SUSTAINABILITY AT SCHWENK

Information on the business, ecological and social environment of our construction materials

Reporting year: 2024
Publication: 2025

SUSTAINABILITY THAT WORKS.

SCHWENK Building Materials Group

SCHWENK

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ABOUT THIS SUSTAINABILITY INFORMATION

Sustainability is firmly anchored in our corporate strategy and shapes SCHWENK's daily operations in a variety of ways. With our sustainability report for 2024, we consolidate this broad commitment and make it transparent and comprehensible for our employees, our customers, and interested professionals. References to persons in the following text always refer to all genders.

On the following pages, we provide a comprehensive overview of established and new approaches with which we implement sustainability within the company. It is important to us not only to highlight individual measures, but also to consider sustainability as a holistic principle and to illuminate the underlying connections and context.

The focus of the report for 2024 is on the SCHWENK Building Materials Group in Germany and includes the divisions Cement, Sand & Gravel, Concrete (Ready-Mix and Mobile Concrete), Concrete Pumps, and Circular Economy. In addition, we address selected key topics and focus areas within individual departments to provide an even deeper insight into our value chain.

This sustainability information was primarily created and designed by an internal project team, supported by input from the individual departments. The update or new edition is issued on an annual basis.

The project team

• Laura Schleicher	Corporate Communications
• Thomas Spannagl	CEO SCHWENK Building Materials Group
• Roman Lentz	CSO SCHWENK Building Materials Group
• Dr. Hendrik Möller	Member of the Executive Board
• Dr. Markus Schauer	Head of Department for Raw Material Supply / Environmental Protection

Picture: Allmendingen cement plant | SCHWENK

CEO MESSAGE

Picture: Thomas Spannagl, CEO SCHWENK Building Materials Group | SCHWENK

Foreword

Dear readers,

The transformation towards more sustainability shapes our daily thoughts and actions. We are proud of what we have achieved and are highly motivated to push and promote change. For us, sustainability is not just a current trend, but the basis for future-oriented business and long-term success in our company and in society.

As a family company in its fifth generation, we have always made our decisions with a view to our responsibility to the next generation and to the future. We are continuously working on the development of climate-compatible processes, products and solutions with an eye to quality and innovation. This process not only covers our supply chain as a manufacturer of building materials, but it also integrates additional activities such as ecological transport, agriculture and forestry as well as reforestation into our sustainability concept.

We take responsibility for people, nature, and the environment and focus on key issues such as climate protection, employee health, and securing and conserving raw materials. For sustainability we endeavour to set standards in technology and to do far more than simply comply with legal regulations and requirements. We have proven in the past that we can meet this claim by our pioneer work with the introduction of SCR, DeCONOx and ExMercury plants.

We view the global reduction of CO_2 emissions as the central challenge of our age. The process demands political, business and technical solutions. We are determined to be involved in these solutions and will continue to make a major contribution. The construction of a CO_2-neutral cement plant is a significant milestone on the path to a technical solution. We plan to achieve this target by 2030.

However, this can only be achieved together with sufficient amounts of renewable energy, fair competition conditions and the appropriate infrastructure for the storage and/or use of CO_2.

At the same time, we are already working intensively on reducing CO_2 emissions across the entire value chain. We are therefore committed to paving the way for future generations in the company and in society with great financial effort, innovation and full commitment.
Under the slogan “Sustainability that works.”, we have been consolidating our sustainability efforts in our communications since 2025, and specifically highlighting our ambition to practice sustainability that truly works.

Do you have any comments on or contributions to this report? We are looking forward to hearing from you.

Yours sincerely,

Thomas Spannagl
CEO

THE COMPANY

GENERALITIES

SCHWENK was founded in Ulm in 1847, making it one of the oldest family companies in the German building materials industry. Our core business is divided into the following divisions: Cement, Sand & Gravel, Concrete (ready-mix concrete and mobile concrete), Concrete Pumps and Circular Economy.

The constituents of our building materials are limestone, crushed rock, sand and gravel. We procure our raw materials mostly from our own deposits and extraction sites. Together they form the basic ingredients for manufacturing concrete. When combined with our concrete pumping services and our high-quality consulting services, we can supply a complete range of services for our customers.

SCHWENK is represented on the market internationally with a large number of investments and subsidiaries. They form a wide-ranging portfolio – from suppliers of building materials to research companies to the farming and agriculture business.

CEMENT

SAND & GRAVEL

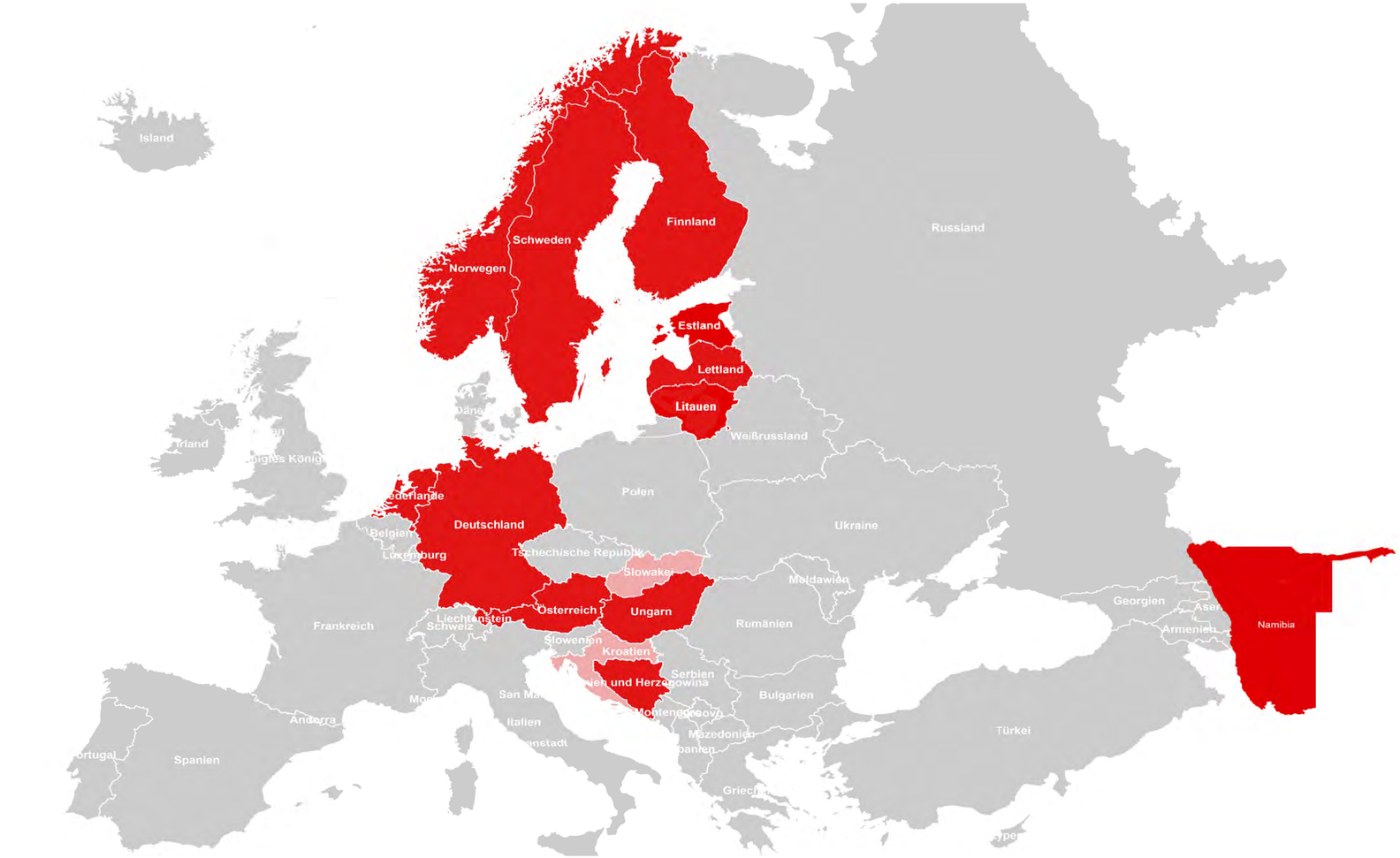
CONCRETE
(READY-MIX AND MOBILE CONCRETE)

CONCRETE PUMP

CIRCULAR ECONOMY

SCHWENK GLOBAL

Together with our subsidiaries, we are represented in many countries in Europe and in Namibia.



Participations at and over 50%

Participations over 25%

CORPORATE STRUCTURE

CEMENT

4+1 PLANTS
4 fully integrated cement plants and 1 milling plant

SAND & GRAVEL

8 PLANTS
8 sand and gravel plants and numerous holdings

CONCRETE
(READY-MIX AND MOBILE CONCRETE)

128 PLANTS
128 ready-mixed concrete plants and numerous investments

CONCRETE PUMP

193 VEHICLES
193 concrete pump vehicles and numerous investments

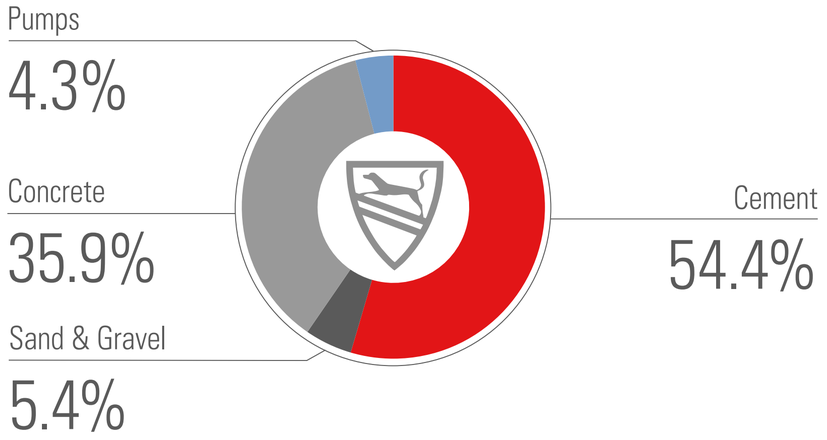
CIRCULAR ECONOMY

0 PLANTS
Construction of a soil washing plant began in 2025 as part of a joint venture. Furthermore, the company FISCHER Weilheim has been strengthening the division since 2025.

INVESTMENT IN PLANTS AND FACILITIES 2024

€57 MILLION

PERCENTAGE SHARE OF DIVISIONS IN TOTAL REVENUE 2024



SALES

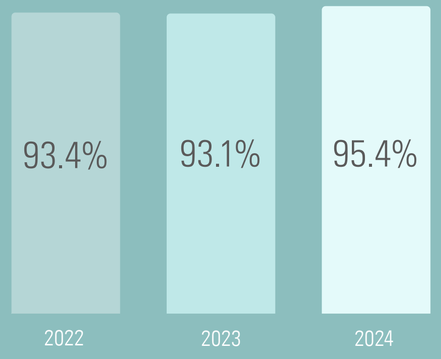
	2022	2023	2024
Cement	4.0 million t	3.6 million t	3.3 million t
Sand & Gravel	2.6 million t	2.3 million t	2.1 million t
Concrete	3.4 million m³	2.8 million m³	2.3 million m³
Pumps	3.3 million m³	2.8 million m³	2.2 million m³
Circular Economy			

Picture: Bernburg quarry | SCHWENK

Picture: Employees | SCHWENK

CLIMATE PROTECTION KEY FIGURES

	2022	2023	2024
Specific net CO_2 emissions (per tonne of cementitious material)	416	417	407
Specific net CO_2 emissions (per tonne clinker)	528	534	522
Clinker/cement factor	77.5%	77.0%	77.5%
Proportion of alternative fuels	93.4%	93.1%	95.4%
Proportion of biomass	31.7%	30.8%	30.6%



Development of alternative fuel consumption based on fuel energy consumption

Alternative fuel mix in clinker production based on fuel energy input in 2024 in percent/tonnes

BGS

80.5 % / 382,503

Used tyres

5.3% / 20,091

Sewage sludge

4.9% / 425,375

Animal meal

4.2% / 25,252

Paper fibre residues

0.5% / 15,713

EMPLOYEE KEY FIGURES

The SCHWENK Building Materials Group Germany employs 2,152 people. These employees are distributed across the Cement, Sand & Gravel, Concrete, Concrete Pumps, and Circular Economy divisions.

2,152 Employees

We've been training our young talent in-house since 1902. We are ensuring that we have the experts of tomorrow with a trainee ratio of 4.18% throughout all divisions.

4.18%

Picture: Employees | SCHWENK

OUR COMPASS

Vision

Sustainable building material solutions for future generations

Mission

Development of CO_2-neutral products and processes with the help of outstanding employees and innovative technologies together with our partners.

Values

FOR FUTURE GENERATIONS

- No compromise to human health and safety
- No compromise to the environment and climate
- Continuous monitoring and optimisation of our processes
- Ensuring that technology and equipment are always state-of-the-art

TWO STEPS AHEAD

- Recognising and actively shaping societal changes
- Anticipating customer needs
- Driving innovation and growth
- Focusing on research and development of new products and processes with partners and universities
- Fostering professional curiosity in daily work

MORE THAN THE SUM OF ITS PARTS

- Respecting individuality and diversity
- Collaborating as a team with our customers, stakeholders, and communities
- Promoting the growth and development of our employees
- Exchanging knowledge and best practices within the Building Materials Group

STRATEGY AND MANAGEMENT

STRATEGY

CORPORATE STRATEGY AND OUTLOOK

As a fifth-generation family business, we are aware of our responsibility towards people, nature, the environment and the climate. We think across generations and place particular focus on the sustainability of our building material solutions.

Our core market is Europe – where we combine our strengths in the regions to offer high-quality solutions for our customers. Our divisions of Cement, Sand & Gravel, Concrete (ready-mixed concrete and mobile concrete), Concrete Pumps and Circular Economy form a vertically integrated value chain and create synergies. With selected investments in research and development, we pursue the goal of remaining an innovation leader in the industry.

In collaboration with universities and science centres, we are therefore working on the development of future production processes and emission reduction technologies. At the same time, we continually invest in our divisions in order to further increase efficiency based on the latest technologies and achieve our desired climate goals. We build trusting and open relationships with communities and interest groups and place great value on qualified and motivated employees as the core of our success.

MANAGEMENT STRUCTURE

The SCHWENK Building Materials Group has grown continuously over many years. Today it includes a large number of investments and subsidiaries with a focus on Europe. It is structured decentrally, with local managers in the individual regions, each divided into divisions. Flat hierarchies and lean organisational structures support rapid decision-making processes and rapid implementation.

