



Rising to the challenge

Sustainability report 2015

ROCKWOOL®

Rising to the challenge

The era of sustainability as a “nice to have” is over, if it ever truly existed. A number of forces, from society’s ever-growing insight into the causes of climate change, to 2015’s COP21 commitments and the adoption of the United Nations Sustainable Development Goals make clear where the tide of history is taking us. **Today, sustainable business is both a business and human imperative — we must all be sustainable to thrive.**

The ROCKWOOL Group’s product portfolio is perfectly placed to tackle many of today’s biggest sustainability and development challenges. From energy consumption to noise pollution, water scarcity to flooding, our solutions help our customers address many of the big issues of modern living. Our range of products reflects the diversity of the world’s needs, supporting our stakeholders in reducing their own carbon footprint along the way.

Embedding sustainability in our business is about the overall impact our products have on the world. Key to this is integrating circular economic principles into our activities. We seek to minimise any detrimental impacts of our products from cradle to cradle, assessing them for durability while ensuring that our products can be easily removed and recycled into new stone wool solutions when a building has reached the end of its life.

For the ROCKWOOL Group, sustainability and safety go hand in hand. **We are committed to enriching the lives of everyone who comes into contact with our products.**

Cover photo: South Harbour School in Copenhagen, Denmark

We have a zero tolerance policy when it comes to anything that could potentially jeopardise the health and safety of our employees, those installing our products and those living in and using the spaces our products help create. We are proactive in constantly striving to improve policies and procedures to reduce risks and increase the safety of our employees and stakeholders.

My team and I are dedicated to continuously improving the sustainability of our production processes, and our products’ positive impact on the world. To set this commitment in stone, and make it meaningful to our global employee and customer base, this year we are announcing 6 ROCKWOOL Group sustainability goals across four themes where we feel we can have the most significant initial impact:

- Climate change and energy efficiency
- The circular economy
- Health and wellbeing
- Water management

We are both privileged and conscious of the fact that the ROCKWOOL Group can play such an important role in shaping a more sustainable society. The team is committed to further integrating sustainability into our business and into people’s lives. Throughout their lifespan the ROCKWOOL Group’s products **typically save between 80 and 1,500 times the carbon emissions emitted during their production.** These CO₂ savings are achieved every time most ROCKWOOL stone wool insulation is installed.

We thank you for your interest and hope you enjoy reading the report.



Jens Birgersson
CEO ROCKWOOL Group



A united Group effort

ROCKWOOL stone wool is the core of our business and our combined portfolio supports a united sustainability effort.



ROCKWOOL

Fire safe insulation for all types of buildings including ROCKWOOL wall systems



ROXUL

Fire and Soundproofing Insulation



ROCKWOOL Technical Insulation

Insulation solutions for process industry, marine and offshore



ROCKWOOL Core Solutions

Customised stone wool solutions to industrial partners



ROCKFON

Acoustic ceiling and wall solutions



GRODAN

Precision Growing for the horticultural industry



ROCKPANEL

Exterior cladding for buildings



LAPINUS FIBRES

Engineered mineral fibres for composite applications and Water Management



ROCKDELTA

Outdoor noise-solutions for homes and vibration controls for railways

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How we rise to the challenge

THE ROCKWOOL GROUP AND THE UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

The UN's Sustainability Development Goals were established to address the biggest global issues of today, from poverty, to climate change. The ROCKWOOL Group is committed to playing its part in addressing these fundamental challenges, by both manufacturing products which maximise positive environmental impacts and producing these products in a sustainable way. This aligns with the ROCKWOOL Group's public commitment, made in 2015, to identify ways the company can best accelerate change.

At the end of 2015, the ROCKWOOL Group worked to integrate its findings on the Group's role in accelerating change with the UN's Sustainable Development Goals. This has resulted in the setting of 6 Group sustainability goals to be met by 2030, with an intermediate goal in 2022 and with baseline 2015. The following two pages give an overview of the 6 Group sustainability goals and supporting actions, which together actively contribute towards achieving 9 of the 17 UN Sustainable Development Goals. The ROCKWOOL Group is committed to supporting all 17 UN Sustainable Development goals but has chosen to highlight its work with 9 of them in this report.

The ROCKWOOL Group actively contributes towards achieving **9** of the **17** goals



STRATEGIC GOALS (BASELINE 2015)

1. HEALTH, SAFETY AND WELLBEING: DRIVING A ZERO ACCIDENT CULTURE



10%

reduction in LTI (Lost Time Incident) frequency rate per year

0

fatalities per year

2. CIRCULAR ECONOMY: INCREASE THE NUMBER OF COUNTRIES WHERE WE OFFER RECLAIMING OF PRODUCTS FROM THE MARKET



15

countries by 2022

30

countries by 2030

3. CO₂ EMISSIONS AND ENERGY: REDUCE CO₂ FROM FACTORIES (t CO₂ Wool)



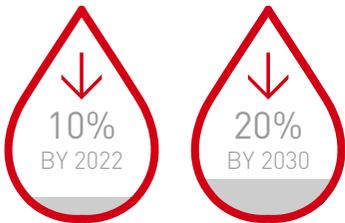
10%

by 2022

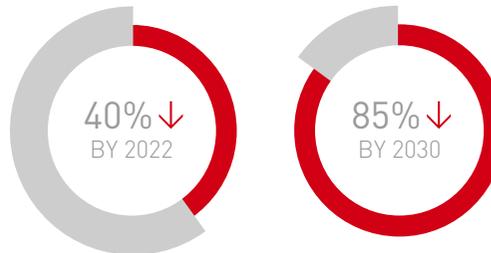
20%

by 2030

4. WATER MANAGEMENT: REDUCE WATER CONSUMPTION IN FACTORIES (m³/t Wool)



5. REDUCE LANDFILL WASTE



6. ENERGY EFFICIENCY: IMPROVE THIS IN OWN (NON-RENOVATED) BUILDING STOCK (kWh/m²)



SUPPORTING ACTIONS

Zero Hunger — providing for water-efficient agriculture

- Further develop water-efficient solutions for the horticulture sector and empower growers by providing access to Precision Growing techniques.

Good Health & Wellbeing — ensuring safe, energy-efficient, peaceful buildings

- Further improve the range of acoustic product offerings impacting on quality of life, particularly in urban spaces.
- Continue to work for better legislation regarding greener building regulations, to improve energy efficiency and acoustics.
- Encourage authorities to take a more systemic approach in drafting legislation governing the testing and requirements which better reflect real life scenarios.

Clean Water and Sanitation — managing our water consumption

- Map our operational footprint to ensure we continue to focus attention on operations that are in areas significantly affected by water scarcity.



Affordable and Clean Energy — reducing energy consumption

- Support enhanced legislation aimed at reducing energy demands in buildings and industry.

Decent Work and Economic Growth — improving our workplace and our supply chain

- Enhance sustainability practices within our supply chain.
- Utilise counsel from our Group Integrity Committee to ensure that we maintain strong business ethics within the ROCKWOOL Group.
- Maintain focus on talent and succession management and increase transparency of our recruitment process to support equal opportunities.

Industry, Innovation and Infrastructure — enhancing waste recycling

- Continue to advocate for greater recycling in refurbishment of waste from new buildings and at the end of a building's lifetime.



Sustainable Cities and Communities — providing science for legislators

- Provide legislators with sound science on which to base their decisions.
- Support fire research to improve knowledge of sustainable fire safety.

Climate Action — encourage renovation and insulation to drive energy efficiency

- Work to maximise drivers to triple the renovation rate. For example the EU aims to have its building stock upgraded to a nearly zero energy level by 2050. This could only be achieved by setting ambitious and binding overall energy savings targets for the EU, development of operational renovation roadmaps and removal of barriers for renovation.
- Increasing awareness to drive adaption of insulation as an effective means of increasing energy efficiency.



Driven by the natural power of stone

THE ROCKWOOL GROUP HARNESSSES THE PROPERTIES THAT NATURE HAS YIELDED TO CREATE INNOVATIVE SOLUTIONS FOR QUALITY LIVING.

Our products help our customers and their communities to tackle the challenges of modern life, by providing comfort, safety and resource efficiency. Stone is the core raw material we use to produce our stone wool and it is the bedrock on which we have founded our business.

Utilising a plentiful resource

Stone is one of the most plentiful natural resources on the planet. All of the major raw ingredients used in ROCKWOOL stone wool production — basalt, diabase and anorthosite — are extracted from an abundant natural reserve, and, unlike other natural resources, show no sign of damaging depletion rates due to their abundance. Alongside stone, we utilise state-of-the-art melting technologies to incorporate secondary raw materials from other industries in its production in order to develop a more circular business.

The ROCKWOOL Group is committed to using nature to give back to nature.

Stone wool is produced in a way that mirrors nature, mimicking the natural effects of a volcano. Stone is first melted down at 1,500 °C before the liquid stone mass (lava) is spun into fibres as it cools. The binder is then cured in an oven. Great care is taken to minimise any stone wool wasted in the production process.

Stone wool is naturally resourceful

By using stone wool in many different ways, the ROCKWOOL Group's products offer a variety of solutions to enrich modern living. Stone wool produced by the ROCKWOOL group is used to: save energy and reduce CO₂ emissions by minimising the use of combustion of fuel, protect buildings from the spread of fire, reduce waste in construction, guarantee acoustical comfort, improve building performance and aesthetics, enhance precision growing and save water. An increased use of stone wool solutions would benefit you and the world you live in.

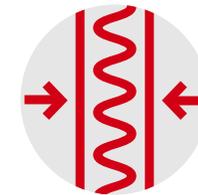
DURABLE AND
CONSISTENT LIFETIME
PERFORMANCE



Reaction to fire



Thermal
resistance



Dimension and
form stability

38,000

“The Earth produces 38,000 times more stone material than is used to make ROCKWOOL stone wool annually”

Tais W. Dahl
Ph.D. M.Sc. Geophysics

Sustainable by nature

The ROCKWOOL Group was founded more than 100 years ago by members of the Kähler family. From the company's beginning on the small Danish island of Omø in the Great Belt, the family has always operated under a deeply-held set of beliefs centred on responsibility toward customers, employees and society. Our business has evolved over the years, but the ROCKWOOL Group has remained steadfast in its commitment to strong ethics and values. We prioritise timely and transparent communication to all our stakeholders, and promote responsible actions by taking a leading role in encouraging society to be part of the solution.

A foundation guided by strong principles

In 1981, six members of the Kähler family each contributed a number of shares corresponding to 25% of the company shares in ROCKWOOL International A/S to establish the ROCKWOOL Foundation. The Foundation reflects the same passion and values the Kähler family defined from the outset. As a testament to their commitment to progress, the family

remains active as member of the Foundation's Board to this day. The ROCKWOOL Foundation contributes to society with knowledge through research and interventions. There are two primary objectives: 1) to analyse and provide knowledge about society through reliable independent research, and 2) to develop interventions that address societal challenges. 23% of the ROCKWOOL Group's dividend goes to the Foundation's activities.

Making a positive impact on society

The Foundation's focus is on five specific areas: immigration and integration; tax and undeclared work; time use and working hours; marginalised groups and risk behaviour; and a special area of emphasis: disconnected youths.

Two projects supported by the ROCKWOOL Foundation are the Rural Initiative for Participatory Agricultural Transformation (RIPAT) and NExTWORK. RIPAT is driven by a commitment to reduce poverty, hunger and undernutrition among smallholder farmers in Africa.

This initiative aims to increase levels of food security among participating farmers and, subsequently, improve levels of nutrition among adults and children in their communities through the principle of "help to self-help". Farmers are introduced to a variety of crops through special training and agricultural technologies, with the ambition of improving their agricultural production. Each farmer can then choose which crops and methods they wish to adopt into their own farming practice.

