



**SIBELCO**

ACTIVITY REPORT 2017



# MATERIAL SOLUTIONS ADVANCING LIFE

Combining materials, technology and know-how, we create solutions for society's changing needs. From materials supporting rapid **urbanisation** and society's need for **energy**, to specialist minerals that enable new **digital technologies**. From game-changing glass recycling processes helping to combat **climate change**, through to soil modifiers and filtration media that support the supply of **food** and clean **water** for a **growing population**. Like the world around us, our business is constantly evolving, as we work with our customers to explore possibilities and create new, shared opportunities.

2017

# ACTIVITY REPORT

- 05 MESSAGE FROM THE CHAIRMAN & CEO
- 07 STANISLAS EMESENS SR.
- 08 OUR BUSINESS AT A GLANCE
- 10 TACKLING CLIMATE CHANGE
- 12 OUR MARKETS
- 20 SUPPORTING AN URBAN FUTURE
- 22 INVESTING IN TOMORROW
- 26 TOWARDS OUR VISION 2020
- 32 FEEDING A GROWING POPULATION
- 34 A SAFE & HEALTHY WORKPLACE
- 36 SUSTAINABILITY
- 41 KEY FIGURES

# MESSAGE FROM THE CHAIRMAN & CEO

Let us start this message by paying tribute to Sibelco's Honorary President Stanislas Emsens Sr., who passed away in January 2018 at the age of ninety-one. Acknowledged as the father of Sibelco, it is impossible to overstate Stany's influence during 52 years of active management, in which time he led the incredible growth of Sibelco from a Belgian silica sand business to a truly international multi-mineral group. His forward-vision and dedication were an inspiration to all of us, and his wisdom and guidance will be sorely missed.

This has been a year of transformational change and significant progress for Sibelco as we made good headway in the implementation of the new strategy we defined towards the end of 2016. Working together as one global team, we achieved key milestones against each element of our vision to *be the best global material solutions company; market-driven, operationally excellent, with a compelling culture.*

The results of our efforts were reflected in an improved financial performance. Against 2016, EBITDA increased by 26% to €541m, whilst Net Cash Flow (before dividend and growth capex) was up nearly 49% to €371m. Revenue was €3.1bn compared with €2.7bn last year.



JEAN-LUC DELEERSNYDER (LEFT) & BERT DE GRAEVE

Beyond our improved financial results, the transformation of our business gathered pace throughout the year. Through an extensive strategic review of our portfolio and a detailed segmentation exercise, we gained a clear view of our global markets and identified exciting new growth opportunities. We continued to build our global innovation community to create a sharper focus on value-adding material solutions. We made great strides towards operational excellence through a Value Programme which has already generated more than a thousand initiatives worldwide and defined new, better ways of working. With our strategy in place, we began to develop and refine our organisational structure, creating new global functions and cross-regional teams. And underpinning all of this, we made further progress in embedding a compelling culture that attracts, engages and retains the best people.



## OUR TRANSITION IS FIRMLY ON TRACK

As a result, we are already seeing a much sharper focus on our markets and customers. We are seeing stronger teamwork and innovation across functions and geographic borders. And we are seeing more focused decision-making, better processes and quicker delivery of projects. We still have some way to go and more challenges ahead, but our transition is firmly on track, and we should not underestimate

our team's achievements this year in accelerating progress towards our vision.

A key milestone in the implementation of our new strategy was reached in December when we announced the forthcoming merger of Unimin Corporation (our North American business) and Fairmount Santrol, a leading US provider of high-performance silica sand. This exciting deal, which we expect to be completed by mid-2018 subject to regulatory review and customary closing conditions, will create a leading new company through which we will deliver unique value for customers in the energy and industrial markets.

Several major growth projects came on stream this year. These included the opening of our new cristobalite plant in Belgium and grinding facility in Russia, as well as the expansion of frac sand capabilities with the extension of our Oregon operation and start of construction on a new plant in West Texas. Work also began on a major project to expand our Canoitas Plant in Mexico.

2017 was not without its challenges. In June, we fell victim to the ransomware attack which affected businesses worldwide, whilst an accidental external contamination issue adversely affected our abrasives business later in the year. Our respective teams responded swiftly to these incidents.

As always, safety is our number one priority. This year we made further progress in the rollout of our Safety Starts with Me training programme with over 90% of our people having now participated in the initiative. The launch of a new set of global health & safety key performance indicators is driving consistent standards across all of our sites, whilst new communication technology is helping us to quickly share the findings of incident investigations throughout the organisation. And it was particularly encouraging to see how our safety culture is growing when thousands of colleagues

joined together in September to get actively involved in our first ever Global Safety Day. Despite these improvements, a fatal accident at our Kemaman plant in Malaysia served as a sharp and painful reminder that safety is a continuous journey. We must never be complacent.

The following pages provide a snapshot of our business today, and an overview of the significant progress we have made over the past twelve months in implementing a strategy through which we will achieve our ambitious vision.

We are in the midst of one of the most significant periods in Sibelco's history - a history that stretches back more than 145 years. During this time, we have seen some major changes, but perhaps none more significant than our current transformation. As the pace of global change intensifies, we're building a leaner, faster and more responsive business model. Thank you to all of our people for their drive and dedication, and to our customers, partners and shareholders for their trust and support.

Together, we are creating a better today and tomorrow, by truly living our purpose – material solutions advancing life.



**BERT DE GRAEVE**  
CHAIRMAN OF THE BOARD



**JEAN-LUC DELEERSNYDER**  
CHIEF EXECUTIVE OFFICER

# STANISLAS EMSENS SR.

## THE FATHER OF SIBELCO

At the start of 2018, we were saddened by the loss of our Honorary President, Baron Stanislas Emsens Sr., who passed away on the 19th January at the age of ninety-one.

Regarded as the father of Sibelco, Mr Stany led Sibelco's expansion on the global stage, dedicating his career to the company's growth into one of the world's leading providers of material solutions.

The son of Walter Emsens, Stanislas started his career with Sibelco as General Manager in 1949 at the age of twenty-three. Eleven years later he was nominated Member of the Board and Managing Director, eventually succeeding Baron Louis de Sadeleer as Chairman of the Board in 1990.

Mr Stany's leadership was instrumental in Sibelco's international growth, beginning in the 1960s with the opening of an export hub in Antwerp harbour and the incorporation of subsidiaries in Switzerland, Italy, Spain, Luxembourg, Scandinavia and Portugal. In the 1970s Sibelco entered the United States and then Australia via Unimin Corporation, whilst the next two decades saw further expansion into South America, the Netherlands, UK and Asia.

Despite the company's rapid growth, Mr Stany always maintained the values and long-term vision of Sibelco as a family enterprise, building upon the work of his predecessors in developing strong employee relations, robust health and safety standards, and a deep-rooted respect for the environment. He ensured that Sibelco's business model embraced the principles of sustainable development long before it appeared on the agenda of other businesses.

Mr Stany's dedication and entrepreneurial spirit earned him the title of Baron in 2006. His lifetime work was instrumental in creating the Sibelco of today, and in laying the foundations upon which we are building the Sibelco of tomorrow.

Until his final days, Mr Stany maintained his passion for Sibelco and our people. Sibelco was his life, and we will forever be indebted for his forward vision and the path he carved.



# OUR BUSINESS AT A GLANCE

Founded back in 1872, we've grown into a truly multinational business with operations in 43 countries and an extensive multi-mineral portfolio.

**9,500**  
PEOPLE

**26**  
TECHNICAL CENTRES

**207**  
PRODUCTION SITES

**43**  
COUNTRIES

**3.1 BN**  
REVENUE €

**541M**  
EBITDA €

**17.6%**  
EBITDA % OF REVENUE

## OUR BUSINESS AT A GLANCE

We work with customers worldwide across a broad range of industries, delivering solutions that combine high-specification materials with dedicated technical support.

## MATERIAL SOLUTIONS

We develop solutions from a broad portfolio of minerals and other materials, the majority of which we mine and process from our own reserves around the world. We offer a diverse range of high-specification products, derived from a core group of materials:



