



#ThisFutureRocks

Sustainability Report 2019

The ROCKWOOL® trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the Group's largest assets, and thus, is well protected and defended by us throughout the world.

ROCKWOOL Group's primary trademarks:

ROCKWOOL®

Rockfon®

Rockpanel®

Grodan®

Lapinus®

Additionally, ROCKWOOL Group owns a large number of other trademarks.

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Building a better future

At ROCKWOOL, we transform volcanic rock into stone wool, creating safe and sustainable products that help people and the communities where they live, learn, work and play to thrive. Stone wool is a versatile natural material with multiple benefits that make it ideal for applications in buildings, industry, transportation, horticulture and water management.

Whether creating safe spaces and lowering emissions or enabling modern horticulture to feed thousands using fewer resources, every day, we learn and share new ways to help societies be better for everyone.

In this report, you'll find out how we're developing innovative new solutions to tackle

climate change, building more circularity into our value chain and enhancing the wellbeing of people around the world. You'll also see how our work is creating measurable progress on the United Nations Sustainable Development Goals (UN SDGs).

This is our sustainability story.

Five brands – one common purpose

To release the natural power of stone to enrich modern living.

We are the world's leading manufacturer of engineered stone wool products, delivering specialist options for the building, horticultural, marine, transport and offshore sectors through our five key brands.

ROCKWOOL®

Fire-safe stone wool insulation



Grodan®

Stone wool growing media and technology



Rockpanel®

Fire-safe façade cladding, roof detailing, soffits and fascia



Lapinus®

Storm water management, vibration and sound dampening

Rockfon®

Fire-safe acoustic ceiling tiles and systems



ROCKWOOL in 2019 at a glance

11 700

employees across Europe, North America, Russia and Asia

46

manufacturing facilities

39

countries with a ROCKWOOL Group presence

2 757 EURm

net sales

10

SDGs committed to

6

Group-wide 2030 sustainability goals

Progress in 2019, optimism for the future



“ We are eager to demonstrate that, even as an energy-intensive manufacturer, we can live up to Denmark’s 70 percent absolute greenhouse gas reduction commitment”.

Looking back, 2019 was a year of progress on many fronts in the battle against climate change, but there’s still much work yet to be done. After reaching the highest annual emissions on record, countries and cities around the world are revising their climate ambitions upwards, sending important signals to business and citizens alike that they too must push ahead with more ambitious targets.

The release of the EU Commission’s Green Deal framework in December sets a positive tone in Europe, with the overarching goal being to achieve a climate-neutral EU by 2050. Recognising the critical role buildings play in the climate equation, EU member states are expected to announce more detailed energy efficiency plans, which over time could help accelerate the renovation of building stocks and increase the demand for insulation.

In our home country of Denmark, the government’s climate ambitions are setting the standard globally with a binding commitment to reduce the country’s greenhouse gas emissions by 70 percent relative to 1990 – and to do so by 2030. This is an ambitious and necessary step by Denmark to lead the way in mitigating the serious consequences of climate change that we all are witnessing. Our products play a significant role in saving energy and thereby carbon emissions. At the same time, we are eager to demonstrate that, even as an

energy-intensive manufacturer, we can live up to Denmark’s 70 percent absolute greenhouse gas reduction commitment before 2030, while keeping the production in Denmark. You can read more about our target and how we’ll get there on pages 12–13 of this report.

At ROCKWOOL, we made good progress in 2019 toward reaching several of our sustainability goals, helped along by the inherent recyclability of our stone wool, which we leverage by offering comprehensive recycling services around the world. Last year, we increased this to 11 countries by adding Switzerland. We have also cut production waste going to landfill by 17 percent since 2015, by investing in internal recycling.

Of course, our commitment to recycling isn’t just about our own products – it’s about creating systemic change across our industry. To that end, we joined the Ellen MacArthur Foundation’s CE100 in 2019 so that we could share our insights to drive circular thinking in the building sector and to learn and be inspired by others.

Regrettably, we experienced a fatal accident during construction of the new factory in Romania. An employee from a local subcontractor succumbed to injuries following a fall from height. As a result, we increased supervision of subcontractors by direct personnel from ROCKWOOL as we continue to work towards zero fatalities across our facilities.

On the positive side, we reduced our Lost Time Incident rate last year by 17 percent, which is an important indicator of increased focus on safety in the workplace.

Regarding the UN SDGs, we built on our commitment to make progress against them by adding a new metric that will help track our contribution to SDG 8 – Decent work and economic growth. We can now estimate the

jobs and economic value ROCKWOOL Group creates directly or indirectly as well as the socio-economic value of the energy our products save. Many of these jobs and the economic value they generate will be created outside major cities, in the smaller communities where we tend to have our operations, bringing much needed revenue and growth to areas that can be overlooked. Our #iRockGlobalGoals Idea Challenge in 2019 focused on engaging all employees in innovation to create even bigger impacts on the SDGs.

In 2019, we became the first company in Denmark to host quarterly calls with investment analysts focused solely on our Environmental, Social and Governance (ESG) management and performance. The calls create an opportunity for a constructive dialogue on the planet and people issues that our investors care about and we have been pleased with the level of engagement they have generated.

You’ll find more details on our performance throughout this report. Though the challenges are great, we believe the solutions are at hand to turn the tide on climate change. We are as committed as ever to maximising the positive impact of our products while reducing the negative impacts of our production. The potential for progress is enormous.

Jens Birgersson, CEO

SailGP: combining exhilarating sport and sustainability

SailGP races take place in the heart of some of the most iconic cities around the world. These events provide the perfect backdrop for ROCKWOOL to showcase our purpose: to release the natural power of stone to enrich modern living. Our aim is to help alleviate the concerns of growing urban areas and focus on tackling issues such as high energy consumption, CO₂ emissions, noise pollution and excess urban rainwater.

With its own focus on sustainability, SailGP provides a global platform to raise awareness around the possibilities that already exist to solve today's sustainability challenges.

Together with the Denmark SailGP Team, we will visit some of the most recognisable cities around the world to showcase the connection between outdoor sports, urban living and the important role stone wool plays in enriching modern life.

We aim to bring an optimistic look at the future of urban living. Working together, we can achieve shared goals to make the world a better place to live, both for ourselves and future generations. Through SailGP, we want to share this vision of urban living to inspire everyone to think bigger and choose better.



Making the Global Goals happen

We use the UN SDGs – also called the Global Goals – to guide our approach to improving future outcomes for both people and the planet. Through our products, we have the greatest impact, which we systematically measure to maximise the benefit. ROCKWOOL Group has six sustainability goals, which have been developed to drive progress on the Global Goals by minimising our operational footprint. Throughout this report you will find indicators highlighting how our approach or our progress has contributed to this impact.

SDGs: inspiring innovation

For ROCKWOOL, the SDGs don't just guide our impact – they're part of our culture.

Building on our employee SDG campaign in 2018, we ran the iRockGlobalGoals Idea Challenge in 2019. Employees were asked to submit ideas on new ways stone wool or ROCKWOOL operations could help meet a Global Goal. The competition produced many innovative ideas, and seven awards were handed out for the ideas with the highest impact, best pitch and other categories. The winning submission for the Greatest Impact Award was a stone wool fire safety fence with a high potential impact on SDG 9. We look forward to continuing employee engagement on the Global Goals as we are dependent on the creativity and entrepreneurship of our employees to maximise impact.



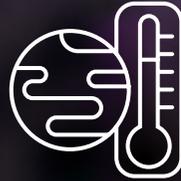
Fighting fires with employee-led innovations

In early 2019, we held an Idea Challenge as part of our iRockGlobalGoals SDG employee awareness campaign. In June, our CEO Jens Birgersson personally presented the Greatest Impact Award trophy to Group Operational Excellence Specialist Victor Aguasca Lloberes.

Inspired by the wildfires in his home country of Spain, Victor's idea is to create a firebreak fence to safeguard houses in wildfire-prone residential areas. The system leverages stone wool's inherent fire-safe properties to address UN SDG 9: Industry, innovation and infrastructure. The idea is now being explored in our Innovation Incubator.



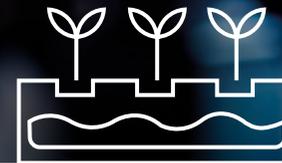
Creating impact



Taking action on climate change



Job creation



Sustainable food chains



We are building the communities of the future

From taking action on climate change, to creating jobs, helping communities be safe and healthy, and ensuring a sustainable food chain, we are building the communities of the future.

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Action for a new climate era

By the end of 2018, global carbon emissions reached a record annual high¹. Then, in 2019, we learned that even if all the current Paris Agreement commitments were implemented, temperatures are still expected to rise by more than 3°C². That same year, we saw school children and young people everywhere taking to the streets and demanding climate action.

In 2019, a new era of climate action kicked off. A spate of ambitious new targets and legislation came into force to drive real progress on the Paris Agreement. We already have the solutions to avoid many of the more severe impacts of climate change. Now citizens around the world are demanding we use them – and governments, municipalities and industry are increasingly responding with the will to turn things around.

New climate ambitions

The EU has committed to **climate neutrality** by 2050.

California is aiming for **carbon neutrality** by 2045.

New York City climate law requires buildings to **reduce emissions** by **40%** by 2030.

Beginning with buildings

In 2019, the European Commission announced plans to initiate a 'renovation wave' as part of the European Commission's new Green Deal³. This is a positive step, since buildings offer the most cost-effective climate mitigation potential⁴. Simply by using known technologies, policies and designs, we can achieve immediate cost savings alongside significant environmental and social gains. Proper insulation alone can reduce heating and cooling energy needs by up to 70 percent⁵.

As a long-standing advocate for building renovation as a powerful climate solution, ROCKWOOL actively supports the aims of the Green Deal. We are a partner for cities and building-owners ready to take rapid and meaningful action for future efficiency.

Most recently, ROCKWOOL joined the Corporate Leaders Group Europe (CLG Europe), which represents leading businesses driving the climate agenda and working together to support a more ambitious climate policy in Europe⁶.



ROCKWOOL technical insulation sold in 2019 will save **1 billion tonnes** of CO₂ over the lifetime of its use – more than Germany's annual carbon emissions⁷.

See www.rockwoolgroup.com/carbon-impact.

¹ <https://www.globalcarbonproject.org/carbonbudget/19/highlights.htm>

² <https://www.unenvironment.org/resources/emissions-gap-report-2018>

³ https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

⁴ IPCC, 'Climate change 2007 – Mitigation of climate change'.

⁵ <http://lowup-h2020.eu/2017/02/21/eu-heating-and-cooling-infographic/>

⁶ <https://www.corporateleadersgroup.com/>

⁷ Publications Office of the European Union, 2019, Fossil CO₂ emissions of all world countries – 2018 Report, retrieved March 2019.



