



# 2019 INTEGRATED REPORT

 **Votorantim**  
Cimentos  
Life is made to last



The expression “flexible solidity” captures the idea that we are a mature company that operates with excellence, ethics and integrity and, at the same time, is flexible to modernize, adapt to the new needs of society and positively impact people’s lives. Through these 10 stories about our employees, we tried to translate our diversity. This is just a small picture of our nearly 12,000 employees worldwide. There are many more stories to be told.

CARLOS  
FLORES

JOSÉ ORLANDO  
NOVELINI

DIRLANE  
MARIA  
ALBINO

KARINE DE  
CARVALHO  
LIMA

GAIL  
PASHUP

LUIS FELIPE  
CASSIMIRO

GLEYCIANE  
ALVES DA  
COSTA

MIKE  
BORTHS

INTIDHAR  
TOUMI

WEBER  
URZEDA DE  
SOUSA

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Votorantim  
Cimentos  
employees in  
the Poty Paulista  
plant, Brazil

# TRANSPARENT COMMUNICATION

**W**e have been reporting our environmental, social and governance performance annually since 2013, as part of our commitment to transparency in presenting our strategies, challenges, risks, impacts and opportunities. In this Integrated Report, we detail how we manage our most critical issues from the point of view of our business and our key stakeholders. The information covers the period between January 1 and December 31, 2019 and was assured by Bureau Veritas.

We prepared this document based on the guidelines of the International Integrated Reporting Council (IIRC), the Standards of the Global Reporting Initiative (GRI) and the Global Cement and Concrete Association (GCCA) guidelines. The GRI and GCCA performance disclosures are part of our everyday management and are aligned with the Global Compact principles and the United Nations (UN) Sustainable Development Goals (SDGs). This report has been prepared in accordance with the GRI Standards: Core option. **GRI 102-54**

The financial information is presented in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and follows the interpretations of the International Financial Reporting Interpretations Committee (IFRIC). We also follow the guidelines issued by the Brazilian Accounting Pronouncements Committee (CPC). The data includes the companies that are consolidated in our results and can be found on page 14. Information relating to Argentina, where we do not have control of operations, is consolidated in the financial statements as equity income and does not include social and environmental disclosures. **GRI 102-45**

Environmental, social and governance information was gathered internally according to corporate procedures and environmental and quality standards and certifications.

## INTERACTIVE CONTENT

### DISCLAIMER

The 2020 projections and expectations described in this Report do not consider the impacts, still unpredictable, of the Covid-19 pandemic



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# MATERIALITY

The identification of the most relevant topics for managing our sustainability is the result of a consultation process carried out between 2018 and 2019 by external consultative, following GRI standards.

The process included phases of identification, prioritization, analysis, consolidation and validation, including reviews of internal and industry documents; personal interviews with the Company's senior management; and face-to-face, telephone and e-mail interviews with stakeholder representatives (investors, communities, customers, consumers, financial institutions, suppliers and NGOs). It also included an online survey with employees and external stakeholders in all regions where we operate (Brazil, North America, South America and Europe/Asia/Africa). In all, 263 people were surveyed (164 employees and 99 external stakeholders).

The results were consolidated and validated by Votorantim Cimentos senior management and identified the following major themes: Healthy and safe working conditions; Customer relations and satisfaction; Research and innovation; Human capital development; Business ethics and integrity; Climate change and greenhouse gases (GHG) reductions; and Regulation and compliance. An eighth theme—Impact in the regions where we

Rio Branco do Sul cement plant, Brazil

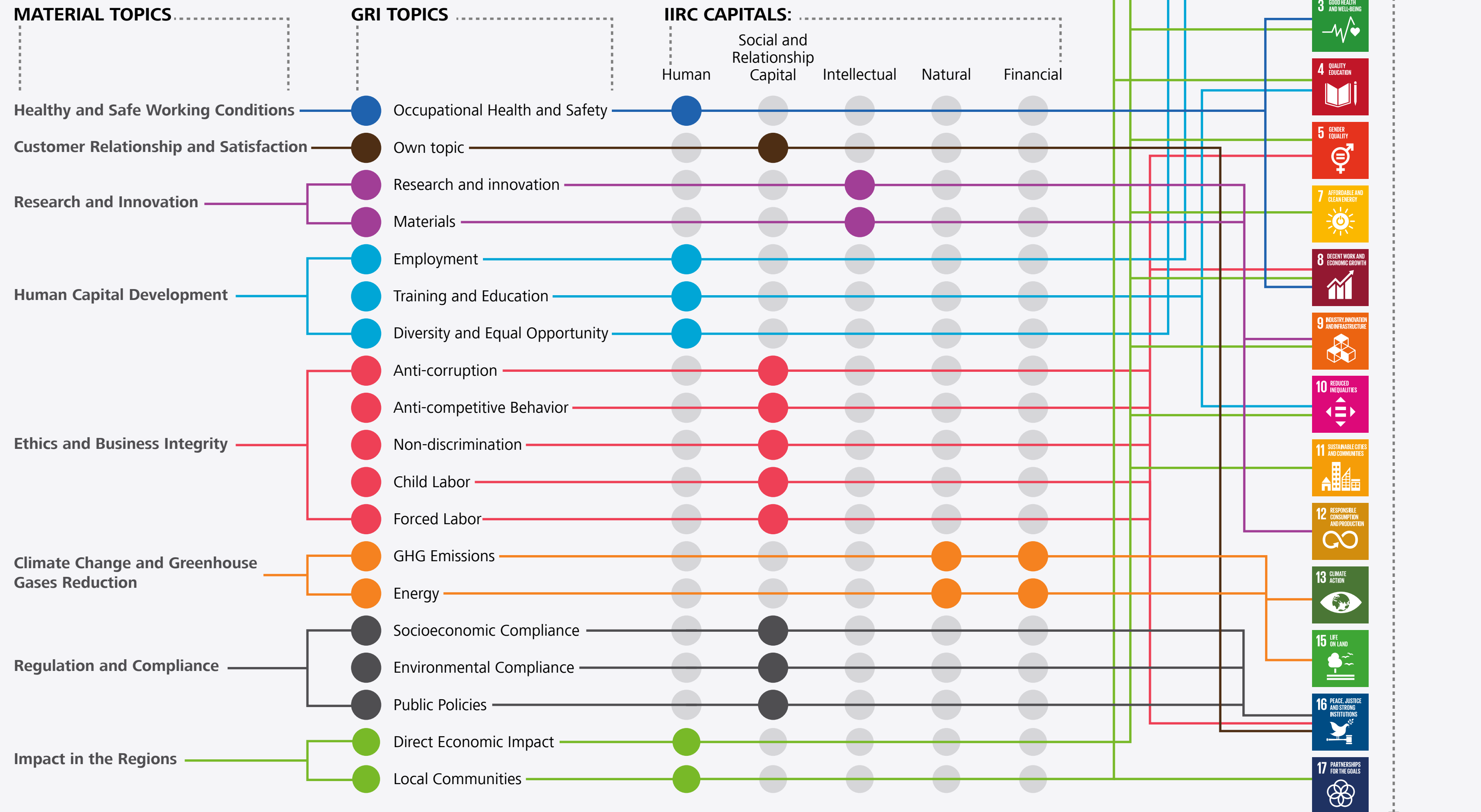
operate—had a borderline result and, based on an internal analysis considering the importance to stakeholders, was included among the material topics.

An additional eight themes were not prioritized at this time. They are: Waste management; Community relations; Economic performance; Supply chain management; Energy management; Equity in labor relations; Preservation of biodiversity; Reduction of particulate emissions, NOx and SOx; and Water resources management. **GRI 102-46**

## ALIGNMENT WITH THE SDGs

The material topics we identified were aligned with the Sustainable Development Goals (SDGs), a global agenda adopted in 2015 by members of the United Nations (UN) that lists 17 goals and 169 targets to be achieved by 2030. We will contribute to achieving the SDGs by using our assets in creating value for society, as well as by exercising good corporate citizenship. Integrating the SDGs into our activities is a strategic approach we view as necessary toward ensuring the future success of our business.

# MATERIAL TOPICS OF HIGH RELEVANCE TO VOTORANTIM CIMENTOS **GRI 102-47**



# SOLIDIFYING THE FUTURE

GRI 102-14

In alignment with our Purpose, “Life is made to last,” in 2019 we worked to solidify innovative and sustainable products and services, aiming to maximize value creation, through the enhancement of our governance and our compliance program. As a result of a R\$ 2 billion contribution made at the beginning of the year by our shareholder, Votorantim S.A. (VSA), and through financial liability management transactions, we restructured our debt profile by extending maturity and reducing costs while also reducing the Company’s gross debt. With the reduction in leverage, we recovered the investment grade rating granted by Standard & Poors and received an upgrade by Moody’s to one notch below investment grade.



Votorantim Cimentos’ Board of Directors: (left to right, back row) Alexandre Gonçalves Silva, Luis Antonio dos Santos Pretti, Johann Markus Akermann, (left to right, seated) José Roberto Ermírio de Moraes, Francisco de Sá Neto, Fábio Ermírio de Moraes, João Carvalho de Miranda

In August 2019, we contracted a new Facility with Sustainability Linked Loan (SLL) provisions in the amount of US\$ 290 million, with maturity in 2024. This is one of the first SLLs issued in the cement industry and is aligned with the Company's sustainability commitments and strategy. In 2020, we will publish our 2030 Commitments, which will include specific targets for the decarbonization of our production process.

Thanks to our strategic position, solidity, financial discipline and sustainable performance, we can strengthen our role as industry leaders. In 2019, we announced the expansion of the Pecém unit in Ceará, in which, in 2020, we will allocate R\$ 200 million to increase our cement grinding capacity by 800,000 tons/year. We also completed new lines of aglime, in Nobres, and mortar, in Cuiabá, both in the state of Mato Grosso, and acquired a mortar unit in the region of Belém, in the state of Pará. In North America, we purchased United Materials (concrete and aggregates) in Buffalo, western New York, expanding our presence in the Great Lakes region. In terms of divestments, in April we concluded the sale of Shree Digvijay Cement Company, in India, to increase our focus on more strategic markets.

We improved our corporate governance by creating an integrated department of Governance, Risks, Compliance and Global Audit, which reports

directly to the Audit Committee of the Board of Directors. This structure further strengthens processes that are vital to the management of a global company like Votorantim Cimentos, which is committed to highest levels of governance, risk management and compliance

In a world where uncertainty and volatility have become the new normal, the strategy of geographic and product diversification has proven to be sound. In 2019, we faced severe economic crises in Argentina and Turkey, a complex political scenario in Bolivia and lower demand in Uruguay, as well as another year of lower-than-expected growth in Brazil. Nevertheless, our results in North America, Morocco, Spain and Tunisia allow us to maintain our projections that 2020 will be even better for Votorantim Cimentos.

We have always believed in the strength of people (employees, third party contractors, suppliers, partners and customers/consumers). With this in mind, we made two significant changes. One involves one of our strategic pillars: now, in addition to focusing on the customer, we will join the customer to focus on their needs, to make it even clearer that we want to view the business from their perspective.

We are increasingly aware of the macrotrends of the business world: demographic changes

*“In a world where uncertainty and volatility have become the new normal, the strategy of product and geographic diversification has proven to be sound.”*



coupled with growing urbanization, climate changes that pose a major challenge to the economy and underscore the scarcity of natural resources, the need to focus on innovation and new technologies, and increasing pressure for larger companies to take on more social responsibility, among others. Since Marcelo Castelli assumed the position of global CEO of Votorantim Cimentos in early 2019, we have refined our strategic plan to revisit our purpose and ambition.

Votorantim Cimentos symbolizes Votorantim S.A.'s successful trajectory of over 100 years in Brazil. While remaining positive and confident about the future, we will continue to help Brazil to grow, preparing for a recovery in economic activity driven by the return of consumer confidence and the resumption of renovations and civil construction projects. A cement company is solid in nature. But we live in constant transformation and we are ready to adapt to new demands.

In several of the regions where we operate, we are drivers of local development and an important partner of public agencies in the work to improve the living conditions of the

population. Hence, the importance of understanding the diversity of cultures in places where we operate and also reinforcing, on a daily basis, that safety is our main value, by focusing on people's behaviors to ensure that our operations are efficient, but above all safe.

We are ready for the future. We are entrepreneurs; we are disciplined, creative and innovative—a family business that looks at the long term. We know that we will certainly face new waves of instability and uncertainty, but that doesn't stop us from being confident in better times to come.

We would like to conclude our message with a tribute to Paulo Henrique de Oliveira Santos, former member and chairman of the Board of Directors of Votorantim Cimentos, who died in March of 2019 after an intense fight against cancer. As part of the Votorantim Group since 1993, Paulo played a significant role over 25 years and leaves behind a legacy of professionalism and integrity to all of us.

### Board of Directors

*"We are entrepreneurs; we are disciplined, creative and innovative—a family business that looks at the long term."*

# CHANGING TO LAST

The year 2019 was a challenging year for Votorantim Cimentos. We experienced a degree of instability that can be typical for global companies. In Argentina, Brazil, Turkey and Uruguay performance was below expectations due to local economic and political matters. At the same time, in the other countries where we operate (Bolivia, Canada, Morocco, Spain, Tunisia and the United States) we solidified our recognition for the quality, regularity and performance of the products and services we offer. This translated into growing revenues, with significant cash generation and strict adherence to cost controls.

Despite the challenges, we remained connected to our entrepreneurial culture: 2019 was a year of new business and new growth opportunities. We invested in energy substitution processes to replace fossil fuels (e.g., petroleum coke) with alternative fuels, reaching a 22% thermal substitution rate. In the Europe, Asia and Africa region, in just three years, we went from zero to 18% fuel co-processing in cement kilns.

**Marcelo Castelli,**  
Global CEO,  
Votorantim Cimentos



Globally, in the future, we want to replace up to 80% of the volume of fossil fuels used in our cement kilns, thereby lowering our greenhouse gas emissions and moving towards a full decarbonization.

We want to be even more competitive and modern, both in cement and concrete production and in so-called adjacencies. As part of a journey of changes in several areas and in seeking opportunities that are adjacent to our main activity—cement production—we created two new business units in Brazil. The first one is Verdera, created to operate in the co-processing and waste management value chains. And the other one is the new aglime brand, created to expand our market share in the agricultural market, which is one of the fastest growing sectors in Brazil, and in which we already have a prominent and recognized presence. We are also strongly advancing on our innovation journey through digital transformation projects and investments in new technologies to solidify our leadership within Industry 4.0, advancing in automation, cloud technologies in the industrial area and inventory control through data analytics and images collected by drones, for example.

In July, we published our diversity manifesto, to improve our organizational culture and support the uniqueness of each employee. Our goal is to go beyond the four major themes of the campaign (gender, race and ethnicity, sexual orientation and people with disabilities) and broaden cultural diversity in the Company, while always taking into account our local characteristics. Caring about people is

also expressed through several initiatives and investments in safety. In 2019, unfortunately, we recorded the death of a contractor in one of our plants in Morocco, an unacceptable situation under any circumstance.