**SILICA**



**HIGH PURITY QUARTZ**



**SPECIALTY MINERALS**



**CLAYS**



**CALCIUM CARBONATE**



**FELDSPAR & NEPHELINE SYENITE**



**OLIVINE**



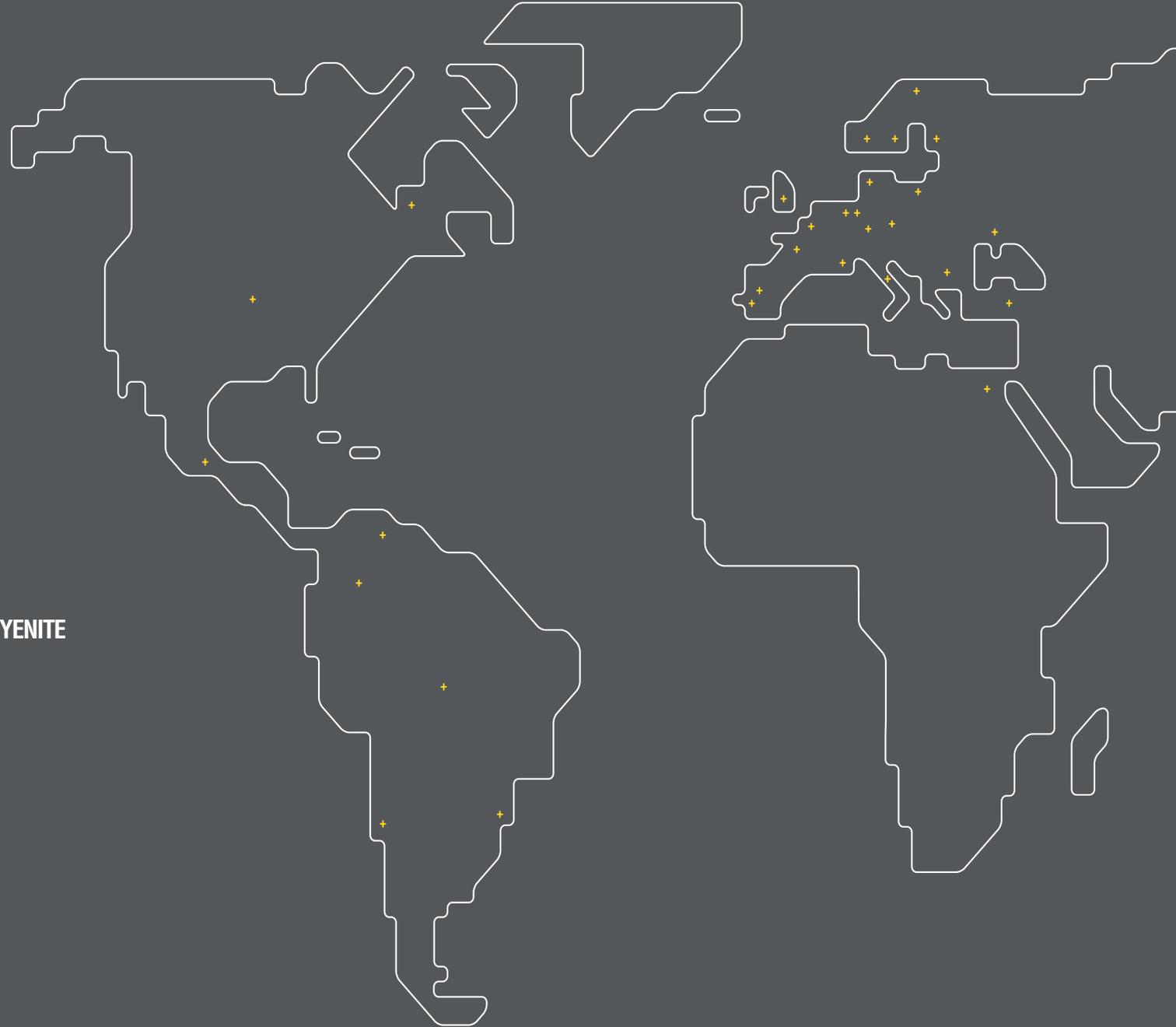
**MAGNESIA**



**MINERAL SANDS**



**RECYCLED MATERIALS**



## CASE STUDY

# TACKLING CLIMATE CHANGE

Combining our expertise in glass recycling with innovative new optical sorting technology, we're building a more sustainable future for glass packaging.

As global demand for glass bottles and jars continues to grow, glass recycling makes perfect environmental and economic sense.

Recycling means that less glass waste goes to landfill, whilst reducing the amount of primary raw materials needed to make new glass. And as it takes considerably less energy to melt recycled glass (cullet) than it takes to melt raw materials, recycling also means less CO2 emissions generated during the glass manufacturing process.

At our plant in Antwerp, Belgium, we're revolutionising glass recycling. Thanks to a combination of expertise and innovative new optical sorting technology, we're able to treat waste streams that other recyclers can't. This means that

more glass than ever before is now being recycled, helping local municipalities to streamline recycling processes and achieve new targets.

Our unique process removes metals, plastics, paper and card from the waste batch, before filtering the remaining glass by size and purity. Optical sorting technology then separates the cullet into four distinct colours. The final product is sent to our glass customers to re-enter the manufacturing process, completing a valuable closed-loop recycling process.



## CASE STUDY

# TACKLING CLIMATE CHANGE

**1**   
MILLION

Every year Sibelco sources over 1 million tonnes of waste that would otherwise go to landfill, and we transform it into 1 million tonnes of cullet

**314**T 

Each 1,000 tonnes of cullet melted saves 314 tonnes of CO<sub>2</sub>

**75%** 

EU-wide glass recycling targets for glass packaging have been set at 75% by 2025 and 85% by 2030

**8** 

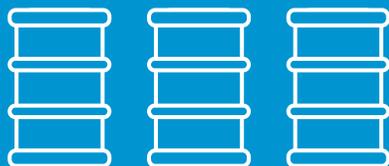
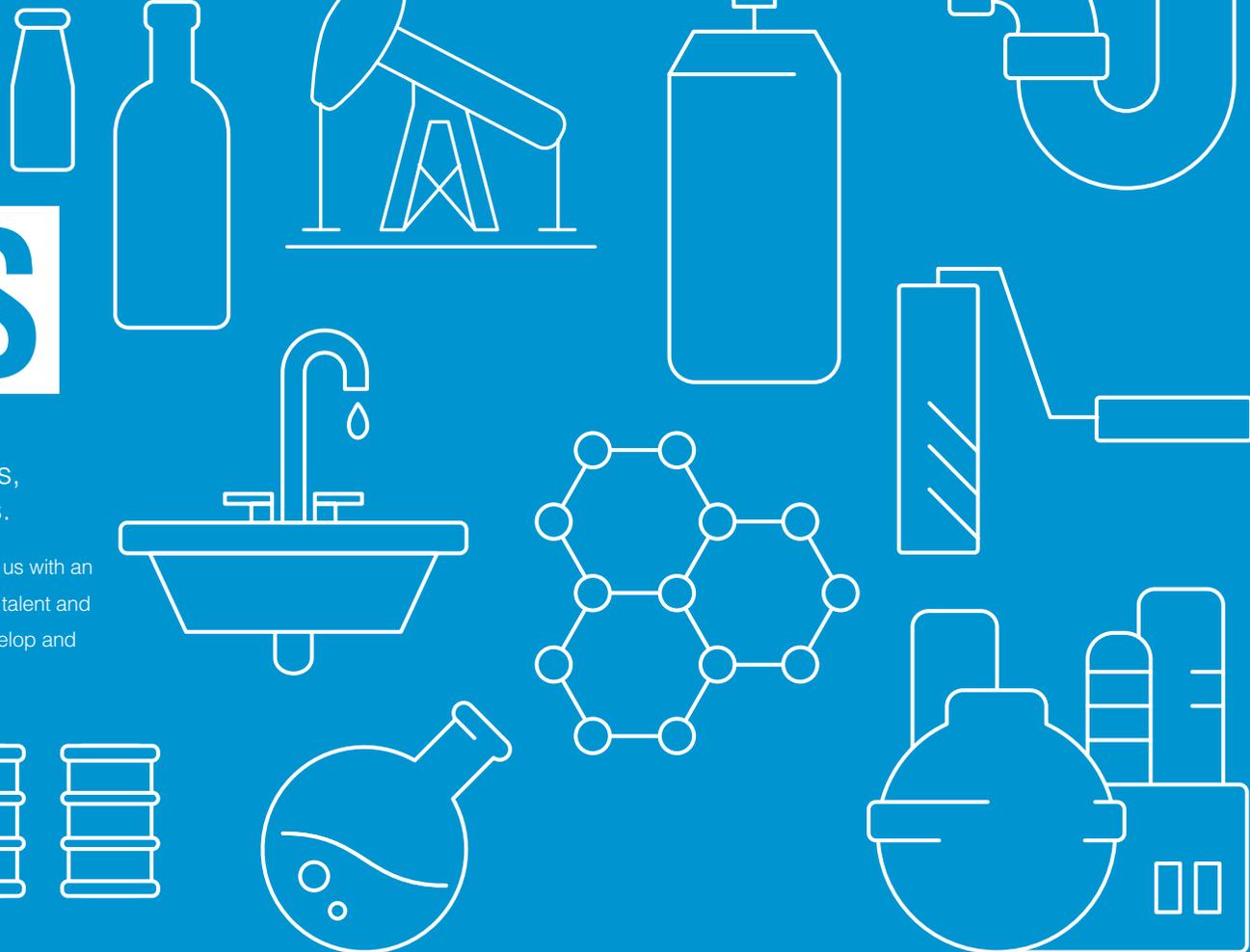
We operate 8 glass recycling plants across France, Belgium and Italy



# OUR MARKETS

We serve our markets via six Global Business Units, subdivided into eighteen specialist Business Lines.

This new, agile structure (which came into force from January 2018) provides us with an even stronger focus on our markets. It enables us to tap into a global pool of talent and resources, working together across functions and geographic borders to develop and deliver optimal solutions for our customers.