Organisational structure

SCHWENK Building Materials Group
Thomas Spannagl (CEO), Stephan Pott (CFO)

Germany Thomas Spannagl (CEO)	**Northern Europe** Reinhold Schneider (CEO)	**Lithuania** Arturas Zaremba (CEO)	**Joint Ventures**
Company management Germany	**Company management Northern Europe**	**Company management Lithuania**	Equity interests ≥ 50%: Austria, Namibia, Hungary, Bosnia-Herzegovina, Netherlands Equity interests ≥ 25%: Slovakia, Croatia
South Plant Group	Finland	Cement factory	
North Plant Group	Sweden	Human Resources / Law	
Human Resources	Norway	Purchasing	
R & D / Quality & Environment	Estonia	Quality / Environment	
Sales / Logistics of cement	Cement manufacture	Sales / Logistics	
Concrete / Sand & Gravel / Concrete Pumps	Human Resources / Work safety and health / Communication	Finances	
Sustainability	Sales / Logistics of Baltic States		
Communication	Law / Environment		
	Construction materials		

OUR VALUE CREATION

The SCHWENK Building Materials Group, with its divisions of Cement, Concrete, Sand & Gravel, Concrete Pumps, and Circular Economy, covers almost the entire construction value chain. Our approach is clear: We create added value through integrated solutions and cross-divisional collaboration.

- Cement is the starting point. From the extraction of limestone in our own quarries to calcination in rotary kilns, grinding, and packaging – all steps are carried out in-house.
- Sand & gravel are extracted and processed using modern facilities and technologies.
- Concrete is the heart of modern construction projects. We develop high-performance mix designs and focus on innovations such as resource-efficient concrete and CO_2-reduced mixes to improve sustainability.
- Our pumping services ensure efficient and safe processing – even under demanding conditions and over long distances.
- The circular economy completes the chain. With recycling solutions and projects such as the construction of a soil washing plant, we close material cycles and conserve resources.

In addition, we offer consulting services and operate our own technology centres to support customers with complex construction projects. Our strength lies in our holistic approach: Research, development, and practical application are intertwined to create sustainable and future-proof solutions.

CONTRIBUTION TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

We also support all 17 UN Sustainable Development Goals (SDGs) with our vision, mission and values. We focus on six key themes, which were defined and developed by an internal working group.

Picture: UN Sustainable Development Goals, SDGs | www.bmz.de

Life on land
Exchange with stakeholders and local population; renaturation and promotion of biodiversity in quarries

Decent work and economic growth
Voluntary contribution to economic growth for the people on site

Industry, innovation and infrastructure
Investments in process innovation and sustainability

Partnerships for the goals
Commitment in R&D partnerships for sustainable innovation

Growth of positive influences

Raw materials → **Suppliers** → **Purchasing** → **Operational processes** → **Sales** → **Product usage** → **Lifespan of the products**

Minimisation of negative influences

Decent work and economic growth
Zero accidental injury (LTI) accidents among employees and subcontractors and increased health and safety education initiatives along the value chain among subcontractors and carriers

Industry, innovation and infrastructure
Active participation in the development of carbon capture and storage (CCS) / carbon capture and utilisation (CCU) technologies

Responsible consumption and production
Increased use of alternative fuels in cement production to reduce fossil fuel consumption

Climate action
Annual reduction of CO_2 emissions per tonne of cement

SUSTAINABILITY MANAGEMENT

Sustainability management forms the core of our corporate strategy and is deeply embedded in all processes, business units, and organisational levels.

At SCHWENK, we understand sustainability as a balanced combination of economic, environmental, and social aspects of our business activities – and thus as an integral component of responsible corporate governance. Management bears overall responsibility for sustainability.

Our sustainability activities are systematically and comprehensively integrated into our business processes. Coordination is handled by a central department, which reports to our Chief Sustainability Officer at the executive management level.

Organisation

OUR FIELDS OF ACTION

DECARBONISATION – TRADITIONAL METHODS

DECARBONISATION – CCUS

CIRCULAR ECONOMY & RECYCLING

INNOVATION – SECURING FUTURE VALUE

COMMUNICATION

OUR SUSTAINABILITY CONTRIBUTION IN 2024

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **CLIMATE**

OVERVIEW AND CO_2 TARGETS

As producers of building materials such as cements, specialised building materials and concrete we are part of the resource and energy-intensive primary industry. Our manufacturing processes, particularly with cement clinker, necessarily involve CO_2 emissions. The cement industry throughout Germany annually releases approximately 14.5 million tonnes of CO_2. Efforts have long been designed to reduce CO_2 emissions for the sake of climate protection. The Kyoto protocol defines three mechanisms for reaching global climate protection targets. The best-known mechanism is emissions trading, which is regulated by an EU Directive for companies in Europe. The number of emissions permits is allocated to specific types of industry and is reduced from period to period. Companies that have already made great efforts for climate protection can sell excess permits.

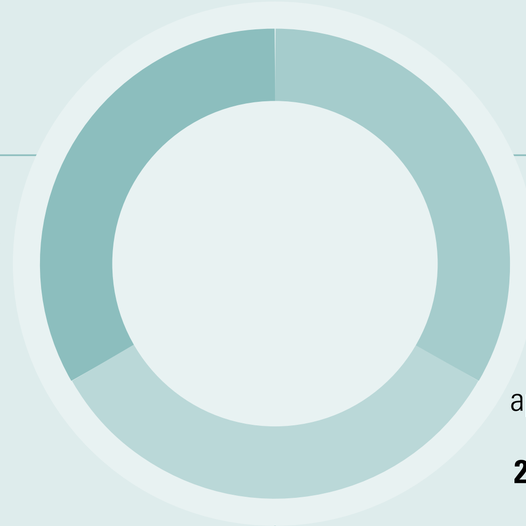
If the allocated number of permits is not sufficient to meet the obligations, emissions permits must be purchased. We calculate the annual CO_2 emissions and prepare emission reports for our cement plants based on the EU monitoring regulation and monitoring plans. We issue the corresponding number of emissions permits via our emissions trading accounts in accordance with the verified emissions reports. Our target is to reduce CO_2 emissions in the period from 1990 to 2030 by 200 kg CO_2 per tonne of clinker. By reducing the proportion of clinker in the cements over the same period we aim to reduce specific CO_2 emissions per tonne of cement by 38%.

Our main levers

concerning climate protection and energy efficiency

- Raw materials
- Fuel
- Processes and innovations

CO_2 targets SCHWENK Building Materials Group



TARGET 1

Reduction of the average CO_2 emission factor of clinker production by approximately **200,000 t CO_2** annually.

TARGET 2

Reduction of the average clinker factor (percentage of clinker in cement) by 2025 to a level that enables a decrease of approximately **342,000 t** clinker and thus **260,000 t CO_2** per year.

TARGET 3

By 2030, the **SCHWENK Building Materials Group's first CO_2-neutral cement plant will be built**, by utilising currently developed future technologies for capturing, storing, and using CO_2.

RAW MATERIALS (1/2)

WHAT IS SCHWENK DOING TO CONSERVE NATURAL RAW MATERIALS AND TO CLOSE THE MATERIAL CYCLE IN A REASONABLE MANNER?

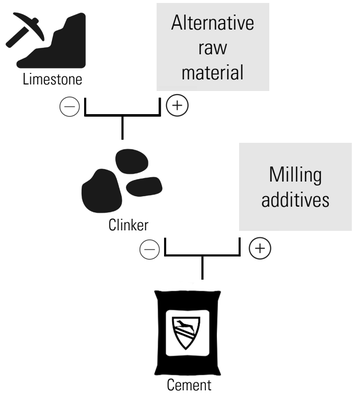
The manufacture of cement and concrete requires high volumes of natural raw materials. They are obtained by excavation of the required primary material in quarries or sand and gravel pits. They form the most important basis for the production of cement and concrete. Because natural deposits are finite and also for ecological reasons, alternative raw materials and ash from alternative fuels are becoming increasingly important. At SCHWENK we have been able to replace more than 15% of natural raw materials with alternative materials. These are combined with the natural raw materials to ensure that they meet our high standards of quality in products. The addition of alternative raw materials saves not only natural raw materials and closes material cycles, but it also reduces CO_2 emissions.

HOW DOES THE USE OF ALTERNATIVE RAW MATERIALS REDUCE CO_2 EMISSIONS?

Approximately two thirds of CO_2 emissions in the cement manufacturing process are due to the raw materials. The emissions are already integrated into the starting product, the limestone. The first stage of cement manufacture is to calcine the limestone to form clinker and then grind the clinker to cement. The following two options are available to save on CO_2 emissions: see graphic.

1. Less limestone in clinker

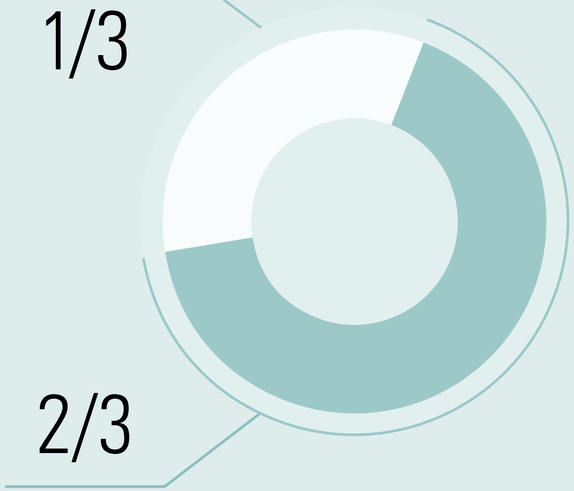
2. Less clinker in cement



Where in the manufacturing process is CO_2 being produced?

FUEL-RELATED EMISSIONS

Fuel-related emissions account for approximately 1/3 of CO_2 emissions. They result from the use of fossil and alternative fuels in the rotary kiln.



RAW MATERIAL-RELATED EMISSIONS

About 2/3 of CO_2 emissions in clinker manufacture are related to the raw materials. They are bound in the limestone and are released during the firing process: $CaCO_3 \rightarrow CaO + CO_2$

RAW MATERIALS (2/2)

Picture: Karlstadt Quarry | SCHWENK

USE OF ALTERNATIVE RAW MATERIALS IN CLINKER PRODUCTION

Cement manufacture is a high-temperature process with the rotary kiln. A wide range of very different raw materials is completely decomposed, melted and converted to new mineral phases at extremely high temperatures (approx. 2,000 °C gas temperature and approx. 1,450 °C material temperature). Limestone ($CaCO_3$) is the most important raw material for clinker production. The integrated CO_2 is released during the calcination process. This is referred to as "deacidification": $CaCO_3$ becomes CaO and CO_2. Alternative raw materials, which are already "deacidified" and thus have less or absolutely no CO_2 integrated in the starting material do not release CO_2 in the clinker calcination process.

Clinker producers should prefer this process for reasons of environmental protection. As long as the chemical composition of the starting materials and the end materials (taking into account fuel ash chemistry) meets the requirements of the "recipe" for the chemical composition of the final Portland cement clinker, the choice of the type and origin of the raw materials placed in the rotary kiln is very flexible. Whether the silicate or silicon components required for the production of clinker come from natural sand from a sand pit or whether used sand from casting is used, is virtually irrelevant for the chemical composition of the clinker. The natural and alternative raw materials are equivalent in their capacity for use in the extremely high processing temperatures in the rotary kiln, so long as the chemical composition is comparable. Unfortunately, the availability of limestone-containing alternative raw materials that also contain no or little CO_2 is very limited.

For this reason, SCHWENK selects sites that have access to sources of appropriate alternative raw materials such as used casting sand, broken concrete from roof tile production, filter dust from steel manufacture or residual materials that contain aluminium. Materials of this type have already been in use for clinker production for many years. The technical and legal approval prerequisites for the use of alternative raw materials must of course be in place.

In this respect, our Bernburg site is special. We share a quarry with SOLVAY AG, a manufacturer of soda. The manufacture of soda requires CO_2, which is produced from limestone in the SOLVAY process. The remaining CaO, referred to as lime lenses, is used in the Bernburg cement plant with limestone to produce clinker. The exploitation of the synergy of two completely different industrial processes has enabled the Bernburg plant to reduce its CO_2 footprint in clinker production to the lowest specific level of all SCHWENK cement plants.

USE OF MILLING ADDITIVES IN CEMENT MANUFACTURE

The grinding of cement clinker to a wide range of granulates does not require a high-temperature process. In addition to clinker, powdered limestone, gypsum, fly ash, granulated slag, natural pozzolan or volcanic ash are the most important materials for grinding cement. Almost nothing is changed other than the degree of fineness. This takes materials that can no longer be used in their own material cycles and adds them to the material cycle in the production of building materials.

This additional use saves valuable resources. The substitute materials for cement manufacture must therefore be subject to rigidly defined quality standards before they can be used. As a result, the options for the use of alternative raw materials in cement grinding are significantly more restricted than those applicable to clinker production. The regional availability of the approved milling additives is the deciding factor in the manufacture of cement with the lowest possible proportion of clinker. SCHWENK is also experimenting with different processes in this area. We are conducting research projects to test the suitability of very fine material from concrete recycling (RCF = recycled concrete fines or crushed concrete) as an alternative milling additive.

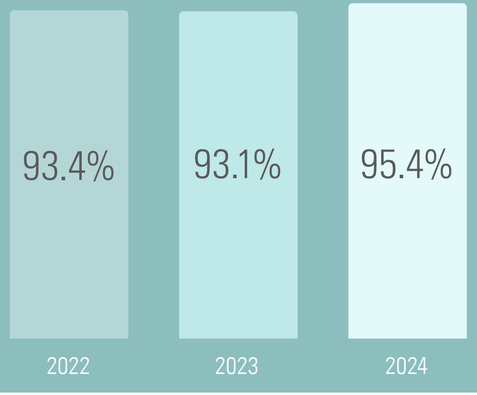
Other projects have already demonstrated that innovative recycling processes for used concrete (referred to as electrohydraulic pulsing) make it possible to separate the additives (gravel and sand) in used concrete completely from the cement matrix (bonded hardened cement). The sand and gravel recycled in this way can be used for manufacturing concrete. The remaining cement stone can be used in the rotary kiln calcination process and also in cement grinding.

FUEL (1/2)

CO_2 emissions are generated in the rotary kiln during the clinker calcination process by the use of energy from the fuel to generate the processing heat. This forms approximately two thirds of CO_2 emissions in the cement manufacturing process. The use of alternative fuels replaces fossil energy sources such as oil, natural gas or coal. With high biogenic proportions they contribute to the reduction of CO_2 emissions and thus to protection of the climate.

Alternative fuels include dried sewage sludge or fuels derived from commercial and residential waste (BGS). Organic pollutants are burnt completely at temperatures over 2000 degrees Celsius. The mineral components from the ash are completely integrated into the cement clinker and also help to save natural raw materials. This means that the fuels used in cement manufacture are fully used not only for their energy content but also for their material content.

Development of alternative fuel consumption based on fuel energy consumption



Alternative fuel mix in clinker production based on fuel energy input in 2024 in percent/tonnes

BGS
80.5 % / 382,503

Used tyres
5.3% / 20,091

Sewage sludge
4.9% / 425,375

Animal meal
4.2% / 25,252

Paper fibre residues
0.5% / 15,713

MARKET LEADER

The use of alternative fuels at SCHWENK is the rule, not the exception. We have been leaders in the German cement industry in this field for many years.

We have replaced more than 95% of our coal consumption with alternative fuels in all of our German plants. This has saved millions of tonnes of CO_2 over the years. It has also helped us to remain competitive.

23.0 MILLION

tonnes of CO_2 from 10 million tonnes of coal – that's how much CO_2 or fossil fuel we have avoided since 1990 through the use of our alternative fuels.

