiatives that we are implementing to decarbonise our business, we seek to support wider environmental projects in our local communities.

Community spend 2022 by focus area



Health & wellbeing	28%
Education	23%
Other	15%
Emergency relief	13%
Youth development	12%
Environment	6%
Arts/culture	2%
Economic development	1%

Case study

Teach for Austria

Since 2019, we have partnered with Teach for Austria, a local organisation which enhances educational opportunities for students who haven't had the best start in life. Through their main project, graduates and young professionals are trained to teach in urban low-income schools. The initiative has directly benefited 32 children in 2022.

The Group expanded its participation in 2022 by including the Teach for Austria initiative within its volunteering programme for Vienna-based employees. RHI Magnesita staff gave interview training and career advice for students at an event hosted by the Company.

"It was a real pleasure to get to know the bright young minds of the class and contribute to their personal and professional growth. Their curiosity and willingness to learn more impressive."

Aleksandra Sanadrovic
Volunteer

Our people and communities continued

Our Initiatives

Sustainable Bonds/Brumado, Brazil

In Campo Seco, a remote community in Brumado, Brazil, the programme "Sustainable Bonds" set up a factory that produces hand-made brooms using recycled PET bottles. In cooperation with a local NGO, 29 women have been trained in the cleaning, preparing and assembling of the necessary materials. The process recycles 14,000 bottles each month with the finished product sold in multiple retail outlets to fund the wages of the project participants.

Through this initiative, more than 40 families from Campo Seco have now a source of income, increasing quality of life and creating a focal point for the community.

Dual Education Program/ Ramos Arizpe, Mexico

Facing the challenge of high demand for technically skilled workers in the north of Mexico, RHI Magnesita established the 'Dual Education Programme' in Ramos Arizpe in September 2013 which has now been running for nine years and has had an important impact on the community.

This was the first Corporate Social Responsibility (CSR) project implemented, and its main purpose was the improvement of technical vocational training for high school students. In the final two years of their studies, participants spend 80% of their time in the plant, where they apply what they have learned in the classroom.

Case study

Identid'Art/Brumado, Brazil

This socio-cultural initiative offers violin, viola and flute lessons for free to children aged ten to 14 in Brumado. The project started in 2020 and now over 120 children per year participate.

Identid'Art aims to promote culture and musical education as a catalyst for social inclusion for the participants, their families and local society.

Life can be transformed by music. This project brought to the community much more than an extra activity for the children... some of the children had never seen or heard a violin before, having this opportunity expands their perspective. My musical path comes from a very similar project back in my town.

Ailin Ayres
Project leader

This project is very important for me and all my friends, because it gives everyone the chance to discover something about themselves: either skills, strengths or areas of opportunity.

Maria Luisa
Project participant

> It can be hard to feel like you are able to make a difference to the society you live in. It is great that the Company gives us this chance to take an active role in contributing to our community.
>
> **Sally Caswell**
> Company Secretary

A total of 14 apprentices have graduated through the programme, and the vast majority have continued their professional training. Today, four of the colleagues at Ramos Arizpe are products of the Dual Training programme, working full time as technicians and engineers.

The initiative has positioned RHI Magnesita as a leader in dual training in Mexico and gives real long-term value to apprentices.

"Not a day goes by when Miguel doesn't teach us something. He's always looking out after us, willing to share his knowledge with everyone." Jared Limon Flores, apprentice, Ramos Arizpe.

Volunteering

RHI Magnesita encourages corporate volunteering as a key strategy to increase community engagement and make a positive impact on the communities in which we operate.

In 2022, a pilot programme was launched for the Group's Vienna-based employees, with the longer-term aim of developing a comprehensive framework for the implementation of a global programme.

Under the pilot, every employee in the Vienna office has been assigned one working day of paid volunteer leave per year and access to a programme of events to participate in.

Indigenous people

RHI Magnesita recognises and respects Indigenous people, their rights and heritage, knowledge, and practices. None of the Group's operational sites are located close to any Indigenous communities. RHI Magnesita supports the strengthening of legal recognition for Indigenous territories including protection against illegal mining and guaranteeing Indigenous people a strong voice in local and global dialogues that affect their future.

EU Taxonomy

EU Taxonomy

The EU Taxonomy Regulation ("EU Taxonomy") applies in respect of the financial year to 31st December 2022 and requires the Group to report annually on the proportion of its turnover, operating expenditure and capital expenditure attaching to economic activities that are considered to be environmentally sustainable.

The EU Taxonomy identifies the six environmental objectives: climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems. In respect of the 2022 financial year, the Group, RHI Magnesita has reviewed its activities that qualify as environmentally sustainable according to the EU Taxonomy Regulation. These activities are eligible and aligned according to the published technical screening criteria for climate change mitigation and adaptation.

As no sector-specific guidance for the refractory industry has been published yet and therefore the Group is required to use its own judgement against the eligibility criteria.

The NACE (the statistical classification of economic activities in the European Community) codes most closely describing the activities of the Company are "23.20 Manufacture of refractory products" and "08.99 Other mining and quarrying". These NACE codes are not listed in Annex I or Annex II of the Taxonomy Regulation, but certain activities carried out by the Group do meet the definitions of economic activities listed in Annex I of the Regulation. As elaborated further by the Commission on Taxonomy, if the NACE code of an economic activity is not mentioned in the Climate Delegated Act, but the economic activity corresponds to the description of the activity, it can qualify as Taxonomy eligible.

The EU Taxonomy distinguishes between taxonomy eligibility and taxonomy alignment. An economic activity can be considered eligible if it is listed in the Annex I or Annex II. However, in order to be considered "aligned", further technical criteria must be met. This requires a further assessment of the eligible activities identified. This involves evaluating the Technical Screening Criteria (TSC) and the Do-No-Significant-Harm criteria (DNSH) for each of the environmental objectives associated with the relevant business activities, as well as assessing the Minimum Social Safeguards (MSS) at the corporate level. The overall aim of this process is to establish the taxonomy-eligibility and alignment and to gather evidence of the substantial contribution.

The EU Taxonomy Alignment refers to the process of aligning the EU's Taxonomy Regulation with existing and proposed national and international sustainable finance initiatives.

Accounting policy

RHI Magnesita N.V. prepares consolidated financial information in accordance with generally accepted accounting principles under IFRS, as adopted by the EU and the financial information for turnover, operating expenditure and capital expenditure presented under the EU Taxonomy has been prepared under the same accounting principles.

Taxonomy eligible activities of RHI Magnesita referring to the activities of Annex I and II

Economic activities of RHI Magnesita that are described in Annex I and II of the Delegated Regulation (EU) 2021/2139, are considered eligible. In the case of RHI Magnesita, the following activities are considered relevant:

- Manufacture of other low carbon technologies.
- Material recovery from non-hazardous waste.
- Close to market research, development and innovation.

Manufacture of other low carbon technologies

The economic activity "Manufacture of other low carbon technologies covers the "Manufacture of technologies aimed at substantial GHG emission reductions in other sectors of the economy".[1]

EAF refractories

RHI Magnesita provides refractory products specifically designed for EAFs. Additionally, RHI Magnesita provides heat management solutions and services to its customers to reduce their GHG emissions,including digital solutions as well as advanced refractory products.

EAFs are a vital enabling technology for the reduction of CO_2 emissions in the steel industry. EAFs can be powered using electricity sourced partially or wholly from renewable electricity and replace the BOF phase of the traditional integrated steel manufacturing process, which pairs a blast furnace with a BOF and is highly CO_2 intensive. To replace a BOF, EAF steelmaking requires scrap steel, and a source of virgin iron like DRI or pig iron produced from the reduction of iron ore. EAF steel-making requires a source of scrap steel or sponge iron produced from the reduction of iron ore.

DRI using elevated levels of or exclusively hydrogen is a new technology under development that seeks to eliminate CO_2 emissions from the reduction of iron ore in blast furnaces using coke. If sufficient quantities of hydrogen manufactured from renewable sources can be accessed and if a DRI furnace can be paired with an EAF for the second stage of the steelmaking process that is also powered by renewable energy, CO_2 emissions from steel production can be largely eliminated. A key limiting factor for increased DRI production is currently the availability of suitable iron ore, as DRI production requires highest quality iron ore pellets while blast furnaces can consume almost any kind of iron ore facing no restrictions.

RHI Magnesita has a leading market position in EAF-specific refractories, services and heat management solutions, in part due to the unique chemical composition of the Group's vertically integrated raw material supply. EAF refractories produced by RHI Magnesita directly enable substantial reductions in CO_2 emissions at steel plants, if the EAF output is displacing steel that would otherwise have been produced using a blast furnace and BOF.

Digital solutions and other products that increase energy efficiency

RHI Magnesita offers digital solutions and associated physical equipment which achieve CO_2 emissions reductions through process efficiencies, such as wear monitoring and gunning repairs to extend the safe working life of refractory linings. Safely extending the working life of refractory linings can achieve significant energy savings for steel producers by reducing the number of heating and cooling cycles required per unit of steel output.