Youth unemployment is a serious challenge throughout much of Europe. In Denmark alone, approximately 8% of young people aged 16-29 are neither receiving an education nor employed. In 2015, the ROCKWOOL Foundation launched a new initiative, NExTWORK, aimed at bringing together unemployed young people, local companies and municipalities in an effort to establish internships for such disconnected young people.

23%

of the ROCKWOOL Group dividend goes
to the ROCKWOOL Foundation's activities



Photo: RIPAT Project, Africa

Our purpose

The core of everything we do at the ROCKWOOL Group is enshrined in our purpose: **to release the natural power of stone to enrich modern living.**

We are committed to empowering employees, customers and society to rise to the development challenges of modern living. By using stone, one of the world's most abundant natural resources, our products make a lasting impact across generations. From classrooms to stadia, land to landmarks, people need spaces not only to dream big but to act on those dreams, making the world a better place for everyone.

ROCKWOOL products are integral to modern society, and many of our employees interact with, and trust them unknowingly on a day-to-day basis. Whether it's in your vehicle's brakes, the football field, your walls, ceilings, roofs, gardens, fences or trains, you can rest assured that ROCKWOOL solutions are contributing to your peace of mind and quality of life. The ROCKWOOL Group is committed to living its values through its global employee base.



Empowering employees

Kirill Fedorovsky, Finance Director, ROCKWOOL UK:

"The ROCKWOOL Group has given me the opportunity to experiment and work on projects I am passionate about. I joined the company as a factory controller in Russia, and then three years later I moved to Denmark on an international posting as Business Controller. Today, I am Finance Director at ROCKWOOL UK. At the ROCKWOOL Group, there is a lot of autonomy across the entire organisation. If you like a good challenge — and there is always one waiting for you in our industry — and have a good idea, there will be room and support for you to implement it."



A principled company

Jan Tupman, Technical Director, Russia:

"From the moment I joined the ROCKWOOL Group, I knew I would be working for a company with high values and a strong ethical policy. Even before it was 'fashionable' for a company to promote corporate principles, I was introduced to the ROCKWOOL way of doing business — with safety and collaboration amongst employees, and accountability towards all stakeholder groups at the forefront. I am pleased to say that, after all these years, even if naturally some of the people have changed, the same beliefs are even stronger throughout our worldwide operations."



Providing enrichment opportunities

Andreas Kinnberg, Technical Innovation Manager, ROCKWOOL North America:

"Growing my international mindset and supporting personal development for the benefit of the company has been key in my career at the ROCKWOOL Group. The organisation fully supported me in pursuing additional training alongside the various positions I held within ROCKWOOL International. This has created a sound foundation for me, and today I see even more opportunities in my current role in the ROCKWOOL North American team which is increasing its expansion in the United States."



Strong teams

Ryszard Brzuchalski, Technical Director, ROCKWOOL South East Asia:

"When I first joined the ROCKWOOL Group, I did not expect that I would still be working here 20 years later. During these years, I have had the privilege of working with highly skilled colleagues. I have learned something from all of them and I hope others have also learned something from working with me. I have also been enriched personally and professionally by the international work experience that has taken me from Poland to Denmark and now to Asia."



Products with significant societal benefits

Anthony Abbotts, Head of Group Sustainability, ROCKWOOL International:

"It is personally important for me to work for a company that has a significant positive impact on the world. This is one of the main reasons why I am very motivated to get up in the morning and work for the ROCKWOOL Group. Whether it be the huge CO₂ savings generated in the lifetime of the products, the fire safe properties that save lives, or the efforts we are making within circular business, ROCKWOOL products have significant societal benefits which are unique within business."

10,601

employees in 37 countries worldwide

Driving energy efficiency

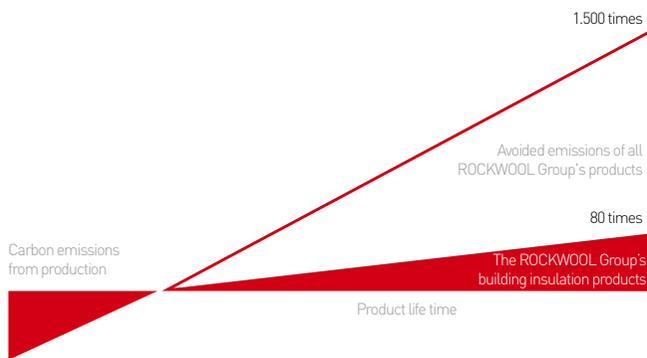
Throughout their lifespan the ROCKWOOL Group's products typically save between 80 and 1,500 times* the carbon emissions emitted during their production.

228 Days

until building insulation is paid back with regard to CO₂ emissions

0.5 Days

until technical insulation is paid back with regard to CO₂ emissions



Buildings, both residential and commercial, account for nearly 40% of the energy used in most countries and are responsible for a similar level of global CO₂ emissions. Energy efficiency in buildings is therefore one of the key forces to reducing greenhouse emissions. This need is reflected in two of the UN's Sustainable Development Goals: SDG 7 and SDG 13.



Part of the solution

A dramatic increase in energy efficiency in buildings is key to tackling these challenges. The ROCKWOOL Group's ambition is to be a global leader in the development of energy-efficient solutions, by delivering:

- Highly energy-efficient thermal insulation solutions for buildings and industry, ensuring energy consumption can be reduced.
- Partnership and engagement to build the best possible legislative framework for increased use of energy-efficient building solutions on a local and global scale.
- Solutions that create a safe, energy-efficient, healthy and comfortable indoor climate with good acoustical performance.
- Reduced energy usage and increased energy efficiency in our own operations.

Rising to the challenge

Internal

- Reduce CO₂ (tCO₂/t Wool) from factories by 10% by 2022 and 20% by 2030.
- Improve Energy Efficiency (kWh/m²) in own (non-renovated) building stock by 35% by 2022 and 75% by 2030.

External

- Support the advancement of reliable legislation aimed at reducing energy demands in buildings and industry.
- Work towards increasing awareness and adaption of insulation as an effective measure in tackling global energy challenges.
- Support authorities in tripling renovation rates and developing tools and systems needed to ensure retrofit of buildings.
- Work to maximise drivers to increase renovation rates, as the EU aims to have its building stock upgraded to a nearly zero energy level by 2050.

Energy efficiency makes a difference

Climate change is a reality. Fifteen of the sixteen warmest years on record have taken place since 2001¹. While this is increasingly acknowledged, global energy demand is growing with the global middle class: three billion consumers will demand access to more energy by 2050. By 2050 energy demands from the building sector alone are predicted to increase by 50%².

¹ http://www.wmo.int/pages/index_en.html

² Climate Change: Implications for Buildings, 2014, European Climate Foundation et al.

* Calculation methodology verified by PwC

40%

Buildings account for 40%
of the energy used globally¹

¹ www.unep.org

If no action is taken towards the reduction of energy consumption, this will result in an average global temperature rise of 4°C. This would severely impact living conditions, especially among children from low-income families, the elderly and people living with illnesses. Significant impacts would be felt across global economies.

In 2015, important steps were made toward an ambitious global climate agreement, aiming to keep temperature increases below 2°C by 2050. The COP21 “Paris Agreement” was signed by both developed and developing countries. To achieve these goals, the Earth’s global energy consumption must be halved.

The need for better buildings

Buildings offer the largest single potential for cost-effective energy savings in the short, medium and long-term. There are approximately 210 million buildings in the EU alone: 70-90% of them with poor energy-efficiency performance, with 35% more than 50 years old.

With nine out of ten existing buildings still expected to be occupied in 2050, a laser focus on renovation is critical, especially when the potential for energy savings is currently 50-90% in new and existing buildings globally¹.

ROCKWOOL insulation can have a large impact on achieving these energy savings. By keeping out or retaining both heat and cold in buildings as necessary, ROCKWOOL insulation reduces the need for additional heating and cooling, saving energy and consequently reducing energy demand, significantly impacting emissions.

The importance of a legislative framework

History has shown us that market forces are not enough to drive key decision makers toward developing high-performing buildings or improved industrial processes. Targeted legislation and proper implementation of that legislation are crucial to ensure that this is delivered.

The ROCKWOOL Group takes an active part in supporting the development of an effective legislative framework in this space. This is done through knowledge sharing and documentation of best practices, and by raising awareness of potential solutions through our collaborations with respected organisations. We also develop tools that help specifiers and architects understand legislative demands and design buildings that meet future demands without any compromises.

Our own performance

In 2015, the ROCKWOOL Group’s CO₂ efficiency (tCO₂/t Wool) in its factories improved by 1% as compared to 2014. Performance has steadily improved since 2009, reaching a 10% improvement from this baseline in 2015². We had aspired to a 15% reduction over this period, and are committed to redoubling our efforts in this space going forward.

The ROCKWOOL Group has also carried out extensive renovations at our office headquarters in Denmark, which has resulted in energy efficiency improvements of up to 80% across two sites. Our two headquarters’ buildings are now rated energy class A and B, respectively, and are examples of how our products and systems contribute to greener, more sustainable buildings. In addition, our North American headquarters, located in Milton, Ontario, Canada is LEED® Gold® certified.

MAKING ENERGY EFFICIENCY A STAKEHOLDER PRIORITY

Correct design of buildings and installation of insulation is critical in ensuring optimal energy efficiency. By providing training, the ROCKWOOL Group helps to ensure this.

In Germany, more than 1,000 ROCKWOOL seminars have helped train over 150,000 individuals on energy efficiency and installation procedures for our products and systems. 8,642 people attended training centres in 2015.

In Russia over 2,000 people — homeowners, dealers, building associations, installers, architects, building owners and college students — attended our insulation seminars at ROCKWOOL training centres. We also offer a significant number of workshops directly on-site at Do It Yourself hypermarkets.

¹ http://bpie.eu/wp-content/uploads/2015/10/HR_EU_B_under_microscope_study.pdf and 80% if we only look at heating demand — http://www.eurima.org/uploads/ModuleXtender/Publications/90/Ecofys_X_leaflet_05_10_2012_web_Final.pdf
² This reduction is based on a broader scope than the 2009 baseline due to an additional 4 Asian factories and 1 Russian factory.



Photo: Wilmcote House, Portsmouth, UK

CASE — WILMCOTE HOUSE, UNITED KINGDOM SOCIAL HOUSING GETS AN ENERGY-EFFICIENT FACELIFT

Challenge

For many social tenants, the expense of heating their home is a significant challenge. Some tenants use as much as 14% of their monthly income to pay their heating bill. After living expenses like taxes, food, bus fare and clothes, there is not much left to spend on comforts.

The London School of Economics conducted a recent study entitled "High Rise Hope Revisited: The social implications of upgrading large estates". Its findings concluded that: "Insulating and externally cladding tower blocks in addition to carrying out repairs on basic structures does radically transform the image and the performance of hard-to-heat dwellings. It also improves the quality of life for those living there who otherwise may be in serious fuel poverty."

Solution

The architecture firm ECD devised an effective retrofit strategy to super-insulate the residential parts of the Wilmcote House block, based on a combination of several ROCKWOOL insulation solutions. The refurbishment was designed to ensure excellent thermal performance, exceptional airtightness and an improved appearance. The overall aim of the Wilmcote House renovation is to lower demand for, and consequently cost of heating within the dwellings by 90% and extend the building's life by a minimum of 30 years, for the benefit of residents.

10.8%

of the EU population (approximately 50 million people) was unable to keep its homes warm in 2012



Photo: CORNELL TECH HIGH RISE, USA

CASE — CORNELL TECH HIGH RISE, UNITED STATES INSULATING THE WORLD'S LARGEST PASSIVE HOUSE

Challenge

The world's largest passive house is being constructed at Cornell Tech in New York City.

This 26-storey tower, scheduled for completion in 2017, will house 530 students, faculty and staff. The combination of ROXUL products and an ambitious proposal put forth by Handel Architects the building will meet the lofty efficiency standards required for Passive House designation. This designation identifies structures that have been designed and built to maintain interior comfort with minimal use of outside energy sources. When compared to a conventional high-rise, this building will consume between 60 and 70% less energy.