We incinerate
425,375
tonnes of sewage sludge annually, thereby avoiding approximately
51,200
tonnes of fossil CO_2 emissions.

We are also helping to ensure that organic pollutants do not enter the food chain by being spread on fields.

We incinerate
382,503
tonnes of BGS annually

FUEL (2/2)

WHAT IS THE DIFFERENCE BETWEEN AN "ALTERNATIVE FUEL" AND "WASTE/RUBBISH"?

Alternative fuels are precisely computed mixtures of specially sorted and prepared waste streams (for an optimal combustion process and thus a consistently high-quality product). They enable utilisation of energy and materials. The biogenic proportion also improves the environmental assessment.

The latter aspect has become more important in emissions trading, particularly in recent years, a commonly little-known factor. The deciding factor is whether the fuel components consist of biogenic (renewable) materials (wood, paper, rubber, grease, etc.) or residues derived from crude oil (such as plastics). Replacing fossil fuels with alternative fuels improves the ecological balance. This improvement is greater, the more biogenic content the fuels used in the rotary kiln have. In addition to the absolute quantity of fuels that we use in the rotary kiln, the biogenic proportion of the fuel has become very important for the economical operation of our plants and to keep them as climate-neutral as possible.

Used tyres
Biogenic component: 27%

BGS
Biogenic component: 26-35%

Paper fibre residues
Biogenic component: 70-90%

Animal meal
Biogenic component: 100%

Sewage sludge
Biogenic component: 75-85%

Waste wood
Biogenic component: 100%

WHY DOES SCHWENK BURN SEWAGE SLUDGE?

Sewage sludge from municipal sewage treatment plants was formerly spread primarily on farm fields as fertiliser. However, due to the ever-increasing proportion of questionable content in the sludge, such as drug residues or microplastics, the legislation now prefers thermal processing as the best solution. Sewage sludge contains 75-85% biogenic carbon content from paper, soap and digestive products. When dried, sewage sludge has a heating or fuel value equivalent to the brown coal dust that we used to use as fuel. The composition of sewage sludge is therefore an excellent addition to the "recipe" for clinker production. SCHWENK recognised the economical and ecological benefits of burning sewage sludge in the rotary kiln at an early stage. We have invested in storage capacity, transport, drying and process technology, and we are now one of the largest industrial processors of sewage sludges in all of Germany.

WHERE ARE THE LIMITS TO ALTERNATIVE FUEL USE?

Organic pollutants are burnt completely at temperatures over 2000 degrees Celsius. However, not everything that could theoretically be used as fuel in our kilns would be considered practical.

As a result, SCHWENK Group Management has undertaken not to use fuels containing contaminated waste as defined in the CSI Guidelines for Co-Processing Fuels and Raw Materials in Cement Manufacturing.

Picture: Alternative fuel | SCHWENK

In accordance with CSI Guidelines contaminated waste includes:

- Electrical and electronic waste (e-waste)
- Whole batteries
- Radioactive waste from the nuclear industry
- Explosives and ammunition
- Corrosive waste, including mineral acids

ENERGY EFFICIENCY

The cement manufacturing process is one of the most energy-efficient industrial processes overall. The average efficiency is around 80%. Compared with the most modern coal-fired power plants with an efficiency of <50% that is extremely efficient. We traditionally use as much as possible of the heat emitted by the combustion process in our plants.

FOR ENERGY EFFICIENCY

At SCHWENK we have an energy team that continuously monitors energy use as part of certification in accordance with DIN EN ISO 50001 and develops and coordinates measures to continuously optimise energy use and reduce the fuel used. All major energy consumers in our plants are equipped with separate consumption meters for this purpose. This allows us to track, analyse, plan and optimise energy consumption in detail.

In addition to reducing the specific electricity requirement, the main focus is on improving thermal energy efficiency and reducing CO_2 emissions in clinker production. The specific CO_2 emissions per tonne of cement have been continuously reduced in recent years.

Another goal is to gradually increase the proportion of green electricity through our own photovoltaic projects and systems to convert waste heat from the production process into electricity. In addition, we would like to increase the proportion of electricity from green energy sources by participating in new construction projects to generate green electricity or by purchasing it from renewable generation plants.

FOR RAW MATERIALS

We use the waste heat of our kiln to dehydrate moist raw materials such as clay, marl or limestone.

FOR FUELS

We also use the waste heat of the kiln in large BGS or sewage sludge dryers to prepare our fuels for use. The dryer they are, the more efficiently and consistently they can be used.

FOR THE NEIGHBOURS

We also do a good deed for the neighbours and the whole community at our plant in Karlstadt near Würzburg with the unused waste heat: we use it to heat the local swimming pool.

Picture: Solar park | SCHWENK

EMISSIONS AND AMBIENT POLLUTION

AIR POLLUTION CONTROL

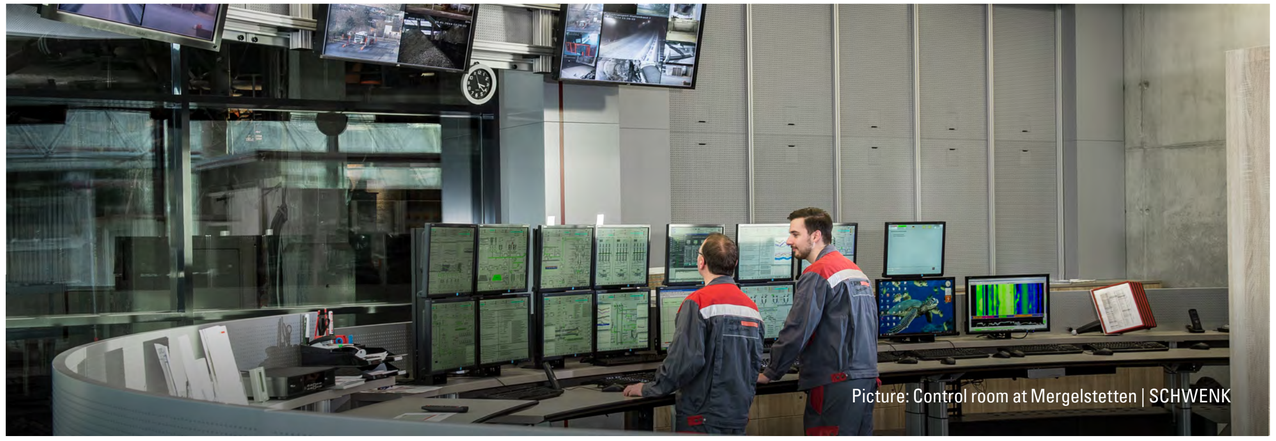
While the excavation and processing of raw materials and also the production of building materials primarily produces noise and dust, a number of different air pollutants must be dealt with in the kilns of our cement plants. We comply with the legal requirements for protection of the environment and are subject to close monitoring by regulators.

We are also consistently investing an above-average amount in the best available environmental technology at all our sites. This ensures that out plants' emissions are regularly below the applicable limits and benchmarks. It also means that we are achieving our targets of reducing emissions of air pollutants to below the legally required amount. Our actions are making significant contributions to the protection of health and the climate.

EMISSION REDUCTION TECHNOLOGIES

The use of modern fabric filters for removal of dust and the entrapment of dust aggregates is standard practice in our plants. We use road watering systems in our quarries to minimise the diffusion of dust. We are also leaders in the development and application of innovative emission reduction technology. This means that we exceed the currently applicable regulations for the use of the best available technology (BVT).

We use SCR systems to minimise NOx and NH_3 emissions at our Karlstadt and Mergelstetten cement plants and we also have a DeCONOx system in our Allmendingen cement plant.



Picture: Control room at Mergelstetten | SCHWENK

We do not only comply with the valid limit values for all pollutants – we are many times below these limits.

Ammonia (NH_3) emissions in mg/m³

	2022	2023	2024
Limit value in Germany	30	30	30
SCHWENK Germany	10.5	9.8	12.2

NOx emissions in mg/m³

	2022	2023	2024
Limit value in Germany	200	200	200
SCHWENK Germany	181.5	177.7	182.5

Dust emissions in mg/m³

	2022	2023	2024
Limit value in Germany	10	10	10
SCHWENK Germany	3.0	3.0	2.8

Mercury emissions in µg/m³

	2022	2023	2024
Limit value in Germany	30	30	30
SCHWENK Germany	9.1	8.9	8.8

Picture: SCR plant Mergelstetten | SCHWENK

PROCESSES AND INNOVATIONS FOR CLIMATE PROTECTION (1/2)

One of our strengths is our proximity to our customers and markets. Ensuring the uniformity of our building materials, a high level of reliability and security of supply as well as consistent compliance with the guaranteed properties are and remain the top goals of our building material developments.

Climate change brings another factor into the focus of our research and development. The associated demands have made it necessary for us, in addition to improving existing products and processes, to work on some completely new technologies. This will require a high degree of effort in development and financing. We will have to develop multiple selected and potentially promising technical approaches in parallel to comply with legal requirements and to meet the general interest in climate-neutral building materials, while maintaining daily cooperation and continuous product development.

Specifically, in this context we are working on projects such as meca-clay, Celitement, additive manufacturing (3D printing), the so-called oxyfuel process, and tail-end technologies.

OUR STARTING POINTS

PRODUCT

APPLICATION

PROCESS

THE TARGET BY 2045

The long-term target for Germany is to be as carbon-neutral as possible by 2045. SCHWENK accepts this challenge and is taking an active part in various research projects – including projects for the development of innovative binding agents and manufacturing processes.

Picture: Allmendingen quarry | SCHWENK

PROCESSES AND INNOVATIONS FOR CLIMATE PROTECTION (2/2)

Picture: 3D Printing | Rupp

MECA-CLAY

Our groundbreaking meca-clay technology allows, for the first time, the conversion of all types of clay into highly reactive cement additives using only electrical energy. This innovative technology, developed in collaboration between SCHWENK and thyssenkrupp Polysius, will be used in the world's first meca-clay plant at the Allmendingen site, scheduled to go into operation in 2026. By eliminating the need for fossil fuels and utilising an electrified grinding process, up to 70% of thermal CO_2 emissions from drying and clay calcination can be avoided.

CELITEMENT – A COMPLETELY NEW TYPE OF HYDRAULIC BINDING AGENT

With the use of Celitement, SCHWENK now has a completely new binding system with excellent technical and environmental properties. It is covered by patents throughout the world. We have now developed the product and the production process to industrial maturity. At the beginning of 2020, SCHWENK completely took over Celitement GmbH, including the pilot plant, and invested in a substantial expansion of the plant technology for mechanochemical activation. The production output of the pilot plant was increased to 5-7 tonnes per week. With these amounts of binder, innovators from a wide variety of application areas have already successfully tested new product lines on an industrial scale. The test plan designed by the German Institute for Building Technology for general building approval for Celitement is currently being processed. Once approval has been received, Celitemente can then be used in all classic concrete and mortar applications in the future. Celitement is one of the very few developments in the field of innovative binding agents that has managed the transition from research to industrial practice. Projects of this type need the long-term outlook of a family company like SCHWENK for successful implementation.

ADDITIVE MANUFACTURING (3D PRINTING) WITH SHORT CARBON FIBRES

Using a special extrusion process, we are working with a partner in the building industry to develop a process for manufacturing innovative finished parts without using reinforcing steel by additive manufacturing. We see the industrial prefabrication of concrete components as a possible way of introducing innovative building practices that also save resources to the industry. We are interested in applying productivity increases that have long been implemented in other industries to the manufacture of concrete. This will require the development of not only machinery and processing technology but also the right building materials. A particular challenge in the field of additive concrete building is the achievement of product characteristics that are normally achieved by the use of reinforcing steel. In contrast to many other “3D concrete printing” concepts, our initial focus was on the development of building materials with oriented short fibres derived from specially treated carbon fibres. When correctly combined and applied, these materials can achieve not only the well-known high compressive strength of cement mortar but also extremely high flexural strength. We are following and promoting the development of innovative 3D printing processes in concrete construction so we can align our products to the new requirements of the technologies at an early stage. Technology such as this requires close cooperation with materials scientists, mechanical engineers and toolmakers, specialists in computers and IT along with planners, and structural engineers and civil engineers.

“DEVELOPMENTS IN THE BUILDING MATERIALS FIELD ARE A MARATHON – NOT A SPRINT!”

CARBON CAPTURE

OXYFUEL PROCESS AND TAIL-END TECHNOLOGIES

The manufacture of building materials such as cement at a consistent quality demands great familiarity and experience with the industrial processing technology for cement manufacture. The process of developing a cement plant as free from CO_2 as possible is very ambitious. The aim is to capture CO_2, which cannot be avoided in the process, using carbon capture technology.

For CO_2 capture in cement plants at SCHWENK, there are currently two approaches:

1. The so-called oxyfuel technology. This process uses pure oxygen for combustion in clinker manufacture. This significantly increases the CO_2 concentration in the exhaust gas because the nitrogen component from the combustion air is missing. Thus, CO_2 capture can be carried out very efficiently. SCHWENK, along with three other partners in the cement industry, has decided to set up an initial pilot plant using this technology at Mergelstetten. The company set up for this purpose, Cement Innovation for Climate (CI4C), is to manage and make the project successful over the next few years.

2. Alternatively, the CO_2 can be separated from the total flue gas stream of the chimney. The disadvantage of what is referred to as post-combustion technology is the very high volume of exhaust gas. Air consists of 78% nitrogen (N2). The carbon capture process requires nitrogen and CO_2 to be separated from each other. From a plant engineering perspective, this can mean high investment costs as well as high electricity and heat consumption during operation. However, the advantage of this technology is that it can be added to an existing plant and therefore does not interfere with the actual manufacturing process. The best-known process in post-combustion technology is amine scrubbing. In addition, there are other processes such as hot potassium carbonate (HPC) technology. SCHWENK has been testing hot potassium carbonate (HPC) technology since the fourth quarter of 2024, alternating between its two sites in Brocēni, Latvia, and Akmene, Lithuania. Furthermore, we are also planning to test other so-called tail-end technologies at the Brocēni site.

Picture: Cement factory Brocēni | Latvia

Picture: Cement factory Akmenes | Lithuania

TWO APPROACHES – ONE TARGET

The goal of our measures is to gather important insights, data, and information that will help evaluate the potential capture of CO_2 from the cement production process and thus support the future selection of a suitable decarbonisation solution for each site.

Picture: CI4C construction site Mergelstetten | SCHWENK

CARBON MANAGEMENT

CO_2 capture is considered a key technology for achieving climate neutrality, but the biggest challenge often begins after the successful capture of CO_2: carbon management. While capture is now technically possible, transport requires a highly complex infrastructure that currently exists only in rudimentary form. The captured CO_2 must first be purified and liquefied in order to be transported efficiently. Once liquefied it can be stored underground (CCS = Carbon Capture & Storage) or combined with hydrogen in a wide range of processes to form additional products such synthetic fuels (CCU = Carbon Capture & Use).

SCHWENK pursues a holistic approach to carbon management that considers both technological innovations and political and economic frameworks. Currently, CO_2 storage in Germany is still subject to legal requirements and conditions. A legislative amendment, to be passed at the end of 2025, is intended to facilitate transport and storage in Germany. However, this is contingent upon the approval of the state governments. Our current focus is clearly on CCS, with CCU being further developed as a complementary option. The active participation in studies, projects, and legislative initiatives underscores SCHWENK's role as a pioneer in sustainable industrial processes.