The Group also offers advanced refractory products which enable its customers to substantially reduce GHG emissions by reducing electricity consumption, improving yield and reducing oxygen consumption, saving up to 13kg CO_2 per tonne of steel produced.

Other solutions and products which directly contribute to CO_2 emissions reductions at customer sites include cold setting mixes, EAF direct purging plugs and converter inert gas purging.

Material recovery from non-hazardous waste

Material recovery from non-hazardous waste covers the "construction and operation of facilities for the sorting and processing of separately collected non-hazardous waste streams into circular raw materials involving mechanical reprocessing, except for backfilling purposes."

RHI Magnesita increased its SRM input to 10% of raw material used in production of refractories. As part of this effort, RHI Magnesita operates facilities for the sorting and processing of spent refractories from customers' industries. Circular

1. RHI Magnesita offers products and services which help to make CO_2-intensive processes in the steel industry more efficient and therefore achieve emissions reductions in the global steel industry.

raw materials which are mechanically processed by RHI Magnesita and transformed from waste to raw material are eligible for consideration under the EU Taxonomy, whilst circular raw material processed by a third party and purchased externally by the Group are non-eligible.

Close to market research, development and innovation

Close to market research, development and innovation covers "research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of GHG emissions (RD&I) for which the ability to reduce, remove or avoid GHG emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level (TRL) 6".

RHI Magnesita conducts close to market research, development and innovation among others to directly avoid GHG emissions (e.g. research on chemically bonded bricks which do not need firing in kilns) or which support other eligible economic activities (e.g. material recovery from non-hazardous waste). These R&D activities may be included in the operating expenditure of the other eligible economic activity and are therefore excluded to prevent double counting.

KPIs

Share of Taxonomy eligible revenue, operating expenditure and capital expenditure — Climate change mitigation:

Turnover

The turnover KPI is calculated as the ratio of turnover associated with taxonomy-eligible economic activities in the reporting period to total turnover in that period. The total turnover of the financial year 2022 of €3,317 million forms the denominator of the turnover key figure and can be taken from the consolidated income statement on **page 27** of this Annual Report.

The following eligible activities have been identified as relevant in view of turnover:

- Manufacture of other low carbon technologies.
- Material recovery from non-hazardous waste.

The total turnover reported in the consolidated income statement is analysed across all Group Companies to assess whether it is associated with taxonomy-eligible activities. A detailed analysis of the items included in the total turnover is used to allocate the respective turnover to the taxonomy eligible activities.

Capital expenditure

The capital expenditure KPI indicates the proportion of capital expenditure that is either related with taxonomy-aligned economic activities, or related to the purchase of outputs and products from taxonomy-aligned economic activities. There is neither a capex plan to expand RHI Magnesita's Taxonomy-aligned economic activities nor to upgrade Taxonomy-eligible economic activities to render them Taxonomy-aligned.

The following eligible activities have been identified as relevant regarding the capital expenditure KPI:

- Manufacture of other low carbon technologies.
- Material recovery from non-hazardous waste.
- Close to market research, development and Innovation.

The project descriptions of the additions of assets in the reporting year served as a basis for the necessary identification.

The sum of these identified additions of assets in the reporting year equals the numerator of taxonomy-aligned capital expenditure. The total capital expenditures in line with point 1.1.2.1. Annex 1 of the Disclosure Delegated Act equal the denominator.

Total capex consists of additions to tangible and intangible fixed assets during the financial year, before depreciation, amortisation and any re-measurements, including those resulting from revaluations and impairments, as well as excluding changes in fair value. It includes acquisitions of tangible fixed assets (IAS 16), intangible fixed assets[2] (IAS 38), right-of-use assets (IFRS 16) and investment properties (IAS 40). Additions resulting from business combinations are not included.

Operating expenditure

The denominator of the operating expenditure KPI shall cover direct non-capitalised costs that relate to R&D, building renovation measures, short-term lease, maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of assets of property, plant and equipment by the undertaking or third party to whom activities are outsourced that are necessary to ensure the continued and effective functioning of such assets.

The numerator equals to the part of the operating expenditure included in the denominator related with taxonomy-aligned economic activities or related to the purchase of outputs and products from taxonomy-aligned economic activities.

The following eligible activities have been identified as relevant regarding the operating expenditure KPI:

- Manufacture of other low carbon technologies.
- Material recovery from non-hazardous waste.
- Close to market research, development and innovation.

For the identification of relevant operating expenditure, costs including direct non-capitalised costs that relate to R&D as well as maintenance and repair have been considered.

Avoidance of double counting

To avoid double counting, data sources for the various reported items are individually crosschecked to identify overlapping classifications.

Where double counting is identified, overlapping data is removed from the eligible amount.

Material areas identified for removal of double counting are as follows:

- Revenue from EAF (manufacture of other low carbon technologies); and
- Revenue from recycling (material recovery from non-hazardous waste.

Taxonomy aligned activities of RHI Magnesita referring to the activities of Annex I and II

For the eligible economic activities of RHI Magnesita previously described, the following activities are considered aligned:

- Manufacture of other low carbon technologies.
- Material recovery from non-hazardous waste.

Concerning Close to market research, development and innovation activities, an internal assessment identified that figures were not material for the FY2022 and therefore the alignment assessment had not been performed.

In respect to alignment criteria, RHI Magnesita considered its activities under "Material recovery from non-hazardous waste" aligned because for each raw material recovery site, monthly yield reports demonstrate a constant yield above 50% which fulfil the alignment criteria.

In respect to "Manufacture of other low carbon technologies", RHI Magnesita could demonstrate CO_2 emission reductions for those who use its EAF products, solutions, and digital solutions.

1. For more information, see Notes 19.
2. For more information, see Notes 18.

EU Taxonomy continued

Does Not Significant Harm (DNSH)

To fulfil the DNSH criteria for the identified taxonomy-eligible economic activities, corresponding analyses and surveys were carried out in accordance with (EU) 2021/2139 to establish taxonomy alignment.

For the economic activity Manufacture of other low carbon technologies (3.6) the following DNSH criteria need to be met: climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control and protection and restoration of biodiversity and ecosystems.

For the economic activity Material recovery from non-hazardous waste (5.9), the DNSH criteria to climate change adaptation and to protection and restoration of biodiversity and ecosystems need to be met.

DNSH to climate change adaptation

Activities 3.6 and 5.9

For the climate risk and vulnerability analysis for objective 2 "climate change adaptation", potential climate hazards were analysed and assessed for their risk potential in accordance with the requirements of Appendix A (EU) 2021/2139, RHI Magnesita conducted climate risk assessment considering both physical and transitional climate risks aligned with TCFD. Two climate scenarios (representative concentration pathways 2.6, and 8.5) were considered based on the Intergovernmental Panel on Climate Change Fifth Assessment Report and the International Energy Agency ("IEA") Sustainable Development Scenario. The results of the assessment indicated that the impact for physical risks is limited.

DNSH to sustainable use and protection of water and marine resources

Activity 3.6

For objective 3 "sustainable use and protection of water and marine resources", appendix B of Regulation (EU) 2021/2139 was relevant. To fulfil the DNSH criteria, RHI Magnesita conducted a water scarcity risk assessment covering all operational sites. The assessment showed that 10 operations are in locations at risk of water scarcity. For these operations, water management actions have been developed which follow local requirements on water such as ground water level monitoring, water withdrawal limits, and affected sites take water management actions to reduce water consumption.

DNSH to transition to a circular economy

Activity 3.6

The economic activities at RHIM falling into the category of "Manufacture of other low carbon technologies" are mainly the production of refractory products for EAF which are designed for durability. Electric Arc Furnaces (EAF) is a prerequisite for the recycling of steel and other metals. Furthermore, RHIM has made the use of secondary raw materials in its own production as well as recycling a strategic priority, so the DNSH-criteria of objective 4 "transition to a circular economy" are in our business model.

DNSH to pollution prevention and control

Activity 3.6

To meet the requirements for the DNSH criteria of objective 5 "pollution prevention and control", a survey and analysis of the substances listed in Appendix C of Regulation EU 2021/2139 were carried out. RHI Magnesita is fulfilling all requirements for substances and mixtures referred to in appendix C (persistent organic pollutants, mercury, substances that deplete the ozone layer, hazardous substances in electrical and electronic equipment and substances in REACH regulation).

DNSH to protection and restoration of biodiversity and ecosystems

Activities 3.6 and 5.9

The requirements for Objective 6 "Biodiversity" according to Appendix D of Regulation (EU) 2021/2139 are ensured due to the legal framework within the EU. For sites outside the EU, the national legal framework was analysed.

RHI Magnesita considers its mining sites as the part of the production process with the highest potential for adverse effects on biodiversity. Therefore, the assessment focuses on mining sites. For all RHI Magnesita's mining sites an environmental impact screening has been conducted. Out of the six mining sites. The mining sites operate within or near IUCN category Ia, II, IV, VI and unclassified (Natura 2000) protected areas. All mining sites fulfil general environmental protection requirements in line with legal requirements. Activity 5.9 Material recovery from non-hazardous waste replaces virgin materials with secondary raw materials; thus, contributes in an effective way to reduce the environmental impact associated with raw material extraction.