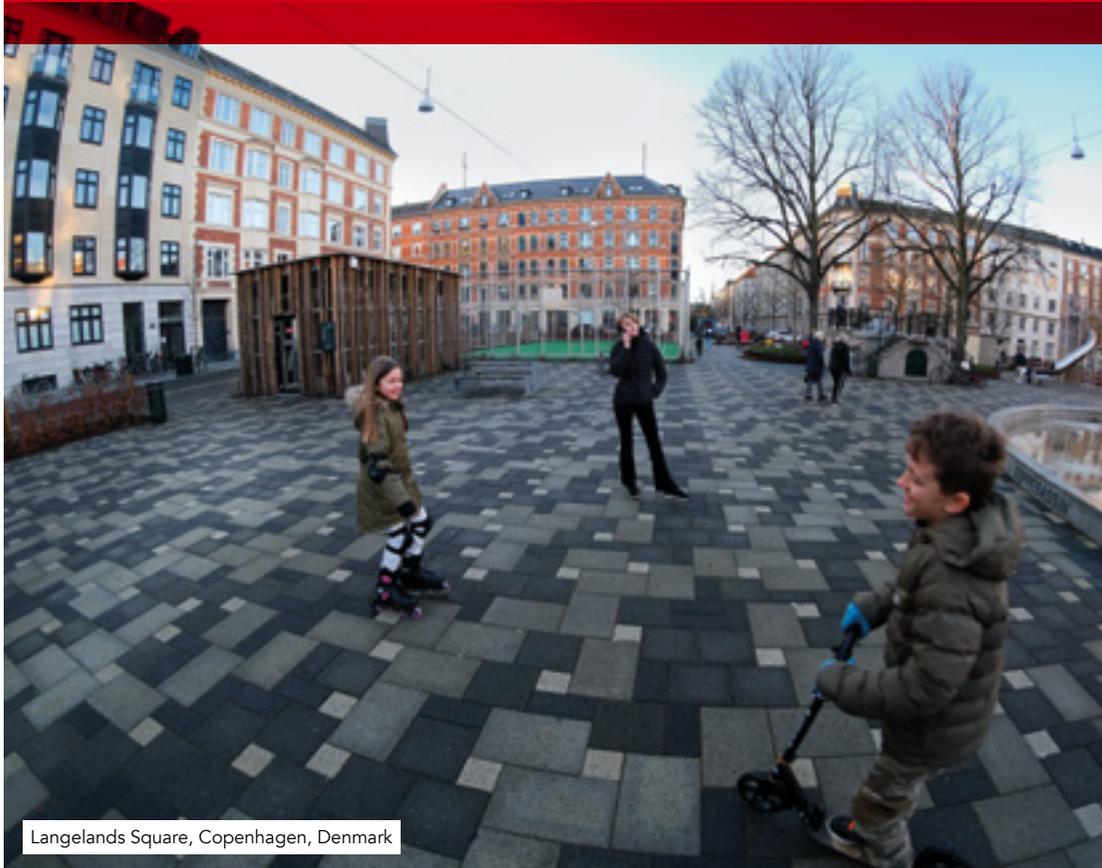
🔍 Securing cities from flooding

Climate change-related fires dominated headlines in 2019, but urban flooding caused by more frequent and severe storms is also a serious consequence of rising emissions. In 2019, we commercially launched the Rockflow product line at the C40 Summit in Copenhagen for urban storm water management in Denmark and the Netherlands.

One of these projects is the newly renovated Langelands Square.

It doesn't look like a critical piece of Copenhagen's flood defences – and that's by design. The square is one of 300 'dual use' projects Copenhagen has planned for the next 20 years to protect against flooding caused by extreme rainfall.

The plan is focused on creating spaces that delay storm water from reaching sewers while also improving quality of life for current and future residents. In the long term, the aim is also to bolster property values and city tax revenues. All in all, the future is looking bright at Langelands Square.



Langelands Square, Copenhagen, Denmark

ROCKWOOL building insulation sold in 2019 will save

888 TWh

heating energy over the lifetime of its use – more than the total energy produced by all PV panels globally in 2019⁸.

7 AFFORDABLE AND CLEAN ENERGY



📍 See www.rockwoolgroup.com/carbon-impact.

⁸ 2019 projected PV solar energy production from IEA. <https://www.iea.org/fuels-and-technologies/solar>



Ideals in action: renovating to the Passive House standard

The cooperative tenant association Stacken had long wanted to reach the Passive House standard for a grey, 1960s-era apartment building in Gothenburg. Now the building has been transformed into a stylish, comfortable and sustainable residence.

The tenants chose to insulate the entire structure with ROCKWOOL products for maximum energy efficiency. What's more, the renovation was done without increasing the rent for the tenants and will, after 15 years, generate a positive income for the Cooperative. For the members of Stacken, there is plenty to smile about.



Jack Norwood, Project leader at the tenant cooperative Stacken, Gothenburg, Sweden

ROCKWOOL aims to cut Danish CO₂ emissions by 70 percent

Investing in deep decarbonisation and local jobs

Melting rock to produce thermally efficient, fire-safe products is an energy-intensive process requiring high and consistent temperatures of approximately 1500°C. Since our founding more than 80 years ago, we have continuously invested in our production facilities in Denmark, resulting in an ongoing decarbonisation while providing 400¹ local manufacturing-related jobs. We have achieved this through a combination of increased energy efficiency, using less carbon-intensive fuels and investing in state-of-the-art technology.

In the last decade, ROCKWOOL invested more than EUR 100 million in the two Danish factories alone, including introducing innovative new fuel-flexible melting technologies. And we're proud to say that we have maintained production in Denmark, in line with our 'Made in Denmark for Denmark' principle.

But we also need to do more. That's why we will now further intensify our efforts to reducing both the absolute CO₂ emissions and the carbon intensity – that is, the emissions per produced unit – of our manufacturing in Denmark with the aim of reducing our CO₂ emissions by 70 percent compared to 1990, and thus living up to Denmark's 2030 national goal.

Denmark leads the way globally

With a binding commitment made in 2019 to reduce the country's greenhouse gas emissions by 70 percent by 2030 relative to 1990, Denmark is positioning itself as a world leader in the green transition showing that economic growth can go hand-in-hand with deep decarbonisation. To meet this ambitious commitment, the government initiated public-private climate partnerships covering all business sectors that are tasked with developing and committing to measures to meet the national target, including on fuel sources and energy efficiency in buildings. And we are pleased to actively participate in several of these partnerships.

We are eager to demonstrate that even as an energy-intensive manufacturer, we can live up to Denmark's 70 percent absolute greenhouse gas reduction commitment. Furthermore, by reducing the carbon intensity of our production we are safeguarding Danish manufacturing jobs.

70% reduction

in CO₂ from our production in Denmark before 2030.

¹ Average number of FTE employed at the two Danish manufacturing facilities in 2019.



Copenhagen, Denmark

Going the distance in our own decarbonisation efforts will require accelerating technology innovations to convert to fossil-free fuel sources, as well as continuing to increase the energy efficiency of our own operations. A key element in the equation is the ability to convert more of our production in Denmark to biogas. We are encouraged by the debate in Denmark regarding the role that biogas can – and must – play to reach the country's climate goal.

In addition to our own emissions reductions, ROCKWOOL's two Danish factories already contribute substantial surplus heat to nearby district heating networks, thereby further reducing national CO₂ emissions. With the right policy framework, we could double the number of homes our surplus heat reaches.

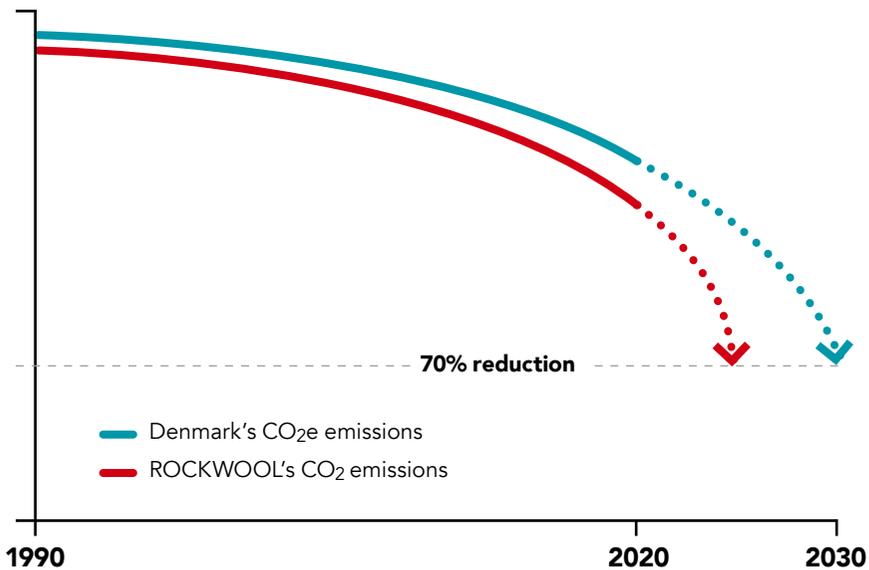
Decarbonising Denmark's building stock

Buildings today represent approximately 20 percent of Danish carbon emissions, while 30 percent of total energy consumption in Denmark comes from heating buildings. If we reduce the heating demand of buildings by one percent annually until 2030, we will reduce energy consumption equivalent to three times the annual power capacity of Horns Rev 3, Denmark's largest offshore windfarm. This saved energy will thereby reduce CO₂ emissions, speed up the greening of the grid and save the Danish economy EUR 800 million by 2030².

3 times

the annual power capacity of Horns Rev 3 can be saved by reducing the heating demand of Danish buildings by 1% annually until 2030³.

CO₂ emission reduction in Denmark



Investing in innovation and jobs

"Through continuous investments since its inception in 1977, our factory in Øster Doense today utilises best-in-class stone wool production technology, using circular business principles while at the

same time generating jobs and economic activity in the local community".

Herluf Nielsen, Production and Operations Manager

² EA Energianalyse, 2019, Samfundsøkonomisk optimum mellem energieffektivitet, vedvarende energi, elektrificering og sektorkobling. (Socio-economic optimum between energy efficiency, renewable energy, electrification and sector links).

³ An annual one percent reduction in the heating demand of Danish buildings is considered to be socio-economically optimal. Source: EA Energianalyse, 2018, Samfundsøkonomisk værdi af varmebesparelser: Optimum mellem forsyningsomkostninger og varmebesparelser i eksisterende bygninger. (Socio-economic value of heating savings: Optimum between supply cost and heating savings in existing buildings).