Solution

ROXUL's role in the project will be providing insulation in a prefabricated wall assembly. The wall will be constructed in Pennsylvania and then shipped to the Cornell campus construction site — a journey that begins with trucks and reaches the Roosevelt Island destination via barge. Once this project has been completed, its 25,000 square meters will have reached a lofty new height in Passive House achievement.

Circular economy

MORE THAN JUST RECYCLING: IT IS NATURE GIVING BACK TO NATURE

Global challenge

In 2013, the World Bank predicted that, at current pace, global levels of solid waste would triple by 2100¹. This level of waste has significant consequences for citizens across the world, impacts air quality and places stress on government budgets and landfill space. The majority of current resource-use systems utilised by society are linear, which means a “produce, use, dispose” approach.

Much of today’s waste is produced by the building and construction industry. Buildings use 40% of global energy, 25% of global water, 40% of global resources, and they emit approximately 1/3 of GHG emissions².

There is an urgent need to address these challenges, which is reflected in a number of the UN Sustainable Development Goals. The ROCKWOOL Group is committed to playing its part in addressing the following relevant goals: SDG 8, SDG 9, SDG 12.



Part of the solution

In order to address increasing levels of waste, a greater commitment to the circular economy is required. The ROCKWOOL Group is dedicated to advancing the UN’s Sustainable Development Goals by effectively contributing to a circular economy by:

- Reclaiming waste and used products from five markets to be recycled.
- Using secondary materials from other industries as feedstock in our production, thereby avoiding landfilling of these materials.
- Driving better resource efficiency in our factories, including optimising recycling rates and reducing waste.

Rising to the challenge

Internal

- Reduce landfilled waste by 40% by 2022 and 85% by 2030.
- Increase the number of countries where we offer the service of reclaiming products from the market, to 15 countries by 2022 and 30 countries by 2030.

External

- Continue to advocate for recycling at the end of a building’s lifetime.
- Proactively engage in discussion on legislation to address the obstacles for a greater level of circularity and modularity in the various countries where we are active.

The circular economy at the ROCKWOOL Group

- Today humanity uses the equivalent of 1.6 planets to provide the resources society uses and absorb its waste. This means it now takes the Earth one year and six months to regenerate what society uses in a year. Moderate UN scenarios suggest that if current population and consumption trends continue, by the 2030s, society will need the equivalent of two Earths to support it³. This development calls for action in the form of a more sustainable approach to the economy, which lays the foundation for the development of a circular economy⁴.
- A circular economy — an industrial system that is restorative by intention and design — has the potential to help society and businesses make better decisions about resource use and reuse.
- Renovating existing buildings can profitably reduce energy consumption while providing a comfortable and healthy environment. This in turn will contribute to long-lasting use and re-use of buildings. Resilient, safe and durable buildings also serve to prolong the buildings’ lifetime, making them more resource efficient.
- At the ROCKWOOL Group, we see a circular economy as a necessity. It is intrinsically linked to our business through the design of the solutions we offer to the market, and it is a priority within our own production processes.

1 <http://www.unep.org/sbci/AboutSBCI/Background.asp>
COM (2007) 860
COM (2007) 414

2 <http://www.unep.org/sbci/AboutSBCI/Background.asp>

3 http://www.footprintnetwork.org/ar/index.php/GFN/page/world_footprint/

4 Study on “Management of CDW in the EU”: http://ec.europa.eu/environment/waste/pdf/2011_CDW_Report.pdf
(2014/2208(INI)) Committee on the Environment, Public Health and Food Safety
Rapporteur: Sirpa Pietikäinen



35%

The building and construction industry accounts for approximately 35% of total waste generated globally¹

¹ www.unep.org

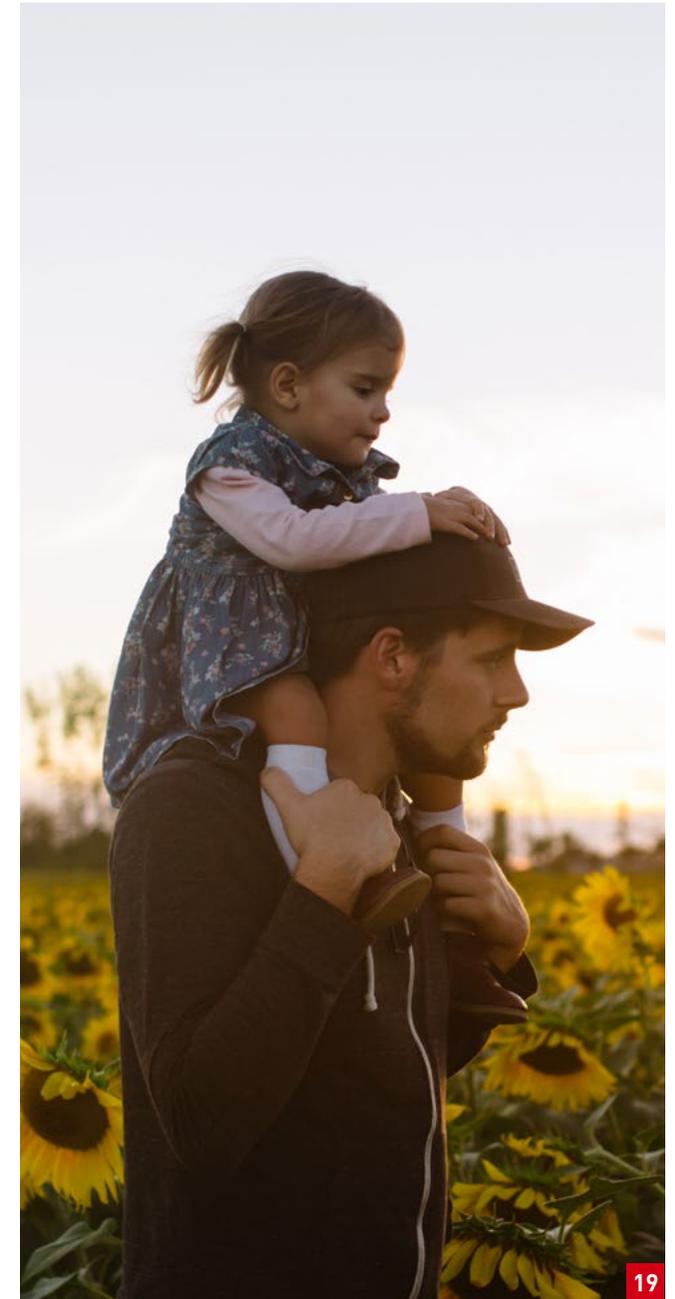
A crucial role for buildings

- While the building sector generates a considerable amount of waste, buildings are also part of the solution. Renovating existing buildings can reduce energy consumption by 80%, while providing a more comfortable and healthier environment, delivering spaces which can be used for longer. Long-lasting design that is also easy to dismantle will ensure that products are efficiently re-used and materials recycled at the end of the building's lifetime¹.
- ROCKPANEL and ROCKFON solutions are designed to be easily disassembled. We recycle returned stone wool waste products whenever possible and use this to produce new stone wool.
- In 2015, we organised a meeting with members of the European Parliament to gain attention for the important role of buildings in the circular economy. We also supported the incorporation of a circular economy in the EU manifesto proposed by a group of green NGOs.

Promoting resource use, efficiency and productivity of buildings

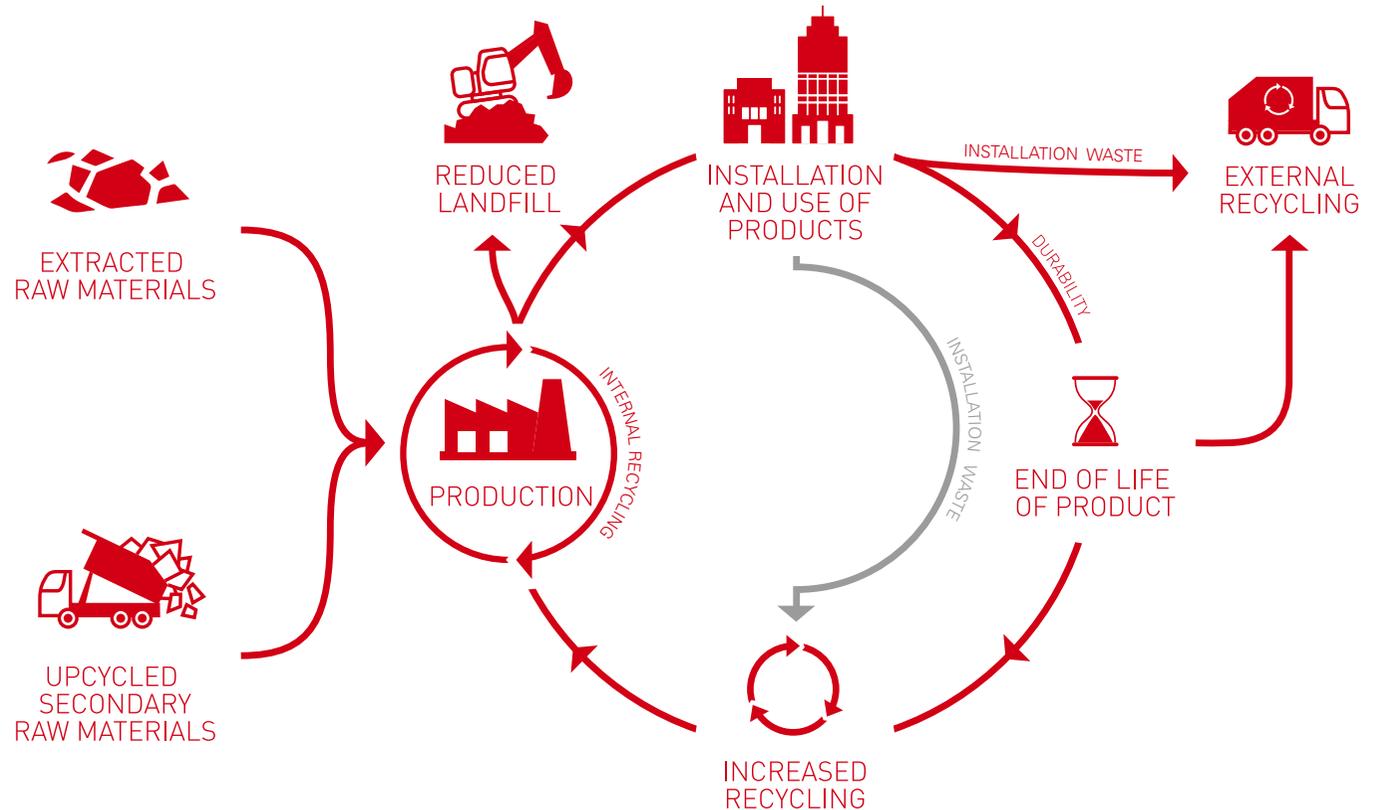
- We are committed to ensuring customers and end users of ROCKWOOL products have access to detailed information about their environmental performance. In 2015, we launched a project to support our customers in making best possible use of our Environmental Product Declarations (EPDs).
- Environmental Product Declarations (EPDs) are currently a meaningful way of communicating the environmental benefits and impacts associated with the lifecycle of building products. The ROCKWOOL Group has carried out EPDs for products developed at all of our stone wool production plants around the globe and made these publicly available in several different countries. Using these allows quicker and more accurate life-cycle assessments (LCAs) at building level to be carried out, meet country-specific requirements and gain credits in building rating schemes.