Our business is focused on the long term and we are always looking towards the future, with the courage and creativity to invest and innovate. In 2020, we will reach the end of the cycle of sustainability targets set in 2015 and will set our new targets for 2030, in line with the United Nations Sustainable Development Goals (SDGs).



*"We want to be both high tech and high touch: a company that is connected to technology and new trends without losing our focus on and attention to people."*

We stand by a concept we call flexible solidity.

We are a traditional, solid company that is also adaptable to change and is rapidly advancing in industry 4.0 projects, digital transformation and people and product diversity. We see with clarity the need to change to last, to adapt, to modernize, while maintaining our unnegotiable values such as ethics, respect and our commitment to doing things the right way.

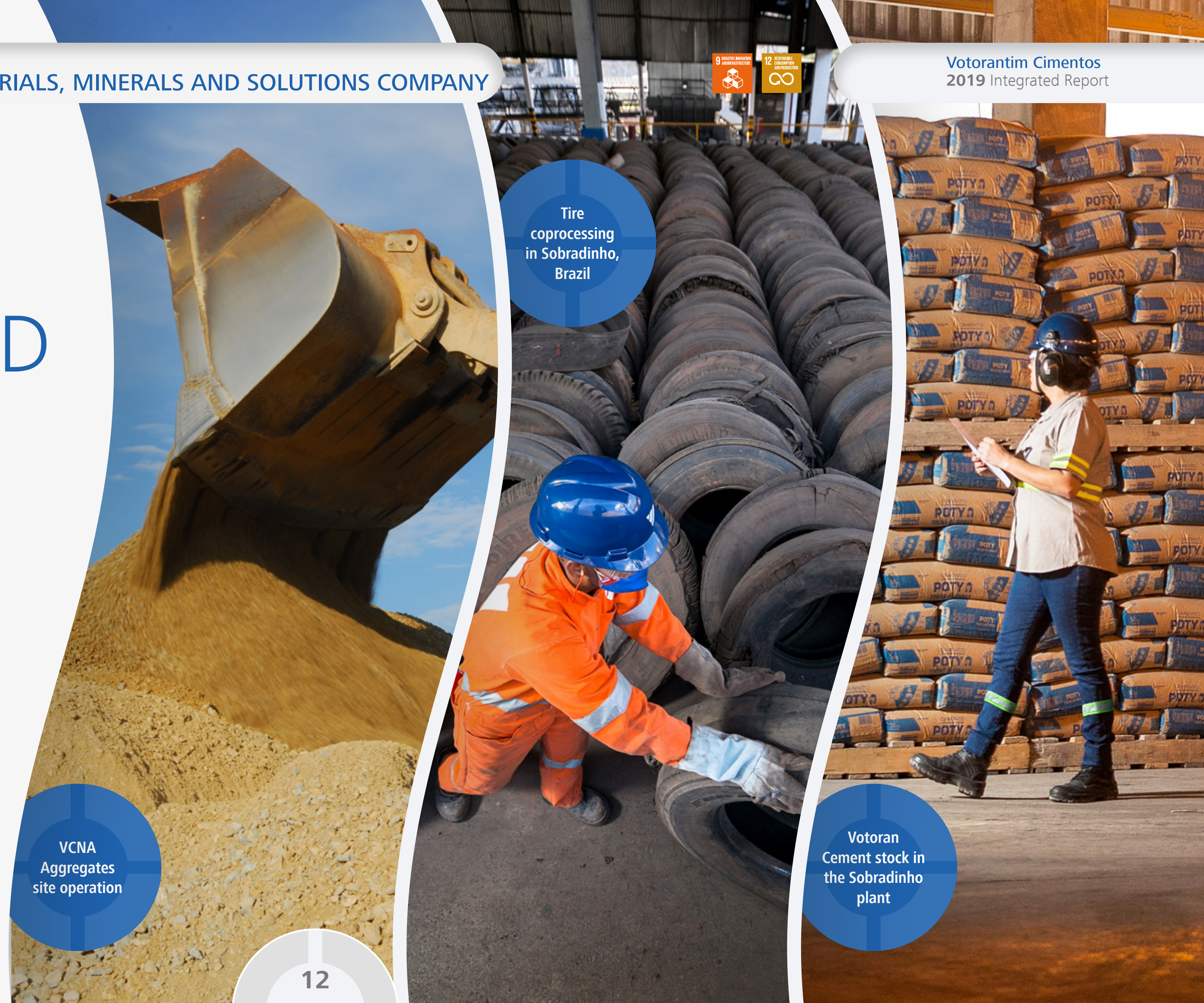
We want to be both high tech and high touch: a company that is connected to technology and new trends without losing our focus on and attention to society. Our priority is to transform investments into diversification and competitiveness, thereby increasing profitability and value creation. Despite the volatile and uncertain world we are living in, we have positive expectations for Brazil and also for the other regions where we operate, we are confident that working together, we will get there.

**Marcelo Castelli – Global CEO of Votorantim Cimentos**

*"We stand by a concept we call flexible solidity: a traditional company that sees with clarity the need to change to last, to adapt, with ethics and nonnegotiable values."*

# A GLOBAL MATERIALS, MINERALS AND SOLUTIONS COMPANY

We are a global company operating in building materials, mining and solutions, founded in 1933. Our capital is 100% privately owned by Votorantim S.A., a holding company that operates businesses in strategic and diversified segments: building materials, metals and mining, aluminum, energy, orange juice and finance. [GRI 102-1](#) [GRI 102-5](#)



Tire coprocessing in Sobradinho, Brazil

VCNA Aggregates site operation

Votoran Cement stock in the Sobradinho plant



Employees at unit in Spain

We are present in 11 countries, on four continents: Argentina, Bolivia, Brazil and Uruguay, in South America; Canada and the United States, in North America; Luxembourg and Spain, in Europe; Turkey, in Europe/Asia; and Morocco and Tunisia, in Africa. At the end of 2019, we had 11,953 employees and 256 industrial units, with an installed cement capacity of 52.8 million tons. During the year, we produced 30.1 millions tons of cement and our net revenue was R\$ 13 billion. **GRI 102-2** **GRI 102-7** **GRI 102-4**

In terms of production capacity, we are the sixth largest cement company in the world (excluding China) and the largest in Brazil, according to public reports. As part of our strategy, we seek to maintain relevant participation in the markets we operate in all regions and focus on operational excellence and cost competitiveness, as a result of more than 80 years of experience in this sector in Brazil and more than 100 in Canada.

In line with our strategy of growth and geographic diversification, in 2019 we expanded our North American operations with the purchase of United Materials LLC, a concrete and aggregates company based in Buffalo (USA). At Cementos Avellaneda, an Argentinean company in which we hold a 49% stake, we completed a new clinker and cement line in the San Luis unit, which started operating in early 2020. In Brazil,

the main investments included a new aglime line in Nobres (MT), a mortar unit in Cuiabá (MT) and the acquisition of a mortar company in the metropolitan region of Belém (PA). We also started the expansion of our cement grinding unit in Pecém (CE), with completion scheduled for the second half of 2020, which will add 800,000 tons of capacity in Brazil. And in April 2019, as part of our divestment strategy in non-strategic assets, we concluded the sale of our 75% stake in a company in India, a process that had begun the previous year. **GRI 102-10**

Last year, with the creation of the Verdera business unit, we also strengthened our participation in providing waste management services to companies and industries, contributing to an increasingly circular economy, in which discarded materials become inputs to produce new products. By co-processing urban and industrial waste, as well as biomass, in our kilns, we have established a competitive differentiator in our operations while using alternatives to petroleum coke and other fossil fuels in thermal energy generation for cement production. In 2019, these alternative fuels represented a 22% thermal substitution rate globally (in Brazil, 29%). In

2020, will announce the creation of a new brand, our unit dedicated to the segment of aglime which leverages synergies from our mining and cement operations and repositions our businesses in this sector. Both units operate only in Brazil. **GRI 102-10** **GRI 103-2: 301**

We invest in the offering of innovative products and quality services in all segments. We are one of the most vertically integrated companies in the industry with a diverse product portfolio consisting of cement, concrete, aggregates, mortar, grout, finishing materials, plasticizers and aglime. We operate in a Business to Business (B2B) model with strong presence in retail, distributors, the infrastructure sector and major construction companies. To facilitate our relationships with customers, we rely on digital solutions; in Brazil, we have Juntos Somos +, a company that maintains the largest loyalty program in the building materials retail market and the largest marketplace in the industry. We serve customers of different profiles, ranging from individuals who purchase our products from stores to building supply stores and home centers, to large residential, commercial, industrial and infrastructure builders. **GRI 102-2** **GRI 102-6**

*We expanded our operations and created new business units that reinforce our diversity of products, services and regions*

# OUR OPERATIONS

## VOTORANTIM CIMENTOS NORTH AMERICA (VCNA)<sup>1</sup>

- 1 Canada
- 2 United States



## VOTORANTIM CIMENTOS LATIN AMERICA (VCLATAM)<sup>1</sup>

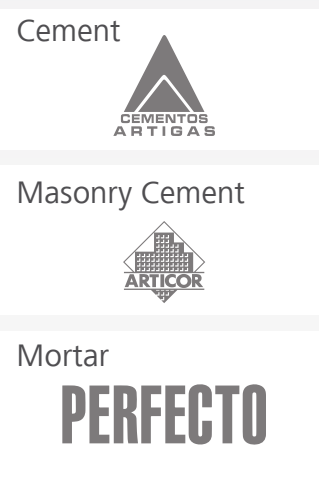
- 3 Argentina<sup>2</sup>



- 4 Bolivia<sup>3</sup>



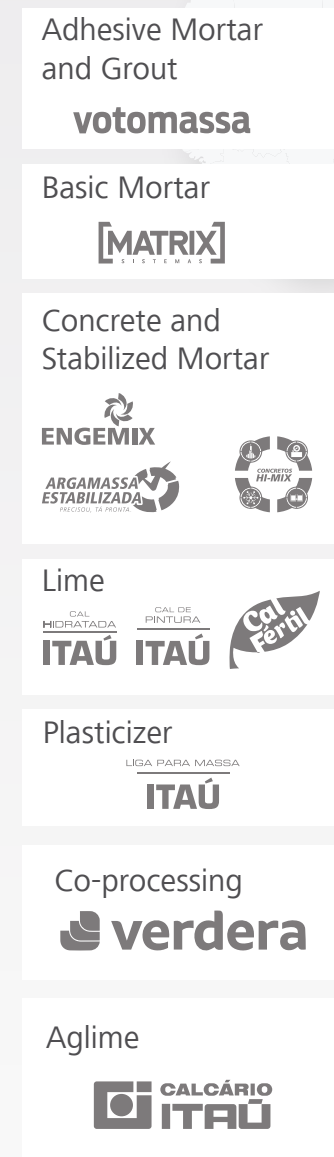
- 5 Uruguay<sup>4</sup>



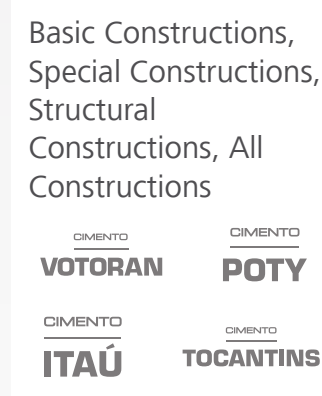
## VOTORANTIM CIMENTOS BRAZIL (VCBR)<sup>1</sup>

- 6 Brazil

### Other Products:



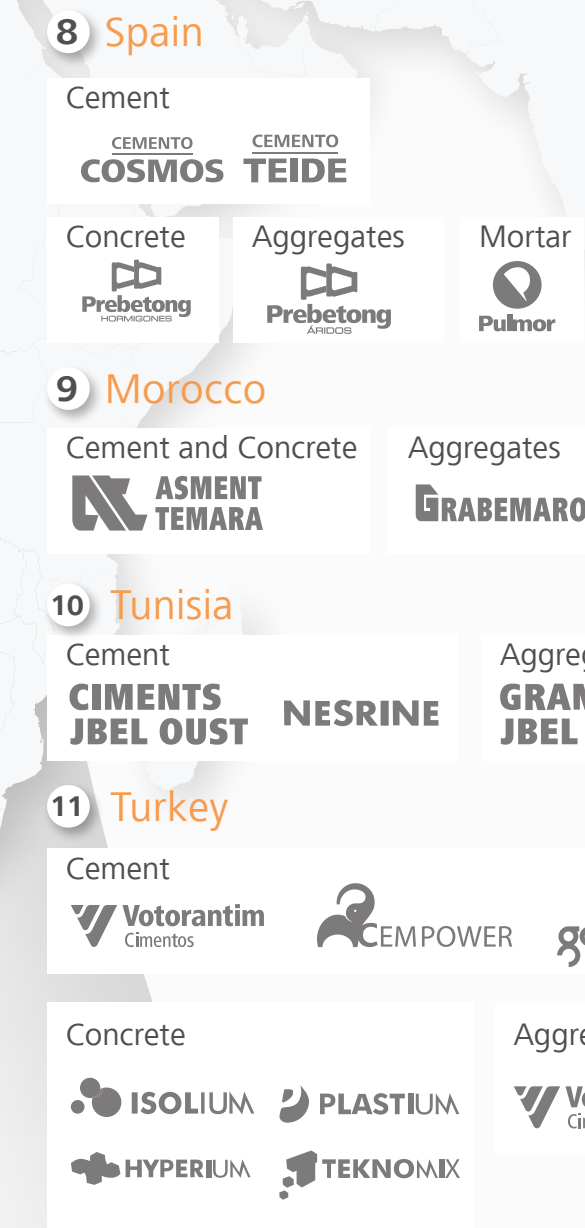
### Portland Cement:



## VOTORANTIM CIMENTOS INTERNATIONAL (VCI)<sup>5</sup>

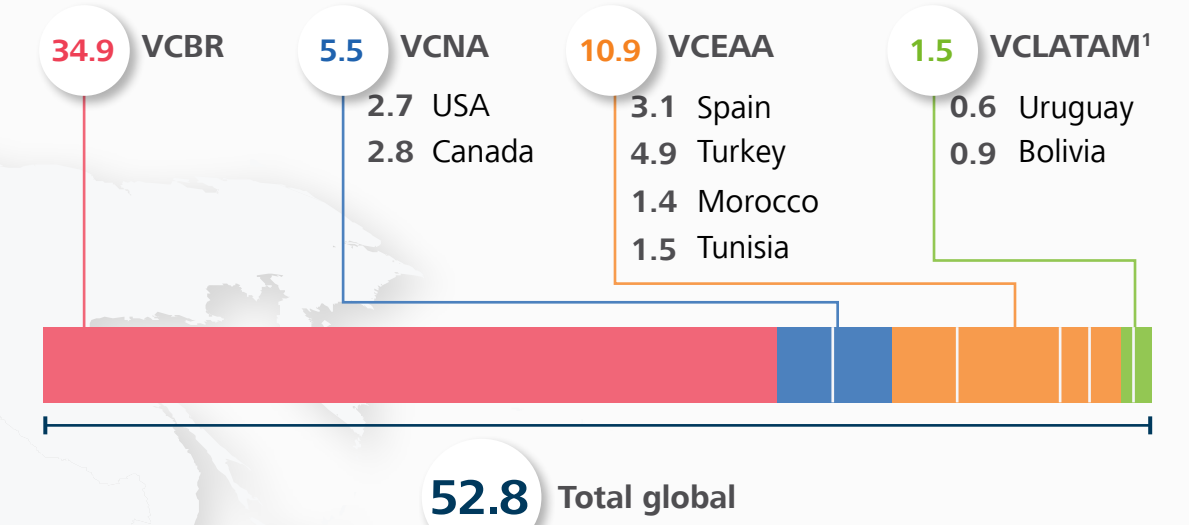
- 7 Luxembourg

## VOTORANTIM CIMENTOS EUROPE, ASIA AND AFRICA (VCEAA)<sup>1</sup>



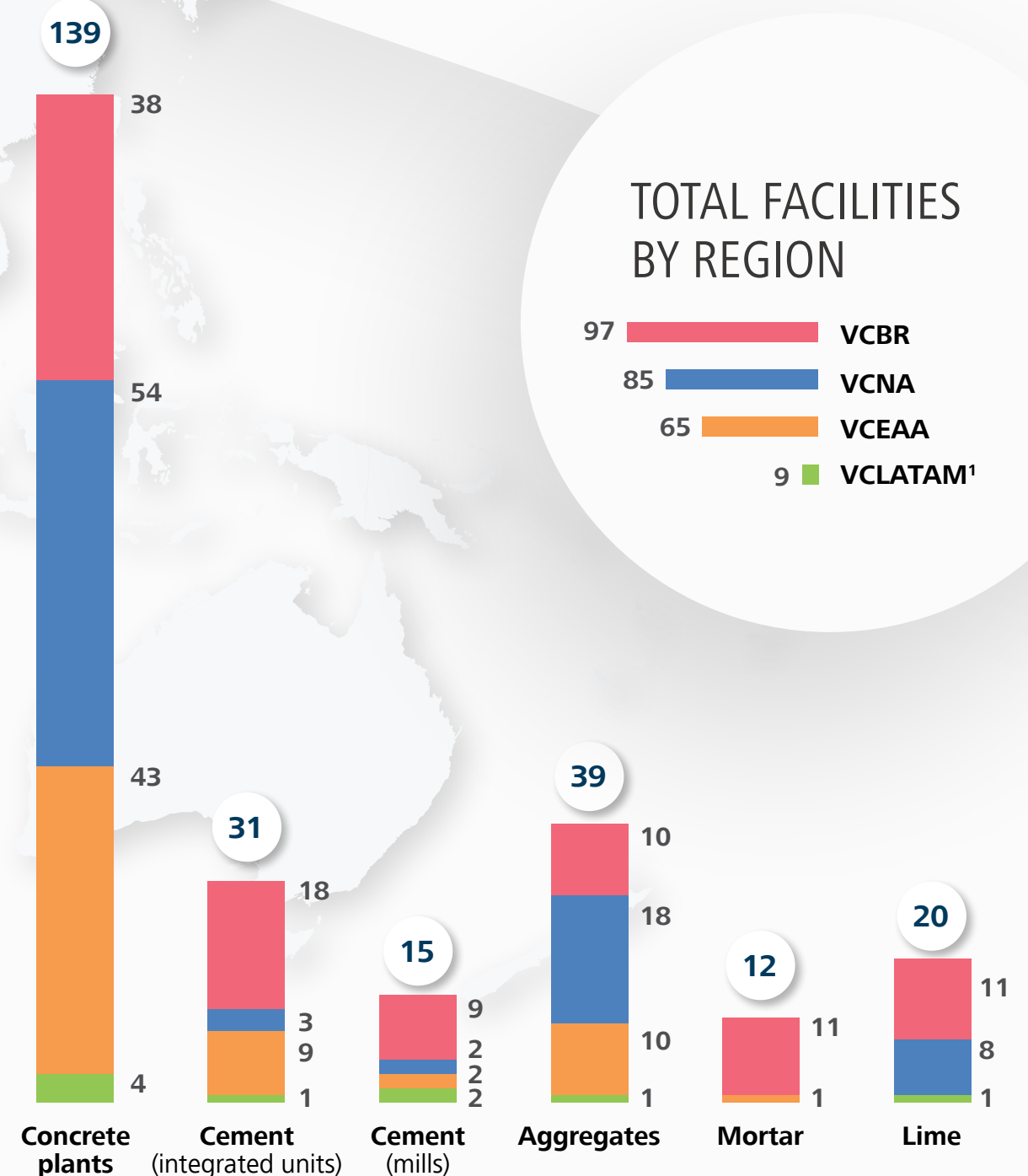
## INSTALLED CEMENT CAPACITY

in million tons



(All countries consolidated, except Argentina. Base: December 2019)

## OUR FACILITIES GRI 102-7



<sup>1</sup> Figures for Bolivia and Uruguay only, since Argentina's operations are not consolidated

GRI 102-1

<sup>1</sup> VCBR is a management denomination for Votorantim Cimentos operations in Brazil, carried out by Votorantim Cimentos S.A. and Votorantim Cimentos N/NE S.A. Abroad, our activities are carried out by St. Marys Cement Inc., in North America; Votorantim Cimentos EAA S.L.U., in Europe, Asia and Africa; Votorantim Cimentos Latam S.L., which holds our investments in companies located in Argentina, Bolivia and Uruguay; and Votorantim Cimentos Internacional S.L., in Luxembourg.

<sup>2</sup> Argentina: 49% stake in Cimentos Avellaneda.

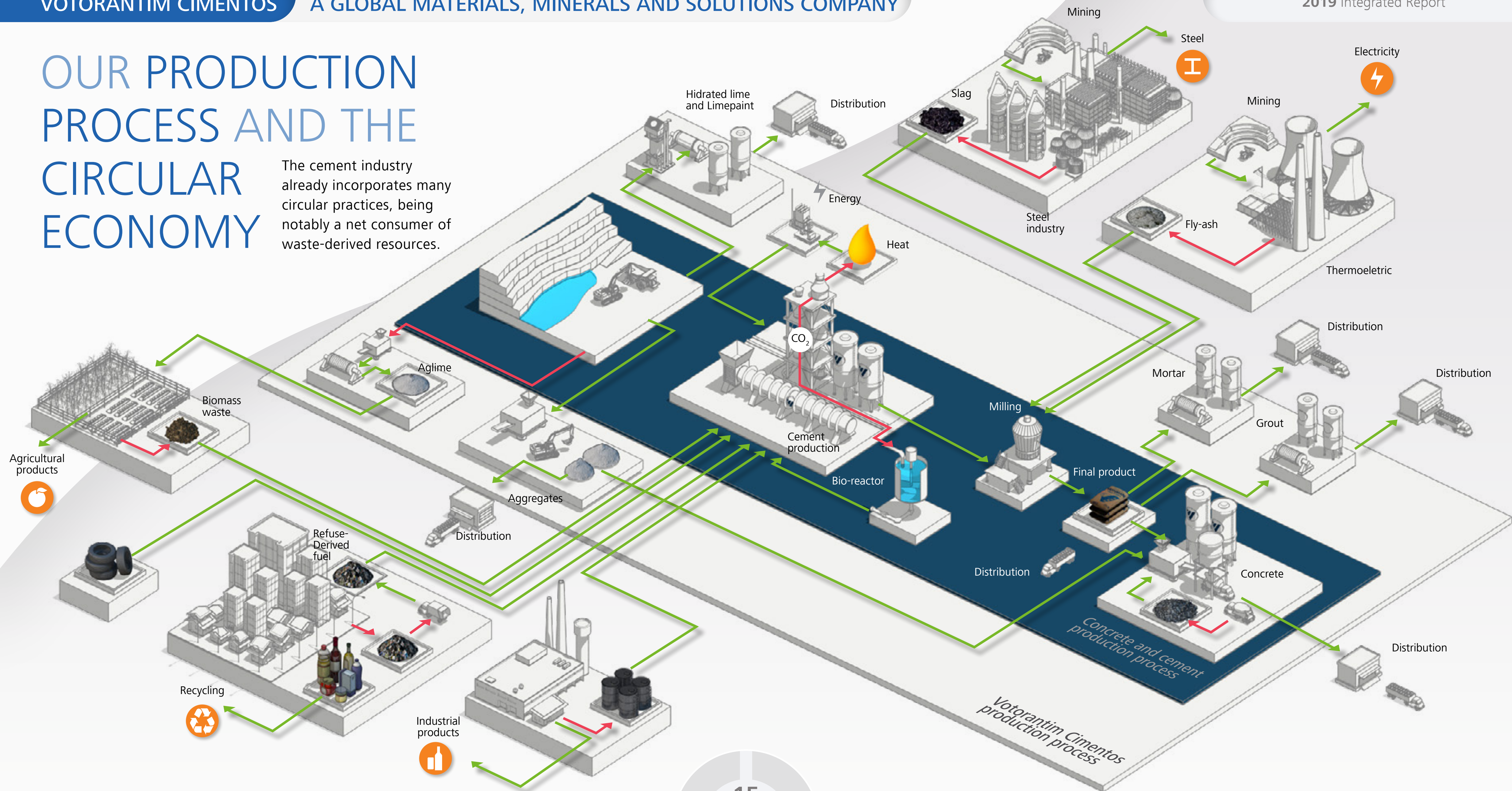
<sup>3</sup> Bolivia: 51% stake in Yacuses, which has a 66.7% stake in Itacamba Cimentos S.A.

<sup>4</sup> Uruguay: 51% stake in Cimentos Artigas

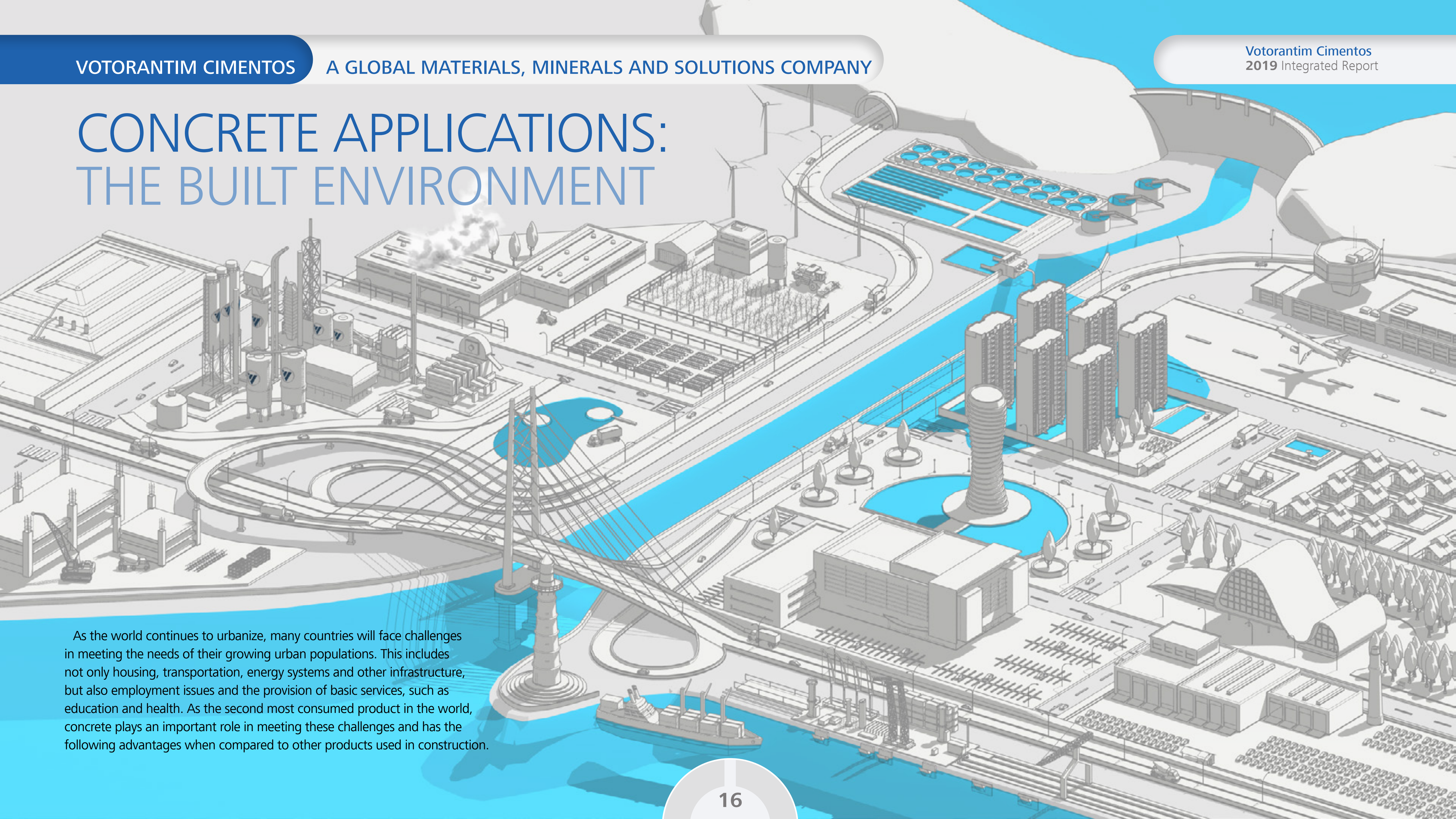
<sup>5</sup> All operations outside Brazil are part of the structure of Votorantim Cimentos Internacional (VCI), based in Luxembourg. Headquarters in São Paulo, Brazil

# OUR PRODUCTION PROCESS AND THE CIRCULAR ECONOMY

The cement industry already incorporates many circular practices, being notably a net consumer of waste-derived resources.



# CONCRETE APPLICATIONS: THE BUILT ENVIRONMENT



As the world continues to urbanize, many countries will face challenges in meeting the needs of their growing urban populations. This includes not only housing, transportation, energy systems and other infrastructure, but also employment issues and the provision of basic services, such as education and health. As the second most consumed product in the world, concrete plays an important role in meeting these challenges and has the following advantages when compared to other products used in construction.



## AWARDS AND RECOGNITIONS

We received relevant awards and recognition in 2019, as a result of a job well executed by different regions and areas of the Company.

### BRAZIL

🔗 **2019 ANAMACO AWARDS** - We won first place in the cement category and second place in the adhesive mortar and ceramic grout categories in the 28<sup>th</sup> National Association of Building Material Traders (Anamaco) Awards. To determine the winners, 1,650 store owners were interviewed.

🔗 **BEST PLACES TO WORK** - In 2019, we were among the 150 Best Places to Work, a ranking organized by Você S.A. magazine and the University of São Paulo Institute of Administration Foundation (FIA/USP) to recognize companies that excel in people management and have a positive organizational environment. The selection process analyzed management practices and surveyed the opinion of 2,000 randomly selected employees who answered a questionnaire about our practices and their daily work.

🔗 **INTEGRATED REPORT | REPORTING MATTERS** – Our 2018 Integrated Report was recognized by the

World Business Council for Sustainable Development (WBCSD) as the best in the building materials industry and in Latin America among all WBCSD company members. This is our third year among the top ten in the world—in 2016 we placed first. This year's ranking considered the analysis of reports from 159 leading companies from 19 industries and 34 countries, focusing on governance and risk, strategy and goals.