## BUILD ENVIRONMENT

REVENUE: €1BN

- FLOAT GLASS
- SANITARYWARE
- STRUCTURAL CERAMICS
- TILES & ENGOBES  
*Including Engineered Stone*
- OPTIMISED MATERIALS  
*Construction, Sports & Leisure, Renewables & Consumer Products*
- AGRICULTURE



## GLASS SOLUTIONS

REVENUE: €573M

- DISPLAY GLASS
- HIGH PURITY GLASS
- FIBERGLASS
- CONTAINER GLASS



## WATER & ENVIRONMENTAL SOLUTIONS

REVENUE: €111M

- FILTRATION
- PERFORMANCE REACTANTS



## COATINGS, POLYMERS & CHEMICAL SOLUTIONS

REVENUE: €363M

- COATINGS
- POLYMERS
- CHEMICALS



## RECYCLING & METALLURGY

REVENUE: €395M

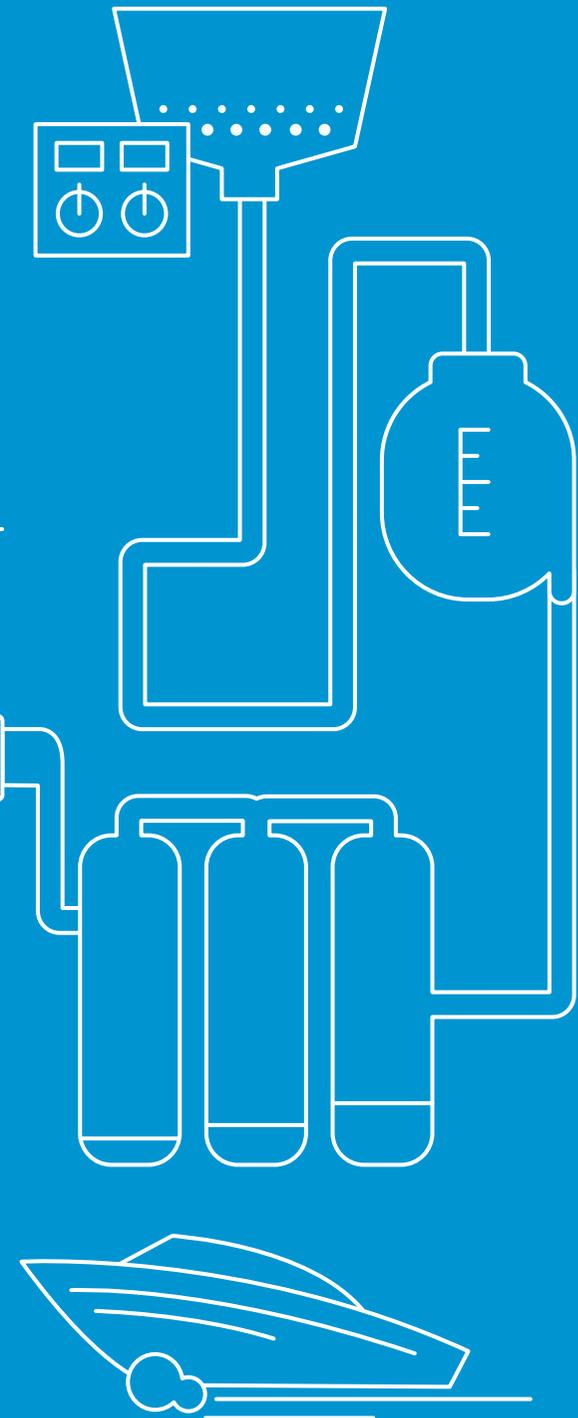
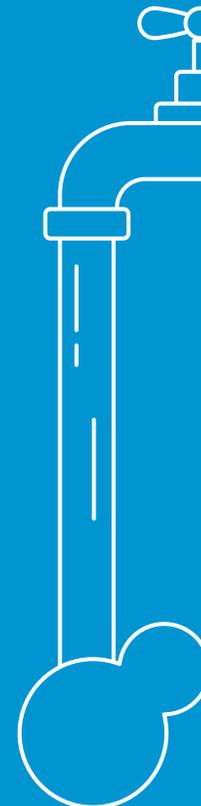
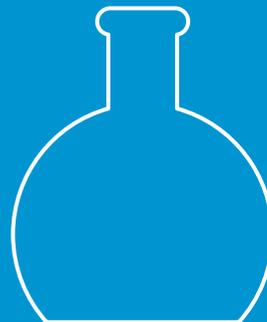
- GLASS RECYCLING
- METALLURGY  
*Including Abrasives*



## ENERGY SOLUTIONS

REVENUE: €597M

- OIL & GAS



# BUILD ENVIRONMENT

Sales in **ceramics** remained strong in 2017, boosted by an increase in demand for white-firing minerals in the fashion-led tiles sector. This meant that our feldspar and Ukrainian clay operations were at full capacity throughout the year, providing high performance materials such as Maxum®, Quantum® and Premiere® to support the market's shift to large format white tiles.

We see opportunities for additional minerals in this sector in the future, and to develop new tile and sanitaryware sales in the USA and Mexico.

It was another positive year in the **engineered stone** market. Demand for cristobalite once again outstripped supply, a situation which has been helped by the opening of our new kiln in Belgium (see page 23). In collaboration with our customers, we continue to develop new material solutions for this market, helping customers to enhance key aspects of a surface's visual appearance such as transparency, whiteness and brightness, and also to improve functional performance through increased hardness, durability and resistance to scratching and staining.

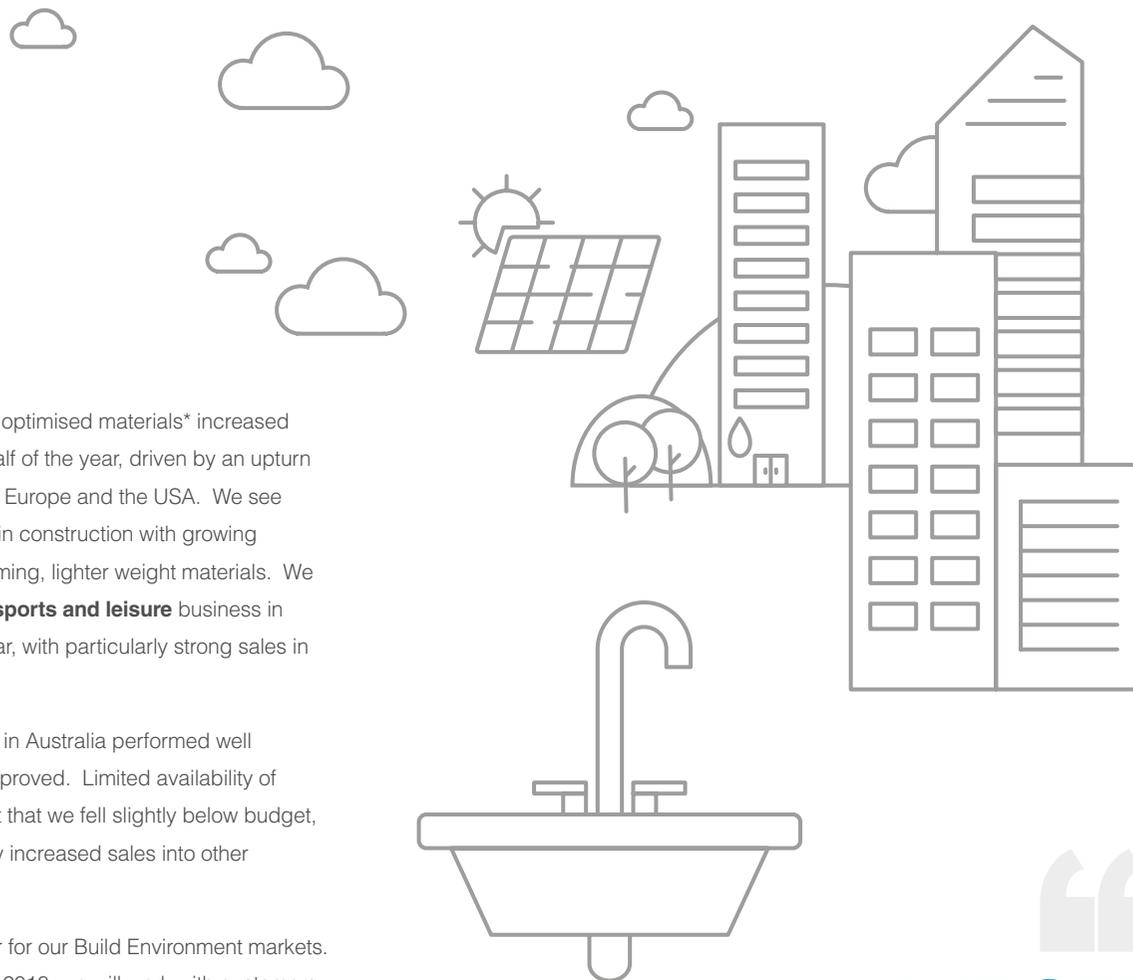
Global sales in **float glass** remained steady, with signs of modest growth in Europe towards the end of the year. We continue to maintain a competitive advantage in float glass, providing high quality, cost-effective materials at the right time via an efficient global distribution network.

After a slow start, sales in optimised materials\* increased markedly in the second half of the year, driven by an upturn in **construction** activity in Europe and the USA. We see scope for new innovation in construction with growing demand for higher performing, lighter weight materials. We continued to expand our **sports and leisure** business in Europe throughout the year, with particularly strong sales in Portugal.

In **agriculture**, the market in Australia performed well as prices for magnesia improved. Limited availability of materials in Europe meant that we fell slightly below budget, however this was offset by increased sales into other applications.

Overall, it was a solid year for our Build Environment markets. With a positive outlook for 2018, we will work with customers across all sectors to develop new opportunities for growth.

\* 'optimised materials' incorporates mineral solutions developed for markets that demand lower volumes of materials, namely construction, sports & leisure, renewables and consumer products



WE SEE  
SCOPE FOR  
NEW INNOVATION  
IN  
CONSTRUCTION

# GLASS SOLUTIONS

Our **container glass** business remained stable this year, with sales roughly in line with 2016 as any gains were offset by lost volumes due to customer plant closures and general market conditions. A new contract secured in the fourth quarter of the year saw production of Matrix® nepheline increase sharply to full capacity at our plant in Norway.

We see a number of opportunities for container glass in 2018 with key customers in France, Turkey and Mexico.

High Purity Quartz (HPQ) performed well in 2017, fuelled by growth in the **semiconductor** and **PV solar** markets. This meant that demand for solutions such as Quartzil® and Iota® outstripped product availability, however we will bring additional capacity on line in the first quarter of 2018.