¹ <http://www.renovate-europe.eu>



Resource efficiency in our production

- Implementing circular economy thinking into our production inter alia means using non-scarce resources and secondary materials or waste that cannot be used elsewhere.
- ROCKWOOL solutions are made from abundant raw materials from widely available natural resources. The accessible stone reserves for our stone wool are large enough to supply current human demands for millions of years and can be regarded as inexhaustible resources.
- Our solutions also incorporate secondary materials, both from our own production and other industries, much of which would have been disposed of otherwise.
- The ROCKWOOL-owned GRODAN Group has set up a professional recycling service in several key markets. This serves to guarantee that our stone wool products are recycled responsibly. Once the growing season is over, the stone wool substrate slabs, blocks and plugs are shredded and then recycled as raw materials for the manufacturing of various products, such as bricks for construction, potting composts and soil improvers. Some of this raw material is also turned into stone wool briquettes and used in ROCKWOOL factories to create new stone wool products.





Navigation Campus, Technology Park Kazan, Russia

CASE — ROCKPANEL

LASTING IMPACT

Challenge

According to Jørn Kiesslinger, Head of Sustainability at Danish architecture firm JJW, developers must increasingly pay attention to the lifecycle of building components as society gradually moves towards a circular economy.

Solution

Jørn Kiesslinger considers ROCKPANEL board material to be a robust solution. He explains that ROCKPANEL façade cladding has a clear product advantage in the new economy as it is possible to recycle the boards after the end-of-life stage and use this as raw material for new boards.

Lasting impact

“As architects focusing on sustainability, we like these closed lifecycles to become reality. In our sustainability screening, we compared the Environmental Product Declaration (EPD) of ROCKPANEL boards with those of other cladding materials. It turned out that the ROCKWOOL boards made from the sustainable basalt source have a lower environmental impact, both in terms of energy use and CO₂ emissions during production. According to the EPD, the product life of ROCKPANEL products is 60 years, another important point when we want to build in a sustainable way.”

Jørn Kiesslinger, Head of Sustainability at Danish architecture firm JJW

Water

THE PUSH FOR BETTER WATER MANAGEMENT

Global challenge

Both too much and too little water are key issues of modern society. Only 4% of the available global water resources are freshwater of which close to 2% is frozen¹. Heavy rainfall, in combination with large paved areas in cities, leads to an increased frequency of flooding. According to the World Bank “Urban flooding poses a serious challenge to development and the lives of people, particularly the residents of the rapidly expanding towns and cities in developing countries².” At the same time, many cities struggle with dropping groundwater levels and availability of clean water, in particular where urban populations are growing rapidly.

This has huge individual, social and economic impacts. A number of UN Sustainability Development Goals are implicitly connected to the theme of water: SDG 2, SDG 6 and SDG 13.



Part of the solution

At the ROCKWOOL Group, we are committed to developing solutions that contribute to better water management by:

- Providing water-efficient solutions for growing within the horticultural sector.
- Developing better water management solutions in urban areas.
- Driving improved water management in our own operations across the entire Group.

Rising to the challenge

Internal

- Reduce water consumption in our own operations by 10% m³/t Wool by 2022 and 20% by 2030.
- Map our operational footprint to ensure we continue to focus attention on operations that are in areas significantly affected by water scarcity.

External

- Further develop our water-efficient solutions for growing within the horticultural sector and enable everyone with access to Precision Growing techniques.

Meeting growing food demand

In 2050, the world will need twice as much food for its growing population as today³. On the other hand, more and more consumers are opting for healthier and tastier fresh produce grown sustainably and safely. This places huge demand on food producers to deliver higher yields, while making more efficient use of the planet’s natural resources. Global agricultural irrigation accounts for 66% of total use of water annually. The World Water Council estimates that the world will require 17% more drinkable water than is currently available in order to meet its demands in 2020 using existing agricultural methods. There is therefore an urgent need for innovative methods within the fields of agriculture and horticulture that address this challenge to ensure sufficient, quality food is produced for consumption by the world’s growing population.

¹ <http://www.greenfacts.org/en/water-resources/>

² <http://public.wmo.int/en/media/news/new-world-bank-report-highlights-impact-flood-events-have-around-world-and-provides>

³ <http://www.worldwatercouncil.org/>

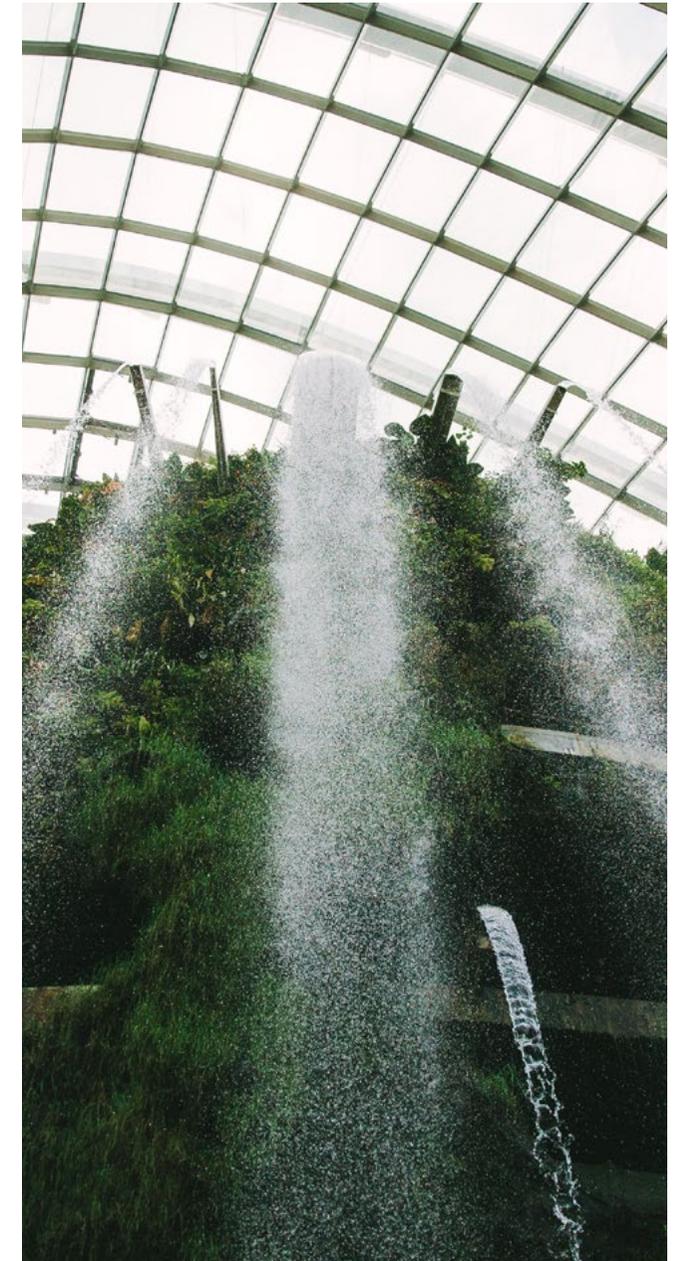


Photo: The Flower Dome, Gardens by the bay, Singapore 22

Innovations for sustainable cultivation

GRODAN innovative products ensure the optimal environment for plant roots to develop in stone wool, leading to healthier plants and maximum yields. They steer the root environment, providing the plant with its precise needs: a perfect environment using less water, nutrients, crop protection products, energy and land.

The GRODAN Group produces inert, clean and uniform growing media solutions for the entire growth cycle, from the start of propagation through to harvest. GRODAN solutions are designed for Precision Growing — the most efficient and effective form of growing that produces maximum yield, while minimising the use of input materials.

GRODAN substrates are ideal for 'closed cultivation systems' in which up to 100% of water and nutrients not absorbed by the plants can be recirculated, purified and re-used. Crops grown on GRODAN products produce up to three times more than crops grown in soil and can be sited on any available land — around, in or even on buildings — essentially all urban areas that would otherwise be unsuitable for traditional soil-based production. All of this results in more efficient resource use¹.

Growing fresh tomato crops in stone wool systems compared to production in soil typically uses 50% less water per kilogram of crop produced. In the most state-of-the-art stone wool systems, this improvement can be achieved using only 5-10% of the water volume per kilogram used by conventional production in soil².

Water efficiency at our factories

Water is an essential resource in all the ROCKWOOL Group's production processes. Water used comes from both public supply and our own extraction sources (e.g. groundwater and surface water from lakes or streams). In addition, eleven of our factories harvest rainwater for part of their water usage for their production processes. Our global factory footprint has limited exposure to areas significantly affected by water withdrawals.

1 52 . Practical Hydroponics & Greenhouses . November/December . 2010:
Elly Nederhoff: Water use efficiency of TOMATOES

2 Van Kooten et al, New development in greenhouse technology can mitigate the water shortage problem in the 21st Century. Acta Hort 767, p 45-51.

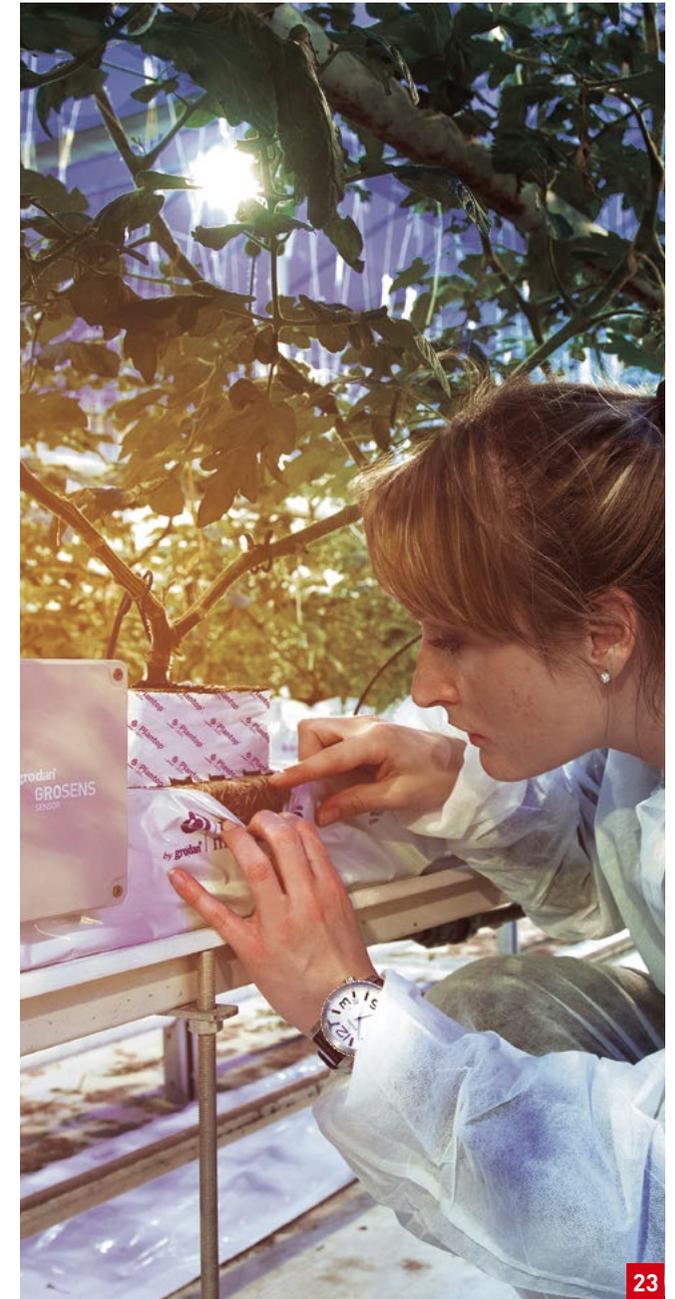




Photo: The Orlyplein, Amsterdam, the Netherlands

CASE — LAPINUS FIBRES

TOWARD OPTIMAL WATER USAGE

LAPINUS FIBRES Water Management product line is designed to actively clean and absorb water. Our products absorb water to almost their full volume. This product is currently used to reduce the load on sewage systems, increase groundwater levels and make green areas within cities possible, reducing the need for irrigation and increasing the performance of sports pitches. All water management products from LAPINUS FIBRES can be recycled and contribute to the circular cities of the future.