🔗 **ÉPOCA NEGÓCIOS 360° AWARDS** – For the fourth year, we received the Época Negócios 360° Award in the Building & Decorating Materials category, for our corporate governance and our open innovation initiative. Within this category, we were also recognized in the financial performance dimension. The award is presented by Época Negócios magazine, in partnership with the Dom Cabral Foundation.

🔗 **VALOR INNOVATION BRAZIL** – For the first time, we were part of Valor Innovation Brazil, a ranking of the 150 most innovative companies in Brazil in their industries. The survey is carried out by the consulting firm Strategy& and the newspaper Valor Econômico. We were ranked 4<sup>th</sup> among Building Materials companies.

🔗 **TRANSFORMERS LATIN-AMERICAN AWARDS** – Our Babassu Chain Support Program, in Sobral (CE), was recognized by Rede América in the Sustainable Business and Community category. Rede América is the largest private social investor initiative in Latin America and the Caribbean. It includes more than 80 organizations in 14 countries and aims to recognize innovative and inspiring experiences that promote sustainable communities with a focus on community-driven development.

🔗 **CLEMENTE GRECO AWARDS** – The process of Production of Pozzolans from Basic Slag Acidification, developed in Brazil, was recognized as the best project in the Innovation, Environmental or Cement Sustainability category.

It consists of transformation of basic slag into artificial pozzolans, resulting in reduction of clinker factor, CO<sub>2</sub> emissions and variable costs of cement.

### SPAIN

🔗 **NAOS STRATEGY AWARD** – NAOS (Strategy for Nutrition, Physical Activity and Obesity Prevention) awarded to VC Spain by the Spanish Food Safety and Nutrition Agency (Aesan) for the promotion of healthy lifestyles and eating habits in the workplace. The Company was recognized in the Labor Scope category, for the Mediterranean Diet + Life project, developed in partnership with the Pere i Virgili Health Institute. The program aims to raise employee awareness of the importance of a balanced diet and regular exercise to reduce risk factors for cardiovascular disease.

🔗 **EUROPEAN AGGREGATES ASSOCIATION (UEPG)** – VCEAA in Spain received the 2019 Sustainable Development Award from the European Association of Aggregates Manufacturers (UEPG, in French) for the restoration and protection of Cova Eirós, a cave close to the mining operations of our Oural plant, in Galicia. We also received the Excellence Award in Restoration from the same organization, for our work at the El Toril quarry (Seville), and a second place in the Biodiversity category, for the regeneration of the El Zairón quarry, in Alcolea del Río (Seville).

### CANADA

🔗 **IHSA ACHIEVEMENT AWARD** – For the second consecutive year, the safety performance of CBM's Ready-Mix Concrete division was recognized by the Infrastructure Health and Safety Association (IHSA) of Ontario, Canada. CBM earned the distinction by having the best lost-time-injury (LTI) frequency rate for companies in the 1,000,000 million labor hours category.

🔗 **ONTARIO STONE SAND & GRAVEL ASSOCIATION AWARDS** – At VCNA, we received six different awards in the Progressive Rehabilitation and Property Enhancement categories from the Ontario Stone, Sand and Gravel Association (OSSGA).

### UNITED STATES GRI 103-2: 301

🔗 **SLAG CEMENT PROJECT OF THE YEAR AWARD** – The Charlevoix silo expansion and installation project at St Marys, in Michigan, received the Project of the Year Award in the High-Performance Concrete category, for its innovative use of this material. This 15%-slag cement helped create a concrete mix that enabled unique design placement, extended working capacity and increased strength.

### BOLIVIA

🔗 **GREAT PLACE TO WORK® BOLIVIA** - For the third consecutive year, Itacamba Cemento (Bolivia) was named one of the best companies to work for in Bolivia in the category of companies with up to 250 workers.

🔗 **MERCO** - Our company was recognized for having the best reputation in the construction sector in Bolivia.

# 2019 HIGHLIGHTS

## FINANCIAL CAPITAL GRI 102-7



- Net income **R\$ 549 million**
- R\$ 13** billion net revenue
- R\$ 2.7** billion adjusted EBITDA
- 30 million** tons of cement sold
- 2.95x** leverage

## MANUFACTURED CAPITAL



- Purchase of a **mortar plant** in the Northern Region, in Brazil
- Acquisition of **United Materials**, a concrete and aggregates company, headquartered in Buffalo, New York
- Investments of **R\$ 200 million** to increase the capacity of the Pecém cement plant, in Brazil
- Launch of our **new aglime** business unit in Brazil
- New lines of **aglime** in Nobres plant
- R\$ 1.1** billion Capex

## INTELLECTUAL CAPITAL



- Industry 4.0 Spectrum, a maintenance program that resulted in **R\$ 4 million** in savings
- Selected to participate in the **Young SDG Innovators**, an initiative coordinated by the UN
- R\$ 16.4 million** invested in 2019 in IT projects with innovative solutions

## HUMAN CAPITAL



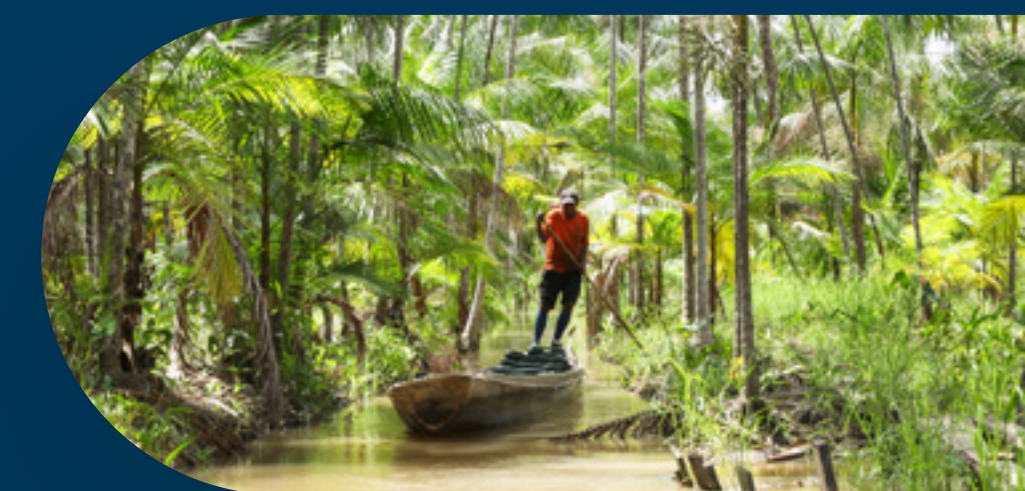
- Creation of the **VC Technical School**
- 150 best places** to work award
- Manifesto** for Diversity
- Average of **21.75 hours** of training per employee

## SOCIAL AND RELATIONSHIP CAPITAL



- R\$ 18.4 million** invested in social initiatives, with a focus on community development
- 472 initiatives** in **124 locations** in Brazil, Latin America, North America, Europe, Asia and Africa
- 19,000 people** benefited by the Corporate Volunteer Program in Brazil

## NATURAL CAPITAL



- 74.3%** Clinker/cement factor
- 22%** thermal substitution rate
- 22.6% reduction of CO<sub>2</sub>** emissions compared to the base-year (1990)
- CDP** Rating A-
- Launch of **Verdera**, our new waste management business unit in Brazil
- Brazilian version of the Cement Technology **Roadmap**



GRI 103-2

GRI 103-3

# FLEXIBLE SOLIDITY

Our global strategy is based on the long-term vision expressed by our purpose, “Life is made to last.” We work with the certainty that changes occur in life. We have reinvented ourselves with the solidity of a company that was created more than 80 years ago, is part of a group founded more than a century ago in Brazil and has acquired businesses as old as 107 years (St Marys Cement, Canada). Longevity and innovation are in our DNA.

Votorantim Cimentos employees in the Corporate Office in São Paulo, Brazil

*The term “flexible solidity” summarizes how we are prepared for the future and capable of changing to last*

The term “flexible solidity” summarizes how we are prepared for the future: We have the solidity of a mature, long-term company that operates globally, delivering with excellence, ethics and integrity on what we set out to do. We are also flexible to modernize and adapt to the changing needs of society, use technology trends and developments to better leverage resources, evolve processes, and positively impact people’s lives. We are able to change to last.

Our Vision points to the future and our strategies are built on four pillars: Customer focus, Empowered people, Best-in-Class operations and Sustainable practices. This is the compass that guides our long-term performance.

## STRATEGIC DIALOGUE

Every three years we hold the Strategic Dialogue, which includes the Board of Directors, the Management Committee and the Strategic Planning areas. In these sessions, we build on long-term trends to determine our goals and what projects and initiatives align with and foster value creation in each business or geography. Every year we

conduct Strategic Planning, which translates the Strategic Dialogue into numbers, directing our annual budget and setting short- and long-term goals. This process includes all areas involved in the Company’s results.

## IMPACTS OF MEGATRENDS

In 2019, we launched a new cycle of Strategic Dialogue. We started with the analysis of megatrends and identified seven that will likely impact the world by 2030: demographic changes; globalization and future markets; climate change challenges; dynamic innovation and technology; and global knowledge society. For each of them, we evaluated sub-trends and how they can impact construction and the cement and building materials markets. We’ll see increasing urbanization in emerging countries, with higher demand for cement and aggregates, and consumers asking for more convenience, solutions and services, leading to an increase in the renovation/ retrofit market. And consumers will increasingly demand sustainable products that use fewer natural resources, are recyclable, emit less CO<sub>2</sub> and other pollutant gases and are more efficient throughout their life cycle.

Expedition Point cement silo, Spain

# MEGATRENDS

The current planning cycle is expected to be completed in the first quarter of 2020, to guide our 2020-2024 strategic plan and redefine our Ambition. "What we did in addition this year was to create a Value Agenda, made up of our long-term aspirations (15 years and beyond), battles we want to win in the medium and short



term (five years), and initiatives that will support our future growth," said Danielle Totti, general manager of Global Strategy. This agenda is founded on four main pillars: Positioning, Competitiveness, Business Transformation and Institutional.

We conducted in-depth studies of the behavior and dynamics of the markets where we operate and an analysis of each region. They included projections of demand growth, mapping of relevant micro markets, level of competitiveness of each cement, concrete and aggregate player, and the attractiveness of each mesoregion.

MATERIALS IMPACTS

Demographic changes

Globalization and future markets

Climate change challenges

Dynamic innovation and technology

Global knowledge society

- Urbanization and infrastructure boost cement demand in emerging countries
- Consumers ask for convenience, choices, solutions and more services
- Growth in renovation and retrofit markets—new adjacencies
- Demand for different types of housing
- Increased productivity
- Industrialization (increase in concrete volume)
- Increasingly larger and more geographically dispersed global construction players
- Internationalization of Chinese players, including non-traditional players
- Greater protection of domestic markets; risks in combined markets
- Sustainability incorporated to projects, processes and materials (lower CO<sub>2</sub> emission, decarbonization)
- Demand for environmentally friendly products and substitution of materials
- Waste: reduce and recycle
- "Dematerialization": lower material intensity
- More efficient materials—life cycle analysis
- Increase and improvement of green certifications
- Lower energy dependency (resources substitution)
- Industry 4.0 will improve the efficiency of production processes
- New customer relationship models
- Automated and industrialized construction
- Collaborative development (BIM)
- Building systems sophistication
- Intense commoditization of basic materials
- Direct access to end consumers
- Shortage of labor
- Industrialization
- Automated and industrialized construction
- Reinforcement of new systems, artificial intelligence and increased productivity
- Attractiveness of the construction industry

# BUSINESS MODEL

We want to build a lasting and sustainable legacy. Therefore, our business model considers trends, risks and opportunities to capture, create and deliver long-term value among all stakeholders who are vested in the success of our operations.

## VALUE CAPTURE ▼

**Financial capital** – Our own resources, resulting from our operational cash generation and capital market funding, with external fundraising and debt management.

**Natural capital** – Our main raw materials are calcium carbonate, silica, aluminum and iron ore, which are usually extracted from limestone or clay. Energy is an essential input of the production process; the main sources are petroleum coke or alternative fuels, such as industrial or urban waste and biomass.

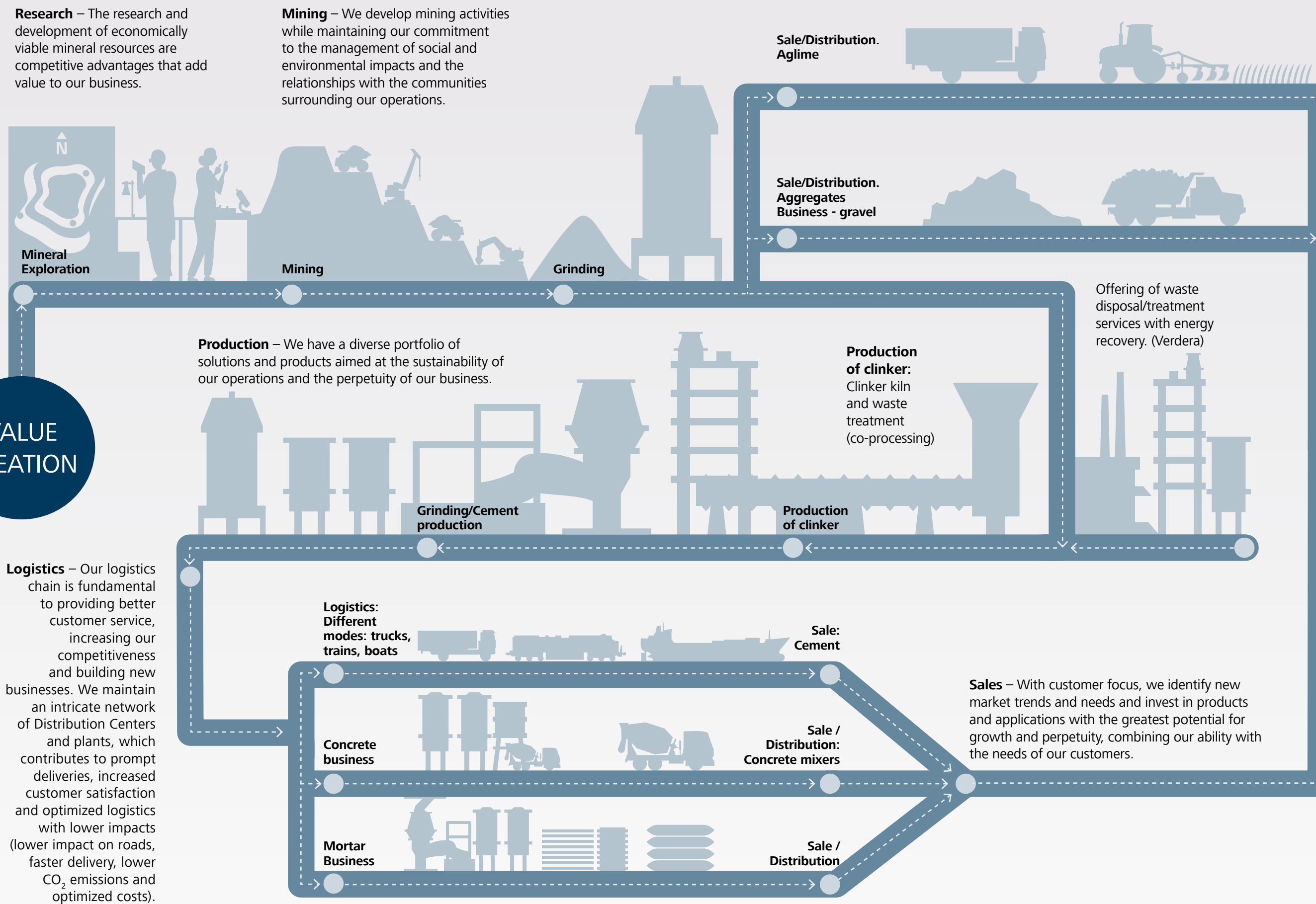
**Human capital** – We employ 11,953 people directly and 11,787 through contracted companies. We are convinced that diversity enables even greater success for our business. Therefore, we strive to leverage a sum of people who we consider equal in our differences.