Decarbonising our operations

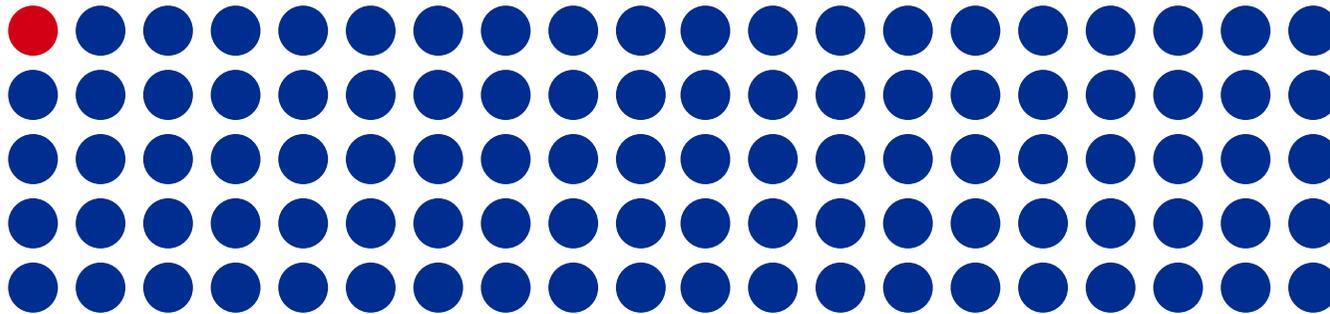
ROCKWOOL Group has a net positive carbon impact. Over the lifetime of its use, the building insulation we sold in 2019 will save 100 times the carbon emitted in its production. But we are committed to doing even more by always seeking to further reduce the carbon footprint of our production while improving our product performance. We are making progress in both areas. In our operations in Denmark, we aim to reduce absolute CO₂ emissions and the carbon intensity of our production by 70 percent

compared to 1990 before 2030. After completing the transition to electric melting technology at our factory in Moss, Norway, we will achieve an 80 percent CO₂ emission reduction compared to the current technology. As an example of product innovation, we have introduced a cavity wall insulation slab this year that is 20 percent lighter but offers exactly the same thermal efficiency thanks to new, cutting-edge manufacturing technology.

In 2015, we set a goal to reduce carbon intensity by 20 percent by 2030 compared to 2015, with an intermediate target of 10 percent by 2022. By the end of 2019, we had reduced carbon intensity by four percent. As climate science and global experience continue to evolve, we are actively reviewing our own decarbonisation ambitions with an eye on further accelerating them. For further details on our operational decarbonisation, [see Factbook section](#).

Beyond production, we also have a goal to improve energy efficiency in our non-renovated office buildings by 75 percent by 2030, compared to 2015. This is an ambitious but necessary goal that we are on our way to achieving. Since 2015, we have improved the energy efficiency of our non-renovated offices by six percent. We expect this to increase substantially over the next few years, as a number of projects have been approved and many more are in the pipeline.

Over its lifetime ROCKWOOL building insulation sold in 2019 will save



100 times the carbon emitted in its production*.

* including upstream emissions from the extraction and transportation of raw materials and fuels.

[See www.rockwoolgroup.com/carbon-impact](http://www.rockwoolgroup.com/carbon-impact).



Moss, Norway

Innovative new melting technology helps reduce ROCKWOOL's carbon footprint

In the second half of 2020, we plan to begin operations of our innovative, large-scale electric melting technology at our Moss, Norway facility south of Oslo. This will be the largest electric melter producing stone wool globally and will reduce CO₂ emissions by 80 percent compared to the conventional coke-burning furnace it will replace.

It has also been designed to use an even greater amount of waste material, reducing the production waste going to landfill by up to 95 percent at this production facility.

The pilot project is being built with a EUR 34 million investment, EUR 10 million of which came from Norwegian Ministry of Climate and Energy-owned Enova. At the 2019 ZERO Conference in Norway, the Moss project was awarded the prestigious Business Climate Prize in recognition of ROCKWOOL's development of technologies and solutions to combat climate challenges.

The Moss pilot project will provide valuable insight and experience as we continue to decarbonise our operations, reduce our environmental footprint and pave the way for circular waste flows.



CEO Jens Birgersson and Senior Advisor Hans Joachim Motzfeldt, Norway

Providing circular solutions for complex challenges

A more resource-efficient, circular economy is essential to minimise resource consumption and waste generation as well as for achieving the Paris Agreement's goals. Circularity's potential to reduce emissions was extensively documented in several reports in 2019¹. The coming years will see a wave of new regulation and market demands to fulfil circularity's potential. For example, the EU's new [Circular Economy Action Plan](#) is one of the key deliverables of the European Commission's Green Deal. We fully support more proactive regulation on this issue, as we know that the inherent recyclability of stone wool can make a powerful contribution to decarbonisation and resource efficiency.

“

Circularity and decarbonisation closely linked

Our reports from 2019 found that 45 percent of emissions come from how we make and use products, and how we produce food. Circular business models are therefore a fundamental step towards achieving climate targets.

The circular economy can also help create more liveable cities, distribute value more widely in the economy and spur innovation. All in all, a potent contributor to achieving a zero-carbon, prosperous future”.

**Per-Anders Enkvist, Founder and CEO,
Material Economics**



Brussels, Belgium.

Renovating buildings can be much more resource efficient than building new and can reduce the CO₂ footprint of materials by up to 70%².

A symbol of circularity in Brussels

In 2018, the Belgian government awarded the renovation of the nearly 50-year-old New World Trade Centre buildings in Brussels to Befimmo's ZIN project. The renovation, which will be completed in 2023, has the dual aims of circularity and sustainability.

The results will be impressive: nearly 65 percent of the two existing towers will be maintained as part of the structure of the new

building, around 0.5 percent of the materials will be reused in the project or other projects and about 30 percent will be recycled.

ROCKWOOL has a key role in this recycling effort. Through its own recycling service, ROCKWOOL removed 23,000 m² of Rockfon acoustic ceiling tiles from the existing buildings. These were taken to our factory in Roermond, the Netherlands, where they will be used to make new stone wool products.

¹ For instance: Ellen MacArthur Foundation and Material Economics, 2019, 'Completing the picture: How the circular economy tackles climate change'.

² Wiedenhofer, D. et al., 2015, 'Maintenance and expansion: Modeling material stocks and flows for residential buildings and transportation networks in the EU25', *Journal of Industrial Ecology*, 19 (4), pp.538–551. Interview with Kasper Guldager Jensen, GXN.

Leveraging stone wool's circularity

In addition to making products that are recyclable, durable and made from abundant natural resources³, we help homeowners and building professionals become more circular by offering take-back services for previously used stone wool. Our products do not contain any greenhouse- or ozone-depleting gases that dissipate over time and reduce thermal performance. In fact, tests from old construction sites show that our products have retained their insulation characteristics and properties for more than 55 years⁴.

We have clear goals to strengthen our circular business model and have made good progress this year. For instance, we reduced waste to landfill by 18 percent in 2019 alone through internal recycling in our production and reduced the water footprint of our operations by seven percent⁵ compared to the baseline year 2015. Circularity enables a more decarbonised production. By recycling stone wool we reduce carbon emissions by close to 10 percent. We are investigating how we can increase this impact in the coming years.

📌 See Factbook section.



Recycling stone wool at ROCKWOOL's production facility in Flums, Switzerland

³ Stone is naturally resilient and essentially inexhaustible as the earth makes 38,000 times more stone every year (through volcanic and oceanic activity) than we use to make stone wool. Source: TW Dahl, et al. 2011, International Geology Review (Volume 53 Numbers 7–8, June–July 2011) 'The human impact on natural rock reserves using basalt, anorthosite, and carbonates as raw materials in insulation products'.

⁴ FIW, 2016, Durability Project Mineral Wool.

⁵ See more information in the Factbook.

Another of our goals is to offer reclaimed waste schemes, which bring stone wool waste back to our factories from customers, in 30 countries by 2030. We now offer comprehensive recycling services to building sector customers in 11 countries, having added Switzerland in 2019.

We have a clear ambition to further exploit the inherent recyclability of stone wool. This is one of the reasons [ROCKWOOL Group joined forces with the Ellen MacArthur Foundation](#) – among the world's strongest advocates and changemakers for circularity – in 2019.

Our products can contain up to

75%

recycled material.

More than **20%** increase in collected and recycled stone wool from customers.



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



11 countries where we offer a comprehensive recycling service to building sector customers.



Driving change at scale

The Ellen MacArthur Foundation's Circular Economy 100 (CE100) Network is an organisation that brings together business, innovators, cities and governments, universities and thought leaders, to lead the transition to a circular economy.

"Collaboration is key to building circular economies and we are delighted to welcome ROCKWOOL to contribute its unique perspective from the built environment sector".

Joe Murphy,
CE100 Lead



Creating local jobs and growth

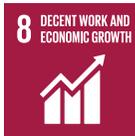
Nearly half a billion people worldwide lack decent jobs, according to a new ILO report¹. It doesn't have to be that way.

A better bottom line for communities

Our business is local, meaning we produce close to our customers and hire from the communities where we operate². For ROCKWOOL Group, building and operating a production facility is a long-term investment – in our business, in our employees and in the

communities they serve. We've contributed to creating around 40,000 jobs globally at our facilities and with suppliers. And our insulation products sold in 2019 will save customers approximately EUR 77 billion in energy costs, making more resources available for investments and other purposes.

In 2019, we worked with Copenhagen Economics to develop a new SDG impact metric and methodology to measure ROCKWOOL Group's global and local impact on SDG 8: Decent jobs and economic growth³.



Around
40 000 jobs
created locally at our
facilities and with suppliers.

ROCKWOOL's insulation products sold in 2019 will save our customers energy costs of around
77 EURb
over their lifetime.



2 757 EURm
economic value created globally – 86 EURm more than in 2018.

See www.rockwoolgroup.com/socioeconomic-impact.



3%
deep renovation rate in the EU would create up to
2 million
local jobs⁴.

¹ ILO, 2020, World Employment and Social Outlook – Trends 2020.

² For instance, around 90 percent of our sales do not cross a customs border.

³ The calculation model is an Input-Output model using EUROSTAT data. The methodology, assumptions and information about the study are available here: www.rockwoolgroup.com/socioeconomic-impact.

⁴ <https://www.renovate-europe.eu/2019/12/02/reducing-the-energy-demand-of-the-eu-building-stock-by-80-by-2050/>



Helping communities thrive

Currently, 16 out of ROCKWOOL's 19 stone wool producing factories in Europe are in non-urban areas⁵.

For example, our production facility in **Saint-Éloy-les-Mines in France** provides around 600 local jobs in a municipality with only about 4,000 inhabitants. Our presence creates employment equivalent to more than 30 percent of the active workforce in the local area.