CO_2 TRANSPORT: PIPELINE, RAIL, AND SHIP

A key element of carbon management is the transport of captured CO_2. SCHWENK is collaborating with the state government of Baden-Württemberg on a study for comprehensive CO_2 management. The pipeline is considered the best solution but is still subject to regulatory and financial uncertainties. Alternatively, rail and ship transport are possible, with rail transport in particular being realistic but cost-intensive. Delivery times for corresponding block trains are currently around 2027, while CO_2 ships with a capacity of up to 20,000 tonnes will not be available until 2028 at the earliest. SCHWENK is in close contact with operators and manufacturers regarding this.

CO_2 AS A RAW MATERIAL AND THE ROLE OF CCU

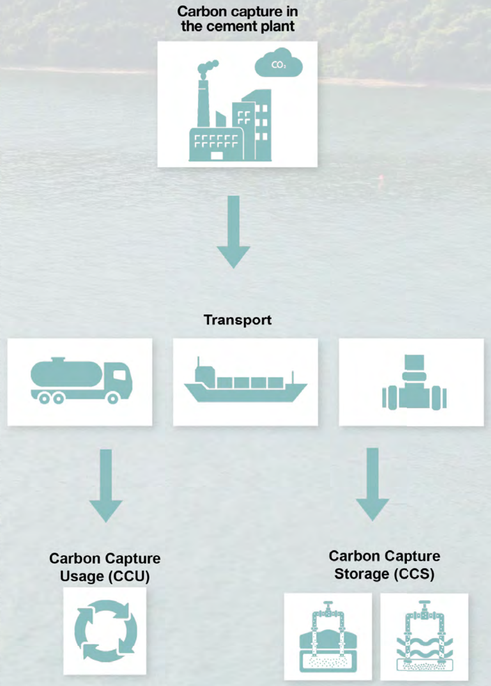
The use of CO_2 as a raw material (CCU) is gaining importance, for example for the production of sustainable aviation fuels. For the cement industry, CCU is currently only economically and regulatory feasible to a limited extent.

CCS AS A KEY STRATEGY

Within the framework of CCS, CO_2 can be stored either onshore on land or offshore in the seabed.

In onshore storage, the captured CO_2 is stored in geological formations on land, mostly in deep saline aquifers. Germany has suitable geological conditions and decades of experience with this technology. Onshore storage is technically mature (TRL 9) and offers large capacities – according to the Federal Institute for Geosciences and Natural Resources, up to 16 billion tonnes of CO_2, which is more than 40 times the annual industrial emissions. A major advantage: The costs are significantly lower than for offshore solutions.

Offshore storage, on the other hand, takes place in underground reservoirs beneath the seabed, for example in the North Sea. This method has been successfully used for over 30 years. Offshore storage is particularly attractive for countries with large coastal regions and suitable geological structures. However, the costs are significantly higher. Through our Danish subsidiary CarbonVault, we participated in the Bifrost Carbon Capture and Storage project in the North Sea in 2025, thus laying important foundations for our sustainability strategy.



OUR SUSTAINABILITY CONTRIBUTION IN 2024: **ENVIRONMENT**

SUPPLY AND CONSERVATION OF RAW MATERIALS

Raw materials such as limestone, crushed stone, gravel and sand are needed for the production of cement and concrete. The spatial distribution and quality of the raw materials is an essential component in our strategy for the supply and conservation of raw materials.

We find our raw materials with geological exploration using digital methods of mapping and analysis. Methods such as 3D mapping using drones and photogrammetry, exploratory drilling with geochemical analysis and the calculation and visualisation of models of deposits are only some of the technologies that we use. The knowledge thus derived about the spatial distribution of deposits enables us to contact property owners and approval authorities at an early stage and secure these deposits in the long term.

Competing claims for usage, even in areas with high-quality raw materials, are increasingly restricting and endangering the availability of raw materials. Sand and gravel deposits in particular, which are used as raw materials for the manufacture of concrete, are likely to become increasingly scarce in the short and medium term with a restriction of the number of deposits available for exploitation.

Our usage of natural resources is more and more based on the use of technology that enables us to use the available raw materials in our quarries to the fullest possible extent. This includes the use of online analysers for quality control and mixing beds for homogenisation of the raw material for our cement plants. We also use rock crushers in our gravel plants to make full use of oversized rocks.

ALTERNATIVE RAW MATERIALS

At SCHWENK we have been able to replace more than 15% of natural raw materials with alternative materials. These are combined with the natural raw materials to ensure that they meet our high standards of quality. This conserves natural raw materials and closes material cycles. Examples of alternative raw materials include used casting sand, sludge from processing potable water supplies and also calcined rough rock from soda production.

MILLING ADDITIVES

In addition to natural raw materials such as limestone or trass, alternative additives such as fly ash from power plants or blast furnace slag from steel production are also used as additives for the production of cements with reduced clinker content.

>130 YEARS

This is the number of years for which raw materials in our quarries will be available. This long-term foresight and action means security and ability to plan – also for the regions around our sites.

RAW MATERIAL SAFETY

The manufacture of one tonne of cement requires up to 1.5 tonnes of raw materials. There are only a small number of geological sites with the chemical and mineralogical quality and long-term availability that makes them suitable for cement production. For this reason, securing these local deposits for the long term has top priority at SCHWENK.

Our five principles:

- Proactive geological exploration
- Securing ownership at an early stage by purchase or excavation contracts
- Planning security in regional raw material procurement plans
- Transparent approval processes with consultation of the local population at an early stage
- Prompt restoration of excavated areas

RAW MATERIAL CONSERVATION

Deposits of natural cement raw materials are restricted to specific locations. Therefore they are finite and cannot be increased. This is why we do all we can to conserve these resources as long as possible – so that they can also be used by following generations.

Our actions for conservation of natural raw materials:

- Development of products and production methods with reduced requirements for raw materials
- Use of alternative raw materials
- Use of excavating and processing technologies to minimise the proportion that cannot be used
- Exploitation of the deposit as completely as possible

IN HARMONY WITH NATURE

FROM EXCAVATION TO RESTORATION

SUSTAINABLE LAND USE AND BIOLOGICAL DIVERSITY

The extraction of raw materials in our quarries and pits represents a temporary use of land. However, this is always accompanied by a significant impact on nature and the landscape. Local people may also suffer disadvantage due to the work. When we submit an application to open a quarry, consultation with the local population – at the earliest possible stage – is very important to us.

We consider suggestions and objections from local people at information meetings and work with them to develop environmentally compatible quarrying processes. The required approvals and licences are then obtained in close consultation with the relevant approval authorities. The process is based on the applicable legal regulations for protection of the environment.

Picture: Allmendingen quarry | SCHWENK

CONCEPTS FOR LIMITING INTERFERENCE WITH NATURE AND THE ENVIRONMENT

Quarry projects involve intervention in the natural world and the landscape that could last for several decades. For this reason we implement concepts that reduce intervention to the absolute minimum possible and that include measures for the promotion of protection of nature and species diversity during the operational phase.

We make an effort to keep the area required for our work as small as possible. We therefore make an effort to use the natural raw materials as completely as possible and we try to use alternative raw materials.

SUBSEQUENT USE – RECULTIVATION AND RESTORATION

The subsequent uses of our quarries are defined in the form of a landscape restoration plan at the initial planning stage for a new quarry. The plan includes the schedule and objectives of recultivation and restoration.

Landscape restoration plans are prepared for all of our quarries. Our many decades of experience in working with this type of planning has shown that the technical and natural conditions tend to develop dynamically and are continuously changing during the operational phase of a quarry project. Therefore, we have developed dynamic concepts at specific sites to define the targets for subsequent use and we have been able to implement them successfully.

Plans for subsequent use over a manageable period of a few years are defined in the course of regular inspections with government regulators and nature conservation organisations. We also include options for modifying plans based on the dynamics of natural developments. We are certain that such concepts will become increasingly significant – particularly when the speed of climate change is considered.

Subsequent use: Solar panel system in the Darast gravel pit

Subsequent use at the Riedheim gravel pit

Result of a dynamic subsequent use plan with the example of the Mergelstetten quarry

Restoration of the Aufhausen quarry

LIVING SPACE FOR RARE ANIMALS AND PLANTS

CONSERVATION OF NATURE AND WILDLIFE IN OUR EXTRACTION SITES

Quarries and sand and gravel pits provide space for rare animals and plants even during their operating phase. We regularly record biodiversity data for use in preparation of biodiversity management plans in order to determine the biodiversity values of our extraction sites and to develop measures for the promotion of species protection.

"NATURE FOR A TIME" MIGRATORY BIOTOPE

Over the total lifetime of our extraction sites spatially separated areas tend to develop where there are often no quarrying operations for several years. Local species and natural communities that can no longer find living space in the general cultural landscape, get a chance to settle here.

We promote such sites with the "Nature for a Time" concept. This involves removing areas within quarries from operational use for several years and identifying them as stepping-stone or migratory biotopes. This allows nature time for restoration and the development of biological diversity. These biotopes and environments migrate in the most literal sense of the word through the quarry over time. This has enabled us to establish environments for the yellow-bellied toad, the sand martin, rare plants such as the sarsaparilla and other species.

Dr. Markus Schauer Technical Manager Raw Materials Supply/Environmental Protection | SCHWENK

We currently have an average of 385 species of plants recorded in our quarries. This represents approximately 46% of all plant species that can occur in the respective reference region (topographic map sheet TK25), even though our quarry areas comprise less than 1% of the total area of this region. Our quarries therefore represent a hot spot of biodiversity.

Picture: Allmendingen Quarry Restoration | SCHWENK

REINTRODUCTION OF THE PARTRIDGE

Implementation of a research project with cage breeding and provision of the preferred habitat (open fields).

FALLOW DEER PROJECT

We are introducing new methods for the maintenance and development of open-land biotopes in our quarries, such as planting low-nutrient grassland. Here we are supporting fallow deer in an area of more than 100 ha.

ECOLOGICAL ACCOUNTING PROJECTS

We are supporting species diversity and the networking of biotopes with various projects such as the maintenance and development of meadow orchards and the development of flowering strips, wild meadows and hedges in neglected fields.

MONITORING THE YELLOW-BELLIED TOAD

Our quarries are preferred habitats for the yellow-bellied toad. We continuously record developing migratory biotopes to enable biotope development and quarrying operations to exist together.

RESOURCE USE AND CIRCULAR ECONOMY (1/3)

USE OF RAW MATERIALS AND FUELS

When defining the term “circular economy”, SCHWENK distinguishes between the material cycle of recycling the building materials that we have manufactured and processed and the recycling of residual material flows from other industries that we integrate into our manufacturing process. By using alternative raw materials and fuels we can integrate materials that cannot be recycled in their original material cycles into the cycle of the manufacture of building materials.

Examples of fuels
We recycle short fibres from paper recycling that can no longer be used in the paper and cardboard production cycle. They supply valuable energy. The conversion of materials to cement clinker moves them into the manufacture of building materials cycle and the subsequent recycling process. The same applies for alternative fuels such as biological sludges, animal and bone meal, old tyres, old plastic and paper and textile residues.

Examples of raw materials
Alternative raw materials include dust from metal manufacturing and processing industries, granulated slag from steel production, fly ash or synthetic gypsum (REA gypsum) from coal-fired power stations and used casting sand. Similarly to alternative fuels, these residual materials can also no longer be used in their original material cycles. Their use in the manufacture of cement and clinker transforms them into a product that gives them a “new life” in a new material cycle.

WASTE MANAGEMENT

At SCHWENK we act according to the principles of the circular economy and take responsible care of any production waste generated in our divisions. We sort the materials generated during the manufacturing process and then deliver them to certified disposal companies. The majority of the materials generated in the production process are recycled – they return to other production cycles as raw materials and are therefore used to manufacture new products.

Picture: BGS Fuel | SCHWENK

TWO CYCLES – ONE TARGET

Material cycle: Recycling of building materials that we have produced and processed

Residual material flows: Recycling residual material flows from other industries that we integrate into our manufacturing process

RESOURCE USE AND CIRCULAR ECONOMY (2/3)

Water management for cement	2022	2023	2024
Used drinking water	164 million l	139 million l	170 million l
Average specific water consumption per tonne of cement	190 l/t	198 l/t	247 l/t


Water vapour at the Allmendingen plant | SCHWENK

Water is a limited and therefore essential resource, particularly in this time of climate change. It is essential to us for combining with cement, sand and gravel to manufacture concrete. Water is also used in many other ways during the production process.

IN CEMENT MANUFACTURE

All SCHWENK cement plants have access to large quarries from which we obtain our raw materials: limestone, marl, clay and sand. We place great emphasis on protection of the water table. We regularly measure and analyse the development of the ground water situation during the excavation process. In some cases our cement plants are in water conservation areas. In these plants, all stored raw materials, auxiliary materials and operating materials must be stored so as to eliminate the possibility of water pollution, even in the event of an accident. In quarries where dewatering and therefore pumping out of water is necessary to protect against flooding, we use this wherever possible to supply our cement plants. We are increasingly using the option of decentralised seepage areas to return water from precipitation to the water table immediately after rainfall.

We not only use water in the production process but we also simultaneously release large volumes of water. This occurs while drying raw materials and fuels and also during calcination in the rotary kiln. In addition to the release of CO_2, every combustion process releases a comparable volume of water (H_2O). When you drive past a cement plant in cool weather you can see the condensed water vapour rising from the chimney. Depending on the location, 20–25 tonnes of water can be released from our chimneys every hour.

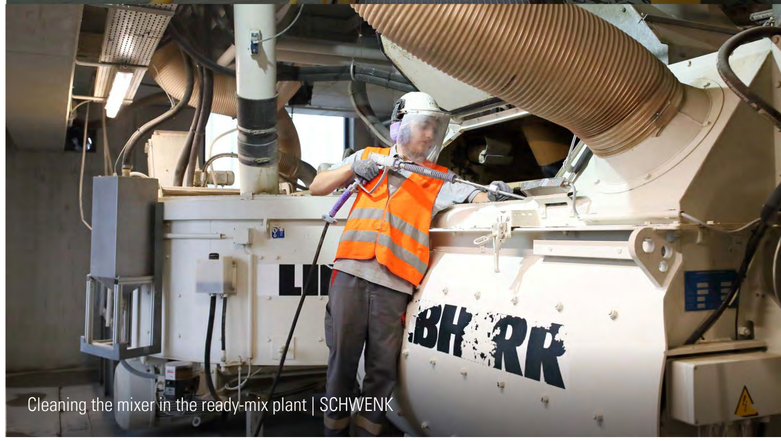
SAND AND GRAVEL EXCAVATION

Water management is just as important when excavating sand and gravel as in the operation of quarries for cement plants. We operate sandpits in the dry layers above the water table and also gravel pits below the water table. Special excavators dig the gravel directly out of the water. We take great care in the process to ensure that the machines and technology cannot pollute the water. After the excavation, natural lakes are left – and also lakes that can be used for swimming. The water available on site is used for washing gravel and it is returned to the water table after use.