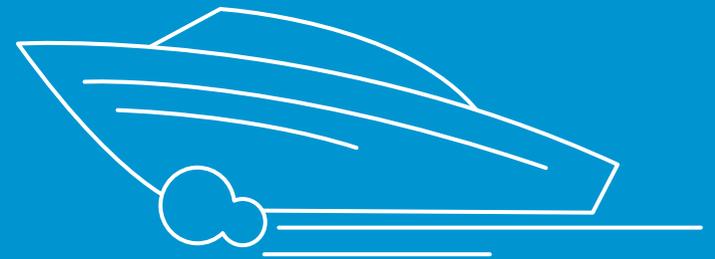
Despite growing competition, we successfully maintained market share in the semiconductor segment whilst increasing our share in the solar market. With new long-term contracts in place with all key customers, the outlook for our HPQ business remains positive and we are well-positioned for continued growth in 2018.

**Display glass** sales remained steady throughout the year. Whilst the market continues to expand geographically, a fall in the number of units shipped (mainly due to larger TV sizes) meant that any growth in demand for raw materials stayed

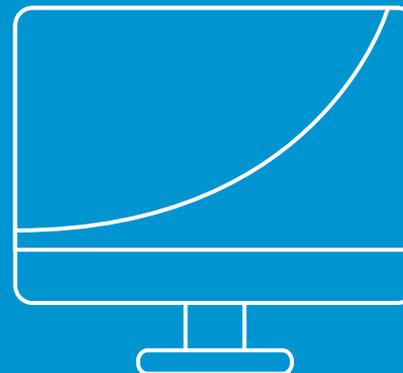
low. With display panel production increasingly shifting to China, prices for our products will remain under pressure, however the overall outlook for this market remains positive and we have a clear strategy in place.

Global sales into the **fiber & specialty glass** markets were strong, driven mainly by positive conditions in the **automotive, electronics, renewable energy** and **industrial** segments. The outlook for 2018 is positive, particularly with growing demand for our lithium-bearing petalite solutions.

Overall, our Glass Solutions Global Business Unit delivered a solid performance in 2017, despite tough market conditions. We remain focused on delivery of our strategy, working as one global team to identify opportunities and deliver new growth in the coming years.



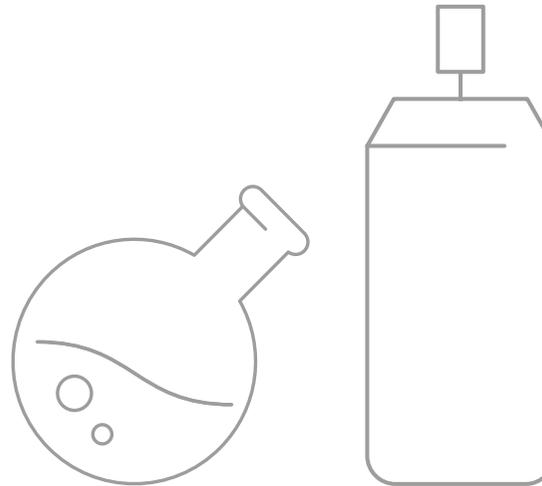
## CONTAINER GLASS REMAINED STABLE



# COATINGS, POLYMERS & CHEMICAL SOLUTIONS

Our performance in **coatings** remained solid in 2017, underpinned by worldwide sales of Minex®, Unispar® and other specialty minerals. Urbanisation continued to drive demand for paints in the architectural / decorative segment, whilst the industrial sector also performed well. The strongest growth was seen in Asia and Australia where the markets expanded by around 10%. The more mature markets of Europe and North America grew steadily in line with GDP, whilst South America remained stable.

Once again, **polymers** represented our biggest growth segment. A strong performance here was driven by demand for our Portaflame® solutions in the growing **flame retardants** market. Working as a highly effective smoke suppressant, demand for Portaflame® is expected to further increase in the coming years as fire regulations continue to extend. Our growth in the polymers market was also supported by an increase in sales of Minbloc® in the **packaging film** and **plastics** sectors.

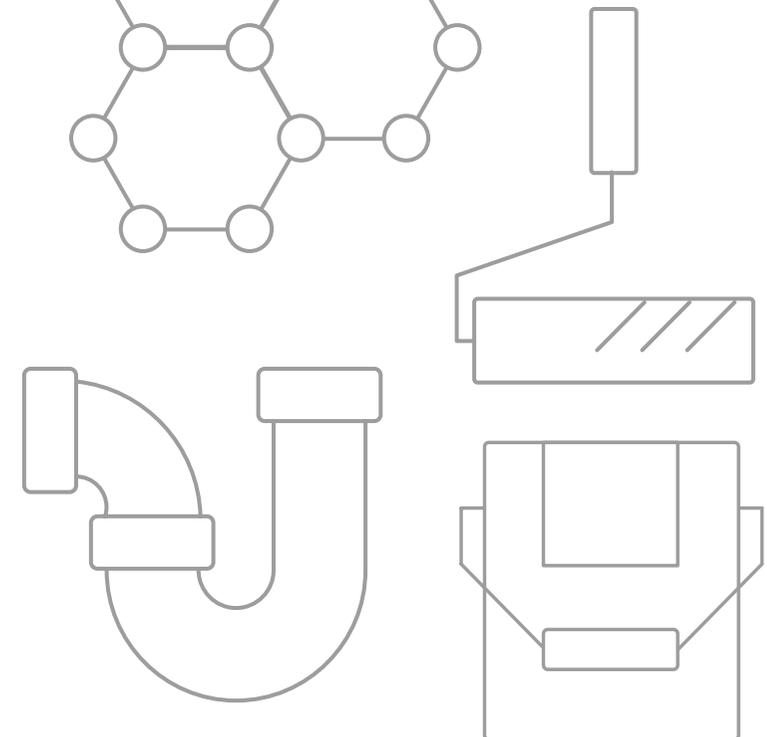
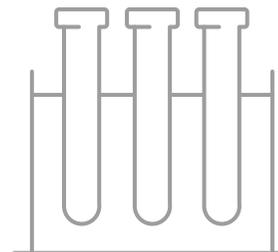
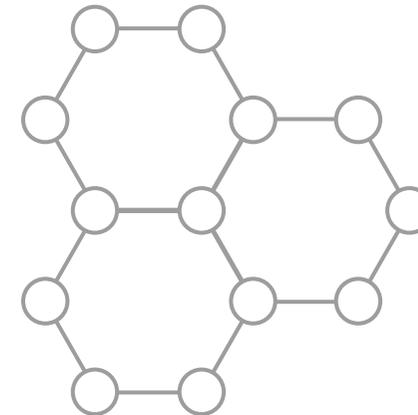


## POLYMERS REPRESENTED OUR BIGGEST GROWTH SEGMENT

To support our global strategy for both coatings and polymers, we brought several new investments on-stream during 2017 expanding our precision grinding capacity across Europe (with our new facility in Russia - see page 27), Asia, North America and South America.

Sales in the **chemicals** sector remained steady throughout the year, with strong demand for products from our specialist portfolio.

With a clear strategy for growth, we see a positive future for coatings, polymers and chemicals. We will continue to work with our customers worldwide, delivering value-added material solutions backed by the highest standards of technical support and service.



# WATER & ENVIRONMENTAL SOLUTIONS

We supply a range of specialist materials for the filtration and treatment of water, working with customers worldwide in the municipal and industrial sectors. Whilst this has traditionally been one of our smaller markets in terms of volume, a strategic review of our portfolio in 2017 identified water as a clear growth segment for the future, presenting Sibelco with a number of exciting new opportunities.

Water scarcity is one of the biggest challenges we face. It is predicted that around half of the world's population will live in water scarce areas by 2050. As well as improving efficiency and investing in infrastructure, better water treatment will be key in solving this problem.

Our focus is on clean water filtration, the treatment of wastewater, and the treatment of other liquids used in industrial processes. We are also working with customers to develop new solutions for gas treatment and other environmental challenges.

Our existing product portfolio includes calibrated silica sands for filtration, lime for pH regulation, and a number of minerals (such as activated carbon and bentonite) that work as

chemical reactants in treatment processes. Together with our technical expertise and global footprint, we are well placed to expand our offering and further develop our presence in this sector, despite strong competition.

With a clear strategy and specialist team in place, our newly-formed Water & Environmental Solutions Global Business Unit will focus on growth in 2018 and beyond, working with existing and new customers to develop material solutions that can help to meet our growing population's need for clean water.



# RECYCLING & METALLURGY

The growth of our **glass recycling** business continued in 2017. Demand for cullet increased once more, as glass customers continue to embrace the environmental and financial benefits that this unique material brings to the manufacturing process.

Importantly, we saw an increase in the amount of waste glass available from mid-year onwards. This was driven largely by an increase in beverage consumption thanks to improved economic conditions, and by local authorities expanding collection services in line with EU-wide glass recycling targets.

An exciting development in 2017 was the adoption of new technology and processes which enable us to fully recycle the plastic from car windshields. This opens up new opportunities as manufacturers can now utilise significant volumes of material that previously ended up as waste. A sharp focus on operational excellence resulted in major improvements in efficiency and increased production yields at two of our recycling plants (France and Italy). This approach will extend to other plants next year.

Our **metallurgy** business delivered a solid overall performance. In the **foundry** market, sales were particularly

strong in the automotive segment, and whilst the number of steel foundries continued to decline, those remaining performed well. We continue to maintain our leading position in foundry, with a special focus on olivine as a material solution in the production of pig iron and the sintering process.

In **steel**, we developed new business for Oliflux®, a high-grade material valued by customers worldwide for its high refractoriness and thermal properties. Sales of quicklime and limestone improved substantially against 2016. Business in **refractories** remained steady, whilst we faced a number of supply issues and increased competition in a subdued **welding** market.