**Manufactured capital** – We maintain mining areas, production lines, administrative buildings and logistics structures that enable value generation through processes and equipment that seek to maximize productivity and enable greater competitiveness.

**Social and Relationship capital** – We operate in 11 countries, on four continents, with diverse cultures and economic and social structures.

**Intellectual capital** – Supported by an open innovation model, carried out in partnership with universities, research centers, startups and public institutions, we develop new technologies, products and processes.

## STRATEGIC PILLARS ► CUSTOMER FOCUS ► EMPOWERED PEOPLE ► BEST-IN-CLASS OPERATIONS ► SUSTAINABLE PRACTICE



**VALUE CREATION**

**CREATED VALUE**

## SHARED VALUE ▼

**Financial capital** – Efficient asset and resource management and short-, medium- and long-term strategic vision enable the creation of value, the distribution of dividends and an increase in the Company's value. In addition, our engagement in sustainability enables us to obtain more attractive financing lines.

**Natural capital** – The optimized use of natural resources and the production of increasingly sustainable products contribute to the preservation and recovery of the environment. Our processes aim for increasingly circular production by using municipal and other types of waste to replace fossil fuels and virgin raw materials. We transform by-products resulting from other production process into new products, thereby expanding our portfolio.

**Human capital** – We create jobs, strive to maintain a safe and healthy work environment and encourage people to develop personally and professionally. We seek to empower local suppliers by promoting the creation of indirect jobs in the communities where we operate.

**Manufactured capital** – We rely on management systems that enable effective and integrated asset and process management to ensure operational excellence. We manufacture quality products and partner with customers and institutions in the search for new solutions and applications to perpetuate the cement value chain.

**Social and Relationship capital** – Concrete is the second-most used material in the world. It is essential in the construction of cities, infrastructure, schools, hospitals and roads, among other projects that enable social development across the planet. The financial impact of our operations serve as a vital economic engine in the communities where we work and live. We promote dialogue to perpetuate a positive legacy as part of our commitment to support local community development and we work to co-create a sustainable legacy. We pursue social transformation, empower the value chain throughout our operations and invest in impactful social businesses in the communities.

**Intellectual capital** – We foster innovation, industry 4.0 and the development of technologies and digitization that create competitive advantages and enable us to capture greater value for our business.

- R\$ 549 million net income
- R\$ 13 billion net revenue
- R\$ 1.1 billion invested in Capex
- R\$ 16.4 millions invested in research and development VC-2
- R\$ 2.5 billions paid in taxes
- R\$ 1.87 billions paid to suppliers
- R\$ 18.4 million invested in communities
- R\$ 228 millions allocated to the environment
- 2,469 new jobs created
- 8,178 suppliers hired

# IMPROVED AND ROBUST MODEL

We are a privately held company that maintains strict corporate governance standards based on market benchmarks and aligned to stringent compliance and regulatory requirements. The Board of Directors is composed of internal and independent members. They are responsible for overseeing strategic issues and validating Company policies. Members serve two-year terms, during which they validate the business strategy and direction, ensure alignment with our values and purposes, and keep themselves informed about our industry and the macroeconomic, social and political conditions in the regions where we operate.

GRI 102-18 | GRI 102-26



Global and VCBR Executive Team: (left to right, back row) Cristiano Brasil, Mariangela Bartz, Eduardo Almeida, Luis Eduardo Vallim, Alvaro Lorenz, Adjarbas Guerra, (left to right, seated) Hugo Armelino, André Leitão, Marcelo Castelli, André Pompeu, Osvaldo Ayres Filho and Gabriela Woge



In 2019, an independent assessment of the Board of Directors and advisory committees was conducted by the consulting firm Spencer Stuart. The objective was to further refine our governance and identify opportunities for improvement in the performance and training of our directors. The Chairman of the Board does not hold an executive function at Votorantim Cimentos—the same is true for all other board members. [GRI 102-23](#)

We have also improved risk management, compliance and internal audit processes

by creating a Global and Integrated Governance, Risk, Compliance and Internal Audit department, which reports directly to the Board of Directors through the Audit Committee. “The independent evaluation of the Board, the reorganization of these areas into a single department, the Board’s independence from the Steering Committee, and the various work areas we have since launched have improved and strengthened our governance,” said Osvaldo Ayres Filho, Chief Financial and Investor Relations Officer.

**VCEAA and  
VCLATAM  
Executive Team.  
(left to right)  
Persio Morassutti,  
Günther Smetana,  
Jorge Wagner,  
Meike Albrecht and  
Rachid Seffar**

## SUPPORTING COMMITTEES [GRI 102-18](#)

The Board of Directors holds seven meetings per year and is advised by four committees, which review environmental, social, economic, financial, compliance, risk management and internal controls topics and support decisions in these areas:

**FINANCE COMMITTEE** – Analyzes medium- and long-term scenarios regarding financial policies and risks, investments, cash management and liquidity. Proposes and creates annual performance and budget targets and determines capital structure. It is currently composed of three members, one of whom is independent.

**STRATEGY AND INNOVATION COMMITTEE** – Analyzes topics related to our industry and business segments, considering opportunities, new markets and the possible impact of innovations on the Company’s competitiveness. It is currently composed of three members, two of whom are independent.

**AUDIT COMMITTEE** – Monitors the effectiveness and thoroughness of internal controls, risk management, compliance, forensics investigation, crisis management and accounting practices. It also assesses ethics- and conduct-related issues, complaints and the Business Ethics Office channel, as well as internal and external audits and financial statements (quarterly and annual). It is currently composed of four members, two of whom are independent.

**ORGANIZATION, COMPENSATION AND PEOPLE COMMITTEE** – Supports the decisions on human resources matters, such as compensation, appointments, profile and skills of candidates for management positions. Monitors issues related to corporate culture and the People & Management area. It currently has three members, all of whom are independent.



## EXECUTIVE COMMISSIONS

We maintain a structure responsible for the direct management of everyday economic, environmental and social issues, made up of directors from the regions where we operate **GRI 103-3**

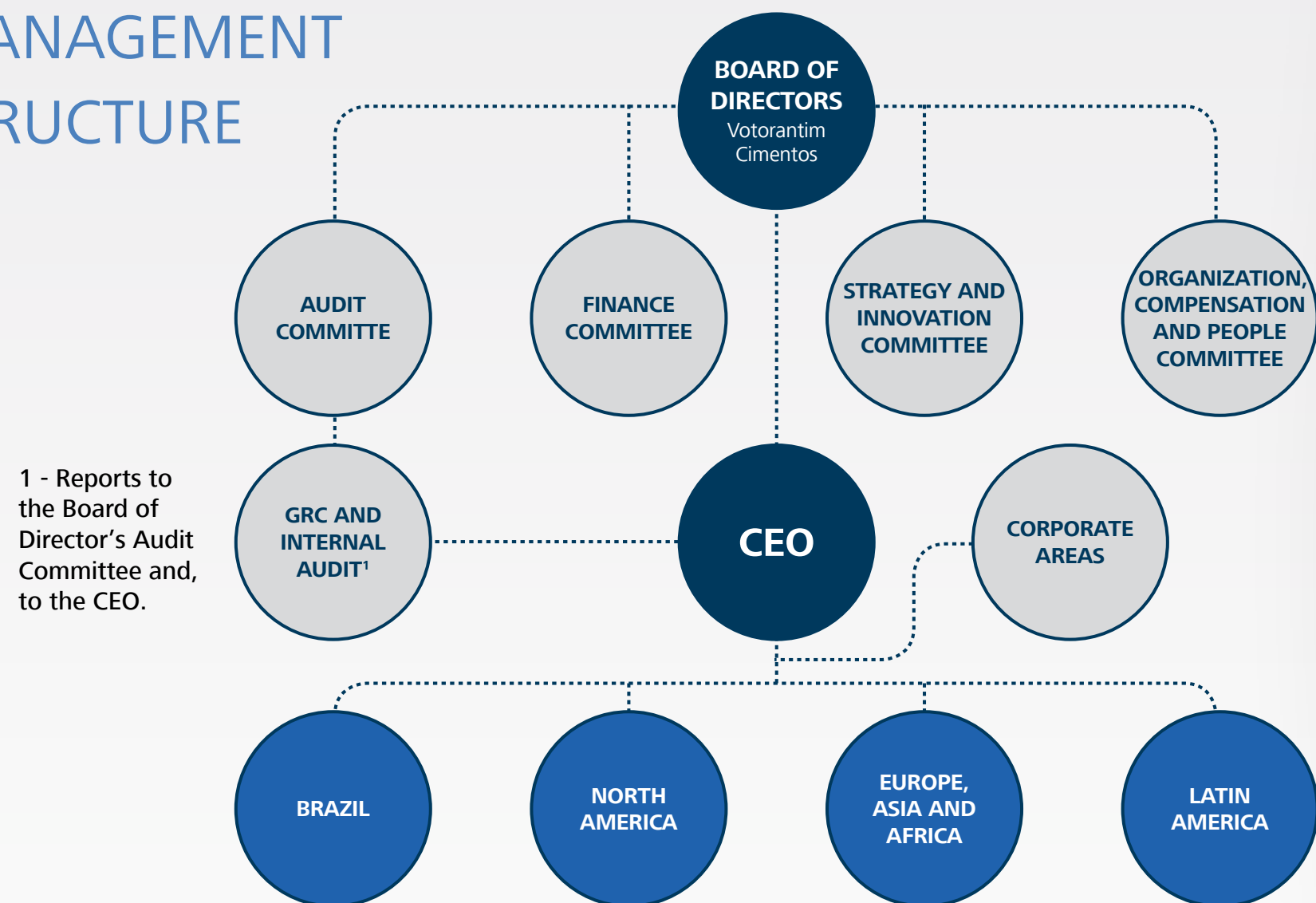
**BRAZILIAN LEADERSHIP TEAM** – Composed of the Company’s Executive Directors and other directors in Brazil. It assists in ensuring compliance with the general business guidelines established by the Board of Directors. The BLT meets every two weeks.

**GLOBAL EXECUTIVE TEAM (GET)** – Composed of the Global CEO, regional CEOs and global executive directors, who meet regularly.

**REGIONAL EXECUTIVE TEAMS** – Assist the Executive Committee in specific, sectoral or regional matters.

**BOARD OF EXECUTIVE OFFICERS** – Statutory body responsible for the management and representation of the Company. The Board of Executive Officers, which is entitled with responsibility for deliberating and further duties and attributions inherent to its positions, under the terms of the legislation and Company’s Bylaws, is currently composed by Global CEO, Global CFO, COO, and Global Legal Officer.

## MANAGEMENT STRUCTURE



## INTEGRATED MANAGEMENT

The Governance, Risk, Compliance and Internal Audit Department (GRC & IA)—which also incorporates the Ethics Line—was created to integrate these areas, which now work in alignment albeit independently, and to create a common language, synergy mechanisms and a virtuous circle among them. “Best practices show that having a common language and clear roles and responsibilities—and making consolidated and structured reports—increases the maturity level in all of these areas because they create cohesive processes with beginning, middle and end,” said Adjarbas Guerra, global chief of GRC & IA officer.

We defined qualitative and quantitative measurements for internal audit points and modified our reports, making them more standardized, with classification of the risks involved, values and action plans and consequence management, in order to prioritize critical points. We also created a Forensic Investigation area to identify and address sensitive cases, such as, misconduct, fraud, loss and conflict of interest. We also developed our Internal Audit Policy and acquired tools to expedite and improve the work of forensic investigation and the identification and investigation of loss and other deviations. The results supported guidelines on loss prevention and identification.

*Governance, Risk, Compliance and Internal Audit were integrated into a single department, creating a common language and clear roles and responsibilities*

**Adjarbas Guerra, global chief of GRC & IA officer**



**North American Executive Team:**  
(left to right, back row)  
**John McCarthy, Resha Watkins, Kelly Curtis, Bill Asselstine, Jolanta Malicki,**  
(left to right, seated)  
**Edilson Chimilovski, Steve Gallagher, Filiberto Ruiz**

Additionally, we created a Crisis Management area to be responsible for operationalizing this process—which consists of three stages (prepare, respond and recover)—and for planning several activities in ten crisis management areas. In the area of governance, seven crisis commissions were created (five regional, one corporate and one board crisis commission), with appointed representatives from the different areas a crisis may impact. All members received training on the new process. Using internal and external sources, we designed the main crisis scenarios and created crisis management plans, and will simulate

exercises including all commissions. We also finalized a new Crisis Management Manual, which was made available to our employees.

In 2019, we also began working to improve our internal control environment to the requirements of the US Sarbanes-Oxley (SOx) law. Even though we are not a publicly traded company, we believe that SOx standards and best practices improve the integration of our internal controls, compliance, internal auditing and risks, while also raising our level of maturity regarding a culture of control within the entire organization.

## MAPPED RISKS

GRI 103-2 GRI 103-3

Our process to identify, monitor and address risks is continuous and systemic, to ensure a quick response when we identify a topic with potential negative impact on the Company's performance. This work is coordinated by the Governance, Risks and Compliance and Internal Audit department (GRC & IA) and periodically reported to the Audit Committee and the Board of Directors.

We focus on four main risk pillars: operational, financial, compliance and strategic. Based on these

pillars, we can analyze the risks that are inherent and related to the business and, subsequently, identify events that may affect the Company. This process is based on ISO 31000 methodology and is done from the bottom up with operational and corporate areas, when risks are mapped in individual rounds with the responsible parties in the areas and, after that, from top to bottom, in discussions with the department heads.

Risk events are analyzed in eight qualitative spheres (financial, legal, social, environmental, health and safety, image and reputation, stakeholders and internal climate) and according to their likelihood and impact. A governance process is established according to the risk classification. Detailed action plans for each risk are developed by the risk owner in order to avoid or mitigate the potential impact. Furthermore, all action plans for main risks are reported to GRC area on a monthly basis. These risks and action plans are properly presented to top management.

During 2019 we updated and deepened the analysis of the main risks of our risk matrix. The review was carried out in all instances of the Company, with a view to identifying risks, classifying them, identifying potential impacts, preparing and monitoring effective and timely action plans, and defining budgets, deadlines and responsible parties.