MANUFACTURE OF CONCRETE

Concrete consists primarily of sand and gravel, cement and water. To manufacture a cubic meter of ready-mixed concrete, about 180 liters of water are necessary. More water is required for cleaning mixers or silo trucks after delivery of ready-mix concrete. This results in mud from washing and residual water that should be returned to the concrete manufacturing cycle as much as possible. All of our ready-mix plants are fitted with water recycling systems.


Dredger at the Borgsdorf plant | SCHWENK


Cleaning the mixer in the ready-mix plant | SCHWENK

RESOURCE USE AND CIRCULAR ECONOMY (3/3)

CIRCULAR ECONOMY IN BUILDING MATERIALS

There is a significant shortage of natural raw materials in the face of the increasing demand for raw materials. A circular economy dedicated to efficient use of resources is becoming more important for securing supplies of raw materials. The building industry in particular is forced to think and act in material cycles with the requirements for greater energy and resource efficiency. The residues of building materials left after an initial stage of use should be recycled as completely as possible. The lifecycle of a building should be considered at the stages of planning, design, erection and usage. The composition of the building materials must therefore be considered for recycling during the manufacturing process. We at SCHWENK make sure that we not only comply with material limit values at the usage stage but we also guarantee recycling as completely as possible at the end of the lifecycle. Even now the greater part of old concrete manufactured with cement is recycled for road and footpath building or for manufacturing recycled additives.

Recycling and reuse of mineral building wastes or building residues as completely as possible, including in the cement manufacturing process, is in our view becoming ever more important. When recycling old concrete, very fine particles that cannot be used directly fall out of the concrete matrix. We are working to develop options for use of this material in clinker production and also in cement grinding (RCF=recycled concrete fines and crushed stone fines). In our ready-mix plants we are working on the technical options for adding or even completely replacing natural additives with recycled additives on request. Concrete and reinforced concrete are ideally suited for recycling into building materials at the end of their useful life. We are continuously experimenting with the material and technical possibilities and applying them to practical use.

RECYCLED BUILDING MATERIALS

Concrete and mortar not only offer advantageous technical properties, they are also building materials that can, in principle, be almost completely recycled. In principle, all constituents of concrete can be considered a component of a circular economy and can be used completely in the manufacture of concrete and cement, depending on the available options and the technical effort required.

In order to show what possibilities the use of recycled aggregates opens up in the production of concrete, we have taken part in various projects. If customers request it, we therefore supply ready-mix concrete with recycled additives – interesting examples of successfully implemented construction projects can be seen. The properties of recyclable additive are in some cases different from those of natural raw materials. This must be considered and taken into account accordingly to prevent new problems arising from a seemingly reasonable solution to the original problem.

RESOURCE-SAVING CONCRETE IN USE

The regulations permit the use of resource-conserving concrete for a defined area of concrete construction, for both interior and exterior components up to strength class C30/37. The special characteristics of the recycled aggregate must be taken into account in the manufacture of the concrete in the ready-mix plant. Processing at the construction site with installation and post-installation treatment is no different from standard concrete. This means that durable and visually appealing buildings can also be created using resource-saving concrete.

Picture: Resource-saving concrete aggregate 2/16 type 2 | SCHWENK

FROM RED TO GREY

Although the colour of the recycled aggregate differs significantly from normal aggregate, you can no longer tell from the finished component which one was used.

Picture: Concrete exterior facade | SCHWENK

SOIL WASHING PLANT ACHSTETTEN

SW BAUMINERALIK

With the construction of the state-of-the-art soil washing plant in Achstetten, SCHWENK and Max Wild GmbH are jointly setting a strong example for resource conservation, recycling, and sustainable construction in the Biberach and Alb-Donau districts. The project is a prime example of innovative circular economy principles and the consistent implementation of sustainability goals in the construction industry.

PROJECT PARTNERS AND OBJECTIVES

The new plant is being built as a joint project of SW BAUMINERALIK Donau-Iller GmbH & Co. KG, a company specifically founded by SCHWENK and Max Wild. The goal is to process mineral construction waste such as excavated soil and track ballast into high-quality secondary building materials in a shift operation. The planned annual capacity is up to 250,000 tonnes, which will significantly increase the regional recycling rate and consistently expand the production of resource-efficient building materials.

TECHNICAL FEATURES AND CONSTRUCTION

Special attention is paid to sustainability right from the construction stage: The concrete used, with a strength class of C30/37, is produced with a clinker-reduced cement from the Allmendingen plant, which has over 30% lower CO_2 emissions than conventional cement. In addition, the concrete contains approximately 20% recycled aggregate. The result is a GWP value of only 147 kg CO_2-eq./m³, a reduction of 44% compared to the industry standard.

CONTRIBUTION TO THE CIRCULAR ECONOMY

With the new plant, regional recycling capacity doubles to up to 500,000 tonnes per year (together with the existing Max Wild plant in Berkheim). The processed sand and gravel fractions are returned to the economic cycle as equivalent secondary building materials and are used in concrete plants, basement walls, floor slabs, and the asphalt industry. This conserves valuable resources and reduces land use for gravel extraction by approximately 1.7 hectares per year.

SUSTAINABILITY AND INNOVATION

Processing construction waste into high-quality recycled building materials not only reduces the environmental impact but also contributes to resource conservation and achieving climate goals. The investment is in the lower double-digit millions – a clear commitment to the future viability of the construction industry. Groundbreaking took place in June 2025, and commissioning is planned for mid-2026. The new soil washing plant in Achstetten is a flagship project for sustainable construction, resource conservation, and the circular economy. It demonstrates how innovative technology, collaborative partnerships, and a consistent sustainability strategy can create real added value for the region and the entire construction industry.

Picture: Achstetten Construction Site | Blautal Construction Company GmbH

Picture: Achstetten Construction Site | Blautal Construction Company GmbH

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **PEOPLE AND ENVIRONMENT**

EMPLOYEES AND EMPLOYMENT

PEOPLE AT THE CENTRE

Highly qualified and motivated employees guarantee the success of our company. We have established a working environment that includes attractive working conditions and targeted development activities that help our employees achieve success. This forms the foundation for sustainable company development. Work safety and employee health have top priority for us as a manufacturing company.

We are proud to be a traditional family company. It is important for us to ensure a modern and safe working environment for our employees. SCHWENK as a company takes full responsibility for the protection of employees, their health and a sustainable business environment. A good employee policy for us means that we establish general conditions for our employees within which they can develop their potential and achieve top results. Appropriate remuneration and attractive benefits are as important as targeted individualised development opportunities and an atmosphere characterised by fairness and esteem.

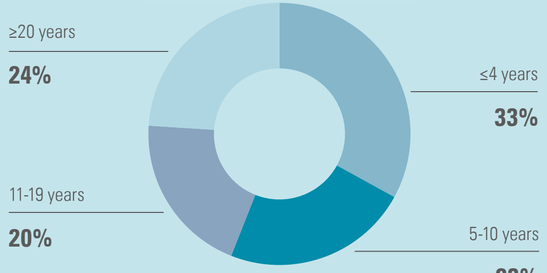
Our management principles describe fundamental and binding principles with respect to employee management. It offers our managers valuable support for their daily management tasks, such as with reference to responsible actions, the development of employees and transparent communication at an equal level. Our Code of Conduct for employees also sets out our general principles of conduct and provides guidance for our daily interactions.

EMPLOYMENT AND EMPLOYEE PARTICIPATION

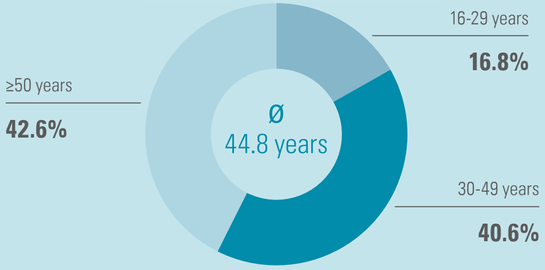
Company co-determination has been firmly established and proven in our companies over many decades. Group management, human resources and employee representatives maintain continual constructive communication. Dialogue with the union is also open and fair in the applicable contexts. As a family company we have always been socially engaged with great enthusiasm, more out of conviction than as a social requirement.

Employee Profile

Period of employment



Age



Full-time employees — **Part-time employees**

Men — **Women**

Senior executives

Non-senior executives

The SCHWENK Building Materials Group Germany employs 2,152 people. These employees are distributed across the Cement, Sand & Gravel, Concrete, Concrete Pumps, and Circular Economy divisions.

2,152 employees

WAGE POLICY AND WORKING HOURS

WAGE POLICY

Our pay policy is based on the general market standards for companies in this industry. Nearly all of our companies are subject to collective agreements and we reward the efforts of our employees with competitive wages and salaries. The amount of the company pension scheme at SCHWENK matches general market standards.

WORKING HOURS

We strictly comply to the legal requirements for regulating working hours. Our compliance guidelines (under which employees are able to report violations) support our compliance with all applicable regulations.

In order to enable flexible working hours we offer employees models such as trust-based working hours, flextime, work hour accounts, part-time and leaves of absence as well as hybrid work models. We offer some of our older employees individualised part-time contracts.

Picture: Nico Häber | SCHWENK

PERSONNEL DEVELOPMENT

Picture: Corinna König and Lara Baier | SCHWENK

Targeted and accurate personnel development measures make a major contribution to the success of our company. They promote specific competencies and the capacity for action of our employees. Personnel development is therefore a central task of our managers and at SCHWENK it is based on the following three foundation stones.

TASKS AND RESPONSIBILITY

By assigning tasks and responsibilities, for instance through project assignments, employees are developed professionally and personally in their daily work environment. With regular employee appraisals, to which every employee is entitled, we create the conditions to specifically identify our top performers and high potential and to support and further develop them using individual development plans. The systematic succession planning for all management and key positions is linked to personal development. It is a central and personnel-based risk management process and is implemented in close consultation between management and the human resources department.

COACHING

Coaching forms another foundation stone. Our managers use continuous feedback, exchange and meetings to support the development of all employees.

TRAINING

Our employees have access to internal and external training, continuing and further education courses as required. The internal promotion of young talent is an integral part of our personnel development measures. For example, in Germany there is a development program that supports young high potential workers in their personal and professional development.

TRAINING AND CONTINUING EDUCATION (1/2)

TRAINING

In addition to the activities described, vocational training at SCHWENK has always been very important in ensuring qualified young talent. In 2024, we offered a total of 16 different commercial and industrial-technical training occupations as well as two dual study programs. Overall, in 2024, we achieved a training rate of 4.2 percent in the SCHWENK Building Materials Group in Germany. We are particularly proud of the fact that, in the same year, 87 percent of our trainees were able to start their careers at SCHWENK due to passing exams and very good performance. We offer our trainers and training representatives internal and external qualification measures to further professionalise their work with young people.

In addition to the actual apprenticeship, we also offer students from schools and universities the opportunity to gain practical experience on the job in the form of internships, dissertations and factory student activities and to become acquainted with SCHWENK as a potential employer.

CONTINUING EDUCATION

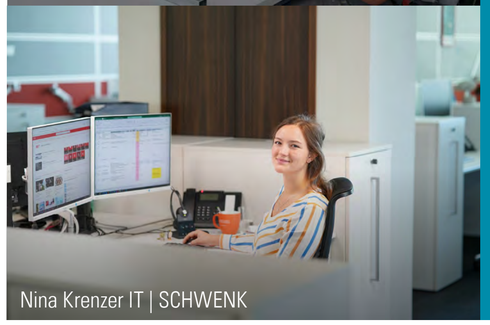
We find it very important to offer employees development opportunities precisely tailored to their requirements. When it comes to methods, we pay attention to the appropriate mix of practical and theoretical activities. We also support employees when it comes to obtaining additional qualifications associated with the duties of the position such as more comprehensive continuing education courses over an extended period. In the 2024 financial year, we extended our continuing education activities to place a central emphasis on the topic of work health and safety.

The most important factor in all of our employee development measures is that we encourage employees to reflect on what they have learnt and how to transfer it to their daily work. Appropriately designed tools and processes systematically promote this transfer and increase the sustainable effectiveness of these activities. The responsibility for all of the above is shared by the learners and their managers, whose primary duty is to oversee the personal development of their subordinates.


Hannes Rattunde, industrial mechanic | SCHWENK


Alina Urbanski, building materials tester | SCHWENK


Toni Angermann, electrician | SCHWENK


Nina Krenzer IT | SCHWENK

4.2%
Trainee ratio

18
Different commercial and industrial-technical training occupations/dual study programs

87%
Employment of trainees

TRAINING AND CONTINUING EDUCATION (2/2)

DIGITAL LEARNING

We have already had very good experience with online courses in the field of work safety. We have expanded this to the IT area and offer online training on various software solutions. We intend to expand our range of digital learning formats and content to further areas and topics in the future. Modernisation of the IT infrastructure and the expansion of cloud-based collaboration tools will also promote new virtual forms of working together.

MANAGEMENT DEVELOPMENT

We offer our managers leadership courses tailored to specific groups. We also encourage reflection on their own management role along with exchange of experience by individualised coaching and group discussions of specific cases. This helps our managers develop ideas and solutions for their everyday management problems.

Picture: Employees | SCHWENK

DIVERSITY MANAGEMENT, RECONCILING FAMILY AND CAREER

DIVERSITY MANAGEMENT

We require all managers and employees of our Group to act legally and ethically at all times. SCHWENK acknowledges the core working standards of the International Labour Organisation (ILO) and the Universal Declaration of Human Rights of the United Nations. We expect consistent compliance with these basic standards and recommendations from our employees and business partners. We promote international cooperation and exchange within our Building Materials Group for greater variety and diversity, particularly through cross-border projects.

DIVERSITY AS A SUCCESS FACTOR

We recruit and promote employees solely on the basis of their professional qualifications and experience in carrying out the respective job. We are firmly convinced that people are best motivated to work if they feel that they and their performance at work are assessed without any form of prejudice. The diversity of our people contributes to the success of our company. The different backgrounds and differences in thinking and point of view also promote additional potential creativity and innovation. This makes a valuable contribution to the design of processes and the development of solutions for our customers. What appears important to us is that we also form a common understanding of the company and a unified system of values to reconcile the difference between diversity and unity. We are proud to have people from 29 different countries employed in our company.

GENERATION MANAGEMENT

Through forward-looking and systematically updated personnel planning, we ensure that retirement-related departures and young talent developed during training and external recruitment are brought into balance and that staffing risks are avoided in a forward-looking manner. We particularly enjoy seeing how, on a day-to-day basis, our employees support and promote one another regardless of their age groups. This happens on the one hand by sharing years of extensive technical and process experience, and on the other hand by efficiently using modern technology and software and communications solutions.

COMPATIBILITY OF JOB AND FAMILY

We as a family company have always placed great importance on family values. Depending on their domestic situation, the needs of our employees can vary greatly: from building a house to family planning to the care of relatives. We support our employees by being aware of the individual situation, assessing applicable actions and developing individual solutions. Examples of how we assist can be flexible working hours and home-office regulations.