In **abrasives**, the fourth quarter of the year was dominated by an accidental external contamination issue which resulted in a recall of products.



**GLASS  
CUSTOMERS  
CONTINUE TO  
EMBRACE THE  
BENEFITS OF  
CULLET**

# ENERGY SOLUTIONS

After nearly two years in the doldrums, the US energy industry performed very strongly in 2017. Oil and gas companies ramped up production throughout the year in response to the upturn in crude oil prices, driven in large part by recent OPEC quota agreements. The turnaround saw demand for proppant rise dramatically across North America to an estimated 75 million tonnes, enabling us to achieve a 65% increase in sales volumes against 2016 and maintain our position as the industry's largest supplier.

In a step designed to streamline production processes, many oil & gas producers have started to buy proppant direct from the supplier, bypassing large service companies in order to reduce costs. This represents a significant change to the traditional supply chain model, meaning that proppant suppliers are now expected to develop solutions for the 'last mile' of delivery from the terminal to the wellhead.

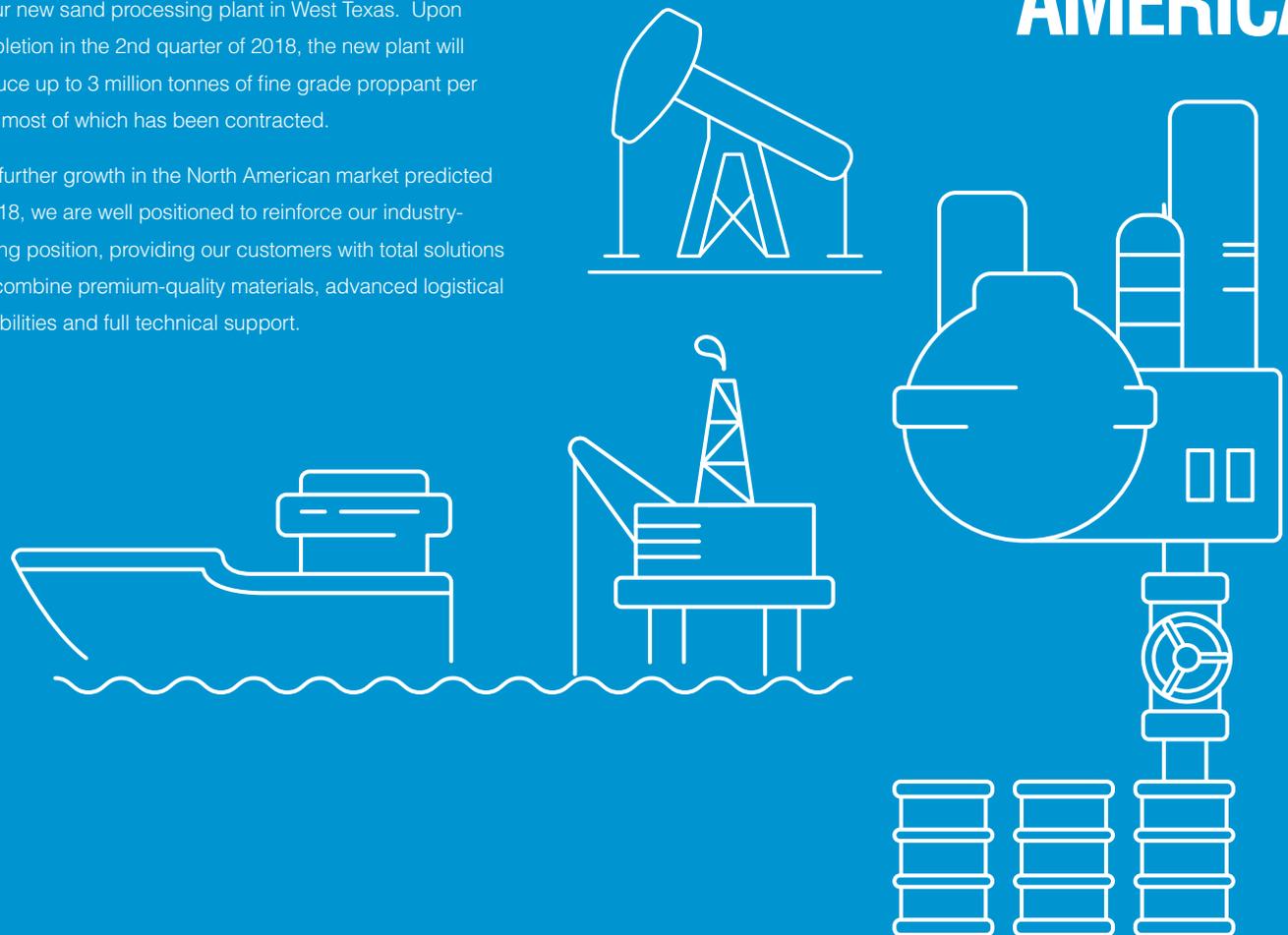
A further change in market dynamics is represented by the emergence of new sand deposits in West Texas to supply the Permian Basin. Activity from a number of new and existing players is serving to increase levels of competition and is expected to result in downward pressure on proppant prices in this shale play.

Against this backdrop, we made significant progress in the implementation of our energy strategy this year, completing an expansion of our operation in Oregon, Illinois to increase

the facility's production capacity by 80% whilst extending unit train rail capabilities. Meanwhile, construction work began on our new sand processing plant in West Texas. Upon completion in the 2nd quarter of 2018, the new plant will produce up to 3 million tonnes of fine grade proppant per year, most of which has been contracted.

With further growth in the North American market predicted in 2018, we are well positioned to reinforce our industry-leading position, providing our customers with total solutions that combine premium-quality materials, advanced logistical capabilities and full technical support.

## DEMAND FOR PROPPANT ROSE DRAMATICALLY ACROSS NORTH AMERICA



## CASE STUDY

# SUPPORTING AN URBAN FUTURE

Our corrective sands are helping to optimise the performance of concrete, the world's most widely-used construction material.

With the world's urban population growing by 1.5 million people every week, demand for sustainable construction materials is higher than ever.

The strength and versatility of concrete make it construction's most popular man-made material, and it's playing an increasingly important role in the development of more energy-efficient eco buildings.

Traditional methods for mixing concrete can give unpredictable results, caused by unavoidable gaps that occur between the ingredient materials. This leads to an unacceptable surface rippling effect when the concrete sets. We've developed a range of corrective sands to rectify this problem. These finer, high-specification sands efficiently fill

any gaps in the mix, whilst creating more touchpoints with the cement elements. The result is more consistent, stronger and smoother concrete.

Our corrective sands also mean greater control over the characteristics of the finished concrete, depending on its end use. Adjusting the porosity or shape of the corrective sands determines properties such as strength, durability, aesthetics and slump. This enables us to provide tailored solutions, working with customers on large-scale concrete construction projects, helping to optimise use of this highly versatile material.

## CASE STUDY

# SUPPORTING AN URBAN FUTURE

**66%** 

The UN predicts that by 2050, 66% of the world's population will be urban (compared to 30% in 1950)

**2.5** BILLION 

This means an additional 2.5 billion people living in urban areas

**90%** 

Nearly 90% of this increase will be concentrated in Asia and Africa

**70%** 

Cities currently account for around 70% of global GDP



# INVESTING IN TOMORROW

As a private, family-owned business, we always maintain a long-term perspective. In 2017, we made several key investments in new technology and infrastructure to support our Vision 2020 strategy.

## BELGIUM

# HIGH-TECH CRISTOBALITE

To meet growing demand from customers worldwide, in October we officially opened our third cristobalite kiln. Located in Dessel, Belgium, the new kiln utilises the latest technology to synthesise cristobalite – a white, inert polymorph of silica used in applications such as engineered stone, coatings, polymers, abrasives and silicates.

The new kiln operates to advanced levels of energy efficiency with lower emissions. This commitment to sustainability helped us to gain valuable backing from the Flemish Government, who provided support for the project via its Strategic Transformation Support programme.

A multinational team worked collaboratively to deliver the project on promise, with construction completed on time and budget with zero accidents, and in close cooperation with the local community and authorities throughout.

We were privileged to welcome a wide range of stakeholders to the official opening ceremony, providing customers with a close-up look at the new facility which will enable us to increase cristobalite production by around 70,000 tonnes per year.



**MEETING  
GROWING  
GLOBAL DEMAND**



## NORTH AMERICA

# EXPANDING FRAC SAND CAPABILITIES

A major expansion of our sand operation in Oregon was completed this year, increasing the facility's production capacity by 80% whilst extending rail capabilities.

This will enable us to meet growing demand for high-quality frac sand from energy customers working the Permian Basin in Texas, one of North America's largest oil and natural gas basins. The Oregon site also serves customers in the glass and foundry markets.

The scope of the project included the addition of four new screening machines, enlargement of stockpiles, expansion of the railyard from 100 to 314 railcars, and recruitment of over 30 new employees. The team delivered on promise with zero accidents, realising a number of significant cost savings and efficiency initiatives along the way.

The expanded Oregon plant with its new 24/7 operating model is a key investment in our overall energy strategy and vision for the future.

Work also began on our new sand processing plant in West Texas. The new facility will become fully operational in 2018 with a production capacity of around 3 million tonnes of sand per year for the oil and gas industry.

Investment in both plants (together with further expansion of our national railcar fleet to over 9,000 vehicles) represents a major step forward in our overall energy strategy and vision for the future.