Minimum Social Safeguards

To ensure compliance with minimum social safeguards RHI Magnesita established a due diligence process. According to Art. 8 (EU) 2020/852, the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights, including the principles and rights set out in the eight fundamental conventions identified in the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work and the International Bill of Human Right were considered by RHI Magnesita.

In 2022, RHI Magnesita adopted a Human Rights Policy. Additionally, the Group revised its Code of Conduct, instituted a global Anti-Discrimination and Anti-Harassment Policy. Our Code of Conduct is available in 11 languages on the internet, intranet, and Compliance Portal. We also update our Anti-Slavery Statement annually and publish it on the RHIM website. We are committed to having our suppliers adhere to the same principles as outlined in our Supplier Code of Conduct, which includes laws related to the protection of human rights. Furthermore, RHI Magnesita has implemented processes to continuously screen business partners in high-risk countries for compliance with fundamental human and labour rights. RHI Magnesita has established an independent whistleblowing hotline and web-based system, which allows both employees and third parties to make reports anonymously. Additionally, other reporting channels are available. All cases reported are investigated by IA, R&C in conjunction with other relevant departments. Moreover, all sales agents must have a Trace certification, which is updated annually and includes a reputational screening that can detect any human rights violations that may have occurred.

With all these measures, RHI Magnesita ensures compliance with the minimum safeguards for itself and its suppliers, and processes are implemented to become aware of suspicious cases of human rights violations, corruption, and bribery and to be able to react accordingly.

Taxonomy disclosure table

Turnover				Substantial contribution criteria					
Economic activities	Code(s)	Absolute turnover	Proportion of turnover	Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular Economy	Pollution	Biodiversity and ecosystems
A. Taxonomy-eligible activities									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of other low carbon technologies	3.6	€556,524,461	16.8%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Material recovery from non-hazardous waste	5.9	€63,191,061	1.9%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Turnover of environmentally sustainable activities (Taxonomy-aligned)		€619,715,522	18.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
Close to market research, development, innovation	9.1	€—	0%						
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		€—	0%						
Total A.1 + A.2		€619,715,522	18.7%						
B. Taxonomy non-eligible activities		€2,697,454,640	81.3%						
Total A+B		**€3,317,170,162**	**100.0%**						

opex				Substantial contribution criteria					
Economic activities	Code(s)	Absolute opex	Proportion of opex	Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular Economy	Pollution	Biodiversity and ecosystems
A. Taxonomy-eligible activities									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of other low carbon technologies	3.6	€16,485,870	12.5%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Material recovery from non-hazardous waste	5.9	€1,875,900	1.4%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Opex of environmentally sustainable activities (Taxonomy-aligned)		€18,361,770	13.9%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
Close to market research, development, innovation	9.1	€1,312,216	1.0%						
Opex of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		€1,312,216	1.0%						
Total A.1 + A.2		€19,673,986	14.9%						
B. Taxonomy non-eligible activities		€112,058,281	85.1%						
Total A+B		**€131,732,267**	**100.0%**						

capex				Substantial contribution criteria					
Economic activities	Code(s)	Absolute capex	Proportion of capex	Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular Economy	Pollution	Biodiversity and ecosystems
A. Taxonomy-eligible activities									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of other low carbon technologies	3.6	€5,329,175	2.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Material recovery from non-hazardous waste	5.9	€3,741,000	1.9%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Capex of environmentally sustainable activities (Taxonomy-aligned)		€9,070,175	4.6%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
Close to market research, development, innovation	9.1	€445,630	0.2%						
Capex of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		€445,630							
Total A.1 + A.2		€9,515,805	4.8%						
B. Taxonomy non-eligible activities		€187,884,195	95.2%						
Total A+B		**€197,400,000**	**100.0%**						

EU Taxonomy continued

Taxonomy disclosure table continued

Economic activities	DNSH criteria ('Does Not Significantly Harm') Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy aligned proportion of turnover year 2022	Taxonomy aligned proportion of turnover year 2021	Category (enabling activity)	Category (transitional activity)
A. Taxonomy-eligible activities											
A.1 Environmentally sustainable activities (Taxonomy-aligned)											
Manufacture of other low carbon technologies		Y	Y	Y	Y	Y	Y	16.8%		E	
Material recovery from non-hazardous waste		Y	Y	Y	Y	Y	Y	1.9%		E	
Turnover of environmentally sustainable activities (Taxonomy-aligned)								18.7%			
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)											
Close to market research, development, innovation										E	
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)											
Total A.1 + A.2								18.7%		100.0%	
B. Taxonomy non-eligible activities											
Total A+B											

Economic activities	DNSH criteria Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy aligned proportion of Opex year 2022	Taxonomy aligned proportion of Opex year 2021	Category (enabling activity)	Category (transitional activity)
A. Taxonomy-eligible activities											
A.1 Environmentally sustainable activities (Taxonomy-aligned)											
Manufacture of other low carbon technologies		Y	Y	Y	Y	Y	Y	12.5%		E	
Material recovery from non-hazardous waste		Y	Y	Y	Y	Y	Y	1.4%		E	
Opex of environmentally sustainable activities (Taxonomy-aligned)								13.9%			
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)											
Close to market research, development, innovation										E	
Opex of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)											
Total A.1 + A.2								14.9%		100%	
B. Taxonomy non-eligible activities											
Total A+B											

Economic activities	DNSH criteria Climate change mitigation	Climate change adaptation	Water and maritime resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy aligned proportion of Opex year 2022	Taxonomy aligned proportion of Opex year 2021	Category (enabling activity)	Category (transitional activity)
A. Taxonomy-eligible activities											
A.1 Environmentally sustainable activities (Taxonomy-aligned)											
Manufacture of other low carbon technologies		Y	Y	Y	Y	Y	Y	2.7%		E	
Material recovery from non-hazardous waste		Y	Y	Y	Y	Y	Y	1.9%		E	
Capex of environmentally sustainable activities (Taxonomy-aligned)								4.6%			
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)											
Close to market research, development, innovation										E	
Capex of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)											
Total A.1 + A.2								4.8%		100%	
B. Taxonomy non-eligible activities											
Total A+B											

EU Taxonomy reporting in the year to 31 December 2022

RHI Magnesita commissioned Deloitte Audit Wirtschaftsprüfungs GmbH for an independent third-party limited assurance engagement on the non-financial report for the year ended 31 December 2022, according to Dutch transposition of the NFI-Decree, the Taxonomy Regulation ((EU) 2020/852) and GRI Standards. For more information, click **here** for more details on the assurance process and conclusions.

Sustainability

Task Force on Climate-Related Financial Disclosures (TCFD)

Introduction

RHI Magnesita is committed to being transparent about its climate-related risks and opportunities. In line with this commitment, we support the Task Force on Climate-related Financial Disclosures (TCFD) and the EU Taxonomy. We have made it a priority to identify, evaluate, and manage climate-related risks and opportunities, and we are always striving to improve our process while providing essential information to our stakeholders to make informed decisions.

RHI Magnesita has reported according to the TCFD Recommendations since 2019 and has updated its climate related risk assessment and enlarged its disclosure in 2022.

The TCFD Recommendations are the world's most commonly accepted standard for disclosing climate-related risks and opportunities. They focus on four key pillars of Governance, Strategy, Risk Management and Metrics and Targets.

Table 1. TCFD Recommendations

Pillar of TCFD Recommendations	Description	
Governance	• Describe the Board's oversight of climate related risks and opportunities	Page 90
	• Describe the management's role in assessing and managing climate related risks and opportunities	Page 90
Strategy	• Describe the climate -related risks and opportunities the organisation has identified over the short, medium and long term	Page 91
	• Describe the impact of climate-related risks and opportunities on the organisation's business, strategy and financial planning	Page 91
	• Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Page 91
Risk Management	• Describe the organisation's processes for identifying and assessing climate-related risks	Page 91
	• Describe the organisation's processes for managing climate-related risks	Page 92
	• Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management	Page 92
Metrics and Targets	• Disclose the metrics used by the organisation to assess climate related risks and opportunities, in line with its strategy and risk management process	Page 93
	• Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Page 93
	• Describe the targets used by the organisation to manage climate-related risks, opportunities and performances against targets	Page 93

Task Force on Climate-Related Financial Disclosures (TCFD) continued

Board oversight

The Board of RHI Magnesita guides the development of our strategy and appetite towards risk. It also has oversight of other material matters such as regulatory developments or reputational and financial topics. Responsibility for and oversight of climate-related risks and opportunities has been assigned to the Corporate Sustainability Committee (CSC).