In 2015, an equestrian competition arena was installed at the Scottish Highland Games, where the best sportsmen compete against each other in a variety of highland sports. In the same year, the first natural grass football pitch was installed by the local soccer association in Gouda, the Netherlands, for competition and training purposes. Both of these solutions were made using Water Management products from LAPINUS FIBRES to optimise the performance of the pitch.

Another example of the use of Water Management products has been on the Orlyplein in Amsterdam. Here, a concrete deck has been transformed into a green, urban oasis by Permavoid using the stone wool products to capture rainwater, store it locally and make it available for the plants.

Health, safety & wellbeing

SUSTAINABLE LIVING & GOOD HEALTH

Global challenge

Buildings exist to protect people from outside threats as well as to support their daily activity. Buildings should not make people sick, cause them discomfort, or inhibit their ability to perform. How effectively a building functions to support its occupants and how efficiently the building operates is essential to people's wellbeing. ROCKWOOL products enhance the overall performance of a building by improving thermal and acoustic conditions and improving the occupant's living conditions¹.

Health, safety and wellbeing are strongly connected to sustainable living as defined in the UN Sustainable Development Goals, specifically: SDG 3.



Part of the solution

The ROCKWOOL Group is committed to reducing accidents in ROCKWOOL workplaces and to decreasing the exposure people have to hazardous noise and air pollutants by contributing to a healthy indoor and outdoor environment through:

- Improved noise absorption and noise reduction in buildings.
- Noise reduction in gardens and open spaces.
- Reductions in air pollution as a result of diminishing requirements for indoor heating.

Rising to the challenge

Internal

- Drive a zero accident culture with 10% reduction/year in the lost time incident frequency rate and zero fatalities.
- Ongoing emphasis on our proactive safety culture.
- Continue to improve our acoustic product offerings and thereby the built environment.

External

- Remain committed to working for better legislation on greener building regulations aimed at reducing the need for heating and improving acoustics.
- Continue to initiate both internal and external research to constantly improve the health and safety performance and properties of our products across their lifetime.

Noise and indoor environment

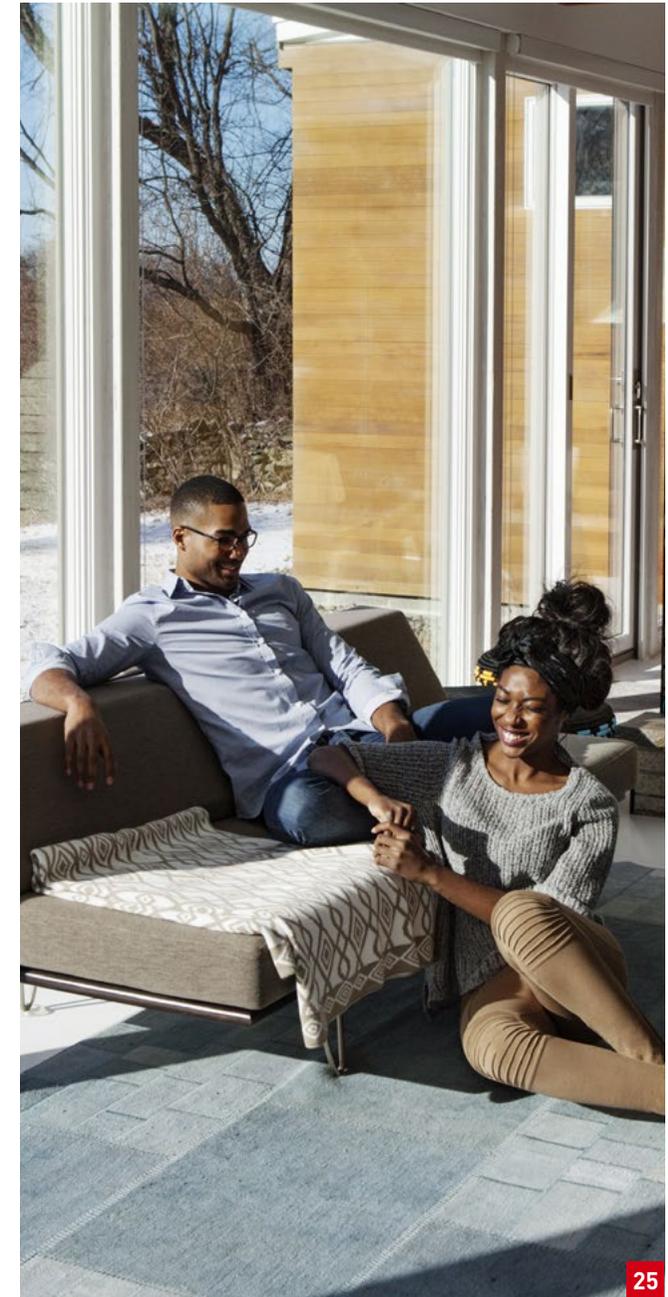
Noise is a pollutant and a hazard to society. The World Health Organisation (WHO) affirms that noise seriously harms human health and interferes with people's daily activities. More than 30% of the population in the EU are exposed to noise levels that disturb their sleep (levels exceeding 55 dB(A)). Noise impairs people's ability to learn. The poor acoustic design of currently aging schools results in students likely not hearing one out of every four words spoken by their teachers².

ROCKWOOL product solutions are essential in creating an optimised indoor environment. Our insulation materials promote thermal comfort and our acoustic products provide acoustic comfort.

¹ <https://www.advisory.com/daily-briefing/2012/01/11/hospital-noise>
http://nfyilma.turner-white.com/pdf/jcom_jul12_noise.pdf

http://healinghealth.com/downloads/HospitalNoise_BIT_SeptOct2012.pdf

² "Classroom Acoustics: a resource for creating learning environments with desirable conditions," Acoustical Society of America publication, August 2000.



ROCKFON acoustic solutions optimise indoor acoustics, reduce noise and improve comfort in the workplace, public spaces and the classroom. When a classroom has good acoustical characteristics, learning is easier, deeper, more sustained and less fatiguing. In healthcare settings, installing high-performance sound-absorbing ceilings such as ROCKFON ceilings, have been shown to reduce patient and staff stress, reduce sleep deprivation and increase patient satisfaction¹.

Minimising outdoor noise

Just as noise is a challenge indoors, it creates issues in outdoor settings, including headaches, stress and concentration problems. Many people use their home and garden as a sanctuary to escape from the noise of the external world.

ROCKDELTA is designed to control undesirable ground-borne noise and vibrations. NoiStop, a ROCKDELTA product is specifically developed for fencing, utilising the qualities of stone wool to protect homes and gardens from unwanted noise hazards.

Emission control

The ROCKWOOL Group monitors the emissions from our factories of substances including CO₂, CO, SO₂, NO_x and binder components. We continually emphasise the criticality of full compliance and ensure that any non-compliant events are quickly corrected. Due to more stringent requirements towards abatement, our CO emissions have decreased significantly in the past few years.

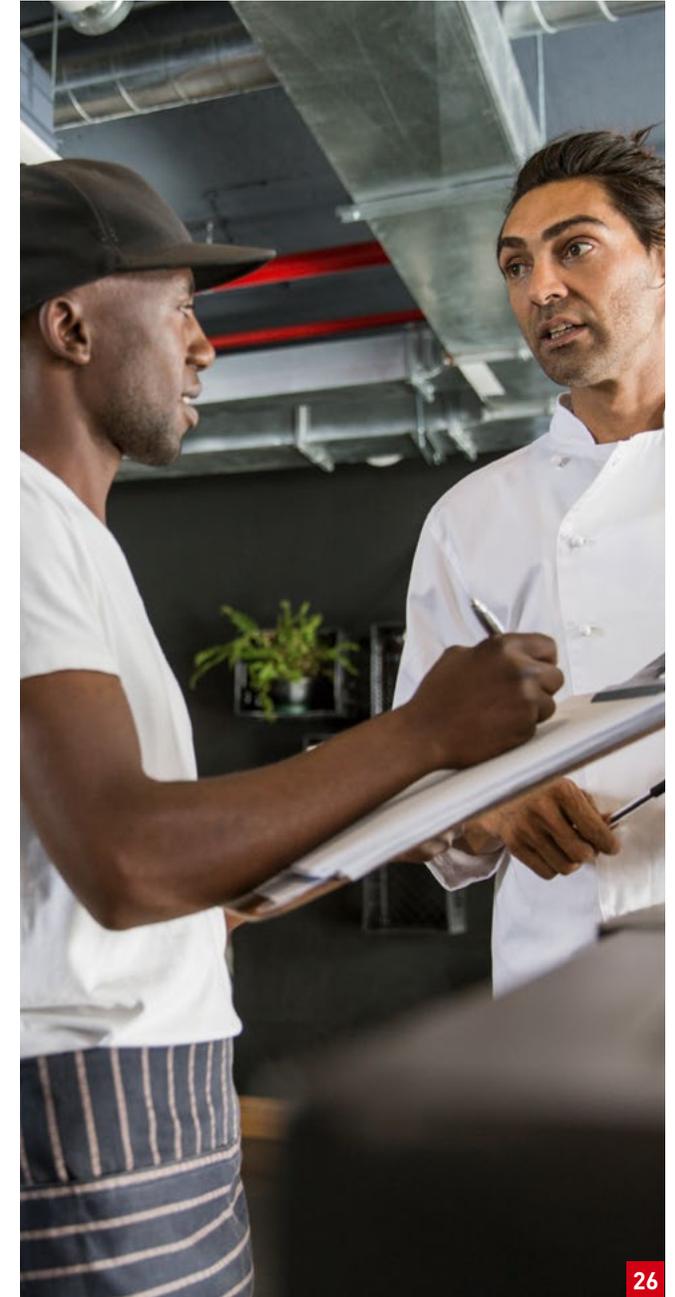
ROCKWOOL products do not contain halogenated flame retardants, super global warming gasses, ozone depletion gasses (CFCs, HCFCs or HFCs) and comply with global chemical legislation including REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances).

Mineral wool fibres are one of the most researched substances. Based upon this research IARC (International Agency for Research on Cancer) has concluded that mineral wool fibres are not classifiable as to their carcinogenicity to humans. Stone wool fibres have neither any hazard classifications in connection with REACH nor the CLP (Classification Labeling and Packaging) Directive. ROCKWOOL fibres thereby have a "clean bill of health".

"Initially, the staff at the Phoenix Academy in Telford UK, had the usual concerns about the reverberant acoustics in their new sports hall, but ROCKFON wall absorbers silenced these concerns. "I've visited sports halls of a similar size and without exception the acoustics were pretty poor, even one-to-one conversations were difficult. But here, we have no such issues and the PE and leisure staff really appreciate being able to communicate without intrusive noise — making their jobs so much easier."

Jim Fogarty, Business Manager at the UK Phoenix Academy

¹ Sadler B, DuBose J, Malone E and Zimring C. The Business Case for Building Better Hospitals Through Evidence Based Design." The Center for Health Design whitepaper series Sept-2008.



25%

Schools without sound absorption account for children not hearing 1 out of every 4 words spoken by their teachers¹

¹ Acoustical Society of America, August 2000.

Photo: Southern Danish University, Odense, Denmark



Photo: iHus Exposition house, Ringsted, Denmark

CASE — HUSCOMPAGNIET

CREATING A BETTER INDOOR ENVIRONMENT

Challenge

People want to live in healthy environments. And for many, there is a need to reconcile the advantages of a modern house with the desire to live in a normal, affordable home. When most people think of tomorrow's home they think of green roofs, flexible designs and glass walls. But it doesn't necessarily have to be that way.