"Years ago, mines around here closed and the town of Saint-Éloy-les-Mines lost a lot economically – but ROCKWOOL revitalised the region", says Diamantino Pereira, a production specialist and team leader.

"Thanks to the technology knowledge needed and training provided, ROCKWOOL has created a pool of qualified employment options in our region. Since ROCKWOOL arrived, the city has even modernised its infrastructure with new roads and improvements to local schools.

Working for ROCKWOOL, you are working for an international company. You really learn about climate change and the positive environmental impact of our work, but also workplace safety and how to really care for your team and colleagues".

ROCKWOOL employee Diamantino Pereira, Saint-Éloy-les-Mines, France

📌 See more about how we work to protect and enable our employees in the [Factbook](#).

Corporate citizenship, being a good neighbour

At its heart, ROCKWOOL is a family business, and corporate citizenship and being a good neighbour have always been an integral part of our culture.

As an example, near our factory in Ariceştii Rahtivani, Romania, the community needs support to help underprivileged children thrive.

The NGO MagiCamp organises free camps and support for safe recovery spaces for children who have suffered serious illness. ROCKWOOL is one of many local and national businesses and citizens that support these activities.

23%
of our dividend goes to the **ROCKWOOL Foundation to contribute to society's body of shared knowledge.**



MagiCamp, Romania

⁵ Copenhagen Economics, 2019, 'Contribution to jobs and growth from ROCKWOOL's global activities'.

Building safer cities and communities everywhere

Much of the older building stock in cities everywhere simply does not meet required fire safety standards. In 2019, there were devastating wildfires in South Europe, California, Asia and Australia, many of which came quite close to suburban and urban areas. This highlighted the importance of fire-safe homes in limiting the damage caused by wildfires. The good news is that fire resilience can be built-in with solutions that create safer spaces and provide peace of mind.

Façade fires in large buildings worldwide have increased

7 times

over the last three decades¹.

Safety from stone

We know that lives depend on thoughtful building design, so we advocate and actively engage with stakeholders to raise awareness and drive stronger fire safety regulations as well as sponsoring academic fire research.

In 2019, we were encouraged to see fire safety receiving greater attention among regulators and architects. For example, France modified its regulation so that medium-rise buildings will now need external insulation materials with a limited combustibility fire

rating, just like high-rise buildings. This year also saw continued engagement with the Fire Information Exchange Platform, where stakeholders and member countries exchange experience on fire safety education, data, fire investigation, new products and tall buildings.



¹ Matthew Bonner, Guillermo Rein, 2018, 'Flammability and Multi-objective Performance of Building Façades: Towards Optimum Design', International Journal of High-Rise Buildings December 2018, Vol 7, No 4, 363-374.



Training the next generation of fire safety engineers

Every year, the [International Master of Science in Fire Safety Engineering \(IMFSE\)](#) programme trains 20 fire engineering students to take on the vital work of assessing the performance and compliance of building fire safety solutions.

By the end of the programme, the 20 students have acquired robust knowledge and understanding of fire safety engineering to perform assessments or participate in research and development work.

“ROCKWOOL’s support as a member of the IMFSE consortium is indispensable. That ROCKWOOL values our programme is a positive reflection of their commitment to the industry and something the students pick up on. They truly appreciate such support by industry players”.

Professor Bart Merci, Programme Manager, IMFSE, Ghent University

Enabling a safe and cool factory in Vietnam

In 2019, Tetra Pak opened its first carton factory in Vietnam with a facility in Binh Duong. During construction, fire safety was a paramount concern. Since 50 percent of fire fatalities and injuries are due to toxic smoke², ROCKWOOL stone wool insulation and Rockfon products were chosen for their unique fire-safe properties. Stone wool does not feed or spread fire nor contribute significant amounts of toxic smoke.

Our products also keep the intense ambient heat out of the buildings and reduce the energy demand from air conditioning, keeping employees both safe and cool.



ROCKWOOL stone wool is a natural fire barrier withstanding temperatures exceeding

1000°C

A sound future

Noise poses one of the most serious health hazards for children and can impact learning and behaviour¹. The U.S. Environmental Protection Agency states that repeated exposure to noise during critical development periods can affect how children develop speech and can impair the acquisition of language-related skills².

Making places that matter

Our acoustic Rockfon products are used in homes, offices, hospitals, restaurants, concert



halls, libraries, schools and universities – all places where human comfort truly matters.

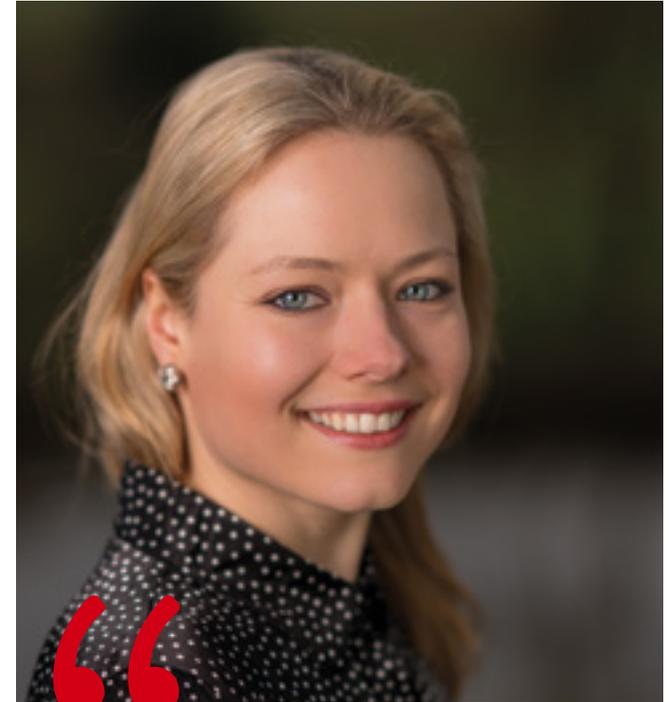
The attributes of Rockfon products also contribute positively to various sustainability building rating schemes, including WELL and Green Globes, which focus specifically on health and wellbeing. Through our SDG 3 'health and wellbeing' metric, we improved the learning conditions of 445,000 students globally.



445 000 students
with improved learning conditions due to acoustics solutions delivered to schools in 2019.



📍 See www.rockwoolgroup.com/acoustic-impact.

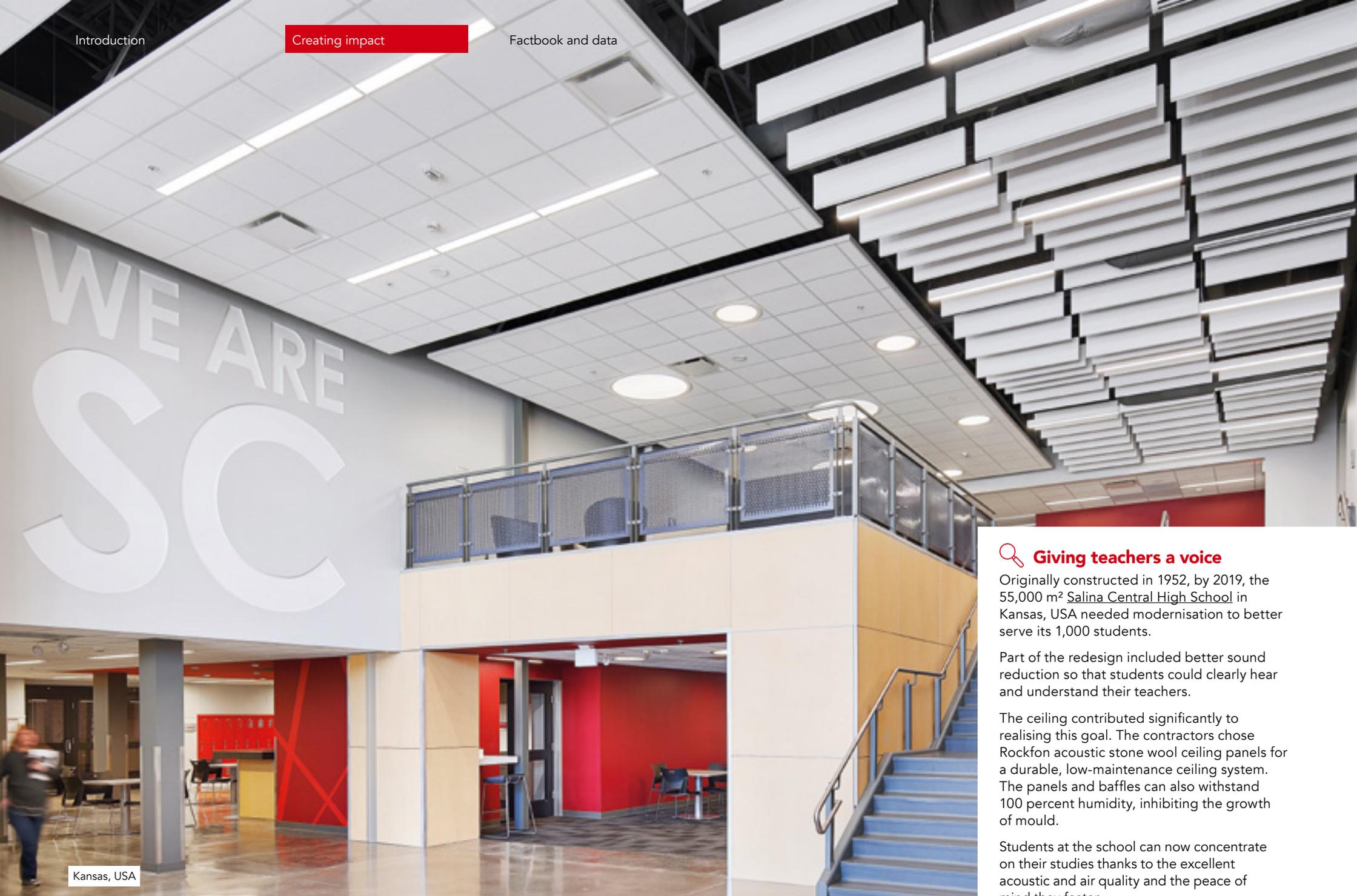


“People often underestimate how much buildings truly affect our wellbeing. They influence the quality of the air we breathe indoors, our access to light and the way we hear and process sounds. This is arguably one of the single greatest determinants of our overall health and wellbeing, and it is paramount that we begin to analyse and quantify this to develop better strategies for improving the places in which we live, work and spend our leisure time”.

Olga Turner Baker, Director and Co-Founder, Ekkist

¹ Thakur, N., Batra, P. & Gupta, P. Indian Pediatr, 2016, 53: 111.

² United States Environmental Protection Agency, 2009, Noise and Its Effects on Children – Information for parents, teachers, and childcare providers.