# ADVANCING OUR ENERGY STRATEGY

RUSSIA

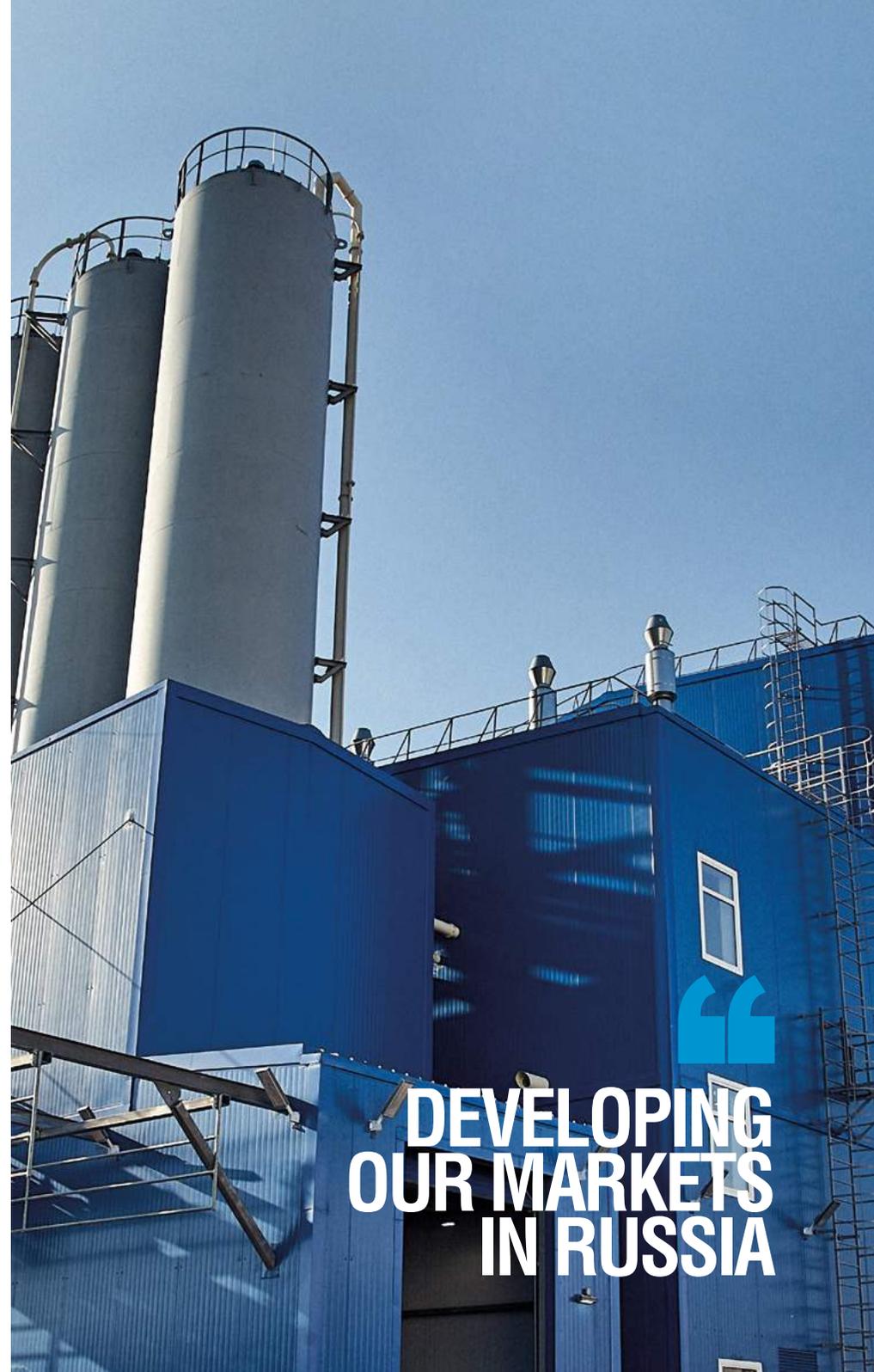
# PRECISION GRINDING

In September we opened a new advanced grinding facility at our site in Ramensky, near Moscow.

With an annual production capacity of approximately 20,000 tonnes, the facility will produce a wide range of material solutions, engineered from precision-ground aluminium hydroxide, barite or wollastonite.

These products will help us to further grow the domestic market in Russia, supporting customers in a range of industries including coatings, polymers, metallurgy and ceramics.

The project further strengthens Sibelco's position in Eastern Europe, a region in which we have steadily built our presence over the past twenty years.



“  
DEVELOPING  
OUR MARKETS  
IN RUSSIA



# TOWARDS OUR VISION 2020



## OUR VISION

TO BE THE BEST GLOBAL  
MATERIAL SOLUTIONS  
COMPANY: MARKET  
DRIVEN, OPERATIONALLY  
EXCELLENT, WITH A  
COMPELLING CULTURE.



**BEST**



**GLOBAL**



**MATERIAL  
SOLUTIONS**



**MARKET  
DRIVEN**



**OPERATIONALLY  
EXCELLENT**



**COMPELLING  
CULTURE**

In 2016 we embarked upon an exciting and challenging transformation of our business, fuelled by a determination to create shareholder value through the realisation of our Vision.

Vision 2020 signals a new chapter in our story, leveraging the capabilities that have driven our achievements so far whilst strengthening other aspects of our business as we adapt to a fast-changing environment of globalisation and new technologies.

This year we made excellent progress in the implementation and execution of our strategy, reaching key milestones against each element of our Vision.





## BEST

Our ambition goes beyond financial status and size. Starting with safety and extending in to all disciplines, we want to be the best in everything we do.



## GLOBAL

We always take a global view. We look beyond geographic and functional boundaries to build value for all stakeholders as one Sibelco.

This year we continued to develop a global structure, creating several new global functions, whilst transforming existing functions from multiple regions into single global teams.

As a result, we are already seeing better teamwork across disciplines and countries, with faster implementation of new, more efficient ways of working.



**BETTER  
TEAMWORK  
ACROSS  
DISCIPLINES AND  
COUNTRIES**



## MATERIAL SOLUTIONS

Our future growth will not be restricted to our current materials and markets. We're constantly exploring new opportunities for today and tomorrow.

Throughout the year we continued to develop our global Technology & Innovation community, which now comprises around 350 people from multiple functions. Fully-connected as one global team, we're pooling talent and sharing knowledge to develop customer-focused solutions across all applications.

This new focus is already delivering faster results. For example, a cross-regional multidisciplinary team developed a new silane-coated silica for the electrical insulation castings market in just three months. Elsewhere, our teams in North America and Asia joined forces to quickly develop an ultra-low iron sand which successfully achieved a customer's high specification in the display panel market.

We have now prioritised key projects to support our market strategies, within the framework of a clear Technology & Innovation agenda focused on short, medium and long-term objectives.



## MARKET DRIVEN

Our strategy is guided by a clear global perspective on our markets. We're making key decisions on where to play and how to win, based on detailed intelligence and insights.

This year we undertook an in-depth strategic review of our entire portfolio, enabling us to segment our markets into three distinct platforms:

### GROWTH

Entering or expanding in new markets

### PERFORMANCE

Further expansion in existing markets

### CORE

Maintain our leadership position

From this exercise, we have identified several exciting new growth opportunities, all of which represent an excellent strategic fit for our business.



CONSTANTLY  
EXPLORING  
NEW  
OPPORTUNITIES



# OPERATIONALLY EXCELLENT

Our focus on excellence is delivering significant results, both financially and in terms of overall business improvement, as we adopt a consistent approach across our operations worldwide.

Our global Value Programme covers all functions, with a special focus on four key interconnected areas:

- OPERATIONS OPTIMISATION
- COMMERCIAL EXCELLENCE
- PROCUREMENT EXCELLENCE
- SUPPLY CHAIN MANAGEMENT

The Programme is now filtering into all areas of our business, empowering people at every level of the organisation to speak up and share ideas for improvement. By the end of 2017, we had generated around 1,300 initiatives.

## OPERATIONS OPTIMISATION

Our drive for operations optimisation is focused on safety, the implementation of lean production processes and waste elimination.

Central to this is our Bright Site Programme, through which we are training our operations teams worldwide in a new, lean way of working, using a combination of classroom learning and practical hands-on development.

Bright Site has already been conducted at more than 20 plants. Local teams have generated multiple ideas which are helping to improve overall efficiency through a range of maintenance and energy solutions. The changes have led to improvements in service for our customers, as well as savings in operating costs.

## COMMERCIAL EXCELLENCE

We're placing the customer at the centre of our business with a range of commercial excellence initiatives.

In 2017, we completed an extensive exercise to segment our global base of more than 20,000 customers. This will enable us to focus more strategically on each segment, and to allocate resources to deliver a more tailored service. We also implemented a new global pricing model.

We are in the early stages of piloting and adopting the Net Promoter Score as a tool to help us accurately measure levels of customer satisfaction and target improvements where needed. At the same time, we continue to refine our global customer service model.

## PROCUREMENT EXCELLENCE

A sharper global focus on sourcing processes is helping us to identify new opportunities to increase quality and reduce costs.

An excellent example this year was the improvement in product quality and cost savings realised through our Procurement Team's focus on barites from China. A multinational project team identified a number of local issues and implemented new, stringent quality control procedures to ensure that the barites, which are shipped from China to several countries in Europe, always reach customers in top condition.

## SUPPLY CHAIN MANAGEMENT

Our global Supply Chain Management team are working across geographic borders to optimise the physical flows of products and associated information from our operations to customers, whilst maximising the use of resources.

A good example is in Europe where the sourcing and utilisation of larger vessels to ship clay from our operations in Ukraine to the ceramics markets of Spain and Italy improved product availability and service levels for our customers.