# COMPLIANCE: THE RIGHT WAY OF DOING BUSINESS



Votorantim  
Cimentos  
employees in  
Turkey

For us, as important as our results and delivering the best products to our customers, is how we do it. That is why, since 2013, we have maintained a Compliance Program, which is based on our Values (Solidity, Ethics, Respect, Entrepreneurship and Unity) and supported by our Code of Conduct. Applicable to the entire Company, the program covers compliance with internal, external, voluntary and strategic obligations and is divided into seven major pillars that determine our scope of work and guide our efforts: 1. Laws and Regulations; 2. Licenses, Permits and Certifications; 3. Contracts and Agreements; 4. External Reports; 5. Defense of Competition; 6. Loss and Fraud Prevention; and 7. Anti-corruption (details can be found by [clicking here](#)). **GRI 102-16** **GRI 103-2: 205**

As a principle, we ensure commitment and accountability from all levels of the Company, according to their grant of authority. We understand that conducting business in a manner that is ethical, efficient and compliant with the applicable regulations includes the entire company—from the Board of Directors, to the Executive Directors, to the Committees that assist the Board of Directors, to the Commissions that assist the Executive Directors, to all of our employees. The Compliance area is responsible for overseeing the program and helping to improve the processes and to take action in event of deviations.

We work to eliminate potential compliance-related risks through clear guidelines and documents, training

and communications activities, the review and/or implementation of processes, monitoring and clarification of questions, among other practices.

Given its importance, anti-corruption is addressed in training on our Code of Conduct, Critical Policies, and in a specific e-learning program.

We reevaluated our strategy of continuous education on Compliance issues for the coming years, aiming at greater efficiency, timeliness and reach within the Company. Throughout 2019, we also expanded our communication initiatives by working on issues related to our Code of Conduct and Anti-Corruption Policy through illustrations displaying clear and real examples from our everyday operations. The informal and relatable illustrations were distributed digitally (Workplace) and posted on bulletin boards in our units, and contained specific tips and reflections. We also published articles on the role of the leader in shaping a culture of integrity, as well as guidance on how to set the right tone for creating an environment of integrity.

The Compliance Program also includes Global Compliance Policies derived from our Code of Conduct: Anti-corruption; Gifts and Entertainment; Conflict of Interest; and Donations and Sponsorships. In 2019, we reinforced this set of guidelines with the approval of two new documents: the Government Relations Policy and the Third-Party Integrity Assessment Policy.

Approved by the Board of Directors, the Government Relations Policy prohibits, as a general rule, donations to politicians or political parties. In situations where they are permitted by local law, specific review processes and approval flows must be followed. The new policy resulted in the revision of the VCBR's Government Relations Manual, with consequences to VCNA and VCEAA as well. The guidelines included in the manual were promoted in specific training sessions for those employees who have greater exposure to government affairs, followed by the application of a comprehension test. **GRI 103-1** **GRI 103-2** **GRI 103-3: 415**

In line with the anti-corruption laws to which we are subject (such as Law 12.846/13, in Brazil, and the Foreign Corrupt Practices Act – FCPA, in the United States), we also implemented, initially in Brazil, a policy and a process for assessing the integrity of third parties and critical transactions.

Throughout 2019, the Compliance area also started a self-assessment of the Compliance Program, including the Anti-corruption pillar. The process was carried out in several areas of the Company with the objective of providing an insight into the maturity level of the program's pillars through an integrated and consolidated panel. It also aimed to guide the strategy and priority actions to improve compliance.

## COMPLIANCE WEEK

In September 2019, we held a Compliance Week for the third consecutive year. For the first time, this activity was conducted simultaneously in all Votorantim Cimentos regions. Our main event, Compliance Day, was broadcasted by our internal communication platform, Workplace, and represented an opportunity for reflection and renewal of our

commitment to "Compliance in practice". We reinforced the idea that compliance is an ongoing journey and part of our DNA, regardless of position, country or language. The meeting was attended by the top leadership in Brazil and the chairman and an independent Board member.

The discussion with the chairman of the Board was translated into English and made available to VCNA and VCEAA in events hosted by their respective CEOs.

*The event was an opportunity for reflection and renewal of our commitment to "Compliance in practice"*

## UNFAIR COMPETITION

**GRI 103-2** **GRI 103-3: 206**

We believe that good business and consistent results are achieved when we establish business relationships in a free and healthy competition environment. We are committed to complying with the antitrust laws of all countries where we operate. In Brazil, especially due to our market position, we offer annual training on this area to broaden the

scope and knowledge of the importance of defending free competition, the associated risks and impacts, and the channels available to clarify questions and seek guidance. In 2019, we promoted global antitrust training, in e-learning format, to senior management, the entire Sales department and other whose work may involve competition and antitrust related activities.

Questions about situations involving competitors can be clarified via email to our Legal Departments, which guide employees on how to understand and comply with both the legislation and the policies and guidelines included in our Code of Conduct. We ensure confidentiality, and the history of cases reported is filed in a restricted-access digital folder.

# ETHICS AND INTEGRITY

Our employees are informed about and trained on the Votorantim Code of Conduct and must fully comply with it. In the event of any deviations from our values, beliefs, behavior guidelines and Company policies, we encourage our employees, through our Open Dialogue practice, to raise their concerns directly to the leadership or responsible areas (such as Human Resources, Legal or Compliance). Additionally, we have the VC Ethics Line, a safe and confidential channel that can be used by anyone inside or outside the company to submit complaints or concerns about suspected illegal or irregular practices in our businesses, such as fraud, bribery, discrimination misconduct, harassment or environmental violations. The person submitting the complaint can choose to remain anonymous. This channel, which is available 24 hours a day, 7 days a week, by phone or website—and operated by third parties—also receives inquiries about the guidelines contained in the Code of Conduct.

All complaints are received by the Business Ethics Office, which directs cases in an impartial, independent and confidential manner to the appropriate areas and people in the Company. Periodically, the Business Ethics Office reports the Ethics Line statistics and the most relevant cases to the Audit Committee and the Global Business Ethics Committee, consisting of the Global Leadership, which includes the CEO and CFO, and Legal, GRC & IA and People and Management officers.

In 2019, 20% of the reports received by the Ethics Line were considered substantiated, 27% were considered unfounded and 4% were considered inconclusive. The other reports did not include enough information for analysis or were outside the scope of related policies. Based on these reports, the Company took the appropriate measures with regard to each issue, including layoffs, suspensions and warnings, and implemented improvements and changes in procedures and/or internal policies.

## ENVIRONMENTAL COMPLIANCE

In 2019, we combined two major tools of our Environmental Management System: Legislation Control (CAL 4.0), for legal requirements and Government License Management (GLM,) for licenses and permits control. This enables us to control both environmental legislation requirements and environmental licenses and permits through a single platform, making it easier to identify potential weaknesses and manage the obligations to be fulfilled by the Company to ensure compliance. In addition, we performed legal compliance audits to validate whether the information fed into the system by employees accurately reflects the situation in the units.

Our actions respect the environment and society and are based on policies and procedures, such as the Global Environment Policy, the

➤ **Code of Conduct** and the **Green Rules** (ten standards that make the policy tangible and guide the actions of all areas and the behavior of all employees regarding environmental issues). Although not formally mentioned in our documents, we adopt the precautionary principle, whereby the absence of absolute scientific certainty will not be used as a reason to postpone economically viable measures to prevent environmental degradation. **GRI 103-1** **GRI 103-2** **GRI 103-3: 307**

Additionally, we train and expect all employees to understand their role, comply with all requirements of this policy, report any violations of this policy or environmental requirements to their leadership or the Ethics Line, refuse to perform any activity that is in disagreement with these guidelines, positively recognize the desired environmental behaviors, and correct undesired ones.

## SOCIOECONOMIC COMPLIANCE

**GRI 103-2** **GRI 103-3: 419**

Our DNA dictates the way we behave, work and manage. Ethical conduct, supported by compliance processes, is the basis for how we are expected to operate. Regardless of changes in the market, business portfolio or organizational structure, we strive to ensure the permanence of our principles and values. We are moving towards consolidation, strengthening and broadening the coverage of our Compliance Program globally. This journey, without a doubt, implies gradually expanding our work as agents of change among our stakeholders, aiming at the business environment we would like to see. In 2019, we did not receive any significant fines for socioeconomic non-compliance. We consider significant fines to be over one million reais. **GRI 419-1**

*The consolidation of environmental management systems made it easier to identify potential non-conformities*

# CONSISTENT RESULTS

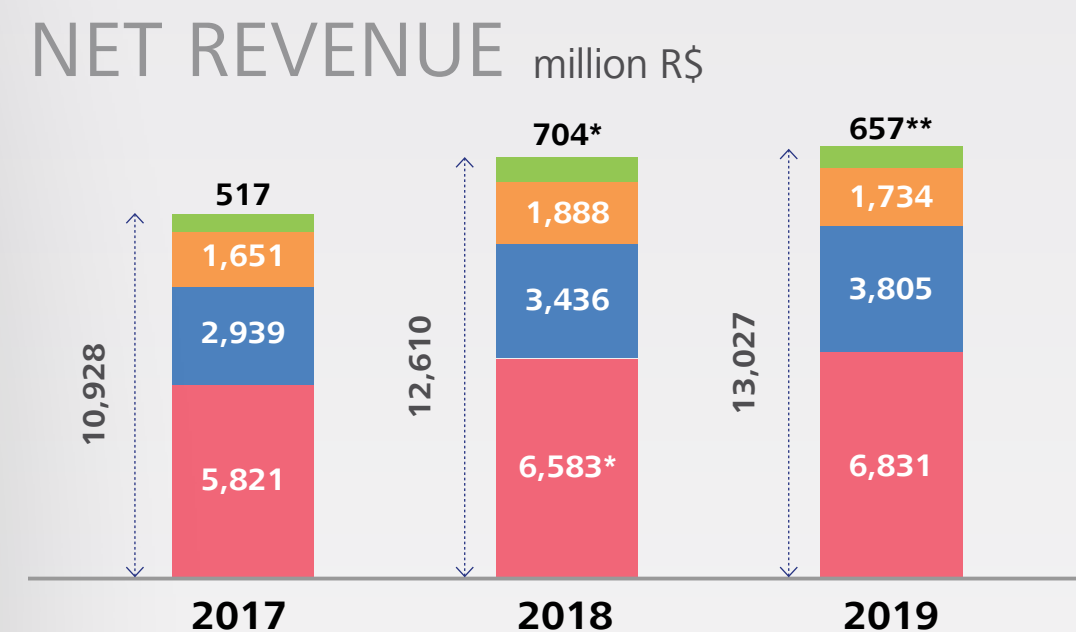
Our geographical diversification and financial discipline were important to ensure the consistent results we achieved in 2019. As a positive highlight, we had favorable dynamics in North America, Spain, Tunisia and Morocco, while in Brazil slower growth in the first half of the year was offset by a stronger market recovery in the second semester. The challenging environment in Turkey resulted in a slight decline in volume but did not significantly impact our consolidated results.

Votorantim Cimentos employees in the Corporate Office in São Paulo, Brazil

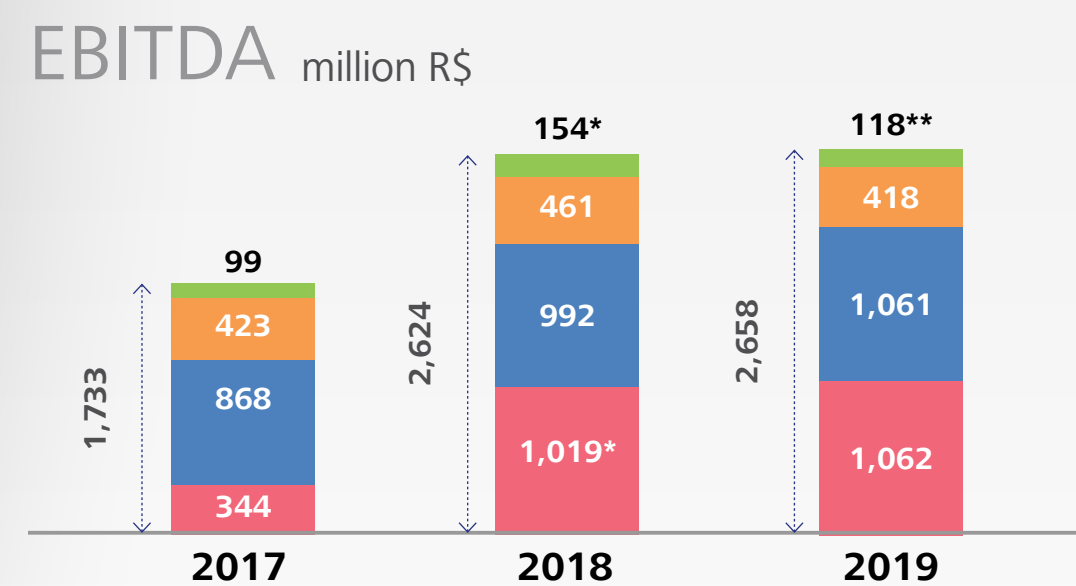
Our consolidated net revenue was R\$ 13 billion, a 3% increase over the R\$ 12.6 billion recorded in 2018. Our consolidated EBITDA was R\$ 2.7 billion, compared to R\$ 2.6 billion in the previous year, a 1% increase and margin of 20% (21% in 2018). **GRI 102-7**

To ensure long-term shareholder value creation, we maintained important initiatives to control fixed and variable costs, to extend tenor and reduce financial costs, without losing sight of investments in portfolio and geographic diversification and the modernization of our units.

■ VCBR ■ VCNA ■ VCEAA ■ VCLATAM



\* Revised 2018 data **GRI 102-48**  
\*\* Includes eliminations



\* Revised 2018 data **GRI 102-48**  
\*\* Includes eliminations

## BRAZIL

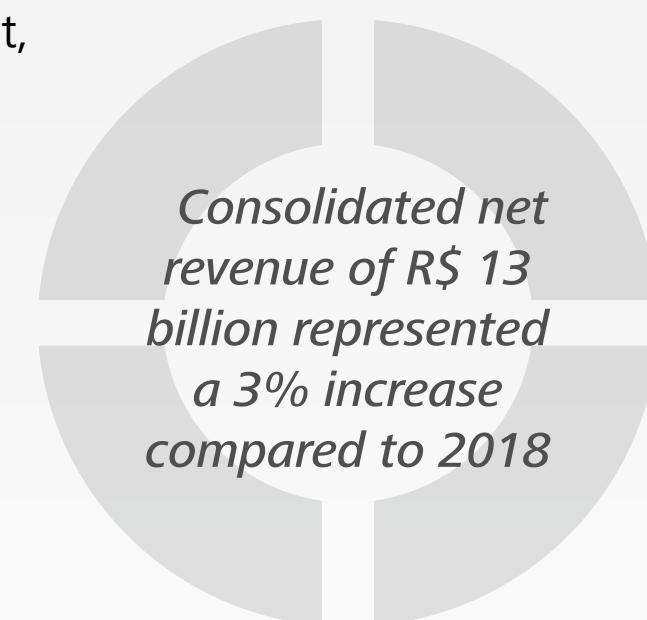
Our net revenue increased by 4%, from R\$ 6.6 billion in 2018 to R\$ 6.8 billion in 2019, mainly due to higher volumes and prices and the better performance of the cement market, especially in the second half of the year. "Cement demand in Brazil grew for the first time in four years, but still at a slower pace than market expectations," said Eduardo Almeida, CFO of VCBR. Business grew especially in the real estate and self-construction markets.