Kansas, USA

Giving teachers a voice

Originally constructed in 1952, by 2019, the 55,000 m² [Salina Central High School](#) in Kansas, USA needed modernisation to better serve its 1,000 students.

Part of the redesign included better sound reduction so that students could clearly hear and understand their teachers.

The ceiling contributed significantly to realising this goal. The contractors chose Rockfon acoustic stone wool ceiling panels for a durable, low-maintenance ceiling system. The panels and baffles can also withstand 100 percent humidity, inhibiting the growth of mould.

Students at the school can now concentrate on their studies thanks to the excellent acoustic and air quality and the peace of mind they foster.

Sustainable food for the future

Advances in agricultural technology mean that today we produce more food than we ever have before¹. Despite this, we still cannot secure our food supply using purely conventional agriculture. In addition, these methods include the use of pesticides and produce waste, all of which, if not managed correctly, can exacerbate air pollution, contaminate soils and leach chemicals into water supplies. Every year, 39 million hectares of soil are degraded due to poor agricultural practices².

However, there are some surprisingly simple, but intelligent solutions to some of our most pressing food challenges.

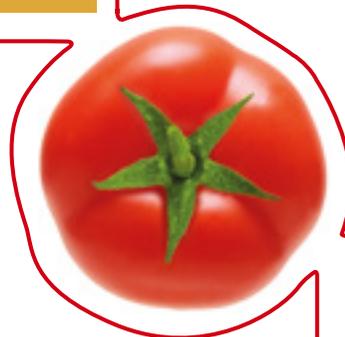
Insects instead of chemicals

High-tech greenhouses offer an easy way to create small, closed ecosystems where bumble bees pollinate and selected insects are used as a natural check and balance on harmful insect populations. For instance, 99 percent of tomato greenhouse growers in the Netherlands use biological crop protection instead of relying solely on chemicals. When it comes to conventional agriculture, the figures are much lower.

Through our Grodan brand, ROCKWOOL Group supports sustainable hydroponic horticulture, which allows plants to be grown without soil while using less water, fertiliser and land. In 2019, this positive impact increased significantly. **See Factbook section.**

6 times
lower environmental burden in crop protection achieved when using high-tech greenhouses instead of conventional agriculture³.

Stone wool is the **most widely used** medium for hydroponic tomato growing.



2 million
tonne increase in the yield of tomatoes and cucumbers enabled by Grodan products sold in 2019.

See www.rockwoolgroup.com/precision-growing-impact.



Pollination by bumble bees

¹ Holt-Giménez, E., Shattuck, A., Altieri, M., Herren, H. and Gliessman, S., 2012, 'We already grow enough food for 10 billion people ... and still can't end hunger', *Journal of Sustainable Agriculture*, 36 (6), pp.595–598.

² Cities and Circular Economy for Food, 2018, Ellen MacArthur Foundation.

³ Montero, J.I., Heuvelink, E. and Marcelis, L., 2019, 'Relative sustainability of fresh vegetable production in greenhouses, comparing production in northern Europe versus southern Europe'.

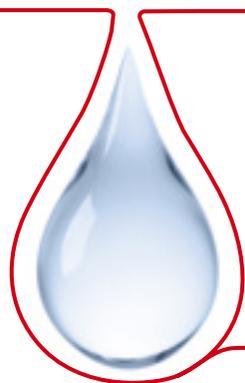
Our support for greenhouse growing is holistic, and we also offer e-Gro, a data-driven software platform for greenhouse management that provides growers with actionable and real-time insights into their cultivation. In 2019, we continued development work to extend the range of crops that can be grown in stone wool growing media.

In June 2019, e-Gro received the prestigious GreenTech Innovation Concept Award in the Netherlands.

Not only are we enabling more sustainable growing through Grodan, we are also committed to making the product itself as sustainable as possible across its lifecycle. We provide access to recycling solutions to more than 90 percent of Grodan customers in Europe. We offer recycling solutions in certain geographies outside Europe and are working to extend this service.

100 million

litres of water saved by Grodan products sold in 2019.



6 CLEAN WATER AND SANITATION



See www.rockwoolgroup.com/precision-growing-impact.

Success without soil

Eletskie Vegetables, Grodan's biggest client in Russia, hit an impressive landmark in 2019 when it achieved 200 kilograms of cucumbers per m² – its highest crop yield recorded.

At ROCKWOOL, we weren't surprised. We know that Eletskie runs one of Russia's most modern greenhouses. Behind its incredible yields are the use of high-quality equipment,

the management of a professional local team and the extensive integration of innovative digital tools, including Grodan's GroSens. Eletskie has found that biological crop protection and using bumble bees for tomato pollination are superior management methods, for example.

By embedding these sustainable solutions, Eletskie is breaking productivity records using nature's simplest yet most cutting-edge solutions: stone, bugs and bumble bees.



Elets, Russia

Factbook and data



Progress on our sustainability goals and the SDGs



Governance and social issues



Carbon emissions and energy efficiency



Environmental and waste management

This Factbook offers investors and other interested stakeholders a deeper look at ROCKWOOL Group's sustainability priorities, including our material issues, how we operate as a responsible business and maintain compliance, and respect human rights as well as our progress on our sustainability goals and the SDGs.

In this section

- 27** Measuring our progress against the Global Goals
- 28** Product impacts and other indirect impacts
- 29** Governing sustainability
- 30** Business ethics
- 31** Safety and social issues
- 32** Climate and energy
- 33** Environmental management
- 35** Waste and recycling
- 36** Accounting principles and materiality

Measuring our progress against the Global Goals

Enriching modern living is fundamental to everything we do. We extensively and comprehensively measure how our products and processes contribute to improving society.

ROCKWOOL has made a commitment to drive an increased positive contribution to 10 UN SDGs – also called the Global Goals.

Our six sustainability goals are directly aligned with SDGs 6, 7, 8, 12 and 13, and we have assessed that the performance and benefits of our products positively impact SDGs 2, 3, 6, 7, 8, 12 and 13.

We evaluate our SDG performance based on the effects of our products as well as our operational impacts. We track our performance through a combination of sustainability goals and product impact metrics where possible. During 2019, we added a new metric that specifically contributes to SDG 8: Decent work

and economic growth, and will now monitor jobs and economic value created by ROCKWOOL Group directly or indirectly as well as the economic value of the energy our products save.

This Factbook contains facts on our management of the material issues as well as key performance indicators showing the progress on both our **product impact metrics** and **operational performance metrics** related to the SDGs.

100% of ROCKWOOL's products are classified as SDG positive by Trucost, part of S&P Global.



Increasing our positive impact

We are increasing our positive impact on people and society by maximising our positive product impact and minimising our operational footprint.



Product impacts and other indirect impacts

We believe that true sustainability goes beyond reducing our operational footprint and that the lifecycle impacts of our products

are the most significant measure of our contribution. We track multiple metrics that give a comprehensive outline of how ROCKWOOL products help society and, more specifically, drive progress on the UN SDGs.

SDG performance: Product and other indirect impacts metrics

Indicator	Value	2017	2018	2019	Note	SDG
Carbon emissions avoided in the lifetime of building insulation sold	Mt CO ₂	193	206	201	1	13
Carbon emissions avoided in the lifetime of industrial insulation sold	Mt CO ₂	1,133	1,176	1,000	1	13
Energy saved in the lifetime of building insulation sold	TWh	853	908	888	1	7
Energy saved in the lifetime of technical insulation sold	TWh	5,220	5,372	4,554	1	7
PM air emissions avoided in the lifetime of building insulation sold	kt		84	79	2	7
SO ₂ air emissions avoided in the lifetime of building insulation sold	kt		256	246	2	7
NO _x air emissions avoided in the lifetime of building insulation sold	kt		302	295	2	7
Water saved by precision growing products sold	kl	90,469	93,817	101,228	3	6
Fertiliser saved by precision growing products sold	t	15,246	15,810	17,059	3	2
Land use reduction by precision growing products sold	ha	26,489	27,469	29,639	3	2
Yield gain of vegetables by precision growing products sold	kt	1,870	1,941	2,092	3	2
Stone wool collected and recycled through ROCKWOOL recycling services	t	120,000	129,000	159,000	4	12

Indicator	Value	2017	2018	2019	Note	SDG
Significantly improved learning environments from acoustic solutions sold	Number of students		423,000	445,000	5	3
NEW Significantly improved learning environments from acoustic solutions sold	Number of teachers		21,000	21,800	5	3
NEW Jobs due to ROCKWOOL Group's global operations (direct & indirect with suppliers)	FTE			40,000	6	8
NEW Economic value created due to ROCKWOOL Group's global operations (direct & indirect)	EUR m			2,757	6	8
NEW Economic value of energy saved by ROCKWOOL insulation products	EUR m			77,000	6	8

¹ Energy and carbon emission savings in the lifetime of our sold building insulation and technical insulation products is calculated following methodology developed by Navigant, who also validate the annual results. See www.rockwoolgroup.com/carbon-impact

² Annual avoided air emissions from heating energy production as a result of our sold building insulation calculated using methodology developed by Navigant, who also validate the annual results. The methodology for avoided air emissions was first developed and applied for the 2018 results. See www.rockwoolgroup.com/carbon-impact

³ Quantitative comparison between soil based cultivation systems and stone wool systems using methodology developed by Wageningen University & Research, who also validate annual results. Methodology available at www.rockwoolgroup.com/precision-growing-impact

⁴ Stone wool building insulation received at our factories for recycling and estimated dry weight of stone wool growth media recycled by external partners.