The Chairman of the Committee, who is responsible for overseeing RHI Magnesita's climate strategy, engages directly with RHI Magnesita managers and employees on climate topics as required between the regular Committee meetings. Certain members of the Executive Management Team regularly attend the Committee meetings. The Committee Chairman reports to the Board on climate-related matters on a regular basis. The CSC regularly reviews climate risks and opportunities, strategy and performance, while the Remuneration committee reviews and approves bonus payment linked to climate. Climate-related progress is discussed at every CSC meeting, with the Chair engaging directly with those driving the CO_2 strategy in between CSC meetings as needed. Recommended disclosures are presented on Table 1. The Audit & Compliance Committee oversees any material ESG risks, including climate-related risks.

Management

At Management level, in the C-Suite, the CTO reports regularly to both the CEO and Board CSC on a quarterly basis and anytime in-between as necessary. The CTO is also on the Executive Management Team. He directly oversees the development of the company's CO_2 strategy and its implementation across the organization. The Global Sustainability Team reports to CTO and manages and facilitates sustainability across RHI Magnesita.

Driven by our Board and led by our Executive Management Team, we engage widely with stakeholders, investigate risks, and identify opportunities aligned with our ambitious strategy. Our climate governance is outlined on the Figure 1.

In 2022 we further integrated carbon considerations into key processes:

- A new internal pricing mechanism was introduced to incentivise sales teams to prioritise products with higher recycled content.
- 25% of the Long-Term Incentive Plan (LTIP) payout criteria is linked to the Group's target to reduce CO_2 emissions per tonne against 2018 baseline year.
- Increase the use of secondary raw material accounts for 10% of the annual bonus for all eligible employees.
- Enhanced monthly monitoring of CO_2 emissions (Scope 1 and 2) was integrated into the Group's enterprise resource planning tool.

In addition to that, we are currently implementing a more structured approach to engage with suppliers to fully integrate sustainability considerations — including climate change — into our procurement process.

Our goal is that by 2025 two-thirds of our suppliers will be rated by EcoVadis. Using the Carbon Action Scorecard of EcoVadis we are provided with a maturity status of a prospective supplier regarding carbon management and mitigation. Engagement on the subject of emissions also highlights to potential suppliers that reducing CO_2 is a key priority for the Group, which is expected to drive changes in supplier behaviour and energy use in the long term.

Climate strategy

Driving down carbon emissions is a key priority for RHI Magnesita. Besides mapping out our own transition path, we would like to be a reliable ally to our customers as they venture into a carbon-reduced economy.

The Group's emission reduction plans target a 15% reduction in CO_2 emissions intensity for Scope 1, 2 and 3 (raw materials) emissions by 2025, compared to 2018. Our climate strategy is based on:

1) reducing the carbon footprint of our raw materials, including through the increased use of circular raw materials;
2) increasing energy efficiency in our operations;
3) reducing the carbon intensity of our energy sources; and
4) providing innovative solutions to reduce customer emissions.

All risks and opportunities were assessed in a qualitative scenario analysis, and the most material climate-related risks and opportunities (those with an inherent risk or opportunity rating of 'high') underwent quantitative scenario analysis to help better estimate the potential financial impact on the business.

For our analysis, we used two climate scenarios to understand the potential range of impacts we face. The climate scenarios considered are based on the Intergovernmental Panel on Climate Change Fifth Assessment Report. and the International Energy Agency ("IEA") Sustainable Development Scenario. The scenarios consider greenhouse gas concentration trajectories in the atmosphere and relate to a below 2°C temperature increase, and above 4°C temperature increase in the global average surface temperature in 2100.

- Below 2°C increase (RCP 2.6): Based on the Intergovernmental Panel on Climate Change ("IPCC") Shared Socio-economic Pathway (SSP) 1 — 2.6 and the International Energy Agency ("IEA") Sustainable Development Scenario. This scenario assumes a gradual buildup of climate policies over time and predicts that through the implementation of moderate mitigation measures, global net zero emissions can be achieved by 2070.
- Hot house World (RCP 8.5): Associated with approximately 4 degrees of global warming, based on the IPCC's SSP 5 — 8.5 scenario. This scenario assumes that without actions to limit emissions, it is likely the rise of temperature, leading to a variety of physical risks and substantial impacts.

We have conducted our analyses across three different time horizons. The short-term (2025) sits within our short-term business plan, while the medium (2030) and long-term (2050) time horizons are oriented towards the broader international policy developments, including the Paris Agreement and the EU Green Deal.

Having reviewed the analysis, the Corporate Sustainability Committee believes the Group is well positioned to mitigate the risks and embrace the opportunities associated with the climate-change related developments across both scenarios. These could range from disruptive regulatory developments, physical hazards for our operations or new business opportunities. The Group believes that through monitoring market developments and enhancing its business adaptability and planning, RHI Magnesita can maintain a strong level of climate resilience over the short, medium and long-term across both scenarios. We remain committed to supporting our customers' decarbonisation efforts as well as actively managing our own climate-related risks and opportunities.

Climate risks management

The Group has an established risk management approach with the objective of identifying, assessing, mitigating, monitoring and reporting uncertainties and risks that could impact the delivery of RHI Magnesita's strategy. Since the environment and climate change represents both strategic and operational risk to our business, they are considered as RHI Magnesita's principal risks (see our risk management approach on our Annual Report 2022, **page 46**). Several mitigation measures are in place to ensure that the risk is appropriately managed and within the Group's risk appetite.

Risks were grouped as physical risks and transitional risks.

Physical risks include greater severity of flooding, droughts or other extreme weather events which could disrupt our operations and supply chain.

Transitional risks range from regulatory frameworks and the rising price of carbon to the viability and customer acceptance of emerging technologies.

Our most material climate-related risks and opportunities result from disruptive regulations for CO_2 emissions reduction.

In 2022, the Group has updated the modelling and analysis of climate related transitional risks and opportunities that are foreseen to impact the Group over the short, medium, and long-term horizons. Results have shown that physical risks remained unchanged, and the impact of transitional risks was reviewed (see table 2).

Short term (2025)

Our first set of sustainability targets are planned within this timeframe. We are also actively monitoring emerging trends and opportunities that may require us to adjust our strategic plans. We are committed to staying agile and adapting our plans as needed to ensure that we remain competitive in the marketplace and continue to meet our sustainability goals, specially our 2025 climate-related target (for more information, see our Annual Report, 2025 Targets, **page 61**).

Medium term (2030)

This is the most likely horizon for the regulatory frameworks (such as the EU Emissions Trading System and Carbon Border Adjustment Mechanism) currently set to come into force in a three years transition period, and set to be expand to all sectors within EU ETS by 2030 thus having partial effect due to the gradual phase out of free allocations. We are anticipating and considering major adjustments to our industrial footprint.

Table 2. Climate-related transitional risks and opportunities

Climate drivers	Risk/Opportunity	Category	Impact (see reference table)	RHI Magnesita response and strategy	Main affected Time Horizon	Related metrics and targets
Policy-making & Regulatory pressure	Carbon Pricing	Risk	RHI Magnesita foresees an impact due to the increase in operating costs because of increase in level or scope of carbon pricing ●●●●●	• The Group integrates carbon permit price projections into its financial planning and has a hedging programme in place to fix future exposures • We are developing new technologies, such as carbon capture and utilisation/storage to reduce our emissions, investing €50 million in research and development of these solutions • The Group aims to increase the use of secondary raw materials which will reduce CO_2 emissions compared to the mining or purchase of fresh raw material • We will continue to invest in fuel switching, renewable energy and energy efficiency as additional methods to reduce our carbon intensity	Medium-Long Term	We have set a 15% emissions intensity reduction target by 2025 on a 2018 baseline of Scope 1, 2 and 3 raw materials emissions. By the end of 2022, our emissions intensity was 8% lower than the 2018 baseline
Market & Customers	Increased demand for the Group's products arising from the development of or transition to lower-carbon emitting industrial processes by our customers	Opportunity	RHI Magnesita foresees a low financial impact regarding the increased demand from customers for refractory products that help them reduce their emissions is considered low (e.g. EAF) ●●	• We are already providing our customers with refractory products that support low carbon production processes. This includes our steel and cement customers who account for 80% of our business. For example, we provide products supporting EAFs for the steel industry, which is an enabling technology for CO_2 emissions reduction • RHI Magnesita has a higher market share in lower CO_2 emitting applications (such as EAF) and a lower relative market share in high emitting applications (e.g. BOF, Blast Furnace) • We will continue to offer our low energy and carbon services and product offering including process optimisation, recycling services, coating technologies and digital solutions	Short-Medium-Long Term	Sales of refractory products supporting EAFs, associated with the lower carbon production of steel, was 552 million in 2022
Market & Customers	Increased demand for RHI Magnesita products that are produced with lower carbon footprint	Opportunity	Higher revenue due to increased demand for low-carbon (e.g. recycled) refractory products ●●●●●	• In the short term, increasing the share of SRM in our products will help us to reduce our geogenic emissions from raw materials and create attractive low-carbon products • In the longer term, if the Group is successful at developing and operating carbon capture and sequestration or utilisation technologies and switching to renewable energy sources, refractory products could be manufactured with low or potentially zero CO_2 emissions • This is expected to translate into a pricing and/or market share advantage compared to competitor products with high emissions, particularly as customers focus more on their Scope 3 emissions	Short-Medium-Long Term	• We have set a target of 10% SRM content in refractory products by 2025. We achieved 10.5% of SRM content in 2022 (2021: 6.8%) • Our target is to reduce CO_2 intensity by 15% by 2025

Opportunities			Risks		
High	>€875m		High	>€875m	
Medium	€175m-€875m		Medium	€175m-€875m	
Low	<€175m		Low	<€175m	

Task Force on Climate-Related Financial Disclosures (TCFD) continued

Long term (2050)

The deadline that has been set by the UN and many policy-making bodies to set decarbonisation goals is the year 2050. During 2021 and 2022, we completed a detailed assessment of all possible measures to reduce CO_2 emissions in our operations based on proven technology and available financial resources. Whilst it may be possible to reduce emissions in line with a "well below 2 degrees" scenario, it is our current assessment that it is not possible to set a target that is aligned with a 1.5-degree scenario which is not dependent on the development of as-yet unknown technologies or significant external financial and infrastructure support.