"However, everyday costs, especially an increase in electricity and freight costs and higher expenses with personnel (mainly due to inflation) and sales, have influenced the results," said Almeida. Our R\$ 1.06 billion EBITDA represented an increase of 4% over the R\$ 1.02 billion in 2018. However, VC was one of the few companies in the industry with a double-digit EBITDA margin and positive cash generation in the year. The prospects for 2020 call for more consistent economic recovery, especially given the signs of improvement in the real estate market.

According to the National Cement Association (SNIC), in 2019 the local sales

volume increased by 3.5% compared to 2018, when a truckers strike impacted demand. This was the first year of growth since the sharp decrease started in 2015 due to an economic crisis in the country. Since then, the market has experienced four consecutive years of volume decrease, accumulating a 27% reduction in cement demand. In 2020, SNIC expects performance to continue and estimates a 3.6% increase in demand, due to more consistent economic recovery.

The country's Gross Domestic Product (GDP) was lower than expected and, according to the Brazilian Institute of Geography and Statistics, grew only 1.1%, compared to an expectation of 2.4% at the beginning of the year. Stronger economic recovery is expected in 2020, with market projections of a 2.2% increase in GDP, the result of a more stable macro-economic environment, interest rates and inflation at historically low levels and structural reforms being discussed in Brazilian National Congress.



Eduardo Almeida,  
CFO, VCBR



## NORTH AMERICA

At VCNA, consolidated results were affected by an exceptionally longer and more severe winter in the first quarter, the effects of which were offset in the following quarters. Net revenue was R\$ 3.8 billion, compared to R\$ 3.4 billion in 2018, as a result of higher volumes and prices and the devaluation of the real against the dollar. Adjusted EBITDA was R\$ 1.06 billion, compared to R\$ 992 million in 2018, an increase of 7%, maintaining strong levels of profitability, as reflected in an EBITDA margin of 28% (29% in the previous year).

“North America continued to experience economic growth in 2019, although not as robust as in 2018” explained John McCarthy, CFO in the region. In 2019, the U.S. economy grew at an estimated GDP rate of 2.3% compared with 2.9% in 2018. In Canada, GDP growth in 2019 was estimated at 1.5%, down from 1.9% in 2018. VCNA continued its focus on improving its cost profile, implementing a number of cost and efficiency improvement initiatives, ending the year with a 2.9% reduction in Fixed Costs. Looking ahead to 2020, and impacts from the ongoing trade dispute with China, the upcoming U.S. Presidential elections, the effects of the Covid-19 on global supply chains, and other geo political events could impact economic growth in North America and around the world.

## EUROPE, ASIA AND AFRICA

In spite of the economic crisis faced by Turkey since the last quarter of 2018, which resulted in a 41%

sales drop in 2019 in that country, the improved results generated in Morocco, Spain and Tunisia helped VCEAA to maintain a healthy profitability level, reaching an EBITDA margin of 22% (23% in the previous year).

“In Morocco, the consolidated performance of the cement, aggregates and ready-mix businesses resulted in an EBITDA margin of 49% (versus 47% in the previous year), supported by higher volumes and lower costs,” said Persio Morassutti, CFO of VCEAA. “In Tunisia, the strategy to focus on high value-added products in the domestic market, coupled with efficiency in cost management, were the key factors in the achievement of higher profitability (EBITDA margin of 38% versus 33% in the year before). In Spain, after an increase in demand at the beginning of the year, business slowed down in the second half of 2019 due to the conclusion of major infrastructure projects in the areas where we operate. Nevertheless, the continued focus on operational excellence and cost management contributed to generate improved results in comparison with the previous year”, he added.

VCEAA’s consolidated net revenues totalled R\$ 1.7 billion, down 8% from R\$ 1.89 billion in 2018. In this challenging environment, adjusted EBITDA was R\$ 418 million, compared to R\$ 461 million in 2018, down 9%, mainly due to the results in Turkey and the depreciation of local currencies in Turkey, Tunisia and Morocco.

In 2020, the scenario will remain challenging in Turkey, which will still be affected by slow economic recovery. To a lesser extent, political instability stemming from recent elections in Spain and Tunisia might have a mild impact in these economies. However, prospects are positive for Morocco, as a result of financial reforms and increased tourism.

## LATIN AMERICA

Our performance in the region (excluding our results in Argentina, which are not consolidated) was influenced by lower volumes in Uruguay, due to market dynamics that were more negative than in 2018, and better results in Bolivia, mainly due to cost efficiency, increased participation in the local market and exports to neighboring countries.

Net revenue in the region totaled R\$ 657 million, 2% below 2018 (R\$ 671 million) due to the non-recurrent environment in Uruguay in 2018. Adjusted EBITDA in the region decreased by 23% from R\$ 154 million to R\$ 118 million due to the same situation in Uruguay.

In 2020, a new competitor in Uruguay and the uncertain political scenario in Bolivia are expected to affect the region’s performance, which corresponded to 4% of the global consolidated result in 2019.

*The economic crisis in Turkey was the main factor impacting VCEAA’s performance in the year*

John McCarthy,  
CFO and  
Compliance,  
VCNA





Gabriela  
Woge, Global Diretor  
of Treasury and  
Investor Relations, in  
São Paulo, Brazil

# ADVANCES IN LIABILITY MANAGEMENT

At the end of 2019, our gross debt was R\$ 10.9 billion\*, compared to R\$ 13.5 billion at the end of 2018, as a result of a structured financial liability management process, positive cash generation in the year and capital contribution made by our parent company. Shareholders' equity reached R\$ 12.3 billion. The Company's leverage. The Company's leverage, as measured by net debt/adjusted EBITDA ratio, was 2.95x, compared to 3.64x at the end of 2018 and 5.21x in 2017. "We were able to reduce leverage in alignment with our financial policy target, set at 3x net debt/EBITDA," said Gabriela Woge, global director of Treasury and Investor Relations. [GRI 102-7](#)

The R\$ 2.6 billion reduction in gross debt was made possible by the capital contribution of R\$ 2 billion made by our shareholder, Votorantim S.A., in January 2019, combined with our own cash (around R\$1 billion), which we used to repurchase dollar and euro securities maturing in 2021, 2022 and 2041. "In addition, this transaction allowed us to reduce interest payments throughout the year, which significantly improved our financial results and will also allow us to reduce interest expenses in the coming years," said Woge.

*"Thanks to a capital contribution by our parent company and financial transactions, we were able to reduce leverage in alignment with our financial policy target, set at 3x net debt/EBITDA"*

**Gabriela Woge,**  
director of Treasury  
and Investor Relations

\* Includes effects of IFRS 16

Oswaldo Ayres Filho,  
Chief Financial and  
Investor Relations  
Officer

One of the highlights in 2019 was our first Sustainability Linked Loan (SLL), a revolving credit line linked to sustainability indicators—the first transaction of this kind in Brazil. This Sustainable CCF (Committed Credit Facility) maturing in 2024, enables us to withdraw up to US\$ 290 million at a variable interest rate according to the Company's key performance indicator based on sustainability targets.

Another important transaction, was the issuance, through a securitization company, of Certificates of Real Estate Receivables (CRI) in the amount of R\$ 527.8 million, with an IPCA + 3.80% rate of return per year and maturing in December 2029. This is our first transaction in the local capital market, opening up a new source of financing and diversifying our debt portfolio.

In addition, we sought opportunities to reduce financial costs and extend our debt profile through transactions such as a foreign currency loan in Brazil (Law 4,131), in the amount of US\$ 75 million, at a cost of 107% of CDI, and a BOB 534 million issuance in the local capital market in Bolivia maturing in 2029.

Cement unit in  
Cuiabá (Brazil)  
with new mortar  
production line

## RECOVERING OUR INVESTMENT GRADE RATING

In March 2019, Standard & Poor's upgraded our rating to BBB-, on a global scale, and in December 2019 it changed our outlook from stable to positive. This upgrade led us to regain our investment grade rating, which had been lost in 2015 as a result of the Brazilian credit risk being downgraded during the economic crisis.

In April 2019, Moody's raised our rating to Ba1 (one below investment grade), with

positive outlook. And in November 2019, Fitch maintained our BBB- rating with a stable outlook and investment grade.

"Our non-negotiable financial discipline, operational excellence and geographical diversification were reflected in an important improvement in our credit metrics." said Oswaldo Ayres Filho, Chief Financial and Investor Relations Officer.

# FOCUSED INVESTMENTS

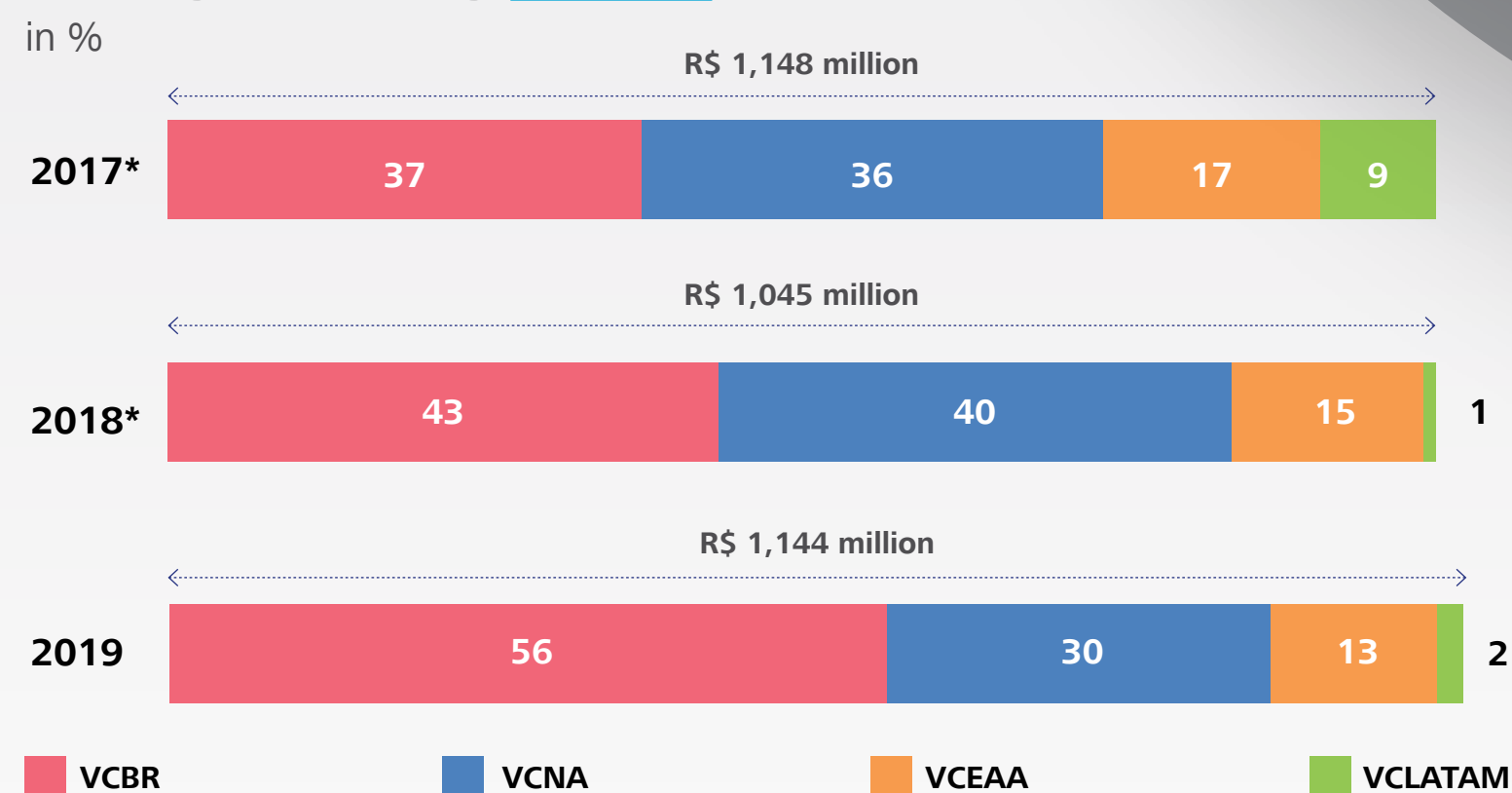
In 2019, we invested R\$ 1.1 billion, 12% of which was used for expansion projects and 88% for non-expansion projects. “We have three main investment focuses: modernization of cement plants, adjacent businesses and co-processing,” said Osvaldo Ayres Filho, Global CFO.

In 2019, the main bulk of our expansion resources was directed to adjacent businesses. In Brazil, we inaugurated new lines of aglime in Nobres (MT) and mortars in Cuiabá (MT). In addition to these investments, we acquired a mortar plant in the metropolitan region of Belém (PA) and United Materials, a concrete and aggregates company, headquartered in Buffalo (USA), which strengthens our presence in the Great Lakes region, in North America.

We also announced investments of R\$ 200 million to increase the capacity of the Pecém cement plant (CE) by 800,000 tons year, totaling 1 million tons/year when completed in 2020. The project includes concepts of energy efficiency and industrial automation, as well as its own railroad to connect the unit to the port of Mucuripe, in Fortaleza, an initiative that translates into logistical gains and reduction of greenhouse gas emissions.



## INVESTMENTS GRI 102-48



\* Adjusted values

Globally, Votorantim Cimentos invested R\$ 64.1 million in co-processing initiatives, including funds to establish the Verdera business unit and a waste preparation line in Rio Branco do Sul (PR), in Brazil. Projects in this area also included investments for the adaptation of plants for the use of alternative fuels, mainly in Europe, Asia and Africa, and in Brazil.

Investments in these projects are part of the modernization plan that we approved in 2019, in the amount of more than R\$ 2 billion over the next five years. The plan aims to further strengthen the competitiveness of our operations in all regions and leave us well positioned for the expected recovery of the Brazilian market.

We also approved a joint project with Votorantim Energia to build a wind farm in 2020, with a capacity of 220MW. The wind farm will go into operation in 2022, and we are committed to buying 25% of the energy generated. With this investment, we will increase the mix of renewable energy used in our operations in Brazil from 35% to 56%.

## FINANCIAL DISCIPLINE

GRI 103-2

We emphasize discipline in financial management to ensure the value creation that is at the core of our strategy. One of our main instruments is the Zero-Based Budget (ZBB). Each year, we build our budget without reference to past expenditures, allocating resources in a planned, discussed and detailed manner so that they are prioritized according to strategic guidelines.

At VCEAA, we completed the implementation of this methodology in Tunisia and Turkey, following the successful implementation in Spain, Morocco and our corporate offices. “We identified an approximate gain of 6.8 million euros (R\$ 30 million) through cost reduction initiatives. Our 2020 initiatives aim to offset 100% of the region’s inflation, considering that our total costs will remain stable on an annual basis,” said Persio Morassuti, CFO of VCEAA.