⁵ The impact on learning conditions from acoustic products sold is calculated using a methodology developed by Ramboll, who also validate the annual result. In 2019, the methodology was updated and applied for 2018 and 2019. See www.rockwoolgroup.com/acoustic-impact

⁶ Contribution to jobs and growth from ROCKWOOL Group's global activities is calculated following a methodology developed by Copenhagen Economics and was first developed and applied for the 2019 results. Methodology available at www.rockwoolgroup.com/socioeconomic-impact

Governing sustainability

The Director of Group Sustainability reports to the Senior Vice President for Group Marketing, Communications and Public Affairs – a member of Group Management. The Director of Group Sustainability is responsible for driving the sustainability agenda across the Group as well

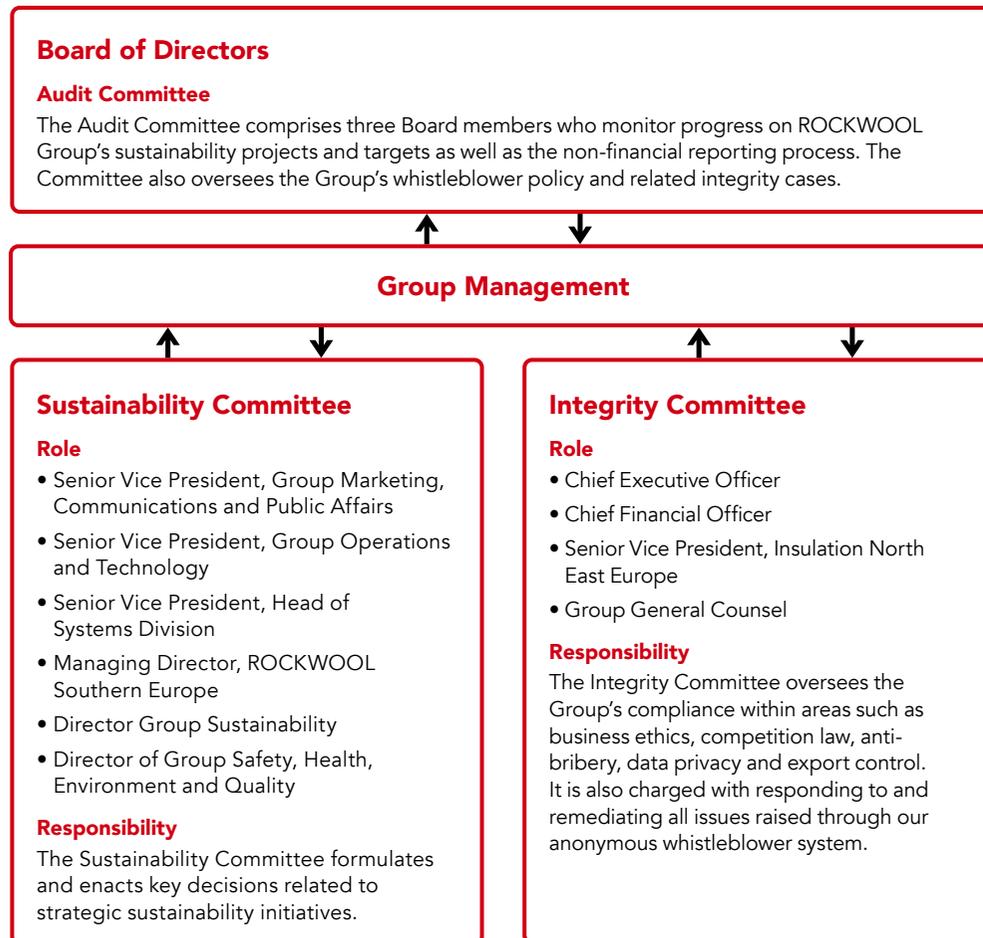
as coordinating and tracking progress towards the Group's sustainability goals.

Tax matters are governed by the Board of Directors and discussed on a regular basis with the Audit Committee.

Code of Conduct

We maintain a Code of Conduct (the Code) as our key communication on and guidance for ROCKWOOL Group's way of working with integrity. The Code includes Group policies related to anti-corruption, gifts and hospitality, conflict of interest, competition law, data privacy, human rights and labour rights, health and safety, and the environment.

We strive to ensure that both managers and employees have read and understood the Code and that they act according to its values. We support this with additional e-learning for the Code. In addition, we maintain a robust whistleblower system, whereby all internal and external stakeholders can safely report misconduct or suspicion of misconduct.



Operational performance: Business ethics

Ensuring ethical awareness

Beginning in 2019, approximately 6,000 targeted employees concluded the new Code of Conduct e-learning. The focus of the e-learning was on ethical behaviour in the workplace, anti-corruption (including our new gift and hospitality policy), conflict of interest and how to report concerns. The e-learning programme will be repeated in 2021.

Also in 2019, as part of the Code of Conduct awareness programme, face-to-face training in competition law was organised by ROCKWOOL International and by local ROCKWOOL companies in local languages.

Working with agents

ROCKWOOL Group has zero tolerance towards any kind of fraud, corruption, bribery or facilitation payments, as defined by our anti-corruption policy. The policy also applies to suppliers, agents and other third parties. In 2019, a new policy on the use of agents was approved and is now under implementation. The focus is on compliance in relation to the U.S. Foreign Corrupt Practices Act and the UK Bribery Act. Use of agents and compliance with the policy will form part of the internal audits.

Enabling safe reporting

All employees are encouraged and required to report knowledge or suspicion of non-compliance with the ROCKWOOL Code of Conduct to management, the Group Integrity Officer or through the whistleblower procedure. We do not accept any form of negative employment consequences for employees reporting in good faith.

In 2019, a total of 13 cases were reported, compared to 15 in 2018. All reported integrity and whistleblower cases were investigated.

The reported cases involved fraud, bribery, unethical behaviour or were related to safety, health and the environment. Of the 13 cases, nine resulted in corrective actions ranging from dismissal of employees to changes in internal procedures.

In relation to bribery, the two reported cases were attempts to bribe ROCKWOOL employees and were reported by the targeted employees themselves.

Supply chain due diligence

ROCKWOOL's Supplier Code of Conduct is designed to mitigate ESG risk by explaining our expectations to suppliers. ROCKWOOL Group expects our suppliers to enforce the same guidelines within their supply chain.

Before being approved as a supplier to the ROCKWOOL Group, new potential suppliers must register in our online supplier portal and either accept the ROCKWOOL Supplier Code of Conduct or upload their own code of conduct for our review and approval.

During 2019, we evaluated the sustainability risk related to three overall areas: human rights and labour rights; the environment; and anti-corruption and bribery across the countries in which we currently operate and the type of materials and services we procure. This has resulted in a risk matrix that we will use for assessing new suppliers and to re-assess existing suppliers. We expect to implement a risk-based screening for existing suppliers in the identified high-risk categories in 2020.

We did not conduct any third-party audits in 2019. We continue to re-assess the legacy portfolio of existing suppliers, and during 2019, we increased from 43 to 65 percent of contracted suppliers having been assessed for acceptance of the ROCKWOOL Supplier Code of Conduct.

Responsible tax

ROCKWOOL Group is committed to being a responsible tax payer and avoids aggressive tax planning. We aim to have a clear and transparent corporate structure with no contrived entities or structures. We believe that a responsible tax practice is an important part of responsible corporate citizenship.

In all tax matters, we apply the same values and integrity by making sure that our primary focus is the ordinary operation of the Group. In the countries where we do business, we

seek to comply with all relevant tax laws as well as recognised international regulations and practices including OECD guidelines.

There are many transactions among ROCKWOOL Group companies, and the transfer pricing policy for these transactions is driven by the activities undertaken and the value created in each part of our business. The key component in our internal price setting is our transfer pricing setup and methods in which we are committed to the principle of paying tax where value is created.

Category	Indicator	GRI disclosure number	Value	2017	2018	2019
Anti-corruption	Confirmed incidents of corruption and actions taken	205-3	Number	3	2	2
Management approach disclosures	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	419-1	EUR k	-	-	-
	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	206-1	EUR k	-	-	-

Operational performance: Safety and social issues

Bringing diversity to our industry

At ROCKWOOL, we aim to offer strong learning and development opportunities to our employees. We are actively trying to change our traditionally male-dominated industry by promoting diversity and inclusiveness for our global workforce and working to eliminate discrimination while providing equal opportunities for all.

We have focused on increasing the number of women in different levels of management. The gender split across the Group has been relatively stable over the past few years with an 18/82 ratio of women to men. However, the proportion of women is higher at executive and middle management levels.

In 2018, Group Management set a target for 2020 of 25 to 35 percent female leaders in executive and middle management positions. In 2019, 27 percent of leaders in executive and middle management positions were women, the same as in 2018. In addition, 29 percent of newly hired middle managers were women, on par with the level in 2017 after a peak of 39 percent in 2018.

To meet our 2020 targets, we will continue to strengthen general diversity growth through our talent development processes and hiring decisions.

We also have a target to have at least one shareholder-elected female member of the Board of Directors by the end of 2020. At the 2020 General Assembly on 1 April a female candidate for the Board is a nominee for election. If elected, she will be the first shareholder-elected woman on our Board.

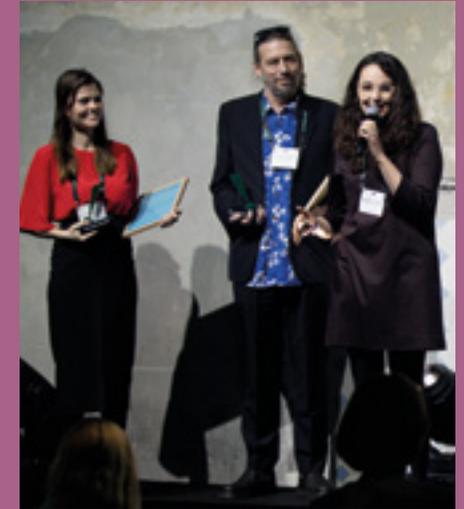
Supporting industry diversity and innovation

In 2020, ROCKWOOL's Group Operational Excellence Specialist Alexandria Trattner received Innovation Fund Denmark's prestigious Industrial Researcher prize for her analysis tool within complexity management.

The prize honours the most talented industrial PhD or business-post doctorate candidates from the Innovation Fund's talent program. The talent program combines a high academic research level with a strong understanding of business and has created positive commercial impact for companies.

Honoured to have received the award, Alexandria greatly appreciates the backing she has been given during the entire process. "This would not have been possible without the enormous

amount of support from the ROCKWOOL management and the dedicated resources to carry out the operational tasks in relation to my research", she says.



Category	Indicator	GRI disclosure number	Value	2017	2018	2019
Workplace diversity	Percentage of female leaders in executive and middle management positions	n.a.	%	27	27	27
	Share of women in new hires for middle manager positions	n.a.	%	29	39	29

Safe and healthy workplaces

ROCKWOOL Group employs around 11,700 people. As an industrial company, there is potentially a high level of safety risk for our employees. We take managing this risk seriously and continuously work to create safe and healthy workplaces and conditions for all employees and people working with us around the world.

Our approach is guided by our Safety, Health and Environment Policy. To further raise awareness among employees, we host annual Safety Day activities across our global operations.

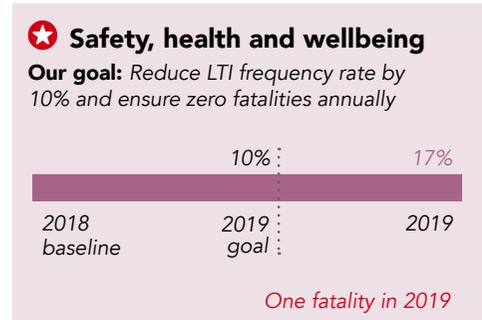
We have a goal of zero fatalities for people working with and for us and have an ambition to incrementally reduce the Lost Time Incident (LTI) rate by 10 percent every year. In 2019, our global activities to safeguard employees meant that we reduced our LTI rate by 17 percent, bringing the level down to 2.9 per million hours worked for all employees and contractors. This is the lowest level ever achieved by ROCKWOOL Group.