Picture: Employees | SCHWENK

COMMUNICATION

Picture: Karolina Glembotzki and Laura Bannert | SCHWENK

Targeted and dialogue-oriented communication is the core of our collaboration and specifically promotes the exchange of knowledge. A variety of online and offline communication platforms are available to tailor the sharing of information to specific target groups, to bring transparency to company processes, and to make information available at all times.

The SCHWENK One Intranet has been used as the main communication channel at SCHWENK since 2020. SCHWENK One is used for announcements of all kinds, but also as a dialog-oriented platform and for sharing documents in real time. This is complemented by the digital collaboration platform Microsoft Teams, which offers an optimal solution for fast, formal and informal exchange, even across countries. Announcements are also published at all of our locations via digital or analogue information boards, which ensure comprehensive access to the information.

Despite the increasing importance of digital channels, we see regular personal communication as an essential part of internal communication. For this reason, our digital channels are rounded off with personal formats tailored to specific target groups and topics. In our plants, for example, early morning meetings underlie daily collaboration. Regular marketplace discussions at headquarters and annual company meetings round off the communication offering and enable an open dialogue.

WORK HEALTH AND SAFETY (1/2)

Safe and healthy working conditions are an important foundation for the success of our company. This applies to our employees and to all persons who enter our facilities or could be endangered by our activities and products. Every accident means human suffering for the victims and their families. Therefore, the prevention of work-related injuries, health problems and diseases is a top priority for us. In cases of doubt, work health and safety always take priority. All employees are required to take active responsibility for work health and safety in their areas of work and to take an active part in improving health and safety at work. We promote competence and awareness of risk and the responsibility of all employees through personal training courses and e-learning activities. Furthermore, our sites were inspected as part of safety inspections and measures were derived to improve safety and occupational health and safety.

We have established management systems for safety and health at work. This provides a structured procedure for the planning and implementation of measures for the prevention of work-related accidents, occupational diseases and other health hazards related to work and for effective first aid. The provision of safe and healthy workplaces, the detection of risks and opportunities and the continuous improvement of our work and health performance are in the forefront. The health and safety of third parties is also important to us. The rules for the protection of visitors to our facilities are described in binding guidelines.

Our pump and ready-mix trucks have turning sensors and camera systems, particularly for the protection of pedestrians and cyclists on the road. We provide checklists to construction managers and our pump operators for setting up concrete pumps. They cover all aspects relevant to safety for our machines and building sites. Trained safety coaches support our pump operators on site with site inspections and inspections of the vehicle and driver's protective equipment to ensure health and safety.

Picture: Personal protective equipment | SCHWENK

Number of accidents of all employees with at least one day off work per 1,000,000 working hours.

Accident rate (LTIFR)	Cement	Sand & Gravel	Concrete	Concrete pump	Circular economy
2022	3.5	50.5	33.6	51.8	-
2023	7.5	17.7	18.0	56.1	0.0
2024	4.0	5.9	17.8	60.3	0.0

SAFE AND HEALTHY

More than 90 percent of work health and safety management systems in our German plants are certified with the "Sicher mit System" [Systematically safe] certification of the professional associations.

WORK HEALTH AND SAFETY (2/2)

OUR MISSION ZERO

Occupational safety is not a one-off project, but a continuous process that is practiced in every area of our company. Mission Zero is our central safety initiative at SCHWENK. It pursues a clear goal: zero accidents – for the safety and health of all employees. With Mission Zero, we are creating a culture of responsibility in which everyone actively contributes to identifying and avoiding risks.

Our health and safety activities cover a wide range of operational and everyday aspects and are reflected in the 14 elements of our Health & Safety Roadmap. We ensure that all employees know and apply the applicable safety standards. Through practical training and open communication, we promote hazard awareness and strengthen personal responsibility. At the same time, we continuously review our processes to make them even safer.

Mission Zero also means that we act together: Managers, teams, and partners work hand in hand to create a safe working environment. Every accident is one too many – that's why we do everything we can to minimise risks and prioritise prevention.

HEALTH MANAGEMENT

Picture: Sports course | SCHWENK

HEALTHY LIVING

Healthy and top-performing employees are a significant factor in the success of our company. Since 2013 we have bundled our actions in the field of health into a company health management system. The target of our holistic approach is to implement and promote a comprehensive and preventive health strategy. This includes areas such as improving awareness of health issues among employees and management, well-being in the workplace and reducing health risks and stress. We offer a wide range of measures, activities and programmes designed to meet the needs of our employees. We conduct regular surveys of employees to ensure continuous improvement and adjustment of our services.

TIPS

Quick and easy – Tips for everyday use on the intranet

We regularly post targeted exercises and information in the field of health on the intranet. In small learning units, employees can take part in teaching tips on how to improve their health and integrate them into everyday life. The continuous expansion of the content creates a wide range of information for everyone who is interested.

COURSES

Preventive action for physical and mental health

Some of our sites have various exercise courses for maintaining health and fitness. Employees can participate in an internal SCHWENK course during breaks or after work. The options range from endurance training to back exercises through to yoga. We also work with Jobrad, a company bike leasing plan, designed to promote healthier and environmentally friendly movement.

PREVENTION

The basis for early action

Medical prevention is an important part of maintaining health. We support participation in preventive medical examinations with local offers and as part of our bonus programme.

BONUS PROGRAMME

Collect points

The bonus programme is an important part of prevention. Employees can collect points by healthy behaviour, even at home, and convert them to prizes.

COMMUNICATION

From training to workshop

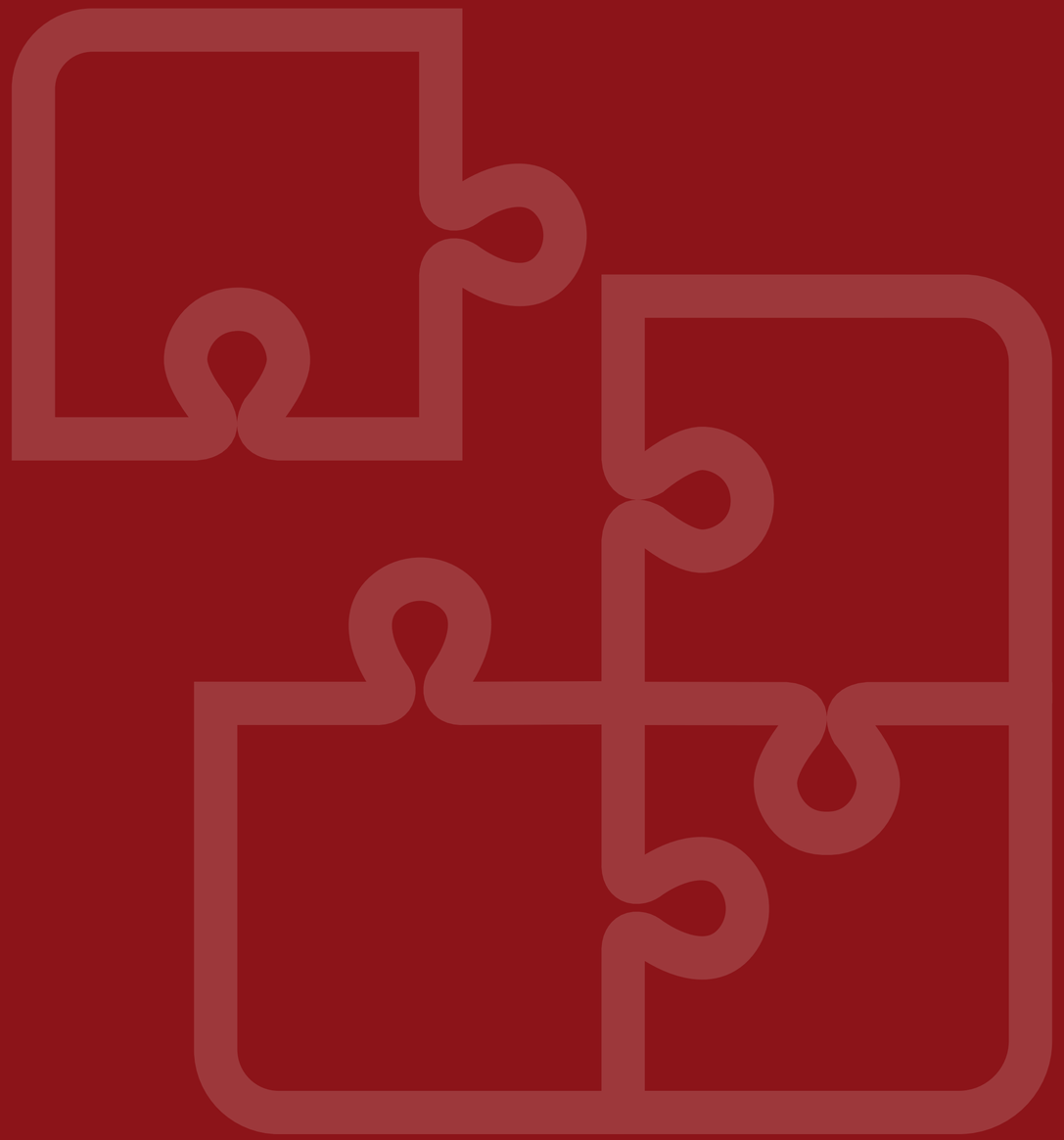
Training and workshops for our managers ensure that they can conduct communications processes, such as employee interviews, successfully. We maintain a communications culture that provides open and regular information on health topics to promote and reinforce awareness of health among employees.

RISK ASSESSMENT

Guide to our offers

The risk assessment of psychological stress is an important field of action for work health and safety and for health in particular. Specific offers in this area are derived from our regular surveys of employees.

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **SOCIETY AND ENGAGEMENT**



DONATIONS AND SPONSORSHIPS

We are represented throughout Germany with our numerous locations and companies. This supports the local economy by increasing employment, paying taxes and bringing our supply chain close to our locations. In addition to our business responsibilities we consider it our duty to participate in public life. We therefore also get involved in what is happening in the region around our locations. We all profit from open discussion, social projects and community involvement.

DONATIONS AND SPONSORSHIPS

We support selected associations and activities around our locations with our donations and sponsorships. This enables us to support regional environmental, social and cultural projects in our regions. This means that we contribute to the quality of life in the cities and communities where we work. We pass on the social responsibility that we practise in the company to our successors in the company in the earliest years of their employment. For example, some of our trainees organise a donation-supported Christmas market every year, with the income going to community projects. We have also maintained close contacts and cooperation with schools, universities and other educational establishments for many years. We take the topic of traffic safety very seriously. Our “Safety with SCHWENK” programme teaches the youngest children everything they need to know about blind spots, the dangers of road traffic and how to behave correctly on the road.

REGIONS, BUILDING AND CULTURE

One example of all that holds us together is our strong involvement in the cathedral support association of Ulm, the city where we started.

ENVIRONMENTAL AND CLIMATE PROTECTION PROJECTS

Our production process means that we are intervening in nature and the landscape – this is unfortunately unavoidable. We are fully aware of this and therefore we support special environmental and climate projects.

RESEARCH AND EDUCATION PROJECTS

Success for us is based on continuing development. We therefore also support scientific projects in the field of building materials and a wide range of education projects.

HUMANITARIAN AND SOCIAL PROJECTS

We make our decisions based on our responsibility to society. It is up to us to help those who most need help. We support them with a wide range of different projects.

SPORTING AND CULTURAL ASSOCIATIONS

We can all experience social cohesion, community and family values in sporting and cultural associations. We want to be involved to contribute to making sure that our society has continuing access to a wide range of recreation options and opportunities to play various sports.

Picture: Concrete mixer truck on Münsterplatz | SCHWENK

STAKEHOLDER RELATIONSHIPS

FOR DIALOG AND EXCHANGE

As a company we are subject to the demands and expectations of various stakeholders. Open communications and making opportunities for open exchange of views is essential for us for the detection of requirements and trends. We address questions, suggestions and concerns of various interest groups and develop solutions. When we apply for approvals required for obtaining raw materials, we involve the local population at the earliest possible stage with information events. We work together to develop concepts for extracting rock in an environmentally responsible manner. Customers have the opportunity to discuss current concerns and work actively with us to face challenges and actions at our customer events such as concrete seminars. We maintain a continuous dialogue with our employees via our organisational structure, our company meetings and the intranet. We are currently working on improving internal communications with the introduction of new technical solutions and increasing digitalisation. We want to make information available faster and more easily and reinforce cooperation.

Relationships and open dialogue with internal and external stakeholders are an important part of our culture and our daily work. Therefore, we do everything necessary to develop sustainable and open cooperation between employees, with our neighbors, the local community, industry, suppliers, municipalities and government institutions.

Picture: Allmendingen meeting room | SCHWENK

STAKEHOLDERS & HOW WE COMMUNICATE

Employees

- Regular online and offline meetings and open dialogues, company meetings
- Survey on various topics
- Activities and events (family, community, charity events, celebrations)
- Online and offline systems for expression of opinions and dialogue
- Communication systems for information and exchange – intranet, messenger services, etc.

Customers and partners

- Investigations
- System for the handling of complaints
- Quarterly events for different customer groups
- Online and offline educational events
- Events and initiatives on health and safety, sustainability, business ethics
- Social media accounts

Business sector

- Active participation in corporate governance, CSR, health and safety improvements
- Exchange of experience, education and growth

Local population

- Local development projects
- Involving the community in citizen dialogues
- Training centre for engineers, technicians and business people
- Legacy of cement production
- Volunteer work
- Social media accounts

Media

- Open and active communication and information
- Events at our sites
- Social media accounts

Trade organisations and industry

- Memberships in business and trade organisations
- Dialog on important topics for the entire sector

Legislatures, state and EU institutions

- Active participation in industry associations
- Competitiveness, sustainability activities

Communities

- Visits to the plant
- Open dialog and ongoing exchange
- Support and collaboration for municipal projects and municipal institutions

LITTLE EXPLORERS AT SCHWENK

As part of our commitment to sustainable development and social responsibility, SCHWENK hosts the annual "From Stone to Stone" Future Academy at its Mergelstetten site. With this project, we aim to raise young people's awareness of raw material extraction, cement production, and sustainable industrial processes at an early age and to provide them with practical insights into the world of work.

Eight students aged 11 to 14 have the opportunity to get to know our Mergelstetten plant during a two-day holiday course. The young people gain a comprehensive insight into key areas of the company: They visit the quarry, the laboratory, the training workshop, and the production area. The focus is particularly on the sustainable aspects of cement production – from responsible raw material extraction in the quarry and quality assurance in the laboratory to modern training programs that focus on future-proof skills. The participants can experience firsthand how sustainable practices are implemented at SCHWENK. In the quarry, they learn about the importance of using natural resources responsibly. In the laboratory, they discover how continuous testing and innovation constantly improve the quality of our products. The training workshop impressively demonstrates how we, as a company, invest in the training and development of the next generation. A special focus is also placed on presenting the training and career opportunities at SCHWENK. Through direct interaction with instructors and trainees, the young people can ask their questions and gain an authentic understanding of the diverse career fields. This not only promotes the individual development of the participants but also contributes to strengthening the region and ensuring the long-term viability of our company.