We are committed to reduce our carbon footprint and we will continue to monitor the variables which support this conclusion and update our transition plan accordingly if the Group's own R&D activities result in the development of new technologies that could deliver a faster reduction in CO_2 emissions that is financially achievable.

Transition-related risks and opportunities

Operating in an emissions intensive industry, it is likely that RHI Magnesita's business model will be affected by the transition to a low-carbon economy. As well as risks, there are a number of significant opportunities that the Group is well positioned to benefit from.

2022 Valuation Bridge Analysis

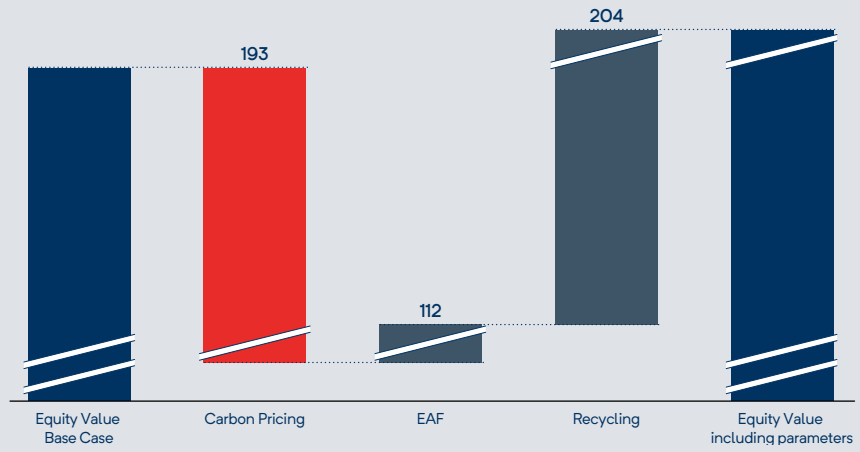


Table 2 illustrates the material climate-related risks and opportunities selected for quantitative scenario analysis.

Risks

RHI Magnesita's main risk is the additional operating expense resulting from carbon pricing developments. The financial impact of this risk has increased due to implementation of CBAM in Europe, which is an EU policy instrument designed to level the playing field for domestic producers subject to carbon pricing by implementing a carbon-based import tariff on goods from countries without equivalent carbon pricing.

The CBAM is designed to protect domestic producers from competitive disadvantages resulting from carbon pricing by making imports from countries without equivalent carbon pricing more expensive. This mechanism would help to ensure that domestic producers and consumers are not put at an economic disadvantage by having to bear the cost of carbon pricing, while their international competitors do not. The CBAM is intended to incentivise countries to adopt similar carbon pricing policies, thereby reducing the global emissions of greenhouse gases.

Table 3. Climate-related physical risks

			RCP 8.5		RCP 2.6	
Country	Plant		Likelihood	Dominant hazard	Likelihood	Dominant hazard
India	**Cuttack**	**2025**	**High**	**Riverine Flooding**	**High**	**Riverine Flooding**
		2030	**High**	**Riverine Flooding**	**High**	**Riverine Flooding**
		2050	**High**	**Riverine Flooding**	**High**	**Riverine Flooding**
France	Flaumont	2025	Moderate	Riverine Flooding	Moderate	Riverine Flooding
		2030	Moderate	Riverine Flooding	Moderate	Riverine Flooding
		2050	Moderate	Riverine Flooding	Moderate	Riverine Flooding
Mexico	Tlalnepantla	2025	Moderate	Soil Subsidence	Moderate	Soil Subsidence
		2030	Moderate	Soil Subsidence	Moderate	Soil Subsidence
		2050	Moderate	Soil Subsidence	Moderate	Soil Subsidence
Brazil	Vale do Aço	2025	Moderate	Riverine Flooding	Moderate	Riverine Flooding
		2030	Moderate	Riverine Flooding	Moderate	Riverine Flooding
		2050	Moderate	Riverine Flooding	Moderate	Riverine Flooding
Mexico	Ramos Arizpe	2025	Moderate	Soil Subsidence	Moderate	Soil Subsidence
		2030	Moderate	Soil Subsidence	Moderate	Soil Subsidence
		2050	Moderate	Soil Subsidence	Moderate	Soil Subsidence
US	Ashtabula	2025	Moderate	Forest Fire	Moderate	Forest Fire
		2030	Moderate	Forest Fire	Moderate	Forest Fire
		2050	Moderate	Forest Fire	Moderate	Forest Fire
China	Chizhou	2025	Moderate	Forest Fire	Moderate	Forest Fire
		2030	Moderate	Forest Fire	Moderate	Forest Fire
		2050	Moderate	Forest Fire	Moderate	Forest Fire

The implementation of the Carbon Border Adjustment Mechanism (CBAM) is expected to have a financial impact on the Group from 2030 onwards as free carbon allowances under EU-ETS are phased-out. This is due to levies on imported materials, which are designed to protect the EU domestic business. This is expected to increase refractory pricing for all suppliers selling into the EU. Additionally, products manufactured in the EU and then exported will incur higher costs, as there are currently no compensation mechanisms for exporters. The financial impacts of the CBAM have been included in the Group's updated TCFD modelling, resulting in impact on equity value ranging from €193 million to €320 million.

Opportunities

Two opportunities were identified (i) increased demand for products that customers will require for technology transition, e.g. EAF refractories, and (ii) increased demand for low-carbon refractory products containing recycled raw materials.

The steel industry is undergoing a decarbonisation process which is predicted to continue into 2050 and beyond. This megatrend has led to an increased demand for electric arc furnaces (EAF) and electric smelter furnaces. As the pressure to reduce carbon emissions intensifies, RHI Magnesita is well-positioned to benefit from this growing trend. With its vertically integrated model, RHI Magnesita has access to the raw material required for an electric arc furnace from its European mines in Austria, Hochfilzen and Breitenau. This gives RHI Magnesita a competitive edge and makes it the leading refractory partner of choice in the green transition of the steel industry (read more on decarbonising across industries on Annual Report 2022, **page 21**).

Besides that, in the first half of 2022, RHI Magnesita entered into a joint venture with Horn & Co. to combine their recycling activities in Europe and increase production, use and offering of secondary raw materials. This will result in a significant decrease in CO_2 emissions. The newly formed entity, MIRECO (Horn & Co. RHIM Minerals Recovery GmbH), will be positioned at the forefront of the circular economy, providing services to customers in steel, cement, glass and other process industries (read more on decarbonising our products on Annual Report 2022, **page 21**).

The net impact on equity value of these opportunities combined is +€123 million (2021: +€352 million).

Table 4. Metrics and Targets[1]

	Absolute emissions (thousand tonnes of CO_2)				
	2018	2019	2020	2021	**2022**
Scope 1	2,400	2,007	1,973	2,499	2,193
of which geogenic emissions	1,305	1,066	1,075	1,340	1,112
of which fuel-based emissions	1,045	918	873	1,146	1,082
of which other emissions	50	24	25	14	—
Scope 2	208	188	143	147	89
Scope 3 (only raw material)	2,875	2,506	2,181	2,404	1,912
TOTAL	**5,483**	**4,702**	**4,297**	**5,050**	**4,196**
Carbon Intensity (t CO_2/t product)[2]	1.90	1.89	1.97	1.85	1.75
Biogenic Scope 1 emissions	5	8	10	13	13

1. Historical CO_2 emission data were revised to reflect new acquisitions and changes that were made following an external verification process that took place in July 2022.
2. Adaptations in line with the Greenhouse Gas protocol and refinement in reporting result in updated CO_2 intensity figures for 2018-2022.