# A CONSISTENT WORLDWIDE APPROACH



# COMPELLING CULTURE

People are the driving force behind our success, and our culture is integral to our strategy. We continue to build upon our strengths to create a consistent culture that attracts, engages and retains the best people.

We made further progress throughout the year in embedding our four Key Behaviours (Build Positive Relationships, Speak Up, Explore Possibilities and Deliver on Promise) supported by learning and development programmes delivered via the Sibelco Academy. We also launched Maximise Contribution, our new global performance management system, enabling teams in the new global structure to work together effectively based on aligned goals. The system supports both organisational and individual performance, development and growth.

Our definition of a compelling culture includes a diverse and inclusive workforce. With the input of Sibelco employees across the globe, we have taken the next step on our diversity journey by finalising targets and developing a multi-year action plan through which we will create a bias-free inclusive working environment for everyone.



OUR CULTURE  
IS INTEGRAL  
TO OUR  
STRATEGY

CASE STUDY

# FEEDING A GROWING POPULATION

With food production needing to double by 2050, we're helping farmers to get the most from their land and improve crop yields.

Mineral nutrients are essential for soil health and fertility. But over time, erosion, acidification and farming combine to deplete soil of vital minerals, leading to low quality sandy soils and poorer crop yields.

Our range of mineral additives help to address this problem and keep soil in top condition, correcting soil acidity levels to restore optimum pH balance, increasing the efficiency of fertilisers, and ensuring strong plant cell walls with healthier, more resistant plants.

Soil health is vital if we are to meet the challenges faced in feeding the world's rapidly growing population. Working together with the agricultural community to apply our expertise in minerals, we're developing solutions focused firmly on the health and wellbeing of future generations.

CASE STUDY

# FEEDING A GROWING POPULATION



**35%** 

By 2050 the world's population is likely to increase by around 35 percent to 9 billion people

**200%** 

To feed that population, crop production will need to double

**33%** 

Earth has lost a third of arable land in the past 40 years as a result of soil erosion or pollution

**80%** 

In developing countries, 80% of the necessary production increase will come from increases in yields and cropping intensity, and only 20% from expansion of arable land

A large yellow Volvo truck is parked at a mining site. In the foreground, two men wearing white hard hats and high-visibility yellow jackets are engaged in a conversation. One man is pointing towards the truck. The background shows a large, reddish-brown rock face under a clear blue sky.

# A SAFE & HEALTHY WORKPLACE

The safety and wellbeing of our people is our number one priority. Through our Going for Zero programme, we continue to work together as one global team to build a culture which positively reinforces safe behaviour in everything we do.

In May we suffered a fatal accident at our Kemaman plant in Malaysia. This tragedy left us all shocked and saddened, and served as a sharp reminder that safety is a continuous journey.

We are using the lessons learned from this and every incident to drive further improvements across our organisation, creating an environment in which nobody gets hurt.

## SAFETY STARTS WITH ME

We continued the rollout of our Safety Starts with Me training programme throughout 2017, with sessions held at locations worldwide. Approximately 90% of our people have now participated in the interactive training sessions which reinforce the message that everyone is a leader when it comes to safety.

The training has been delivered at every level of the organisation and across all functions, ensuring that our health and safety footprint continuously expands. Regardless of role, our people know that safety is their personal responsibility, and that frequent and open discussion is key in addressing any issues and preventing accidents.

## GLOBAL KEY PERFORMANCE INDICATORS

This year we introduced a new set of global health and safety KPIs, helping us to create a set of common standards against which every site in every country will be measured.

Whilst still managed locally, the new global KPIs will support a consistent approach across the Group, driving continuous improvement with a clear view on each site's progress.

## ICAM GLOBAL SHARING

We use the Incident Cause Analysis Method (ICAM) to investigate incidents, accidents or near misses. The findings of the investigation are shared across the organisation, breaking down the causes of the incident with clear instructions and recommendations to prevent future occurrences.

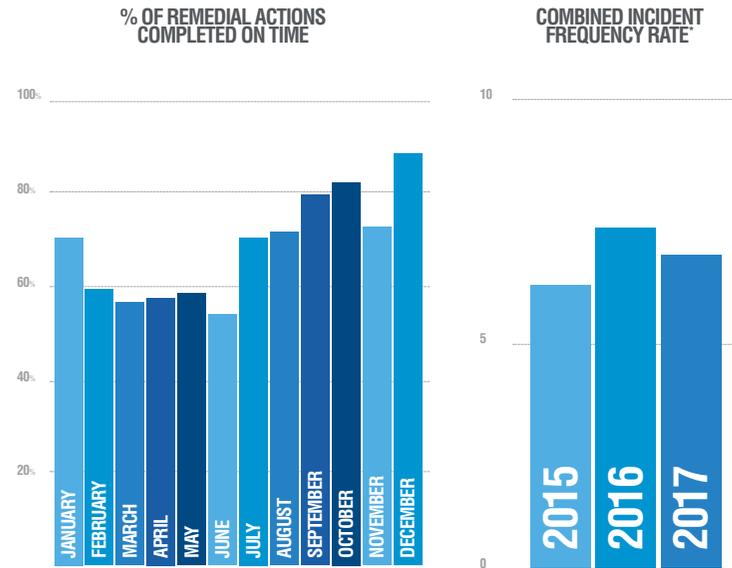
We're using communication technology to share ICAM findings globally, ensuring that our drive for safety has no geographic borders.

## SAFETY DAY 2017

In September, colleagues across the organisation came together to participate in our first global Safety Day initiative.

Events were held at our sites around the world, getting people actively involved in a diverse range of safety topics, from risk management and emergency planning through to personal wellness activities such as posture correction and meditation.

The event succeeded in raising further awareness and building engagement, thereby reinforcing our firm commitment to the continuous improvement of safety across Sibelco and a culture of zero harm.



\* CIFR is rate of lost time plus modified duty incidents



**TRAINING HAS BEEN DELIVERED AT EVERY LEVEL OF THE ORGANISATION**

# SUSTAINABILITY

From the first geological survey, through to the end of a mine's active life, we are committed to minimising any impact our business has on the environment and our neighbours.

Aside from our economic contribution, we continually strive to create a positive legacy through responsible land, property and natural resource management, and through positive community relations.

In 2017, we made good progress in building and refining our global model for sustainability, creating a framework to ensure that every site in every country achieves a common set of Sibelco standards. This approach will shortly enable us to establish

and report against key global targets, thereby providing greater clarity for our stakeholders whilst further reinforcing our commitment to a sustainable future.

The examples on the following pages represent just a small percentage of the work we undertake at our sites around the world each year.



“  
WE  
CONTINUALLY  
STRIVE TO  
CREATE A  
POSITIVE LEGACY

# SUPPORTING BIODIVERSITY

Our biodiversity strategy includes several tools that help us to manage our quarries sustainably before, during and after operations. This includes 'Capacity Building', focusing on the protection of important wildlife species that we encounter in our daily work.



## A SAFE PLACE FOR RARE BATS

In North America, a former Sibelco mine is now a safe haven for more than 45,000 endangered Indiana bats, after we donated ownership of our Tamms site in Illinois to the Organisation for Bat Conservation.

The site now offers a protected environment for the Indiana bats together with several other species, and has the potential to become an important location for scientific study into these fascinating mammals, which play such an important role in our ecosystem.



## CREATING HABITATS FOR SOLITARY BEES

Our drive to support the conservation of solitary bees across our operations earned us the 2017 European Bee Award\*. Solitary bees, unlike bumblebees or honeybees, do not live in colonies. There are more than 20,000 species of bee worldwide, and around 90% of these are solitary bees.

Conditions in our mines can attract solitary bees as they look for dry siliceous habitats on southern-facing slopes in which to make their nests. Our global bee conservation initiative is raising awareness about these creatures, whilst creating the right type of habitat for bees within our sites.



## TURTLE CONSERVATION

In Canada, we continued our support for turtle conservation with completion of another extensive nesting survey at our nepheline operations in Ontario, as part of the Wildlife Habitat Council's Wildlife at Work programme. This year we witnessed several nesting turtles and were able to recover eggs for incubation.

We also assisted the Ministry of Natural Resources and Forestry in releasing thirteen Blanding's hatchling turtles into the wild in August. We are currently investigating the possibility of incubating eggs on site as part of the 2018 survey.

\* The European Bee Award is an initiative established by the European Landowners' Organisation and the European Agricultural Machinery Association as part of a continuous commitment to promote common solutions for the benefit of biodiversity and more sustainable agricultural practices.