Regrettably, in January 2019, we experienced a fatal accident at the construction site for a new production facility in Romania.

An employee from a local subcontractor succumbed to injuries following a fall from height. Following this, we increased supervision of subcontractors by direct personnel from ROCKWOOL, focusing daily on the contractor management process and sharing the findings with all production facilities.

In 2019, our Cigacice factory in Poland was awarded first prize for employee safety by the National Labour Inspectorate. One of ROCKWOOL's largest factories, Cigacice, beat 16 other companies to the top spot with judges noting impressive safety standards and the outstanding behaviour of colleagues towards their health and wellbeing.

Progress against our sustainability goals



Operational performance: Climate and energy

Our products help save energy and combat climate change on a large scale but we also continuously work to increase positive climate impact through new products and process innovations in our operations.

We are committed to reducing the carbon intensity of our production and, in 2016, set a goal to reduce carbon intensity by 20 percent by 2030, with a baseline of 2015. Since 2015, we have reduced the CO₂ intensity of our production by four percent. In 2019, the development in intensity was flat while absolute carbon emissions declined by eight percent. As climate science and global experience continue to evolve, we are reviewing our own decarbonisation ambitions with an eye on further accelerating them.

Beyond production, we also have a goal to improve energy efficiency in our non-renovated office buildings. Renovation is our preferred approach for reaching our energy efficiency targets. In some instances, the economic payback of a deep renovation may not be attractive, but we may pursue it anyway because of the many other benefits

it brings, such as creating healthier and safer work environments or achieving broader sustainability goals.

Since 2015, we have improved the energy efficiency of our non-renovated offices by six percent. We expect this to increase substantially over the next few years, as a number of projects have been approved and many more are in the pipeline.

As part of our support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, ROCKWOOL comprehensively reports on both business opportunities and risks related to climate change through the Climate Disclosure Project (CDP).

Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Workplace safety	Fatalities	403-9	Number	-	1	1	
	Frequency of LTI – employees & contractors (per million hours worked)	403-9	No./mill hours	3.5	3.5	2.9	1
	Annual improvement in LTI frequency	403-9	%	10	12	17	2

¹ One acquired factory is included in 2019. The 2018 LTI number was adjusted to include this factory. 2017 results remain unchanged.

² The LTI improvement in 2018 is calculated using the same scope for both 2018 and 2017 and excludes the acquired factory in both years.

Leading by example at Gladbeck

The deep renovation of our office in Gladbeck, designed to improve energy efficiency by more than 80 percent, is one of our major investments to support our goal to improve energy efficiency in our non-renovated office buildings by 75 percent by 2030, compared to 2015.



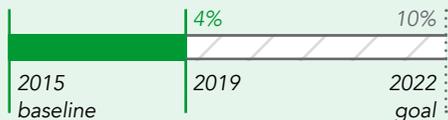
Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Greenhouse gas emissions	Total direct and indirect greenhouse gas emissions	305-1, 305-2	Mt CO ₂ e	2.06	2.22	2.05	1
	Total direct and indirect CO ₂ emissions	305-2	Mt CO ₂	1.75	1.89	1.74	1
	CO ₂ direct (Scope 1)	305-1	Mt CO ₂	1.44	1.54	1.41	1
	CO ₂ indirect (Scope 2)	305-2	Mt CO ₂	0.31	0.34	0.34	1
	CO ₂ intensity direct (Scope 1) per tonne stone wool (Scope 1)	305-4	Index	98	99	96	1
	CO ₂ intensity indirect (Scope 2) per tonne stone wool	305-4	Index	90	91	96	1
	CO ₂ intensity direct and indirect (Scope 1+2) per tonne stone wool	305-4	Index	97	96	96	1
Energy	Energy consumption	302-1	GWh	4,935	5,428	5,053	1
	Energy per tonne stone wool	302-3	Index	97	98	99	1
	Energy efficiency in own buildings	n.a	Index	100	100	94	

¹ Scope extended to include one acquired factory. All years have been updated.

Progress against our sustainability goals

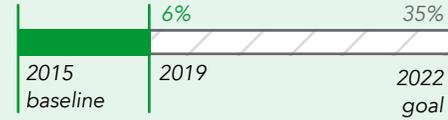
★ CO₂ emissions

Our goal: Reduce CO₂ emission intensity (CO₂/t stone wool) from our stone wool production facilities by 20% by 2030 (10% by 2022)



★ Energy efficiency

Our goal: Reduce energy consumption (kWh/m²) within own (non-renovated) offices by 75% by 2030 (35% by 2022)



Operational performance: Environmental management

Our Safety, Health and Environment policy states our commitment to continuously strive to protect people and the environment from the impacts of our processes. We are committed to reducing the environmental and climate footprint of our operations and have set goals to achieve that.

The way we work is to apply risk assessments to prioritise our activities and to protect and manage risks in the development and implementation of new processes and machinery. We also continuously conduct internal audits to improve the safety, health and environmental performance and awareness across the Group and have, for many years, disclosed a substantial number of performance indicators to customers and other stakeholders.

Our production facilities are subject to strict air quality regulations that are in place to protect sensitive groups of the population, animals and the local environment. Many of our factories are located close to residential neighbourhoods, schools, businesses, parks and protected green spaces, and we have successfully operated in these neighbourhoods for decades. We develop and apply our own standards to protect people and the environment. In cases where our own standards exceed legal requirements, our standards prevail.

Around

80%

of our stone wool production facilities have at least one external certification within safety, health, environment or energy management and several were certified across all areas.

Water management

Our production process is designed for zero wastewater discharge to the environment. No production process wastewater is discharged into waterways or the ground at any of ROCKWOOL's manufacturing facilities. The water we use at most of our sites is recycled and evaporates, so water effluent is therefore not a material issue for us.

We have a goal by 2030 to reduce water consumption per tonne of product. We are implementing more systematic water management at all factories, and in 2019, we continued mapping water use and installing additional water meters. In 2019, five percent of our water use came from rainwater harvesting. There are plans in place to increase this percentage in the coming years. Overall, we improved our water efficiency by five percent during the year, leading to a seven percent accumulated saving compared with the 2015 baseline.

We continue to closely monitor and drive improvements in the four factories in the Group that are deemed to be located in potentially highly or extremely highly water-stressed areas in Russia, India and Malaysia.

Progress against our sustainability goals

★ Water consumption

Our goal: Reduce water intensity (m³/t stone wool) within our manufacturing facilities by 20% by 2030 (10% by 2022)



Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Environmental laws and regulations – non-compliance	Factories certified to ISO 14001 and/or ISO 45001 and/or ISO 50001	n.a	Number	22	22	23	1
	Share of factories certified to ISO 14001 and/or ISO 45001 and/or ISO 50001	n.a	%	79	78	79	
	Audits for environment, health, safety	n.a	Number	91	186	201	
	Fines – monetary value	307-1	EUR k	3	2	8	
	Non-monetary sanctions	n.a	Number	-	0	5	

¹ 23 factories are ISO 14001 certified (Environmental Management), nine factories are ISO 45001 certified (Occupational Safety & Health Management) and nine factories are ISO 50001 certified (Energy Management).

Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Air emissions	NOx intensity	305-7	Index	119	130	103	1
	SO ₂ intensity	305-7	Index	72	68	66	1
	CO intensity	305-7	Index	33	3	4	1
	Ammonia intensity	305-7	Index	96	93	90	1
	Phenol intensity	305-7	Index	99	98	81	1
	Formaldehyde intensity	305-7	Index	109	79	90	1
	Particulate matter (PM10) intensity	305-7	Index	147	122	110	1
Water consumption	Water consumption total	303-5	million m ³	3.73	3.94	3.48	2
	Water intensity (m ³ /t stone wool)	303-5	Index	100	97	93	2
	Water consumption excl. rainwater	303-5	million m ³	3.54	3.78	3.32	2
	Total water consumption from all areas with water stress	303-5	million m ³	0.27	0.28	0.23	2
Water withdrawal	Groundwater own abstraction	303-3	million m ³	1.23	1.29	1.04	2
	Municipal water a.o. utilities	303-3	million m ³	2.00	2.21	1.97	2
	Rainwater own abstraction	303-3	million m ³	0.19	0.16	0.16	2
	Surface water own abstraction	303-3	million m ³	0.32	0.29	0.31	2

¹ 2015 Baseline recalculated with the same methodology used in 2016 and onwards. The air emissions data has some uncertainty and are dependent on nationally prescribed methods, sampling frequency, sampling methods and laboratories. Emission measurements can vary a great deal based on the representativeness of the samples taken, flow measurements and sampling techniques, as well as the method of analysis.

² Scope extended to include one acquired factory. All years have been updated.

Operational performance: Waste and recycling

Utilising proprietary ROCKWOOL technology, we have developed ways to increase the circularity of our factories. The fact that stone wool is recyclable presents us with a unique opportunity to have fully closed loop stone wool systems at all our factories. This means we can recycle waste wool generated during production and take back our products from construction and demolition sites. We have also developed ways to use waste from other industries.

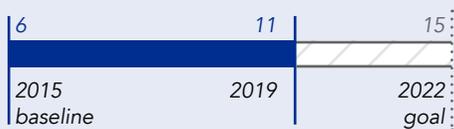
Reclaimed waste schemes

Building from the inherent recyclability of stone wool, ROCKWOOL has a goal to offer comprehensive recycling services for our products in 30 countries by 2030. In 2018, we took a significant step forward by initiating product recycling programmes in five additional countries, which brought us to 10 in total. In 2017, we fully acquired a Swiss company that has been operating a recycling service for nearly 30 years. Following the full

Progress against our sustainability goals

★ Reclaimed waste

Our goal: Increase the number of countries where we offer recycling services for our products to 30 by 2030 (15 by 2022)



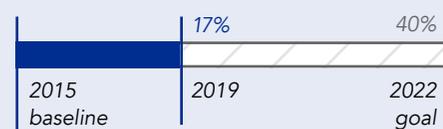
integration of the company into the scope of our financial and sustainability reporting from 2019, we have included Switzerland into the baseline for our recycling services goal. This brings the total number of countries to 11 and we are on track to reach the intermediate goal of 15 countries by 2022.

Landfill waste from production

We also have a goal to reduce waste from operations going to landfill by 85 percent by 2030 compared to 2015, with an intermediate 2022 goal of a 40 percent reduction. Investments in new recycling plants at our Asian and Russian production facilities have already significantly reduced waste sent to landfill. So far we have reduced production waste sent to landfill by 17 percent overall and we are confident we will fulfil our ambitious goal.