Solution

The secret to an ordinary house that meets future requirements is hidden in the walls of HusCompagniet's iHus. The success of iHus is largely based on the ROCKWOOL Group's development of highly efficient systems. Innovative ROCKWOOL wall technology provides for a wall that is thermal-bridge free, resulting in very low heating usage and cost. This helps retain a controlled indoor climate, providing a more comfortable and healthier home environment.

"Together with the ROCKWOOL Group, we have set new standards with the iHus. The ROCKWOOL Group delivered thermal excellence that provided superior sound absorption and the comfortable indoor climate we were looking for. The Group also introduced an innovative wall concept that allows us to build smarter, slimmer and more efficiently. Not only do their ROCKWOOL solutions perfectly complement HusCompagniet's forward-thinking endeavours, they improve the health and wellbeing of those living in built-up areas, where noise is a constant factor."

Ejvin Legaard, Technical Director, HusCompagniet

Sustainable fire safety

ROCKWOOL FIRE SAFE INSULATION

Global challenge

Sustainability and fire safety are intrinsically linked. Not only does fire injure and sometimes kill, but it destroys valuables, harms the environment and damages critical parts of society's infrastructure. Insulation that can withstand fire and very high temperatures can give residents and firefighters the valuable extra minutes needed to save lives and possessions. Many of the UN Sustainable Development Goals are implicitly linked to fire safety, but we consider the following goals to be key: SDG 3, SDG 11.



Part of the solution

The ROCKWOOL Group is committed to advancing the UN Sustainable Development Goals by providing firesafe solutions in a multitude of ways, for example, we:

- Deliver and develop non-combustible stone wool insulation that is naturally fire resistant.
- Conduct and support research into how insulation products contribute to the fire performance of buildings.
- Identify weaknesses in existing regulations related to fire performance of buildings and work towards changing these to ensure sustainable fire safety.
- Create alliances with partners in the industry, academia, NGOs and the fire-fighting community to improve fire safety of buildings (Fire Safe Europe, Fire Safe North America).

Rising to the challenge

- Collaborate with policy makers to ensure building regulations reflect the fire hazards of buildings today.
- Work with standardisation bodies to ensure that fire test standards reflect the fire scenarios experienced in buildings today.
- Engage with relevant bodies to have smoke toxicity introduced as an element that must be evaluated in seeking approval of construction products.

Keeping you safe from the rapid spread of fire

People spend 90% of their time in buildings¹; their principal role is to keep us safe from outside threats. However, it can take as little as three minutes from ignition of a fire within a room until the entire room is engulfed in flames, which can quickly spread to other parts of the building and the structure itself. The last decade has seen a rapid development in the building and construction environment, inspired by the need for more sustainable and energy-efficient buildings, as well as a desire to foster more open-building designs.

This development, coupled with the increase in urbanisation and changing demographics in some countries, further emphasise the importance of ensuring fire safe buildings. For the ROCKWOOL Group, fire safety is at the heart of our commitment to human wellbeing, and through our work and our products, we contribute to improving fire safety.

Protecting people and property

Properly installed insulation products are rarely the first product ignited in a fire. But today's rapidly growing fires will cause insulation products to be involved at a faster pace than previously. Buildings less than 10 years old are 50% more at risk for fires than buildings more than 30 years old².

The ROCKWOOL Group's primary goal regarding fire safety is to ensure no human lives are lost due to a fire. Due to its stone wool material, ROCKWOOL insulation can withstand fire and high temperatures — at least 1000°C — much longer than comparable insulation materials. By slowing down the spread of fire from one room to another, ROCKWOOL insulation protects people and their possessions from potential loss.

WHEN IT COMES TO FIRE RESILIENCE STONE WOOL IS SUPERIOR

- Stone wool is non-combustible — it will not feed or spread a fire
- Stone wool has a high melting point — it slows down the spread of fire
- Stone wool does not contribute any significant smoke or toxic gases
- Stone wool does not produce burning droplets or particles
- Stone wool's built-in fire protection is not dependent on flame retardants, fire protective coverings or active suppression systems
- Stone wool is durable — fire performance does not change over time

¹ http://europa.eu/rapid/press-release_IP-03-1278_en.htm
<http://www.forbes.com/sites/amywestervelt/2012/08/08/how-our-buildings-are-making-us-sick/#5463efef45db>

² Försäkringsbolaget If: Fler bränder i nya hus, 2012-10-26 02:19

1000°C

Due to its stone wool material, ROCKWOOL insulation can withstand fire and high temperatures — at least 1000°C — much longer than comparable insulation materials



Photo: Eiffel Tower, Paris, France

Buildings resilient to fire

Traditionally, a building design was considered a success if, in the event of fire, there were no deaths and only minor injuries — even if the building itself was completely destroyed. With today's increased focus on sustainability, the loss of buildings to fire is no longer acceptable.

In the larger context of sustainable communities, loss of major buildings to fire influences not only the occupants but also the neighbouring community. For cities to have robust buildings and infrastructure, it is necessary to have buildings that are resilient to fire.

ROCKWOOL insulation is part of the built-in fire protection of buildings and does not rely on flame retardants, protective coverings or extinguishing systems for its superior fire performance. The fire protection persists even if other systems in the building are compromised by severe events or natural disasters.

Dedicated to fire safety

The ROCKWOOL Group's dedication to fire safety does not end with our products. Recognising the increased threat from fire to the modern built environment and the need for buildings to be resilient to fire, we are continuously carrying out our own fire research, while at the same time supporting independent research conducted at various institutes and universities.

We strongly believe in the need for high-quality education of fire safety engineers. We support universities by sharing guidance as well as providing use of fire-testing facilities to students at master's and PhD levels.

In addition to fire research, we are proud to work toward improving fire regulations. The ROCKWOOL Group is a founding member of Fire Safe Europe and Fire Safe North America, whose missions are to reduce the impact of fires in buildings. Fire Safe Europe launched a lively debate on the revision of EU fire safety regulations and testing methods, and triggered important actions, including:

- The European Commission is now working on the harmonisation of fire tests and classifications for façades
- The European Commission will soon launch a call for tender to run a study to regulate smoke hazards under the Construction Products Regulation

Fire Safe Europe also supported the European Fire Fighters Union Alliance in its campaign to have cancer recognised as an occupational hazard for fire fighters.

In 2012, ROCKWOOL flat roof solutions were selected for use in the renovation of the Eiffel Tower. ROCKWOOL products provide safety and comfort to the nearly 7 million people who visit this world-renowned landmark every year.



“ The support from ROCKWOOL International A/S towards my PhD research within the School of Engineering at the University of Edinburgh was vital to promote studies on the performance of common building insulation materials in fire conditions. This led to novel methodologies for quantifying the fire risks imposed by various types of insulation materials in buildings. Such industry support of fire safety engineering research is critical to ensure the safe evolution of a sustainable and resilient built environment.”

Dr. Juan Patricio Hidalgo-Medina is a Postdoctoral Research Associate with a PhD in Fire Safety Engineering from the University of Edinburgh. His professional qualifications include membership of the International Association for Fire Safety Science and the Society of Fire Protection Engineers.

FIRE SAFETY

The ROCKWOOL Group does their best to prevent these sad statistics

Approximately
100,000
people killed by fires
globally in 2014



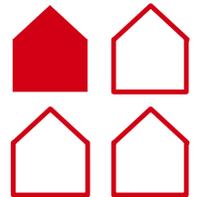
50%
of fire deaths in Europe
are due to toxic smoke
inhalation



Fire spreads faster today
than ever because
buildings contain more
flammable materials



25%
of businesses suffering
major fire damage are
forced to close



Source: Firesafeeurope.eu, Brandsikkert Denmark, World Fire Statistics



CASE — SWINKELS TUIN & PARKMACHINES ENSURING FIRE RESILIENCE

Challenge

When a devastating fire tore through a business complex in the town of Mierlo, Netherlands, the fire department was there within fifteen minutes and determined immediately that it was a big fire, which was upgraded to conflagration (a large and destructive fire). As the fire burned for hours at over 1000°C, fire fighters did everything they could to prevent it from spreading to neighbouring buildings. It was clear from the beginning that the sheds located in the back of the complex could not be saved, as was the case with many of the buildings within the complex, which were unfortunately reduced to ashes.

Solution

Adjoining the premises are the businesses of Swinkels Tuin & Parkmachines and Verbeek Brothers Carpentry. Both of these firms were spared from the fire's destructive spread due to the firewall that separates their offices from the other companies.

With a double-layer of ROCKWOOL insulation inserted into a former doorway, they had fire-safe solutions which were instrumental in saving both businesses from certain destruction. In fact, the fire began just a few metres from the old doorway, which is where the fire lasted the longest.

“Taking out insurance to cover fire interruption and loss of income is extremely important. Many businesses think they will be okay and save time and money. It may seem like you are saving money until a fire destroys your business. Even if your business is interrupted for just a few weeks, the costs — including wages — keep coming. If you do not have insurance for that, you have a really big problem. [Had the ROCKWOOL insulation and firewall] not been in there, the fire would have destroyed our company as well.”

Gerard Swinkels, Owner of Swinkels Tuin & Parkmachines

CASE — WALENSTADT FIRE SAFETY

In Switzerland today, many buildings are being retrofitted in order to become more energy-efficient. As well as reducing costs for the building's tenants, and its environmental footprint, this also makes the property more fire safe. One retrofitted property in Walenstadt recently benefitted from this when, early in the morning, people living in a block of flats contacted the fire brigade when they realised a fire had begun. Due to the recent fitting of stone wool insulation in the room where the fire was started, it did not spread to other rooms or nearby older buildings. The containment of the fire allowed the fire brigade to rapidly bring it under control, while safely evacuating ten people from eight apartments.

Ethics & good conduct

A BETTER WORLD FOR EVERYONE

Global challenge

The world's population keeps growing, with the UN estimating the global population will reach more than 9.5 billion by 2050, adding 2.5 billion people to the world's urban population. It is predicted that 66% of the world's population will live in urban areas¹.

As the world's population grows, and people live closer and closer together, the way people interact with each other takes on increased importance. The UN Sustainable Development Goals aim to address these challenges. The ROCKWOOL Group plays a role in fulfilling two goals within this area: SDG 8, SDG 11.



Part of the solution

We are committed to living our values and integrating social and human rights considerations into our daily business:

- Values form the foundation for how we work with customers, suppliers and other stakeholders.
- The Group Integrity Committee ensures strong business ethics and a code of conduct focusing on integrity and credibility within the ROCKWOOL Group.
- Having a diverse workforce is valuable for our business. Offering equal opportunities for all and making it possible for employees to move between business units and countries is important. We aim to create an environment in which all individuals can realise their maximum potential.

Rising to the challenge

- Consistently seek counsel from our Group Integrity Committee to ensure we maintain strong business ethics and a code of conduct focusing on integrity and credibility within the ROCKWOOL Group.
- Create more robust sustainability practices within our supply chain.
- Continue to focus on talent and succession management and increase transparency of our recruitment process to support equal opportunities.

Ethics is a business priority

Acting with uncompromising integrity is not only an important enabler of being successful in today's business environment. It is core to the ROCKWOOL Group's fundamental ethos.

In 1962, Claus Kähler established a set of ROCKWOOL business values, underlining our strong focus on corporate behaviour. Our values form the foundation of how we strive to work with customers, suppliers, competitors and other stakeholders. Ethical behaviour, honesty and adherence to laws underpin the way we operate.