Physical-related risks and opportunities

The Group assessed its major production sites and strategic port locations across a broad range of physical climate hazards. The table 3 presents seven highest risk assets that were selected for 'deep dive' analysis. These sites remain in the 'Moderate' or 'High' VAR[1] categories across 2025, 2030 and 2050 and both scenarios. We considered the impacts including asset damage, disruption to operations and impacts on the value chain (upstream and downstream). Riverine flooding was identified to be the most dominant hazard to our portfolio in relation to value at risk of damage across both scenarios and all three-time horizons.

The results of the assessment indicated that the overall risk profile for physical risks is limited. Our current insurance coverage provides sufficient coverage for asset damage and operational disruption. The assessment did not indicate that there are likely to be any material increases in the cost or coverage of insurance in the future. The results of the assessment will be used to guide resilience building within our operations and value chain.

This assessment will be reviewed to include the new assets RHI Magnesita is acquiring during the year 2022.

Climate risks also form part of our third CDP climate submission, for which we were awarded a A-rating by CDP in December 2022.

Metrics and targets

We continue to publish our Scope 1, 2 and 3 (raw materials) GHG emissions within our Annual Report. In 2022, the Group's new product carbon footprinting methodology was independently verified and we are in the process of integrating monthly monitoring of CO_2 into the Group's enterprise resource planning tool. Reducing CO_2 emissions was introduced as a remuneration target in 2021 and now accounts for 10% of the annual bonus for all eligible employees.

In addition to that, in 2022, the Group completed a major project to increase transparency for its customers by disclosing the carbon footprint of its c.200,000 refractory products. The calculations follow the principles of ISO 14067 standard and include all scope 1 and 2 emissions, as well as relevant scope 3 emissions related to the manufacturing process (known as "cradle-to-gate" greenhouse gases from raw material extraction to production and packaging).

Tracking our progress

We use metrics and targets to track our progress in relation to our material climate-related risks and opportunities.

Outlook

We recognise the importance of understanding our risk and opportunity landscape in guiding our climate strategy. In addition to charting our own transition, we want to be a trusted partner to our customers on their journey to net zero. We will further deepen our climate-related initiatives in the coming years to help us to continue to be a sustainability leader within the sector.

1. MVAR is a measure of the annual risk of damage to an asset. The MVAR captures the costs of expected extreme weather and climate-related damage, relative to the replacement cost of the building.

Independent assurance report on Non-Financial Reporting

Introduction

We have performed procedures to obtain limited assurance as to whether any matters have come to our attention that cause us to believe that the consolidated non-financial report as of December 31, 2022 has not been prepared, in all material respects, in accordance with the reporting criteria. The reporting criteria consist of the GRI Standards issued by the Global Sustainability Standards Board (GSSB) and the reporting requirements mentioned in "Besluit bekendmaking niet-financiële informatie", hereafter: "NFI-Decree".

Furthermore, we have performed procedures to obtain limited assurance as to whether any matters have come to our attention that cause us to believe that the EU taxonomy information disclosed is not prepared, in all material respects, in accordance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation).

Responsibility of the management

The legal representatives of RHI Magnesita N.V. are responsible for the preparation of the report content in accordance with the reporting criteria and for the selection of the disclosures to be verified. The reporting criteria consist of the GRI Standards issued by the Global Sustainability Standards Board (GSSB) and the reporting requirements mentioned in NFI-Decree. Furthermore, they are responsible for reporting the disclosed information on the EU taxonomy in accordance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation).

This responsibility includes the selection and application of appropriate methods for preparing the report, making assumptions and estimates of individual non-financial disclosures that are plausible under the given circumstances. The responsibility further includes the internal controls, which have been determined as necessary by the management to enable the preparation of a consolidated non-financial report that is free from misstatement, whether due to fraud or error.

Responsibility of the auditor

Our responsibility is to express a limited assurance opinion as to whether any matters have come to our attention that cause us to believe that the consolidated non-financial report as of December 31, 2022 has not been prepared, in all material respects, in accordance with the reporting criteria. The reporting criteria consist of the GRI Standards issued by the Global Sustainability Standards Board (GSSB) and the reporting requirements mentioned in NFI-Decree.

Furthermore, it is our responsibility to express a limited assurance opinion as to whether any matters have come to our attention that cause us to believe that the EU taxonomy information disclosed is not prepared, in all material respects, in accordance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation).

We conducted our engagement in accordance with the International Standard on Assurance Engagements ISAE 3000 (Revised), "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" issued by the International Auditing and Assurance Standards Board (IAASB) in order to obtain limited assurance on the subject matters.

ISAE 3000 (Revised) requires us to plan and perform the engagement in a way that enables us to obtain limited assurance that nothing has come to our attention that causes us to believe that the consolidated non-financial report has not, in any material aspect, been prepared in accordance with the GRI Standards and NFI-Decree, and that the disclosed information on the EU taxonomy has not been prepared in accordance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation).

In a limited assurance engagement, the evidence-gathering procedures are more limited than in a reasonable assurance engagement and therefore, less assurance can be obtained. The choice of audit procedures lies in the due discretion of the auditor.

As part of our audit, we have performed, inter alia, the following audit procedures and other activities as far as they are relevant to the limited assurance engagement:

- Interview of the employees named by RHI Magnesita N.V. regarding the sustainability strategy, the sustainability principles and the sustainability management
- Interviews of employees of RHI Magnesita N.V. to assess the methods of data collection, data processing and internal controls
- Matching the non-financial disclosures shown in the consolidated non-financial report with the documents provided
- Conducting a media analysis
- Review of the disclosed information according to NFI-Decree and GRI standards
- Review of the disclosed information on the EU taxonomy for compliance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation)

We believe that the audit evidence we have obtained is sufficient and appropriate to serve as a basis for our assessment.

The objective of our engagement is neither an audit of financial statements nor an auditor's review of financial statements. Likewise, neither the detection and clarification of criminal offences, such as embezzlement or other acts of breach of trust and administrative offenses, nor the assessment of the effectiveness and efficiency of the management is the object of our engagement.

Summarized Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the consolidated non-financial report of RHI Magnesita N.V. as of December 31, 2022 has not, in any material aspects, been prepared in accordance with GRI Standards.

Furthermore, nothing has come to our attention that causes us to believe that the reporting requirements of the NFI-Decree are not met by the consolidated non-financial report.

Additionally, based on our audit procedures, nothing has come to our attention that causes us to believe that the disclosed information on the EU taxonomy has not been prepared in accordance with Art. 8 of Regulation (EU) 2020/852 (Taxonomy Regulation).

Engagement approach

The basis for this engagement are the "General Conditions of Contract for the Public Accounting Professions", as issued by the Chamber of Tax Advisers and Auditors in Austria (according to appendix). In accordance with chapter 7 of these terms and conditions, our liability shall be limited to intent and gross negligence. In cases of gross negligence, the maximum liability is limited to a maximum of five times the fee. This amount constitutes a total maximum liability cap, which may only be utilized once up to this maximum amount, even if there is more than one claimant or more than one claim has been asserted.