# RESOURCE EFFICIENCY

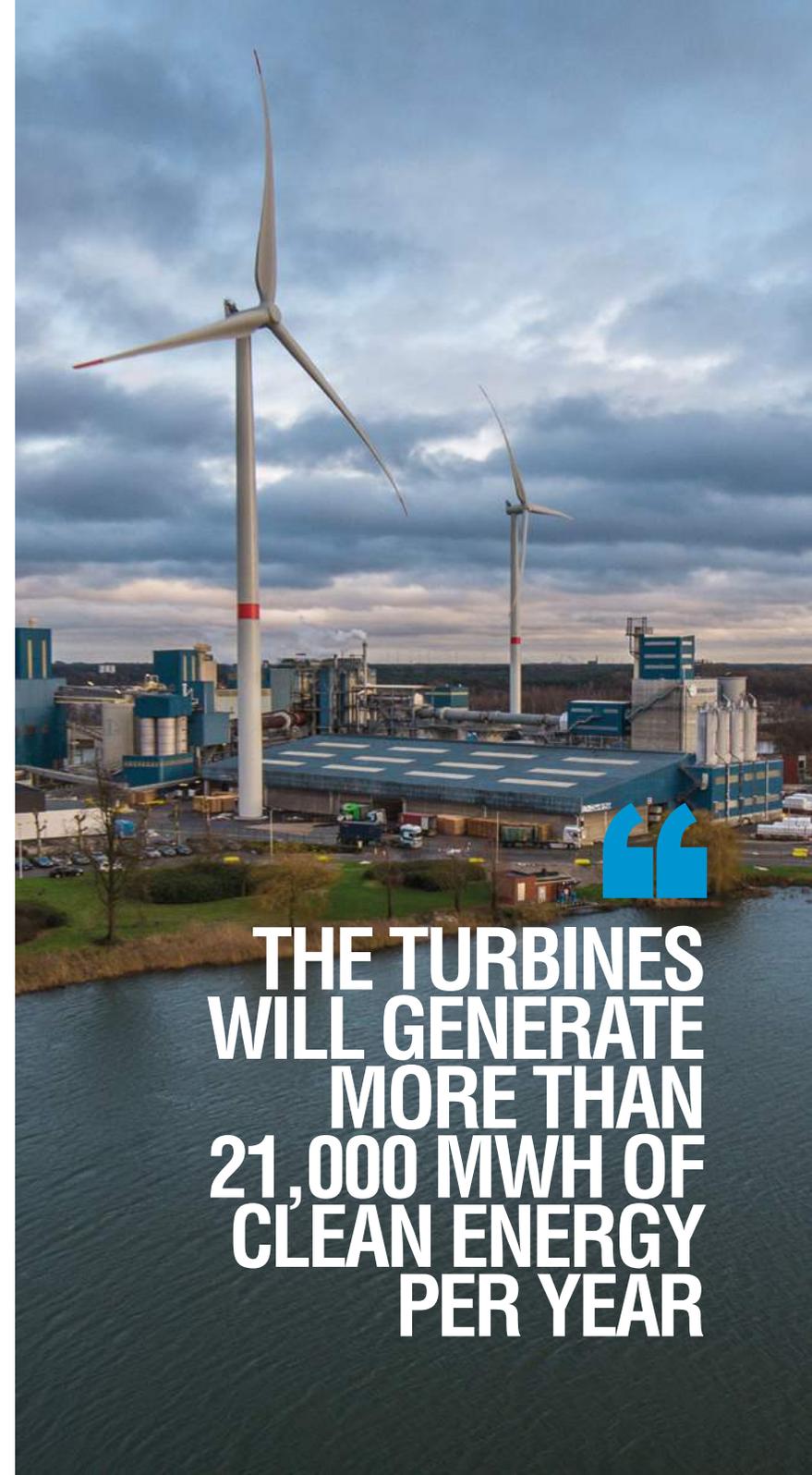
We're harnessing renewable energy technologies at more sites each year.

A trio of new wind turbines are now fully operational at our Mol/Dessel site in Belgium. Standing 150m tall, with a rotor diameter of over 100m, the turbines will generate more than 21,000 MWh of clean energy per year. The project was developed in association with energy specialists, EDF Luminus, and will significantly reduce the carbon footprint of our local operations. A second project, incorporating seven turbines at our site in Lommel, Belgium, is in the final stages of permitting.

This year we also began work on a project to install solar panels at three sites in Taiwan. This includes our Da Chai plant, where PV panels will eventually contribute around 15% of the plant's total electricity usage, whilst also reducing the need for air conditioning as the panel-covered roof helps to reduce direct sunlight on the building.

In Australia, new solar panel installations at six of our sites will cut energy usage by around 15% at each location, and reduce the six sites' combined carbon emissions by a total of 228 tonnes per year.

We are also looking at water management across the Group, exploring ways for our plants to capture and utilise water more efficiently. This includes feasibility studies into the recycling of both hazardous and non-hazardous waste.



**THE TURBINES  
WILL GENERATE  
MORE THAN  
21,000 MWH OF  
CLEAN ENERGY  
PER YEAR**

# COMMUNITY

Staff at our San José Plant in Mexico celebrated World Environment Day with a valuable community and education project, involving the reforestation of a local nature park.

Sibelco employees and their families worked alongside pupils from a nearby school to plant a range of flora across an area of more than seven acres. With the children also enjoying a special conservation seminar, the event helped to raise awareness about sustainability and demonstrated what can be achieved when businesses and communities work together.

Also in Mexico, our Jaltipan Plant team participated in a local running event, organised by the Institute of Ecology and sponsored by Sibelco. The event takes place in the Forest of Fog Sanctuary, a designated conservation area, helping to raise awareness about local and wider ecological protection.

In North America, the donation of ten truckloads of washed sand from our Camden Plant in Tennessee helped to recreate a beachfront area at a local scout camp. The new beach has given a real boost to the facility, which is used by around 2,000 boy scouts each year for a wide range of outdoor activities.

Our Camden Plant team also showed their support and appreciation for a local emergency service, donating a no longer needed Sibelco water truck to the Carroll County Fire Department. Meanwhile in Illinois, our Tamms and Elco Plants gave a welcome financial donation to the Tamms Volunteer Fire Department, an invaluable service that relies on the support of local businesses to fund new equipment and personnel training.



“  
EMPLOYEES AND  
THEIR FAMILIES  
WORKED  
ALONGSIDE  
LOCAL SCHOOL  
CHILDREN



# PEOPLE ARE THE DRIVING FORCE BEHIND OUR SUCCESS

We're proud of our global team and recognise their contribution to our success. With over 9,500 people in 43 countries, we've built a working environment which enables everyone to thrive and perform at their best across diverse cultures and roles.

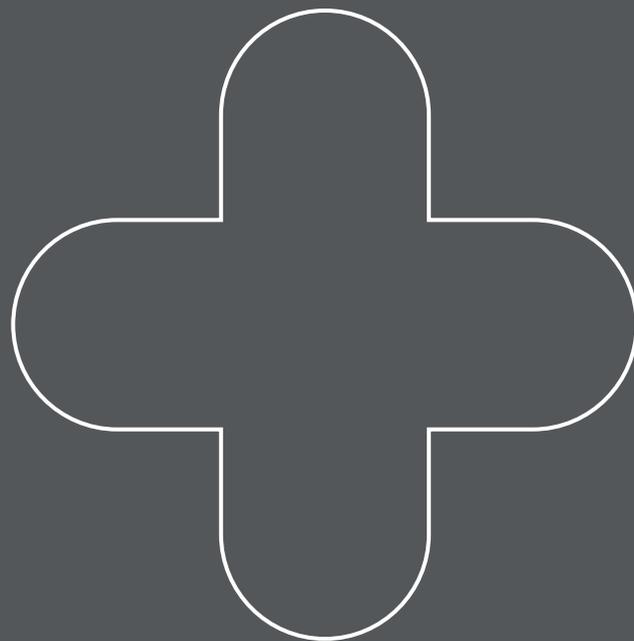
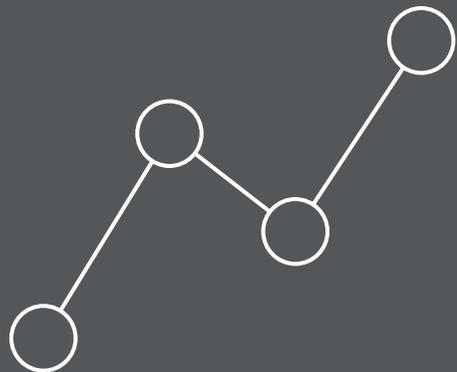
At the heart of our strategy is a culture in which we continually strive to build positive relationships, speak up, explore new possibilities and deliver on promise.





# KEY FIGURES

2013-2017





## KEY FIGURES 2013-2017

2013	2014	2015	2016	2017
------	------	------	------	------

### CONSOLIDATED RESULTS (KEUR)

	2013	2014	2015	2016	2017
Revenue	2 968 723	3 339 506	3 130 984	2 725 702	3 083 004
EBITDA	558 101	673 248	494 065	428 146	541 429
EBITDA % of Revenue	18.80%	20.16%	15.78%	15.71%	17.56%
Recurring EBIT	319 508	401 301	234 995	145 000	282 690
EBIT	284 498	388 019	(35 448)	(152 675)	157 449
Net result (share of the Group)	150 441	240 068	(83 981)	(247 189)	95 818
Recurring net result	174 956	249 551	119 663	33 075	212 544

### CASH FLOWS (KEUR)

	2013	2014	2015	2016	2017
Free operating cash flow	162 117	282 865	123 401	176 904	314 896
Recurring free operating cash flow	341 377	394 207	344 654	299 194	409 004



## KEY FIGURES

### 2013-2017

**2013**    **2014**    **2015**    **2016**    **2017**

### FUNDING at year end (KEUR)

Net debt	910 621	894 985	957 749	891 174	646 620
Net debt EBITDA ratio	1.63	1.33	1.93	2.08	1.19
Shareholder's equity	1 819 340	2 017 753	1 925 128	1 643 723	1 479 538

### DATA / SHARE (EUR)

Earnings per share	343.03	550.57	(192.85)	(567.99)	220.18
Dividend (gross)	128.00	133.33	135.53	140.51	154.56
Total shares	470 170	470 170	470 170	470 170	470 170
Own shares	31 834	34 444	34 944	34 994	34 994

Pay-out ratio excluding own shares	37.30%	24.14%	-	-	70.20%
Total Gross dividend	60 181 760	62 687 766	63 719 789	66 063 025	72 668 132
Total Gross dividend excluding own shares	56 107 008	58 095 348	58 984 004	61 146 060	67 259 559