¹ <http://www.un.org/en/development/desa/news/population/un-report-world-population-projected-to-reach-9-6-billion-by-2050.html>



Commitment to integrity

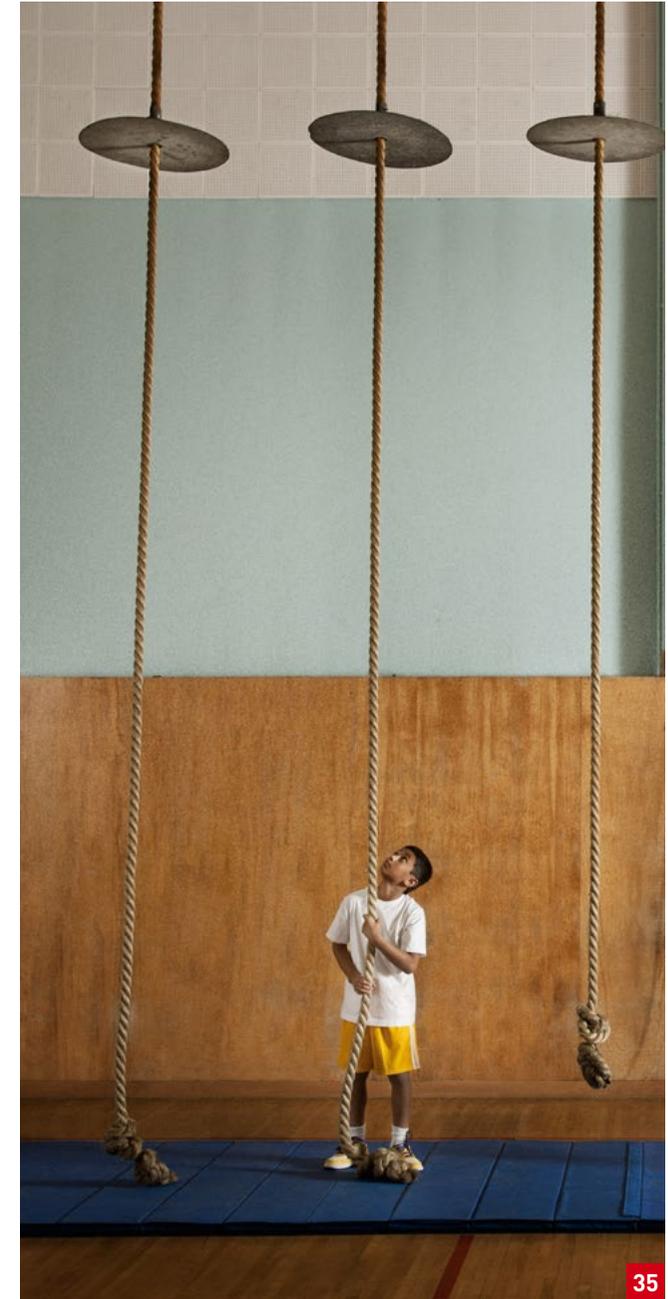
In order to ensure continued focus on company values and emphasise our “zero tolerance” policy with regards to compromising on integrity, in 2015 Group Management established an Integrity Committee consisting of the CEO, CFO, an SVP member of Group Management and the Head of General Counsel. This new committee oversees our adherence to the highest standards of business ethics, as well as ensuring that the entire Group is well informed and updated on all aspects of integrity and related policies. In 2014, we launched an extensive, global ethical e-learning programme and conducted seminars aimed at increasing awareness among all employees regarding good conduct and ethics. These activities continued throughout 2015. In addition, we facilitated an ethics training course from 2014-2015 for approximately 5,000 office employees, which included discussions on dilemmas as well as real cases, giving all employees the opportunity to share their experiences and learn.

The ROCKWOOL Group is also committed to conducting its business ethically and in compliance with international laws. We have adopted a whistleblower policy and encourage all stakeholders — employees, suppliers, distributors, customers and others — to expose corrupt practices and other misconduct, anonymously if they prefer.

Human rights and responsible sourcing

Human rights are part of the ROCKWOOL Group’s Social Charter. The ROCKWOOL Group supports the UN’s Universal Declaration of Human Rights principles, which define a number of rights, including freedom of association, non-discrimination, and a ban on child labour and forced labour. We are placing continued focus on Corporate Social Responsibility and responsible sourcing.

Today, the sourcing of direct materials by the ROCKWOOL Group is managed centrally. Sourcing is done in accordance with the Group Procurement Policy. It is a requirement that suppliers of direct materials with an annual spend over €100,000 sign our code of conduct. The code of conduct is based on the UN Global Compact and addresses topics such as statutory compliance, equal opportunities, trade union recognition, fair employment terms and no child labour in any form. Currently, 76% of key suppliers for direct materials contracted centrally have signed a code of conduct and we are working continuously to increase this percentage. If suppliers breach the Code of Conduct, we engage directly to ensure required improvements are made. If the required improvements are not implemented, we will find a substitute supplier and terminate the relationship. In 2016, 6 supplier audits were carried out, led by an international audit company on behalf of the ROCKWOOL Group..



Appendix

GOVERNANCE

An internal governance structure has been established to ensure the ROCKWOOL Group's sustainability ambitions remain on track and are embedded in all the work that we do.

A Group Sustainability function has been established led by Anthony Abbotts, Head of Group Sustainability. He is reporting to Mirella Vitale, Senior Vice President for Group Marketing, Communication & Public Affairs who is a member of Group Management. In addition, a Group Sustainability Steering Group has been set up to govern our sustainability efforts throughout the Group consisting of Senior Vice President Mirella Vitale, Senior Vice President Bernard Plancade, Managing Director Rafael Rodriguez, Group Safety, Health, Environment & Quality Director Marianne Guldborg and Head of Sustainability Anthony Abbotts.

GLOBAL REPORTING INDEX (GRI G4) CONFORMANCE

Reporting criteria

This 2015 report covers the calendar year 2015 and is in line with the Global Reporting Initiative (GRI G4) guidelines. A materiality analysis has been executed in collaboration with an external party in order to determine the most material topics for ROCKWOOL International and its stakeholders. These material topics are listed in the GRI table in this appendix and reported in this report.

Reporting boundary

The scope of this report is ROCKWOOL Group and all our mineral wool producing companies of which we hold the majority of shares. This means a total of 70 legal entities in 35 countries and 28 factories in 18 countries. You can find the list of our companies (including the degrees of ownership) on p.91 of our 2015 Annual Report.

Reporting methodology

Based on our stakeholder dialogue and on the GRI technical protocol, key performance indicators (KPIs) were selected and reported in this report in order to provide a balanced and representative picture of our business. Most of the data in this report was gathered by our business units, and reported to our Group head office. The data was then consolidated and verified internally. Some of the data included in this report was derived from our Annual Report, which has been assured by external accountants (with respect to financial data, governance aspects, some of our social data, and to a limited extent, environmental aspects).

Key performance data

Category	Indicator	GRI-G4	Value	2012	2013	2014	2015	Note
Anti-corruption	Confirmed incidents of corruption and actions taken	S05	Number	—	2	3	3	
	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	S08	kEUR	-	-	-	-	
Workplace safety	Fatalities	LA6	Number	1	—	—	—	
	Frequency of accidents — employees & contractors (per million hours worked)	LA6	no./mill hrs	3.7	4.5	3.2	3.1	1
Environmental management	Factories certified to ISO 14001 and/or OHSAS 18001		Number	12	12	18	17	
	% of factories certified to ISO 14001 and/or OHSAS 18001		%	44	44	67	63	
	Environmental laws and regulations — non-compliance	EN29						
	Fines — monetary value	EN29	kEUR	—	2	—	1	
	Non-monetary sanctions	EN29	Number	—	—	—	—	
	Audits for environment, health, safety		Number	60	65	93	94	
Energy	Energy consumption (in factories)	EN3	GWh	4139	4361	4444	4278	
	Energy per tonne stone wool (22 baseline factories)	EN5	MWh/t	2.00	1.97	1.94	1.86	
	Energy per tonne stone wool (27 factories)	EN5	MWh/t	2.06	1.97	1.94	1.89	
Greenhouse gas emissions (GHG)	Impact mitigation of products	EN27						
	Avoided emissions of all ROCKWOOL products (lifetime savings of insulation produced that year)	EN27	Mt CO ₂	-4990	-5054	-5504	-4628	2
	Avoided emissions — saved CO ₂ first year	EN27	Mt CO ₂	-221	-224	-244	-193	2
	Total direct and indirect greenhouse gas emissions	EN15, EN16	Mt CO ₂	1.60	1.58	1.64	1.58	3
	CO ₂ direct (Scope 1)	EN15	Mt CO ₂	1.26	1.24	1.28	1.25	
	CO ₂ indirect (Scope 2)	EN16	Mt CO ₂	0.34	0.34	0.35	0.33	
	CO ₂ direct (Scope 1) per tonne stone wool (22 factories)	EN15	kg CO ₂ /t	559	550	553	535	
	CO ₂ direct (Scope 1) per tonne stone wool (27 factories)	EN15	kg CO ₂ /t	585	562	561	552	
	CO ₂ indirect (Scope 2) per tonne stone wool (22 factories)	EN16	kg CO ₂ /t	151	151	152	144	
	CO ₂ indirect (Scope 2) per tonne stone wool (27 factories)	EN16	kg CO ₂ /t	155	152	153	148	
	CO ₂ direct and indirect (Scope 1+2) per tonne stone wool (22 factories)	EN15, EN16	kg CO ₂ /t	711	701	705	679	
CO ₂ direct and indirect (Scope 1+2) per tonne stone wool (27 factories)	EN15, EN16	kg CO ₂ /t	740	714	714	700		

Key performance data

Category	Indicator	GRI-G4	Value	2012	2013	2014	2015	Note
Ozone depletion	Emissions of ozone-depleting substances	EN20	t CFC11 eq	negligible	negligible	negligible	negligible	
Air emissions	Significant air emissions (27 factories; Asia & China replaced with representative average)	EN21						
	NO _x per tonne stone wool		kg/t	0.63	0.66	0.76	0.62	4
	SO ₂ per tonne stone wool		kg/t	2.69	2.97	3.32	3.22	4
	CO per tonne stone wool		kg/t	15.39	15.15	12.45	7.76	4
	Ammonia per tonne stone wool		kg/t	1.11	1.41	1.33	1.3	4
	Phenol per tonne stone wool		kg/t	0.18	0.18	0.15	0.16	4
	Formaldehyde per tonne stone wool		kg/t	0.1	0.06	0.09	0.05	4
	Particulate matter (PM10) per tonne stone wool		kg/t	0.44	0.49	0.6	0.43	4
Water	Water consumption per tonne stone wool		m ³	1.31	1.37	1.32	1.33	
	Water consumption total	EN8	million m ³	2.86	3.04	3.02	3.02	
	Water withdrawal by source							
	Groundwater own abstraction	EN8	million m ³	1.04	0.97	0.96	0.92	
	Municipal water a.o. utilities	EN8	million m ³	1.36	1.67	1.61	1.61	
	Rainwater own abstraction	EN8	million m ³	0.18	0.16	0.21	0.21	
	Surface water own abstraction	EN8	million m ³	0.27	0.25	0.25	0.29	
	Waste water from external source	EN8	million m ³	—	—	—	—	
	Water consumption significantly effecting water resources	EN9	million m ³	—	—	—	—	
	% of water consumption with significant effect	EN9	%	—	—	—	—	

Key performance data

Category	Indicator	GRI-G4	Value	2012	2013	2014	2015	Note	
Waste & Recycling	Total waste generated	EN23	tonnes	358200	197100	185140	173320		
	Total waste per tonne stone wool	EN23	kg/t	164	89	81	76		
	Waste landfilled	EN23	tonnes	150500	87900	86900	77550		
	Waste for external recycling	EN23	tonnes	174200	77600	91750	73550		
	Waste for external recovery (energy)	EN23	tonnes	8300	7300	10900	8600	5	
	Waste to landfill per tonne stone wool		kg/t	69	40	38	34		
	Recycling and reclaimed products								
		Recycling of residue from other industries		tonnes	564900	619400	543815	845950	
		% recycled content (secondary melt raw materials per tonne stone wool)	(EN2)	%	25.9	27.9	23.7	37.4	6
		Products and packaging reclaimed	EN28	tonnes	12600	23200	15280	14200	7
Transport — environmental impacts									
	CO ₂ from downstream transportation — European Division	(EN30)	tonnes CO ₂ e		23162	26899	30821		

General Note: The new mineral wool facility in USA that started in 2014 together with the new acquisitions for façade solutions and for grid manufacturing are not included in this reporting, with the exception for safety reporting where the acquisitions are included.