The consistently positive feedback from the participants confirms the success of the project. The enthusiasm and keen interest of the young people underscore the importance of conveying content in a practical way. With the "From Stone to Stone" Future Academy, we are making an active contribution to education for sustainable development, promoting dialogue between business and society, and investing in the future of our industry.


Picture: Holiday course | SCHWENK

Picture: Holiday course | SCHWENK

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **CONSUMERS AND CUSTOMERS**

BUILT FOR GENERATIONS

Building with concrete means thinking long-term. The earliest uses of this material have proven this. Buildings such as the Pantheon in Rome or the aqueducts have already lasted for millennia.

Picture: Waldschlösschen Bridge Dresden | SCHWENK

ADDED VALUE OF OUR BUILDING MATERIALS

Successful projects are characterised by the fact that on completion all parties involved are satisfied and the personal benefits, added value as well as the common goals have been reached. An increasingly important common goal is sustainable building. Our aim therefore is to supply building materials that meet the growing demands for climate protection, environmental protection, sustainability and resource efficiency. At the same time we must achieve added technical value – whether it is by very consistent product qualities, simple and robust handling on the construction site or physical properties that go beyond the fulfilment of minimum standards.

We as a family company are convinced that the investment and effort that we place in increased climate and environmental protection will bring significant added value to the company with its employees and their families, our customers and, viewed in the long term, also society as a whole. The building materials concrete and cement have attractive future potential due to their flexible application options and excellent properties.

Under good technical management, concrete building components and concrete structures can be used for a very long time, even under the most extreme conditions. This is a very positive factor in the ultimate overall ecological assessment that includes the complete lifecycle of building structures. Concrete is not a disposable product! Well and innovatively planned and built and maintained with high quality, concrete is a building material for all who value long-term added value above short-term success.

ENVIRONMENTAL RELEVANCE OF OUR PRODUCTS

We are surrounded every day by a wide range of products and structures that were erected with concrete and cement. We often take little notice of this building material. It has become an integral part of our environment. Its continuing success is becoming part of a global challenge: climate change. The more building material is manufactured, the greater the volume of CO_2 emissions. The CO_2 naturally contained in the limestone is released in the manufacture of cement. It forms around two thirds of the CO_2 emissions of the entire manufacturing process. The high demand results cumulatively in a significant "CO_2 footprint" and thus is highly relevant to the environment. From a global point if view it is the sheer mass of cement and concrete used every year that represents a significant factor for the climate. And the demand is increasing! The reasons for the growth are the increase in population, urbanisation and the desire for modern infrastructure with roads, bridges and residential buildings.

INCREASED EFFICIENCY AND LONGEVITY OF OUR BUILDING MATERIALS

In order to improve the CO_2 balance and increase the efficiency of resource usage, we need to do "more with less". We have already improved the performance of our building materials and are doing our best to continue our development to face the challenges of the future. Cement and concrete are ideally suited for the construction of lasting and very robust structures. The challenge is to close the associated material cycles as much as possible.

TOGETHER AS AN INDUSTRY

Our building materials serve an extremely specific market. The market demands properties of our products that we have optimised and adjusted with our customers for many decades. CO_2 balance and optimal resource efficiency as well as environmentally relevant properties and economically important characteristics must be taken into account today. The required changes, in some cases huge changes, will demand close cooperation from all involved. This will be the only way to reduce the climate relevance of our building materials in the long term.

At SCHWENK we are convinced that environmental factors are becoming increasingly important to the extent that we are expecting a future paradigm change in the entire cement and concrete industry. This is why we are continuously researching, developing and investing in keeping our manufacturing processes, products and services as sustainable as possible. Our target is to demonstrate to Europe the technical options required so we can continue to build sustainably with concrete and cement. Our ambition requires us to continually reinvent ourselves without losing our competitiveness and profitability.

Picture: NEW GOLF CLUB Neu-Ulm | SCHWENK

SUSTAINABILITY OF OUR PRODUCTS

CEMENT

Our cement is used for the production of various concrete structures, bridges, slabs, reinforced concrete and concrete paving stones, ready-made mixes and the construction of heavy-duty objects such as bridges and building foundations. We produce a variety of cement types and are working to increase the number of lower clinker factor cements to support climate goals. Raw materials, production processes and products are subject to thorough tests and controls.

At all of our German cement plant locations, we produce clinker-reduced cements with a clinker content of <60%. At the Allmendingen site, this is the CEM II/C-M (V-LL) 42.5 N. At the Mergelstetten, Karlstadt and Bernburg sites, the CEM II/C-M (S-LL) 42.5 N is produced. In practice, these cements are already largely used in the ready-mixed concrete area and classical high-rise construction. Customers value the good processing properties and, above all, the very low ecological footprint of these cements. An important contribution to sustainability and the reduction of the clinker factor.

CONCRETE

We offer our customers technical and advisory support in the more efficient use of concrete for sustainable construction. Various tests on raw materials and products are carried out regularly and upon request in our concrete laboratories. The concrete quality experts are also in close contact with committees in the cement, concrete and construction industries that deal with the development of industry standards and sustainable construction practices. Our price list includes GWP concretes.

AGGREGATES

We produce certified aggregates for road construction, agriculture and construction. Production takes place in our quarries in compliance with the recognised rules of environmentally friendly rock extraction, whereby the principles of responsible recultivation and the preservation of the diversity of flora and fauna are implemented. The additives are manufactured and monitored in accordance with the applicable standards and regulations.

Picture: Cement Laboratory | SCHWENK

PRODUCTS AND CONSULTING

With our construction consulting, we support our customers in the optimal use of our products. In addition to cement, concrete or additives, we also offer services and digital consulting in the fields of quality control, logistics and consultation. The SCHWENK technology centre (Technologiezentrum; TZ) inspects and advises plant laboratories for SCHWENK companies and also for external customers. The pending changes in the area of the reduction of the CO_2 intensity of our processes must remain in harmony with the advanced technical requirements of our customers for our products and services. This requires competent consulting and coordination. We ensure this through construction consulting, the concrete technology centre and our plant laboratories.

The increasing desire for sustainable construction can only be fulfilled as a social performance via many interfaces. From planners to architects to manufacturers of building material, from companies commissioning buildings to government regulators – all entities involved are required to complete a building project successfully both technically and sustainably. The increasing complexity is the major challenge here. Good communications and coordination, above all at an early stage, are essential to avoid an increasing number of faults, damage or an overwhelming of planners, owners and building contractors. The properties of new building materials must harmonise with the practical work on the construction. Newly defined building materials derived from the application of new technology must be securely controlled. We are trying to engage ourselves through all interfaces. Our target is a solution combining the best aspects of environmental, economic and technological factors.

Picture: Construction consultation | SCHWENK

ACHIEVING THE TARGET TOGETHER

Individual entities in construction often work together like a well-rehearsed orchestra. A new “piece” or a new challenge must be communicated properly and rehearsed in order to achieve success for all.

CSC CERTIFICATION

In Germany, SCHWENK has had gold certification for all of its cement plant locations in accordance with the CSC system standard 2.1 (CSC = Concrete Sustainability Council) since March 2020. This certification system, established worldwide, is a high-quality certification covering sustainable procurement of raw materials and the production of building materials. We are also striving for further certifications for all of our divisions and cement locations in Northern Europe and Lithuania.

It assesses and evaluates the environmental, social and economical company facets for companies in the field of cement, concrete and aggregates. The certification process has confirmed that our construction materials meet the highest claims for national and international systems for the assessment of the sustainability of buildings and structures (DNGD, LEED, BREEAM). In Germany, 30% of all buildings are already certified in accordance with such systems and the number is continuously increasing. The reason is that certified buildings have higher value and are more attractive for investors. In addition to the cement division, the first companies of our concrete division have successfully completed their certification.

Picture: SCHWENK CSC certification | SCHWENK

ONE DIVISION FOR ALL AND ALL FOR ONE:

Because the overall solution is not in individual solutions along the supply chain. Therefore, at SCHWENK all divisions work closely together to improve the sustainability of building.

Picture: Concrete laboratory | SCHWENK

RESEARCH AND DEVELOPMENT

OPTIMISATION ACROSS ALL DIVISONS

As a Building Materials Group with the Cement, Sand & Gravel, Concrete, Concrete Pumps and Circular Economy divisions, SCHWENK has a lot of experience and know-how across the entire construction value chain. We cover virtually all requirements for our building materials by our own activities in practice – from knowledge of geology and the environmentally compatible operation of our quarries, sand and gravel pits for the additives in the concrete to the manufacture and quality control of cement, the main binding agent, through to optimisation and monitoring of high-performance concrete mixes. SCHWENK is the market leader in many parts of Germany when it comes to the most demanding applications such as pumping concrete over long distances under very high pressure.

The development of new cements with even less clinker content and new properties has immediate effects on the subsequent options for application in concrete. For example, the increased use of recycled aggregates changes the requirements for classical additive materials such as sand and gravel or the usable building chemistry in the concrete. Even the processing procedures for manufacturing recycled building materials may change some important durability properties.

As a Building Materials Group, our strength lies in research into the complex interactions with all divisions working together. We work with universities, research centres, our industry associations and of course our customers to maintain a holistic view over sustainable building.

COOPERATION WITH PARTNERS AND UNIVERSITIES

A STRONG NETWORK

We have maintained and expanded a network with a wide range of partners for many years. We use the network to find out about and continue the development of the latest methods and processes – particularly in the field of CO_2 reduction. Because the construction industry is dominated by small and medium enterprises, the average expenditure on research and development is not comparable with other industries such as the automotive industry. This makes it even more important for us to work closely with reliable partners.

COOPERATION PARTNERS IN THE R&D NETWORK

R&D	MIP Polymerforschung Mainz	MPA Berlin Brandenburg	University of Stuttgart and MPA Stuttgart
EMPA Zurich	University of Augsburg	University of Weimar	University of Ulm
KIT Karlsruhe	TU Clausthal	TU Munich	Fraunhofer Institute for Silicate Research
Bergakademie Freiberg	MFPA Leipzig	TU Aachen	HBC Hochschule Biberach
BASF Construction Chemicals	FH Nuremberg	University of Erlangen	

SIX DECENTRALISED SCHWENK LABORATORIES

Our laboratories at the cement plants are competent contacts for our network.

1879

The year we started working with the Test Institute for Building Materials directed by Dr Wilhelm Michaëlis.

1894

The year we started working with the Royal Technical University in Stuttgart (today the Otto Graf Institute).

Picture: Cement Laboratory | SCHWENK

3D PRINTING

3D printing, also known as additive manufacturing, has evolved in recent years from a visionary technology to a real alternative in the construction industry. In 3D printing in construction, buildings are constructed layer by layer directly on-site from digital blueprints. This technology saves time, resources, and CO_2 emissions, and opens up entirely new architectural possibilities.

SCHWENK, together with Putzmeister (a global leader in concrete pumping and an innovation driver in 3D concrete printing) and the Rupp Group (specialising in advanced construction projects and innovative technologies), has successfully implemented three innovative 3D printing projects in building construction. At the heart of these projects is the mobile 3D concrete printer KARLOS, a fully electric and low-emission construction machine that erects massive concrete walls directly on-site – quickly, precisely, and without traditional formwork – layer by layer.

REMMELTSHOFEN CLUBHOUSE

In Remmeltshofen, a clubhouse with a footprint of 95 m² was built in 2024 – in just 29 printing hours. The KARLOS mobile 3D printer from Putzmeister was ready for use in less than an hour and printed the walls layer by layer, entirely without traditional formwork. The specially developed concrete mix from SCHWENK ensures minimal CO_2 emissions and optimal resource utilisation.

VÖHRINGEN APARTMENT BUILDING

In Vöhringen, a true pioneering project was realised in October and November 2024: Germany's first residential building constructed entirely using 3D concrete printing. For each of the two full floors, each containing two apartments, the innovative 3D printer required only 20 hours of printing time. Despite high cost pressures and an ambitious schedule, the team succeeded in implementing the project with exceptional precision and efficiency. A total of approximately 120 m³ of concrete was processed.

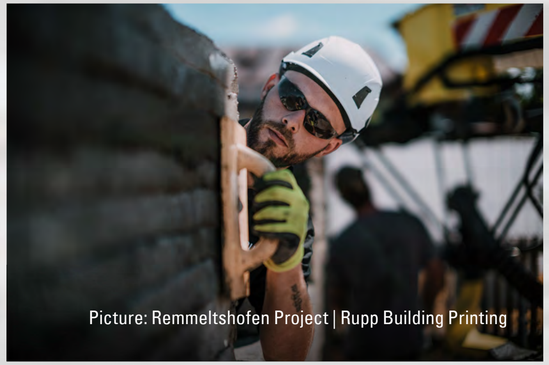
ILLERTISSEN APARTMENT BUILDING

In May and June 2025, another apartment building was constructed using 3D printing in Illertissen – a project that presented the team with particular challenges. The 3D printer had to be repositioned several times to implement the planned architecture, requiring the utmost precision and coordination. In addition, the printed walls received a special surface treatment, giving the building a unique character. A total of approximately 100 m³ of concrete was processed – another step that demonstrates how flexible and versatile 3D concrete printing can be today.

Picture: Remmeltshofen Project | Rupp Building Printing

Picture: Illertissen Project | Rupp Building Printing

Picture: Illertissen Project | Rupp Building Printing



Picture: Remmeltshofen Project | Rupp Building Printing

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **INDUSTRY AND SUPPLY CHAIN**

INVOLVEMENT IN VARIOUS ASSOCIATIONS

The principle of working together is also applicable to the associations and societies with which we are involved. In addition to memberships in industrial associations such as the Verein Deutscher Zementwerke e.V. (VDZ), the Cembureau and the Global Cement and Concrete Association (GCCA), which are actively involved in promoting sustainability in the construction industry, SCHWENK is also a member of a number of local associations involved in nature, education and culture.

SCHWENK Association Memberships

European Cement Association (CEMBUREAU)

Global Cement and Concrete Association (gcca)

German Cement Works Association (VDZ)

German Association of Building Materials, Stones and Earths (bbs)

German Ready-Mix Concrete Association (BTB)

SUPPLY CHAIN AND LOGISTICS (1/2)

MORE SUSTAINABLE PURCHASING

In all procurement processes, the implementation of optimum material economy as well as customer, team and process orientation is the guiding principle of our actions. The basic requirement is the observance of our company's compliance principles and other binding obligations, taking into account environmental protection and occupational safety, social aspects and energy efficiency. Responsible resource extraction is also a criterion when purchasing raw materials. We require our suppliers to implement appropriate measures to continuously improve the aforementioned principles. In addition, we reserve the right to terminate the business relationship with a supplier if specifications and regulations are not adhered to.

SUSTAINABLE LOGISTICS

SCHWENK focuses on the reliable, on-time and cost-efficient delivery to our customers. Even with wide fluctuations in customer demand we remain a reliable partner with deliveries almost always at the precise time promised. In addition to our strong customer orientation, sustainable logistics has always been a central component of our principals. This becomes particularly clear in the long-term and diverse relationships that we maintain with our logistics partners. Our building materials are naturally very heavy. For the sake of sustainability, we try to use barges and rail transport as much as possible for transporting raw materials and to deliver building materials. We prefer to work closely with local, generally small to medium-sized transport companies for transport by road. The emphasis on local means that in most cases drivers are able to come home at night to their families. Our way of working also strengthen regional economies.