★ Landfill waste

Our goal: Reduce landfill waste (tonnes) from our manufacturing facilities by 85% by 2030 (40% by 2022)



Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Waste	Total waste generated	306-2	t	222,152	218,501	208,536	1
	Total hazardous waste generated	306-2	t	26,551	18,236	21,148	
	Waste landfilled	306-2	t	90,401	95,830	78,387	2, 3
	Landfill waste from factories	306-2	Index	96	101	83	2
	Waste for external recycling	306-2	t	96,243	87,123	103,784	
	Waste for external recovery (energy)	306-2	t	2,547	2,997	2,652	
	Other external waste disposal	n.a	t	33,824	33,141	23,713	

¹ Excluding internally recycled production waste.

² Scope extended to include one acquired factory. All years have been updated.

³ 2018 value corrected for two factories.

Category	Indicator	GRI disclosure number	Value	2017	2018	2019	Note
Recycling	Recycling of waste from other industries	n.a	t	596,400	622,559	628,277	
	Average % recycled content	301-2	%	25	24	26	
	Post-consumer stone wool reclaimed and recycled	306-2	t	120,000	129,000	159,000	1
	Number of countries with comprehensive insulation reclaimed waste schemes	n.a	Countries	6	11	11	2

¹ Stone wool building insulation received at our factories for recycling and estimated dry weight of stone wool growth media recycled by external partners.

² Switzerland has been included in the baseline and added to 2017, 2018 and 2019.

Exploring packaging efficiency

For ROCKWOOL Group, plastic packaging for products offers important advantages, allowing us to protect and compress our products and preserve their integrity. We have reduced the intensity of our plastics use over several years and, in close collaboration with our packaging and logistic suppliers, are currently investigating ways to use less plastics with a greater level of recycled content.

Accounting principles

Reporting period

Our reporting covers the period from 1 January 2019 to 31 December 2019.

Controls

The processes for data collection, calculation and consolidation of results are described in manuals and guidelines and go through an internal data validation process. All factories are required to provide explanations to any significant developments. Changes to historical data are only made if considered material.

The data collection, calculations and consolidation of results for LTI are supported by an IT tool validated by an IT audit. The data is provided according to the management's best knowledge.

Scope

The scope for the safety indicators is all employees and contractor employees performing duties for ROCKWOOL Group. It covers all ROCKWOOL locations, including factories, offices, construction sites, laboratories, warehouses, etc.

For the environmental indicators, unless otherwise mentioned, the scope of the 2019 data is 29 stone wool producing factories including any offices, warehouses and other facilities on the factory premises. For 2019 data, one factory acquired in 2017 has been added. One factory acquired in 2018 and a new factory that started operating in September 2019 are not included in the 2019 data. The Systems segment production facilities, office buildings and warehouses are also not included.

The 2015 baselines for the sustainability goals relating to CO₂ emissions, water consumption and waste to landfill were adjusted to take account of one acquired factory.

Greenhouse gas (GHG) emission conversions

GHG emissions are calculated indirectly via conversion factors for energy consumption and GHGs. The energy and CO₂ conversion factors are regularly updated based on results from fuel analysis, provided by the suppliers, emission factors published by national or regional authorities, or by the International Energy Agency. For N₂O, the global warming potential value used is the one published in the IPCC Fourth Assessment Report (AR4).

Definitions

Workplace diversity

Women in management includes managers on levels 1–5 in our organisational hierarchy. Women in new hires includes managers on levels 3–5 in our organisational hierarchy.

Anti-corruption

The disclosure of incidents is aligned with the GRI standard on anti-corruption point 205-3, where confirmed incidents of corruption are reported.

Lost Time Incident (LTI)

The LTI rate/frequency is calculated as the total lost time incidents per 1,000,000 working hours.

Energy consumption

Energy consumption is calculated as the total energy consumed by the 29 stone wool production facilities in the form of fuel and electricity. Reported energy is based on meter readings, invoices and net calorific values from laboratory analysis results or reported by the suppliers.

CO₂ and GHG emissions

CO₂ emissions are calculated as the total CO₂ emitted by the 29 stone wool production factories in the form of fuel, process emissions and electricity. All our stone wool production facilities in the EU, UK and Norway are part of the EU Emissions Trading Scheme. Seventy-five percent of our Scope 2 emissions is externally verified to the limited assurance level.

Other GHG emissions are estimates based on analyses made in some of the production facilities in representative operational conditions. Scope 1 and 2 are defined according to The Greenhouse Gas Protocol: Scope 1 includes all direct emissions, Scope 2 includes indirect emissions from consumption of purchased electricity, heat or steam.

Water consumption

Water withdrawal by source is calculated as the total water withdrawn by ROCKWOOL's 29 stone wool production factories. Reported data is based on meter readings and invoices.

Total water consumption from all areas with water stress, refers to the water consumption at four factories in Malaysia, India and Russia that have been identified as being located in either highly or extremely highly water stressed areas. This was the result of a water scarcity assessment carried out by a third party in 2017.

Waste disposal

Waste to landfill is calculated as the total quantity of waste sent to landfill by the 29 ROCKWOOL stone wool production factories. Reported data are based on meter readings and documentation provided by external suppliers.

Waste sent to other types of disposal are calculated as the total quantity of waste sent to each individual type of disposal. Reported data are based on meter readings and documentation provided by external customers/suppliers.

Air emissions

All air emissions other than GHGs are calculated as the total emissions for each component and are based on analytical measurements performed in accordance with the facility's permit requirements and operational conditions. In addition to the permit requirements, ROCKWOOL has set minimum mandatory requirements relating to air emission measurements that prevail in cases where legal requirements are less stringent.

The air emissions data has some uncertainty and are dependent on nationally prescribed methods, sampling frequency, sampling methods and laboratories. Emission measurements can vary a great deal based on the representativeness of the samples taken, flow measurements and sampling techniques, as well as the method of analysis.

Reclaimed waste

A country-specific reclaimed waste scheme is considered eligible when it meets the following criteria:

- the scheme facilitates the take back of construction and/or demolition ROCKWOOL stone wool products to a ROCKWOOL factory and/or a waste/industry partner that ensures the waste is reused/recycled;
- the scheme is either offered to a substantial market segment or the scheme is offered to selected, large customers in a country;
- the scheme covers, as a minimum, insulation products but must also cover other ROCKWOOL products when appropriate; and
- the offering is accessible, for example, on the ROCKWOOL country website, in marketing brochures, through direct promotion, and is communicated to relevant customers.

Energy efficiency in our own buildings

Energy efficiency in own, unrenovated offices is calculated in terms of kWh/m²/year. Buildings that are rented, have no dedicated use as an office building, are deemed as having a high energy performance or were renovated relatively recently, compared to the 2015 baseline year, are not included in the scope.

Recycled content

Recycled content is calculated in accordance to EN 15844:2012 and ISO 14021:1999.

Recycled content is an average of the recycled content across the 29 factories.

Recycling of waste from other industries is waste or secondary materials purchased with the purpose of melting to produce new products.

Environmental laws and regulations – compliance

A fine is a monetary sanction for non-compliance with environmental and health and safety laws and regulations (including international, national, and voluntary agreements with authorities).

A sanction is a non-monetary administrative sanction for non-compliance with environmental and health and safety laws and regulations (including international, national, and voluntary agreements with authorities).

Fines and sanctions are reported as the total of fines and sanctions in the 29 ROCKWOOL stone wool production factories.

The number of safety, health and environment audits includes external audits related to safety, health and environment carried out by authorities, certified bodies, etc., together with Group internal audits at the 29 stone wool producing factories.

Materiality

Many expectations faced by corporations are well established and have been formalised by law, including emission limits, tax schemes, safety requirements and minimum wages. However, as a corporation we also need to understand and meet informal, evolving and location-specific expectations to maintain our social licence to operate.

To do this, we engage with stakeholders across our value chain to understand the stakeholder concerns and expectations of us as a business. This forms part of how we annually determine ROCKWOOL Group's material issues.

Our stakeholders are diverse, and their concerns vary. For example, we work closely with communities when we engage in building on greenfield land or when we significantly expand our manufacturing facilities.

We also engage with our investors quarterly on ESG issues and use leading indices and frameworks – the UN SDGs in particular – to guide our assessment of our material issues.

Our material issues

- Energy efficiency and carbon management
- Circular economy
- Fire resilience
- Safety, health and wellbeing
- Water efficiency and management
- Public and private sector collaboration
- Decent work and job creation
- Anti-corruption and bribery
- Environmental management
- Human rights
- Supply chain management
- Responsible tax

GRI Standard Reference Index

Our reporting is informed by the Global Reporting Initiative (GRI) Standards. The Standards highlight multiple topics across three categories: economic, environmental and social, which are material to our business.

We publish a separate GRI Standard Reference Index along with our annual Sustainability Report that can be downloaded at www.rockwoolgroup.com/sustainability.

Growing focus on ESG performance

In response to growing interest, ROCKWOOL Group, in 2019, became the first company in Denmark to host quarterly calls with investment analysts focusing solely on our ESG approach and performance. This is a fast-moving area of engagement, but we welcome the chance to have a consistent dialogue with analysts on these issues. Recordings of the ESG analyst calls can be found at our [website](#).

Selected awards and recognition

- 50 Sustainability and Climate leaders, Bloomberg
- Business Climate Prize, ZERO Conference, Norway

Ratings

- CDP Climate B
- MSCI ESG A
- MSCI BISR Environmental Impact 90.93%
- SustainAnalytics Risk Rating 19.9 (Low)
- ISS-Oekom B- (Prime)

Indexes

- TRUCOST (S&P company) classifies 100 percent of the Group's products as SDG positive.
- SDG Invest includes ROCKWOOL Group in a portfolio of the 60 best performing companies globally.

Selected partnerships within climate and sustainability

UNGC Action Platforms:

- Business Ambition for Climate and Health
- Reporting on the SDGs



Ellen MacArthur Foundation – CE100



Corporate Leaders Group



Renovate Europe



COP Statement to UNGC

ROCKWOOL Group is a participant in the UN Global Compact and we would like to express our continued support for the Global Compact by hereby renewing our ongoing commitment to the initiative and its principles.





Making a splash

The multi-award-winning building in Tychy, Poland, attracts a lot of attention. Not least thanks to the spectacular effect of blue Rockpanel Chameleon façade panels that almost completely cover the elliptical building that houses this water park.

Apart from aesthetics, adequate insulation is also very important as the building consists of warm and cold areas. The water park is highly energy efficient with ROCKWOOL products throughout the building and a renewable energy source of biogas from the local wastewater treatment plant supplied through a six-kilometre pipeline. The surplus heat generated is transmitted to the municipal network and covers about one-seventh of the city's total energy needs.

Tychy, Poland

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