[1] Lost days count begins the day after the accident and connotes scheduled work days. Minor (first-aid level) injuries are not included

[2] The ROCKWOOL Group's products save between 80 and 1,500 times the carbon emissions throughout their lifespan, more than emitted during their production. This results in a significant amount of avoided emissions

[3] Our methodology for calculating the Group's direct (Scope 1) and indirect (Scope 2) CO₂ emissions is based on 'The Greenhouse Gas Protocol'. We used 'The IPCC Second Assessment Report (SAR — 100 year)' as reference for calculating our global warming potentials. Other indirect emissions (Scope 3) are not included as these are considered negligible compared to the enormous savings of the products

[4] 2013-figures relate 23 factories. For 2014-figures extrapolated for all 27 factories (Asia & China replaced with representative average)

[5] 2014 corrected

[6] The calculation of recycled content in our products has been revised in 2015 and is now based on ISO 14021

[7] Products and packaging reclaimed by external partners are not covered in the Group figures, only the part directly from our factories

GRI

Indicator	Level	Description	Value	Reference
General standard disclosures				
Strategy & analysis				
G4-1	Core	Statement of CEO about relevance of sustainability to organisation and strategy.		AR: p.6-7 Unlocking our full potential SR: p.2 Rising to the challenge
Organisational profile				
G4-3	Core	Name of the organisation.		AR: p.4 World leader in stone wool solutions
G4-4	Core	Primary brands, products, and services.		AR: p.20 Insulation business AR: p.23 Systems business
G4-5	Core	Location of the organisation's headquarters.		AR: p.4 World leader in stone wool solutions
G4-6	Core	Number of countries operating.		AR: p.4 World leader in stone wool solutions AR: p.5 A leading local presence AR: p.91 Group companies
G4-7	Core	Report the nature of ownership and legal form.		AR: p.91 Group companies
G4-8	Core	Markets served.		AR: p.5 A leading local presence AR: p.91 Group companies
G4-9	Core	Scale of the organisation.		AR: p.4 World leader in stone wool solutions AR: p.5 A leading local presence AR: p.91 Group companies AR: p.10 Five-year summary
G4-10	Core	Total number of employees		AR: p.10 Five-year summary
G4-11	Core	Total employees covered by collective bargaining agreements.	There are collective bargaining agreements in the majority of the countries where we are active. In the countries where we have collective bargaining agreements in place the majority of employees are covered.	
G4-12	Core	Describe the organisation's supply chain.		SR: p.7 Driven by the natural power of stone SR: p.17-21 Circular economy
G4-13	Core	Significant changes during reporting period		AR: p.85 Note 31 — Acquisition of subsidiaries and activities AR: p.86 Note 32 — Accounting policies applied SR: p.36 GRI G4 Conformance
G4-14	Core	Precautionary approach or principle addressed by the organisation.	The ROCKWOOL companies have acceded to the International Chamber of Commerce (ICC)'s Environmental Charter for Sustainable Development — Principles for Environmental Management.	AR: p.37 Working with human rights AR: p.43 Risk Management AR: p.46 Corporate Governance SR: p.34 A better world for everyone

GRI

Indicator	Level	Description	Value	Reference
G4-15	Core	Externally developed economic, environmental and social charters, principles or other initiatives subscribed to or endorsed.	The ROCKWOOL companies have acceded to the International Chamber of Commerce (ICC)'s Environmental Charter for Sustainable Development – Principles for Environmental Management. The Group supports the UN Declaration of Human Rights.	AR: p.37 Working with human rights SR: p.34 A better world for everyone
G4-16	Core	Memberships of associations and national or international advocacy organisations (refers to primarily memberships at organisation level)		AR: p.34 Stone wool to the benefit of refugee camps
Identified material aspects and boundaries				
G4-17	Core	Entities included and excluded in consolidated financial statements.		AR: p.86 Note 32 – Accounting policies applied AR: p.91 Group companies
G4-18	Core	Process report content (Materiality Assessment, etc.)		SR: p.36 GRI G4 Conformance
G4-19	Core	Material aspects.	Stakeholder engagement, product quality & safety, energy efficiency in buildings, durable performance, ethics and good conduct, innovation, employee health and safety, customer health and safety, GHG emissions, energy efficiency in operations, ability to provide Life Cycle Assessments (LCA), Fire Protection, Economic performance & competitiveness, employee training and development, other emissions to air, water resource management, sustainability in the supply chain, being a good neighbour, water protection and conservation	
G4-20	Core	Boundary for material aspects within organisation.		SR: p.36 GRI G4 Conformance
G4-21	Core	Boundary for material aspect outside organisation.		SR: p.36 GRI G4 Conformance
G4-22	Core	Restatements of information.	No restatements were made in 2015	
G4-23	Core	Significant changes in scope and boundary.		SR: p.36 GRI G4 Conformance
Stakeholder engagement				
G4-24	Core	List of stakeholder groups engaged by the organisation		SR: p.12, 14 Driving energy efficiency p.17 circular economy, p.25 Health, safety & wellbeing, p.29-33 Sustainable fire safety
G4-25	Core	Basis for identification and selection of stakeholder.		SR: p.12, 14 Driving energy efficiency p.17 circular economy, p.25 Health, safety & wellbeing, p.29-33 Sustainable fire safety
G4-26	Core	Approach to stakeholder engagement.		SR: p.12, 14 Driving energy efficiency p.17 circular economy, p.25 Health, safety & wellbeing, p.29-33 Sustainable fire safety

GRI

Indicator	Level	Description	Value	Reference
G4-27	Core		Key topics and concerns raised through stakeholder engagement.	SR: p.12, 14 Driving energy efficiency p.17 circular economy, p.25 Health, safety & wellbeing, p.29-33 Sustainable fire safety
Report profile				
G4-28	Core	Reporting period.	1st January 2015 — 31st December 2015	
G4-29	Core	Date of most recent previous report.	Previous reports have been GRI reports. The previous report covered financial year 2014 and was published on the internet in May 2015.	
G4-30	Core	Reporting cycle.	Annual	
G4-31	Core	Contact points.	Anthony Abbotts: anthony.abbotts@ROCKWOOL.com	
G4-32	Core	GRI indicators.	The GRI table is part of the sustainability report	
G4-33	Core	Assurance.	The report has not been externally verified.	
Governance				
G4-34	Core	Governance structure.		AR: p.36 Corporate Governance
Ethics & integrity				
G4-56	Core	Organisation's values, principles, standards and norms including:		SR: p.9 Sustainable by nature SR: p.10 Our purpose
Specific standard disclosures				
Economic performance				
G4-EC1		Direct economic value generated and distributed		AR: p.56-90
Materials				
G4-EN2		% recycled content (secondary melt raw materials per tonne stone wool)		SR: p.17-21 Circular economy SR: p.37-39 Appendix — GRI final performance
Energy				
G4-EN3		Energy consumption (in factories)		SR: p.12-16 Driving energy efficiency SR: p.37-39 Appendix — GRI final performance
G4-EN4		Energy consumption outside of the organisation		SR: p.12-16 Driving energy efficiency SR: p.17-21 Circular economy

GRI

Indicator	Level	Description	Value	Reference
G4-EN5		Energy intensity		SR: p.12-16 Driving energy efficiency SR: p.37-39 Appendix — GRI final performance
G4-CRE3		Greenhouse gas emissions intensity from buildings		SR: p.12-16 Driving energy efficiency
Water				
G4-EN8		Water consumption total		SR: p.22-24 Water SR: p.37-39 Appendix — GRI final performance
Emissions				
G4-EN15, G4-EN16		Total direct and indirect greenhouse gas emissions		SR: p.37-39 Appendix — GRI final performance
G4-EN17		Other relevant indirect GHG emissions		SR: p.37-39 Appendix — GRI final performance
G4-EN21		Significant air emissions		SR: p.37-39 Appendix — GRI final performance
Products and services				
G4-EN27		Extent of impact mitigation of environmental impacts of products and services		SR: p.12-16 Driving energy efficiency SR: p.17-21 Circular economy SR: p.37-39 Appendix — GRI final performance
Supplier environmental assessment				
G4-EN32		Percentage of new suppliers that were screened using environmental criteria		SR: p.34 A better world for everyone
Occupational Health and Safety				
G4-LA6		Type of injury and rates of injury		SR: p.25-26 Sustainable living & good health SR: p.37-39 Appendix — GRI final performance
Training and education				
G4-LA9		Average hours of training per year per employee by gender, and by employee category		AR: p.35
Supplier assessment for labor practices				
G4-LA14		Percentage of new suppliers that were screened using labor practices criteria		SR: p.35 Human rights and responsible sourcing

GRI

Indicator	Level	Description	Value	Reference
Customer health and Safety				
G4-PR1		Percentage of significant product- and service categories for which health and safety impact are assessed for improvement		SR: p.25-26 Sustainable living & good health
Supplier Human Rights Assessment				
G4-HR10		Percentage of new suppliers that were screened using human rights criteria		SR: p.35 Human rights and responsible sourcing
Anti-corruption and Compliance				
G4-S05		Confirmed incidents of corruption and actions taken	No corruption incidents occurred in 2015	SR: p.37-39 Appendix — GRI final performance
G4-S08		Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations		SR: p.37-39 Appendix — GRI final performance
Supplier assessment for impacts on society				
G4-S09		Percentage of new suppliers that were screened using criteria for impacts on society		SR: p.35 Human rights and responsible sourcing
Other material indicators				
Innovation				
own indicator		Creating new solutions, in the form of new processes/ideas/products		SR: p.10 Our Purpose, p.21 Circular Economy, p.22-24 The push for better water management, p.25-28 Health, Safety & Wellbeing, p.29-33 Sustainable fire safety
Being a good neighbor				
own indicator		The ROCKWOOL Group aims at minimising the nuisance experienced by the communities living in the vicinity of ROCKWOOL locations. Next to that, we also aim to be an asset to our community and create a positive impact on the communities (e.g. by creating jobs).		SR: p.37-39 Appendix — GRI final performance

GRI

Indicator	Level	Description	Value	Reference
Durable performance				
own indicator		The durable performance of our products		SR: p.2 Rising to the challenge, p.7 Driven by natural power of stone, p.17-21 Circular Economy, p.29-33 Sustainable fire safety
Fire protection				
own indicator		The ROCKWOOL Group offers products that minimise the risk of fires starting, and stop them spreading in the event that they do. This way ROCKWOOL contributes to safety of its customers. This included emissions and costs of fires.		SR: p.29-33 Sustainable fire safety

AR: Annual Report 2015

SR: Sustainability Report 2015

The ROCKWOOL® trademark

ROCKWOOL® — OUR 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 largest assets in the ROCKWOOL Group, and thus well protected and defended by us throughout the world.

Please help us protect our trademark:

- The ROCKWOOL® trademark must always be written in capital letters
- The word ROCKWOOL must always be followed by a descriptive noun
Example: ROCKWOOL products, ROCKWOOL insulation or ROCKWOOL stone wool
- Always write the ROCKWOOL trademark completely. Never abbreviate, change or modify it
- The ROCKWOOL word is not the generic term for insulation or stone wool, and may not be used as such. Use instead e.g. the term ROCKWOOL insulation
- The first time you mention the ROCKWOOL trademark, it must include the registration symbol ®. Company names are however without registration symbol.

TRADEMARKS

ROCKWOOL®, ROXUL®, ROCKFON®, ROCKPANEL®, GRODAN®, LAPINUS®, RockDelta®, CREATE AND PROTECT®, Chicago Metallic®, FAST® and HECK® are registered trademarks of the ROCKWOOL Group.

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