OUR TRANSPORT FLEET

Cement

240

Sand & Gravel

9

Concrete

212

Concrete Pumps

193

SUPPLY CHAIN AND LOGISTICS (2/2)

TRANSPORT BY RAIL

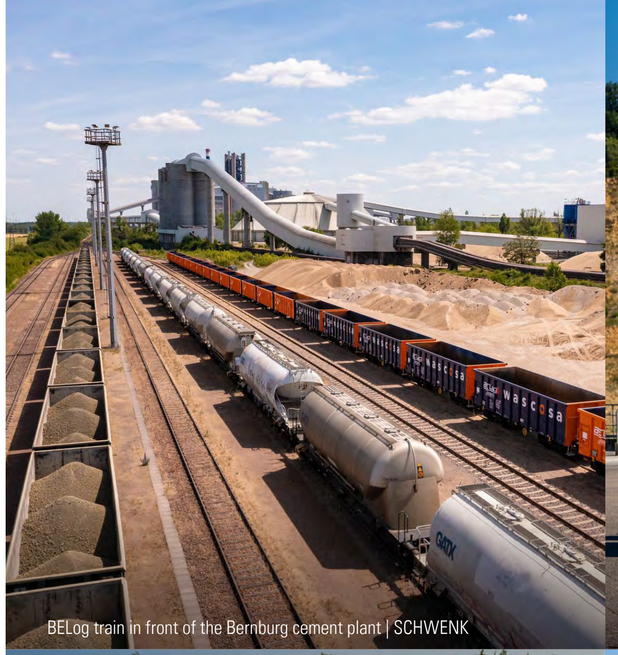
Our subsidiary BELog gives us in-house expertise in rail transport. Through continuous expansion, we want to increasingly transport goods such as sand, gravel, clinker and cement by rail in the future. Our terminal in Rostock harbour allows us to supply our terminals in Norway and Sweden. We are continuously establishing additional supply lines, including to customers with direct rail connections or connections via transhipment rail terminals.

TRANSPORT BY BARGE

Our cement plant in Karlstadt has a direct connection to the Main river. We receive important raw materials and ship cement and cement clinker by barge from this harbour. We have maintained a continuing relationship with a number of locally based, in some cases family-owned shipping companies for many years. They assist us with the supply of our customers with access to canals, even in difficult cases.

TRANSPORT BY ROAD

Our partly outsourced fleet of silo trailers, tippers, mixer trucks and concrete pumps uses almost exclusively engines that conform to the most current EURO 6 environmental standard. We are already using alternative fuels such as CNG (compressed natural gas) und LNG (liquefied natural gas) in regions with the appropriate network of fuelling stations. We are also considering vehicles using hydrogen and electric drive for short distances and very small loads. Regardless of what type of engines will be used in the future, we are planning a significant expansion of the decarbonisation of our truck fleet. We use a modern and fully integrated fleet management system that digitally assigns tasks to drivers in order to optimise our routes and processes. This has significantly improved the speed and flexibility of our logistics. Our order and dispatch receiving system is noted for its closeness to customers. By close cooperation we can avoid unnecessary travel and respond quickly to changes. Modern loading systems also assist us in reducing the transport of “air”. They ensure that cargo space is utilised to its maximum capacity without exceeding the permissible total weight. This allows us to avoid many unnecessary loads, especially on the road.


BELog train in front of the Bernburg cement plant | SCHWENK

Concrete mixer truck in the Mergelstetten quarry | SCHWENK

Cement silo train in the Mergelstetten quarry | SCHWENK

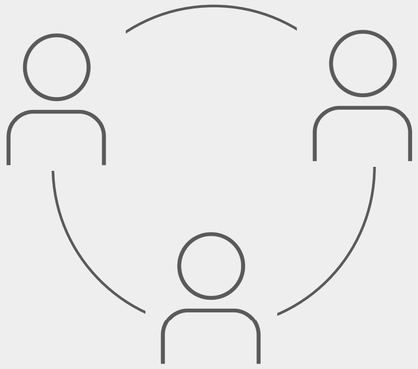

Harbour at the Karlstadt cement plant | SCHWENK

RESPONSIBLE SUPPLIER RELATIONSHIPS

SELECTION, MONITORING AND EVALUATION OF LOGISTICS PARTNERS

We base the selection of our small to medium-sized logistics partners on their sustainability. We pay attention to items such as compliance with environmental standards, safety regulations and identification with our company. We assess our selections once a year, and our partners are subjected to a transparent, fair and traceable evaluation. Achievement of the best environmental standard is an important target. So that our partners can maintain a long-term sustainable business, we decided in 2018 to reimburse the costs for the road toll extension and adjustment to the polluter pays principle (to the last kilometre) directly to our transport contractors. In order to create a further strong incentive for the most modern environmental standards, only freight forwarders who meet the Euro 6 standard benefit from these cost advantages.

Picture: Silo truck | SCHWENK



Over 700

Suppliers in 2024

SHIPPING AUTOMATION

The continuous improvement of processes is a key priority at SCHWENK. As early as 2017, the foundation for digitalisation was laid with the introduction of a modern telematics system. This enabled significantly improved communication between dispatch and drivers, as well as the introduction of the digital delivery note. Later, an ordering app followed, allowing customers to order cement and track the delivery status in real time.

In 2022, SCHWENK launched the Logistics 2.0 project to further optimise logistics processes at its plants. The focus is on replacing outdated hardware with modern terminals for loading and unloading vehicles. At the same time, the logistics processes are being comprehensively revised and digitalised. The goal is to integrate customers and suppliers even more closely into the processes, thereby achieving consistent acceleration and transparency on all sides.

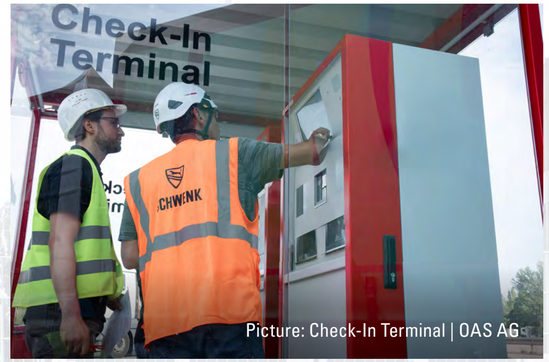
Truck turnaround times are reduced, and manual rework and paper documents are minimised. A highlight is the integrated vehicle recognition system: Registered vehicles can pass through the plant without the driver having to leave the vehicle, while unregistered vehicles can check in at self-service terminals in one of 17 languages.

In particular, standardising the different workflows at the various locations and in different countries required close cooperation and coordination. Local conditions, such as access and parking situations, also had to be individually considered and adapted.

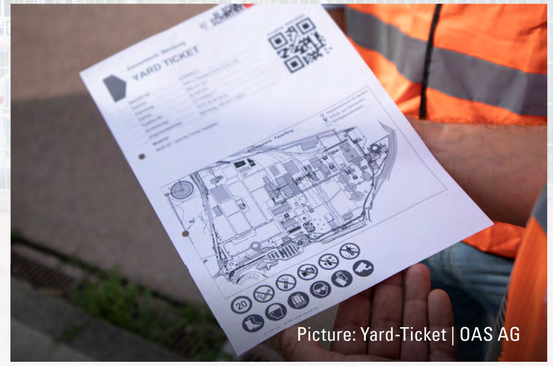
Shipping automation has already been successfully implemented at several locations. In Mergelstetten, the project was completed in July 2023, followed by Allmendingen in February 2024. Both locations deliberately carried out the conversion and test shipments on weekends to minimise disruption to ongoing operations. At the Broceni site in Latvia, shipping automation was implemented in August 2024 even while operations continued, so there were no interruptions. The Bernburg site followed in spring 2025, and Karlstadt in summer 2025.

Other sites such as Akmene, Vils, Lübeck, and Namibia are currently under review. In parallel, a separate project with the same goal and team is being carried out at the sand and gravel sites.

With Logistics 2.0, SCHWENK is setting a clear course for the future: Digitalisation, automation, and customer-oriented processes are the basis for modern, sustainable, and efficient cement logistics.



Picture: Check-In Terminal | OAS AG



Picture: Yard-Ticket | OAS AG

OUR SUSTAINABILITY CONTRIBUTION IN 2024: **GOVERNANCE**

COMPLIANCE MANAGEMENT

You can submit your questions or concerns at any time via the contact form on our website. You can report violations through our complaints procedure.

OBSERVANCE OF LEGAL AND INTERNAL CORPORATE RULES

General compliance with all legal and regulatory requirements and also internal company regulations is of central importance to us. We expect the same from our partners. The good reputation of our company is based on moral and ethical behaviour and fair competition.

Management requires both employees and suppliers not to engage in any form of corrupt practices such as extortion, fraud or bribery. The framework is provided by our Code of Conduct for Employees and our Code of Conduct for Suppliers. Detailed instructions are provided in our compliance guidelines. A key component of our compliance structure is the whistleblower system, which offers employees and external partners the opportunity to confidentially and, if desired, anonymously report potential violations.

MANAGEMENT SYSTEMS

The integrated management system as the hub

Our integrated management system (IMS) completely regulates all processes, instruments and sequences in the company. The basis for this is the “Safe with System” quality seal (occupational health and safety)., DIN EN ISO 9001 (Quality), DIN EN 197-2 (Products), DIN EN ISO 14001 (Environment), DIN EN ISO 50001 (Energy) and the monitoring specifications for the monitoring and report of CO_2 emissions. The certifications of the systems set a standard at SCHWENK. This is regularly tested, ensured and continuously improved through internal and external audits.

AUDIT AND CONSULTATION

The basis for the observance of specifications and continuous improvement

Our internal auditing departments see themselves as service providers for the SCHWENK Building Materials Group. Their objective is to support the management of the various entities to meet their specifications and targets, to increase efficiency, economy and returns and to secure the company assets. They therefore work with the organisation to achieve the targets. They apply a systematic and targeted approach to evaluate and optimise the efficiency of the auditing mechanisms and management and monitoring processes.

MANAGEMENT OF RISKS AND OPPORTUNITIES

The internal early warning system

Our risk management is based on careful consideration of corporate opportunities and risks. It is an important instrument for the early detection of factors that could lead to discrepancies. Our risk management is therefore a basic requirement for deriving and implementing preventive actions. Basically, we consider various external influencing factors when weighing opportunities and risks.

- Economic developments: Willingness to invest in the construction industry as well as economic developments and cost drivers such as energy prices
- Procurement markets and supply chains: Availability of raw materials, operating resources, energy, fuel, personnel, spare parts, etc. as well as supplier structures and logistics partners
- Legal framework: Compliance with and observance of regulations and laws as well as changing legal requirements
- Technological developments: New processes, CO_2-reduction technologies and process optimisations

TRAINING AND E-LEARNING

Implementation of the defined actions and regulations in day-to-day work life

Through regular training in combination with e-learning, our employees are always informed about all currently applicable compliance requirements. We actively support further training, and our offerings of IT-based continuing education and training courses are being consistently expanded.

APPENDIX

GENERAL

Investments

2024
57 million

Plants

Plants	2024
Cement factories	5
Sand & Gravel plants	8
Concrete plants	128

Share of total sales

	2024
Cement	54.4%
Sand & Gravel	5.4%
Concrete	35.9%
Pumps	4.3%

Sales

	2022	2023	2024
Cement	4.0 million t	3.6 million t	3.3 million t
Sand & Gravel	2.6 million t	2.3 million t	2.1 million t
Concrete	3.4 million m³	2.8 million m³	2.3 million m³
Pumps	3.3 million m³	2.8 million m³	2.2 million m³

CLIMATE PROTECTION

Climate

	2022	2023	2024
Specific net CO_2 emissions (per tonne of cementitious material)	416	417	407
Allmendingen	420	418	446
Mergelstetten	433	415	393
Karlstadt	428	443	438
Bernburg	395	399	356
Specific net CO_2 emissions (per tonne clinker)	528	534	522
Clinker/cement factor	77.5 %	77.0 %	77.5 %
Proportion of biomass	31.7 %	30.8 %	30.6 %

Raw materials

	2022	2023	2024
Proportion of natural raw materials in cement production that are replaced by alternative raw materials	14.58%	15.19%	17.36%

Emissions

	2022	2023	2024
Limit value of ammonia (NH_3) emissions in mg/m³	30	30	30
Ammonia (NH_3) emissions in mg/m³	10.5	9.8	12.2
Limit value for NOx emissions in mg/m³	200	200	200
NOx emissions in mg/m³	181.5	177.7	182.5
Limit value for dust emissions in mg/m³	10	10	10
Dust emissions in mg/m³	3.0	3.0	2.8
Limit value for mercury emissions in µg/m³	30	30	30
Mercury emissions in µg/m³	9.1	8.9	8.8

Development of fuel use

	2022	2023	2024
Development of alternative fuel consumption based on fuel energy consumption	93.4%	93.1%	95.4%

Alternative fuel mix in clinker production based on the fuel energy consumption

	2022	2023	2024
BGS	77.8%	77.7%	80.5%
Used tyres	6.1%	5.6%	5.3%
Sewage sludge	5.2%	4.7%	4.9%
Paper fibre residues	0.7%	0.5%	0.5%
Animal meal	3.7%	4.6%	4.2%
Other	0.0%	0.0%	0.0%

Alternative fuel mix in clinker production based on amount use

	2022	2023	2024
BGS	472,095	412,024	382,503
Used tyres	29,050	23,522	20,091
Sewage sludge	547,301	455,230	425,375
Paper fibre residues	23,715	17,557	15,713
Animal meal	28,032	30,938	25,252
Other	0	0	0

ENVIRONMENT

Water consumption in cement production

	2022	2023	2024
Drinking water consumed in liters	164 million l	139 million l	170 million l
Average specific water consumption l/t cement	190 l/t	198 l/t	247 l/t

LOGISTICS

Vehicles

	2024
Cement	240
Sand & Gravel	9
Concrete	212
Pumps	193
Suppliers	>700

EMPLOYEES & WORKPLACE SAFETY

Employment

	2022	2023	2024
Number of employees	2,176	2,216	2,152
Full-time employees	89.7%	89.0%	89.1%
Part-time employees	10.3%	11.0%	10.9%

Period of employment

	2022	2023	2024
≤4 years	38%	36%	33%
5–10 years	18%	20%	23%
11–19 years	19%	19%	20%
≥20 years	25%	24%	24%

Age

	2022	2023	2024
Average age	44.6	44.8	44.8
≥29 years	16.8%	17.3%	16.8%
30–49 years	40.5%	38.9%	40.6%
≥50 years	42.7%	43.8%	42.6%

Training

	2022	2023	2024
Trainee ratio	5.1%	4.9%	4.2%
Number of qualified jobs	18	18	18
Employment of trainees	91.8%	86.0%	87.4%

Occupational safety | Accident rate (LTIFR)

	2022	2023	2024
Cement	3.5	7.5	4.0
Sand & Gravel	50.5	17.7	5.9
Concrete	33.6	18.0	17.8
Pumps	51.8	56.1	60.3

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PICTURE CREDITS

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2024

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