Vienna
February, 24th, 2023

Deloitte Audit Wirtschaftsprüfungs GmbH

Mag. Gerhard Marterbauer
Austrian Certified Public Accountant

Mag. Marieluise Krimmel
Austrian Certified Public Accountant

Sustainability

Global Reporting Initiative Standards Index

General disclosures 2021		Location/page Annual Report 2022	Additional content
Disclosure number	Description		
The Organisation and its reporting practices			
GRI-2-1	Organisational details	—	Please click **here** for more details.
GRI-2-2	Entities included in the organisation's sustainability reporting	60	This non-financial report covers all activities, sites, and industrial assets operated or contractually managed by RHI Magnesita N.V. or one of its subsidiaries.
GRI-2-3	Reporting period, frequency and contact point	60	Non-financial data in this report are for financial year 2022 sustainability@rhimagnesita.com
GRI-2-4	Restatement of information	— 61	EU Taxonomy 2021 — the revenue, opex and denominator capex reported as part of the EU Taxonomy disclosure table from the economic activity "Material recovery from non-hazardous waste" as eligible in 2021 is restated (originally reported: Revenue 2021: €82 million; opex 2021: €3 million; restated: revenue €34 million; opex 2021: €1 million; Denominator capex (originally reported: capex 2021: €261 million; restated: capex €279,5 million)) (see Appendix — Taxonomy). Historical CO_2 emission data were revised to reflect new acquisitions and changes that were made following an external verification process that took place in July 2022. Adaptations in line with the Greenhouse Gas protocol and refinement in reporting resulted in updated CO_2 and energy efficiency figures for 2018-2022.
GRI-2-5	External assurance	60	RHI Magnesita commissioned Deloitte Audit Wirtschaftsprüfungs GmbH for an independent third-party limited assurance engagement on the non-financial report for the year ended 31 December 2022, according to Dutch transposition of the NFI-Decree, the Taxonomy Regulation ((EU) 2020/852) and GRI Standards. For more information, click **here** for more details on the assurance process and conclusions.
Activities and workers			
GRI-2-6	Activities, value chain and other business relationships	1-9	RHI Magnesita engages mainly manufacturing suppliers. Our largest 20 suppliers cover roughly 20% of our spend, largest 200 suppliers cover roughly 60%. RHI Magnesita engages suppliers that produce raw materials specifically for refractory industry, energy suppliers to allow conversion of raw materials into finished products, transport suppliers as well as manufacturing suppliers. With a few exceptions mainly for critical raw materials and energy supplies, our contractual commitments usually do not exceed one year. In most cases we have recurring demands, only in a few cases our purchases are project specific. RHI Magnesita operates in a capital and energy intensive business regarding the equipment to produce raw materials and finished products for our customers. A high share of specific raw materials to our industry are sourced in China which means a long supply chain. In the industry in which we are operating, the procurement spend equals roughly two thirds of the revenue. With the exception of a higher share of Chinese raw materials, the suppliers are mostly located in the country and region where we operate production facilities. As a result, Europe still has a higher share of suppliers than the other regions, followed by China, Brazil, USA and India.
GRI-2-7	Employees	24-25	a. Total number of employees by employment contract (permanent and temporary) and by gender (headcount): • Permanent: 12,248 (of which 10,564 male, 1,684 female) • Temporary: 1,483 (of which 1,157 male, 326 female) b. Total number of employees by employment contract (permanent and temporary), by region (headcount): • Western Europe: Permanent: 3,228; Temporary: 473 • Eastern Europe: Permanent:59; Temporary: 11 • Near and Middle East: Permanent: 613; Temporary: 2 • South America: Permanent: 4,729; Temporary: 153 • North America: Permanent 1,344; Temporary: 34 • Asia Pacific: Permanent: 2,231; Temporary: 807 • Africa: Permanent: 44; Temporary: 3 c. Total number of employees by employment type (full-time and part-time), by gender (headcount): • Full time: 13,515 • Part time: 216 • Full time male: 11,662 • Full time female 1,853 • Part time male: 59 • Part time female: 157

Global Reporting Initiative Standards Index
continued

General disclosures 2021		Location/page Annual Report 2022	Additional content
Disclosure number	Description		
GRI-2-8	Workers who are not workers	—	For 2022, an estimation would result in an average FTE of 1.100.
Governance			
GRI-2-9	Governance structure and composition	100-105/115-117	
GRI-2-10	Nomination and selection of the highest governance body	98	
GRI-2-11	Chair of the highest governance body	98	Herbert Cordt, Chairman of the Board of Directors.
GRI-2-12	Role of the highest governance body in overseeing the management of impacts	100	
GRI-2-13	Delegation of responsibility for managing impacts	100	
GRI-2-14	Role of the highest governance body in sustainability reporting	124	Chairman of Corporate Sustainability Committee.
GRI-2-19	Remuneration policies	134	Chairman of Remuneration Committee.
Strategy, policies and practices			
GRI-2-22	Statement on sustainable development strategy	60	Refer to Sustainability strategy.
GRI-2-23	Policy commitments	62	Refer to Ethics & Compliance section.
GRI-2-24	Embedding policy commitments	62	See also **here**.
GRI-2-25	Processes to remediate negative impacts	62	RHI Magnesita follows the precautionary principle in all its operations. All major operations in the EU follow the requirements of the EU IPPC Directive on the precautionary principle. Operations outside the EU follow the precautionary principle in line with national regulatory requirements. Please click **here** for more details.
GRI-2-26	Mechanisms for seeking advice and raising concerns	62	See also **here**.
GRI-2-27	Compliance with laws and regulations	—	There were no significant instances of non-compliance with laws and regulations that resulted in fines or sanctions during the reporting period according to Management. Provisions for potential litigations can be seen on Annual Report 2022, Notes 31. The Group will work to establish a comprehensive approach to report this indicator.
GRI-2-28	Membership of associations	—	• World Refractories Association (WRA) • European Refractories Producers Federation (PRE), via the Association of the Austrian Mining and Steel Producing Industry of the Austrian Federal Economic Chamber • Association of the Austrian Mining and Steel Producing Industry of the Austrian Federal Economic Chamber • Austrian Society for Metallurgy • Association of the German Refractory Industry • Steel Institute VDEh • Brazilian Association of Metallurgy, Materials & Mining (ABM) • Brazilian Association of Refractories Producers (ABRAFAR) • SIRef/MG (Minas Gerais State Refractory Industry Union) • Latin-American Association of Refractories Producers (ALAFAR) • SIR (Brazilian Refractory Industry Union) • Industriellenvereinigung (Federation of Austrian Industries) • Cerame-Unie • Euromines • European Technical Platform of Sustainable Mineral Resources (ETPSMR) • European Cement Research Academy (ECRA) • American Ceramic Society • Bergmännischer Verband Österreichs • US National Lime Association
Stakeholder engagement			
GRI-2-29	Approach to stakeholder engagement	106-109	Stakeholder engagement chapter.
GRI-2-30	Collective bargaining agreements		82% of employees are covered.
Material topics 2021			

General disclosures 2021		Location/page Annual Report 2022	Additional content
Disclosure number	Description		
GRI-3-1	Process to determine material topics	60	RHI Magnesita conducts a materiality assessment as part of our sustainability reporting process. This tool is used to identify issues that are important to the Company's long-term value creation and the demands of its stakeholders. Stakeholder engagement is a key component of the process, as it provides an understanding of what is material and allows the Company to work together to establish solutions for future challenges, even if there are conflicting perspectives from different stakeholders. In 2022, RHI Magnesita continued to prioritise stakeholder engagement and launched an online survey to collect the perspectives of different stakeholders in different regions, as well as an internal survey with employees. The Company reconfirmed Health and Safety, Recycling, Climate Change and Decarbonisation, Other Emissions, Energy Efficiency, and Diversity as material topics as they all fell in the quadrant of extremely important for all stakeholders. This materiality includes the double materiality concept, which considers the impact of topics on the value of the company. Three different levels of impact were considered (low, medium, high) based on a risk management approach that takes into account four dimensions (compliance, strategy, financial, and operation), as well as the likelihood of the risk becoming true. For more information, please see our updated **materiality matrix** on our website.
GRI-3-2	List of material topics	60	No significant changes in the list of material topics for 2022 and topic boundaries. Material topics/KPIs review will be based on updated materiality matrix (see above).
Requirement 7	Publish a GRI Index	—	Please click **here** for more details.
Requirement 8	Provide a statement of use	60	RHI Magnesita has reported in accordance with GRI Standards for the period 01.01.2022–31.12.2022.

Specific Standard Disclosures/Key RHI Magnesita Topics		Location/Page Annual Report 2022	Additional Content
Disclosure number	Description		
Economic Performance 2016			
GRI-201-1	Direct economic value generated and distributed	6–9; 16–22; 29–34	
GRI-201-2	Financial implications and other risks and opportunities due to climate change	47; 55; 91	Financial implications are described in our TCFD Report (**pages 90–92**).
Anti-corruption 2016			
GRI-3-3	Management of material topics	62	RHI Magnesita's Code of Conduct outlines anti-corruption, conflicts of interest, and gifts & invitations policies. There are digital workflows in place to report potential conflicts of interest, seek pre-approval for gifts & invitations, and process proposals for community contributions. An independently operated whistleblowing hotline is available for employees and third parties to report potential violations. Regular reporting to executive management, regional management, and the Audit & Compliance Committee is conducted regarding key compliance issues. There is an annual audit of anti-bribery & corruption controls. Sales agents are required to have a TRACE certification and all suppliers are expected to follow the Supplier Code of Conduct.
GRI-205-2	Communication and training about anti-corruption policies and procedures	62	
Energy 2016			
GRI-3-3	Management of material topics	70	• Base year 2018 • Acquisitions conducted in 2022 partly included • Transportation, sales offices and other administrative buildings not included
GRI-302-1	Energy consumption within the organisation	70	• Historical energy data were revised to reflect new acquisitions and integration to the data collection system GET • No steam is used and we use some climate-chambers ISO-production that is reported under electricity
GRI-302-3	Energy intensity	70	Adaptations in line with the Greenhouse Gas protocol and refinement in reporting result in updated CO_2 and energy efficiency figures for 2018–2022.

Global Reporting Initiative Standards Index
continued

Specific Standard Disclosures/Key RHI Magnesita Topics		Location/Page Annual Report 2022	Additional Content
Disclosure number	Description		
GRI-302-5	Reductions in energy requirements of products and services	70	The Group strives to have all sites supplied with renewable sources of electricity; 65% of our sites have green electricity, and increase of 48% against 2021 data (2021: 44%).
Water 2018			
GRI-3-3	Management of material topic	71	• Acquisitions conducted in 2022 partly included (Sörmaş in Türkiye) • Transportation, sales offices and other administrative buildings not included
GRI-303-1	Interactions with water as a shared resource	71	See below.
GRI-303-3	Water withdrawal	71	2022 Water withdrawal (million m³): • Groundwater 10,5 • Drinking water 1,6 • Total 12,1 million m³
Biodiversity 2016			
GRI 3-3	Management of material topics	71	All RHI Magnesita sites that are under direct control are considered.
GRI-304-3	Habitats protected or restored	71	
Emissions 2016			
GRI-3-3	Management of material topics	64-70	• Base year 2018 • Acquisitions conducted in 2022 included • Transportation, sales offices and other administrative buildings not included • Historical CO_2 emission data were revised to reflect new acquisitions and changes that were made following an external verification process that took place in July 2022
GRI-305-1	Direct (Scope 1) GHG emissions	66	Biogenic emissions (thousand tonnes): 2018: 5; 2019: 8; 2020: 10; 2021: 13; 2022: 13. For questions on the emission factors and calculation methods, please contact: sustainability@rhimagnesita.com
GRI-305-2	Energy indirect (Scope 2) GHG emissions	66	For questions on the emission factors and calculation methods, please contact: sustainability@rhimagnesita.com
GRI-305-3	Other indirect (Scope 3) GHG emissions	66	Reported Scope 3 covers only CO_2 emissions from purchased raw materials. For questions on the emission factors and calculation methods, please contact: sustainability@rhimagnesita.com
Waste 2020			
GRI-3-3	Management of material topics	—	All RHI Magnesita sites that are under direct control are considered.
GRI-306-3	Waste generated	—	Data reported annually and split into hazardous and non-hazardous waste Hazardous waste: 9,8 ktonnes; non-hazardous waste:82,6 ktonnes.
Employment 2016			

Specific Standard Disclosures/Key RHI Magnesita Topics		Location/Page Annual Report 2022	Additional Content
Disclosure number	Description		
GRI-401-1	New employee hires and employee turnover	—	a. Total number and rate of new employee hires during the reporting period, by age group, gender and region. i. Age group Under 30 years old: 1,257 (53,2%) 30 - 50 years old: 1619 (18,5%) Over 50 years old: 282 (10,8%) Excluding seasonal staff Total: 3,157 ii. Gender Male: 2,591 (22,1%) Female: 568 (28,3%) iii. Region Western Europe: 752 (20,3%) Eastern Europe: 6 (17,3%) Near and Middle East: 237 (38,5%) South America: 1,203 (24,6%) North America: 433 (31,4%) Asia Pacific: 525 (17,3%) Africa: 1 (2,1%) Excluding seasonal staff Total: 2,468 (18%) b. Total number and rate of employee turnover during the reporting period, by age group, gender and region. i. Age group Under 30 years old: 866 (36,6%) 30 - 50 years old: 1,141 (13%) Over 50 years old: 461 (17,7%) ii. Gender Male: 2,032 (17,3%) Female: 436 (21,7%) iii. Region Western Europe: 849 (22,9%) Eastern Europe: 2 (2,9%) Near and Middle East: 13 (2,1%) South America: 1072 (22%) North America: 338 (24,5%) Asia Pacific: 193 (6,4%) Africa: 1 (2,1%)
GRI-401-3	Parental leave	—	b. Total number of employees that took parental leave, by gender. Total: 53 (Male: 30 (56,6%); Female: 23 (43,4%)). c. Total number of employees that returned to work in the reporting period after parental leave ended, by gender. Total: 49 (Male: 26 (88,5%); Female: 23 (82,6%)). d. Total number of employees who returned to work after parental leave ended were still employed 12 months after their return, by gender. Total: 45 (Male: 19 (42,2%); Female: 26 (57,8%)). e. Return to work and retention rates of employees that took parental leave, by gender. Return to work rate: Total: 49 (Male: 26 (53%); Female: 23 (47%)). Retention rate: see GRI401-3 c.
Occupational Health & Safety 2018			
GRI-3-3	Management of material topics	74	All RHI Magnesita employees and contracted workers under direct control as well as contracted workers without direct control considered. For 2022, Health &Safety data are partially considering the acquisitions; only Sörmaş. Other sites are starting the integration of data reporting.
GRI-403-1	Occupational Health & Safety Management System	74	Occupational Health & Safety is part of RHI Magnesita's Integrated Management System (IMS) with respective policy and procedures. ISO45001 certifications based on this MS ongoing (three more plants achieved ISO45001-certification in 2022).
GRI-403-2	Hazard identification, risk assessment, and incident investigation	—	Global procedure for hazard identification and risk assessment as part of IMS implemented. For incident investigations the methodology of 5-Whys and Fishbone are in use.
GRI-403-3	Occupational Health Services	—	By fulfilling local legal obligations and the respective RHIM procedure for Hazard Identification/Risk Assessment the participation of Occupational Physicians is obligatory.

Global Reporting Initiative Standards Index
continued

Specific Standard Disclosures/Key RHI Magnesita Topics		Location/Page Annual Report 2022	Additional Content
Disclosure number	Description		
GRI-403-4	Worker participation, consultation, and communication on occupational health and safety	—	For global aspects to be considered as well as for local, detailed information RHIM provides Safety boards, daily/weekly safety talks, participation of workforce-representatives in Safety Committees (also represented at the CSC — Corporate Sustainability Committee).
GRI-403-5	Worker training on occupational Health & Safety	74	Beside legally required trainings for specific tasks and exposures, all persons visiting our operational sites need to participate in a standardised basic Safety-training.
GRI-403-6	Promotion of worker health	74	RHIM provides in every location a set of health promotion offers and activities for which the participation rate for employees is measured.
GRI-403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	—	RHIM performs onsite services (OSS) at customer operational facilities for which the same global requirements as per IMS (integrated management system) apply.
GRI-403-8	Workers covered by an occupation Health & Safety Management System	—	All RHI Magnesita employees and contracted workers under direct control as well as contracted workers without direct control considered.
GRI-403-9	Work-related injuries	74	RHI Magnesita reports in particular on frequency-rates based on 200,000 hours worked, considering the LTI — Lost Time Injuries (41 cases for 2022) and TRI — Total Recordable Injuries (109 cases for 2022), — including employees and non-employees (temporary workers/leased personnel, contractors). The reporting of high-consequence incidents as defined by GRI will be adopted in future.
Diversity and equal opportunity 2016			
GRI-3-3	Management of material topics	73	• Base year: 2018 • Focus on Gender Diversity (Board and senior levels)
GRI-405-1	Diversity of governance bodies and employees	73	a. Percentage of individuals within organization's governance bodies in each of the following diversity categories: i. Gender Executive Management Team (including the Executive Directors): Male: 5 (71%) Female: 2 (29%) ii. Age group: under 30 years old, 30-50 years old, over 50 years old Under 30 years old: 2,363 (17%) 30 - 50 years old: 8,767 (64%) Over 50 years old: 2,601 (19%) b. Percentage of employees per employee category in each of the following diversity categories: i. Gender Male: 11,721 (85%) Female: 2,010 (15%) Salaried staff: Male: 5,146 (75%); Female: 1,651 (25%) Wage earners: Male 6,575 (95%): Female: 359 (5%) ii. Age group: under 30 years old, 30-50 years old, over 50 years old; Salaried staff: Under 30 years old: 1,345 (19%); 30-50 years old: 4,304 (62%); over 50 years old: 1,285 (19%) Wage earners: Under 30 years old: 1,018 (15%); 30-50 years old: 4,463 (66%); over 50 years old: 1,316 (19%)
Non-discrimination 2016			
GRI-3-3	Management of material topics	—	The Code of Conduct of an organisation covers the topic of human rights, such as non-discrimination, prohibition of child or forced labour. RHIM's Code of Conduct is available in 11 different languages and was last reviewed in November 2022. In addition, the organization provides a whistleblowing hotline and other reporting channels for employees and third parties to report any violations of the Code of Conduct. All reports are investigated by the Internal Audit, Risk & Compliance department.
GRI-406-1	Incidents of discrimination and corrective actions taken	—	One incident was reported in 2022 via our whistleblowing channels which proved to be unsubstantiated.
Local communities 2016			
GRI-413-1	Operations with local community engagement, impact assessments, and development programmes	75-77	Acquisitions conducted in 2022 are not included.
Supplier Social Assessment 2016			
GRI-414-1	New suppliers that were screened using social criteria	63	Partially reported.

Sustainability

ESG ratings

Our performance in ESG rankings

AA

MSCI

Gold

ecovadis

Prime C+

ISS ESG

A–

CDP
DISCLOSURE INSIGHT ACTION

ESG ratings

The Group's strong commitment to sustainability is reflected in the ESG ratings that RHI Magnesita scored in 2022. A rating of "A–" was awarded by CDP, which is in the Leadership band. This is higher than the Europe regional average of B, and higher than the global average of C. RHI Magnesita rated "AA" from MSCI and "Gold" for EcoVadis, with an overall ESG score of 69 out of 100.

Get in touch — Stay in touch

RHI Magnesita
Global Sustainability Team

Kranichberggasse 6, 1120 Vienna, Austria

sustainability@rhimagnesita.com

Follow us

Designed and produced by emperor
Visit us at **emperor.works**

RHI MAGNESITA

rhimagnesita.com