At VCNA, in our fourth year using the ZBB methodology, we continued to generate value with initiatives targeted to reduce costs across the organization, including in information technology and telecommunications, travel and entertainment, professional services and vehicle expenses and leases.

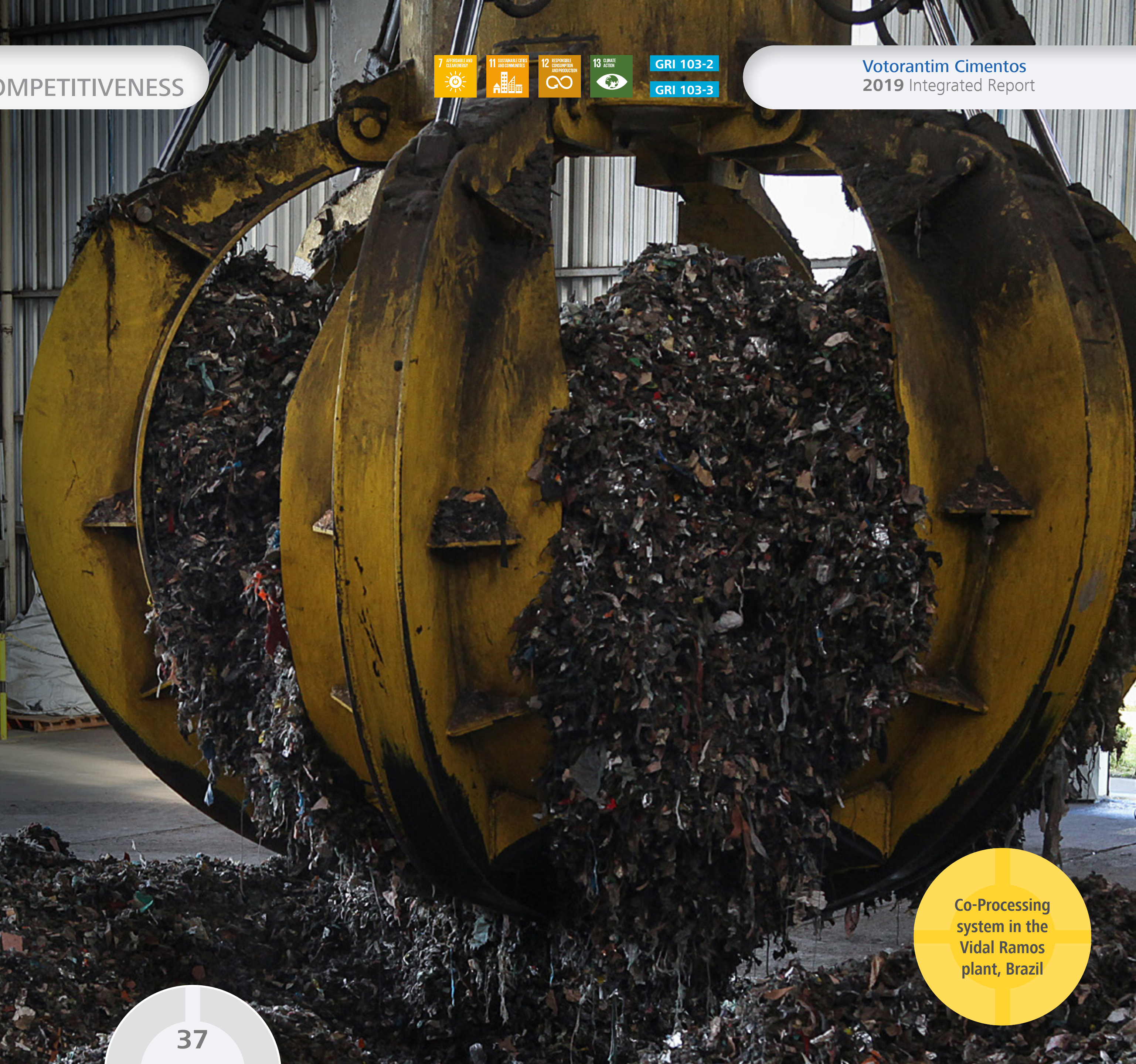
In Brazil, where we have had to severely reduce expenses to offset market retraction in recent years, our approach to cost reduction is less traditional. “Today, we need to invest to reduce costs much more on the operational side—costs directly associated with production,” explained Eduardo Almeida, CFO of VCBR. As an example, he mentioned the insourcing of mining activities that had been outsourced in the past and the need for investments in mobile equipment. In Brazil, there is also a Variable Cost Committee (VCC), which analyzes how to reduce expenses on fuel, electricity, inputs and reverse logistics, based on operational excellence measures, negotiations with suppliers and innovation.

Votorantim  
Cimentos  
employees in  
Morocco



# CO-PROCESSING DRIVES COMPETITIVENESS

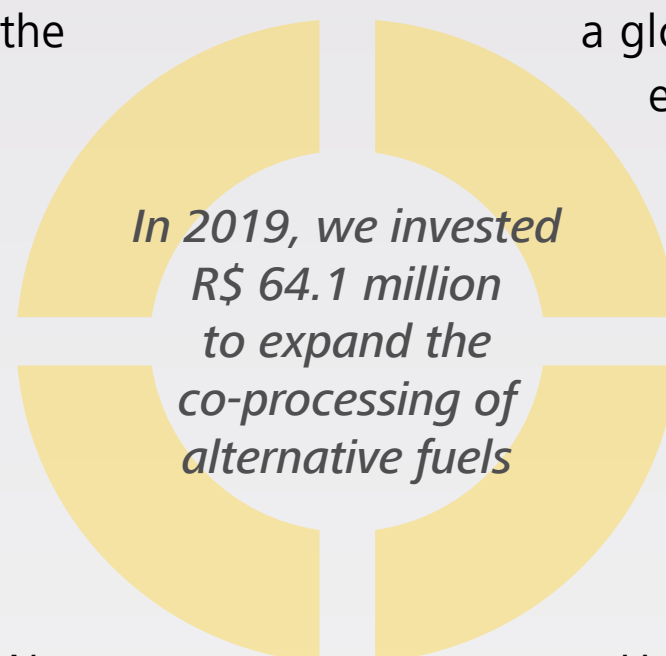
Using alternative materials in our production process has been a standard practice for nearly 30 years. This is one of our strategies, adopted both to reduce the environmental footprint of our activities and to increase business competitiveness. Taking action against climate change by using fewer natural resources and fossil fuels is one of our main management focuses in the regions where we operate—and it is fully aligned with our strategic plan, as one of our sustainability commitments.



Co-Processing system in the Vidal Ramos plant, Brazil

One of our priorities is to replace fossil fuels with renewable energy sources that emit less CO<sub>2</sub>. To this end, we co-process industrial and agro-industrial waste, solvents, municipal solid waste, biomass (such as açai, babassu coconut and olive pomace) and used tires. Another priority is to reduce the proportion of clinker in cement (the so-called clinker factor) by using limestone and other cementitious materials such as blast-furnace slag, fly ash, natural pozzolans and calcined clay.

GRI 103-1 GRI 103-2 GRI 103-3: 302  
GRI 103-3: 305



In 2019, we expanded the co-processing of alternative fuels. We invested R\$ 64.1 million in technologies and new facilities in our operations. While aligning with our ambition, this initiative reduces the cost of thermal

energy and our dependence on petroleum coke, and also generates incremental revenue from the provision of waste management services. In 2019, our thermal substitution rate was 22%, compared to 18.5% in 2018. We consumed 1 million ton of waste (vs. 839,716 tons in 2018). This resulted in a global reduction of 947,013 tons of CO<sub>2</sub> emissions, the equivalent of removing 300,000 cars from circulation. All this activity takes place within the regulatory limits established to ensure public safety, with much of the potential emissions eliminated by the extreme heat of the manufacturing process. **GRI 103-3: 305**

Using alternative materials also generates shared value. From an eco-efficiency standpoint, it reduces our carbon footprint, preserves natural resources and strengthens our reputation and brand. We benefit society in many ways: we contribute to reducing the amount of waste that is sent to landfills or intended for incineration, thereby avoiding the creation of environmental liabilities; we create direct and indirect jobs; and we generate income from projects with communities. We also contribute to leveraging sustainable waste management solutions. That is why, in 2019, we invested in the creation of a dedicated business unit, Verdera (read more on page 37).

## PROGRESS

The greatest progress we saw in co-processing was in our VCEAA operations, which, in just three years, went from zero thermal substitution to 17.8% at the end of 2019. “The investments we made will enable us to reach 30% thermal substitution by 2020 and we are forecasting to reach 63% by 2024 through the development of future investments that we have in our pipeline,” said Diego Novoa, project manager at VCEAA Globally, we want to reach a 45% rate.

In Tunisia, we mainly process biomass (waste from olive oil production). At the end of the year, we co-processed 69,000 tons of biomass, which corresponds to 20% of the fuel used in our kilns. In Morocco, we went from zero in 2018 to 18% in 2019, using 28,000 tons of biomass, industrial waste and used tires. In Turkey, we also co-process a large variety of waste, including Refuse-derived fuel (RDF), used tires and urban and industrial waste, and have achieved a 20% substitution rate. Hasanoglan is the first and only cement plant in Turkey that have applied and received a license to reach a 100% thermal substitution rate. Our Oural plant, in Spain, is the only Votorantim Cimentos plant in the country licensed to co-process hazardous waste such as contaminated oil, solvents and other hazardous liquids and RDF with hazardous content.

In Brazil, our investments included waste preparation units, modernization of our manufacturing system, filters and online emissions control, safety initiatives, laboratories to evaluate

Co-processing of biomass in the Jbel Oust plant, Tunisia



waste specifications, and technical staff to perform quality control among our partners, to ensure environmental and quality standards in the production process. In Brazil, we already have the highest thermal substitution rate within our operations (28.8%, in 2019). In 2020 we will inaugurate the first chlorine bypass system in Brazil, at the Vidal Ramos (SC) unit, which will enable us to use additional alternative fuels in our kilns and significantly increase our co-processing capacity. This is the first step towards a five-year goal of also installing bypass systems in Rio Branco do Sul (PR), Salto de Pirapora (SP) and Laranjeiras (SE).

At VCNA, we are also increasing thermal substitution and reducing our carbon footprint. At our Bowmanville (Canada) plant, we are licensed to

co-process construction and demolition wood waste. We began co-processing in mid-2018 and are reaching the limit of our current license, which is 100 tons per day. We will be submitting a request to authorities to increase both the quantity and the variety of alternative fuels (municipal and industrial plastics, textiles and packaging waste materials). At our Charlevoix (USA) facility, the operation of our co-processing system was resumed in November, after it had been temporarily halted during extensive plant modernization and expansion. Our current license there includes plastics, asphalt flakes and small quantities of cellulose fiber waste materials. [GRI 103-1](#)

[GRI 103-2](#) [GRI 103-3: 302](#) [GRI 103-3: 305](#)

In VCLatam, our plant in Uruguay achieved a 34% rate of alternative fuels and raw materials substitution. In Argentina, our cement plant is leading the co-processing in the cement industry with a substitution rate of 13%.



## BIOMASS: ENERGY AND SOCIAL TRANSFORMATION

Biomasses accounted for 47% of the alternative fuels we co-processed in Brazil in 2019. Two of our projects that stand out in this area include the use of babassu coconut shell and açai pits in the Northeast and North regions of Brazil. Since September 2018, the Sobral (CE) plant has been buying babassu coconut shells and bagasse from family farmers in Serra da Meruoca, which includes four towns in Ceará. This waste, which used to be discarded, replaces part of the fossil fuels used in cement manufacturing, resulting in environmental gains, thanks to the use of renewable energy and reduced greenhouse effect.

The sale of the waste that is left after babassu almonds are extracted to produce oil, soap and cosmetics ensures a steady and complementary income to families in the region, where babassu

collection is a traditional activity. In March 2019, this initiative won the 4<sup>th</sup> Latin American Transformers Award, presented by Rede América. The award recognizes innovative and inspiring examples of promoting sustainable communities with a focus on community-driven development.

In 2019, we launched a babassu coconut processing complex to enable families to increase the production of oil to be sold to the food and cosmetics industries. The opportunity is offered through the ReDes Program, a joint initiative of Votorantim Cimentos, the Votorantim Institute and the Brazilian National Bank for Economic and Social Development (BNDES). In 2019, in Primavera (PA), we co-processed 70,000 tons of açai pits—another biomass resulting from a fruit whose pulp is traditionally consumed in northern Brazil and that is currently exported to all continents.





Verdera launch  
event in São Paulo,  
Brazil

## VERDERA ADDS VALUE TO THE WASTE MANAGEMENT CHAIN

Verdera is the name of the business unit we launched in Brazil in September 2019 to offer companies and other industries appropriate waste management services. The name Verdera comes from the verb “ver”, in Portuguese, which means “to see”: seeing waste management from a different perspective, giving new purposes to waste materials. It also has to do with building a new era, in which we think about sustainability and future generations. “We offer a service that benefits society. It’s a great example of how industries can be a solution for the elimination of municipal and industrial waste,” said Eduardo Porciúncula, general manager in charge of the new unit. “Few businesses like us can offer a solution on this scale, with national presence and operational stability.”

By acting in the environmental solutions chain, we assign a different value to waste while generating alternative energy.

In this way, we have established a lever for competitiveness, value creation, emissions reduction and reputation. In 2019, the work of Verdera prevented 806,300 tons of waste from being sent to landfills or incinerated.

In 2018, we started to co-process Refuse Derived Fuel (RDF) at our plant in Salto de Pirapora (SP). In just one year, the volume grew 118%, from 17,600 tons to 38,300 tons in 2019. During the year, we received a permanent license for Salto, as well as licenses for RDF processing in Rio Branco do Sul (PR), Sobradinho (DF), Edealina (GO) and Goiânia (GO). “These licenses show that technologies that represent an alternative to landfills are becoming better known in Brazil,” said Porciúncula.

At our Rio Branco do Sul plant, we started processing RDF in 2019. Year-to-date, we have consumed 75,000 tons of RDF in production processes at Brazilian units, which resulted in a 14,800-ton reduction in emissions of greenhouse gases.

In parallel, we started the operation of our pre-preparation plant, which receives and prepares industrial waste that we collect from different generators for co-processing. These materials include contaminated fabrics, personal protective equipment (PPE), paper and packaging discarded by the pulp and paper, chemical, oil and gas industries and the agricultural sector. The waste that is crushed in Rio Branco do Sul feeds our kilns in that plant. Over the next five years, five pre-preparation units will be installed in the Center-West, Southeast and Northeast regions of Brazil.



# LOGISTICS AS A COMPETITIVE ADVANTAGE

We remain committed to the strategic objective of transforming efficiency into a competitive advantage by providing the best customer service and creating new businesses. In 2019 we advanced the implementation of the #Clean100 project, which began in 2018 with the identification of four levers of value generation in logistics: Cost Efficiency, Transport Matrix, Technology and Automation, and Collaborative Business. Our goal is to create a logistics ecosystem that is pioneering in the Brazilian industry.

Logistics accounts for the second largest cost of our activity. The area represents a great opportunity for cost savings and value creation. At the same time, it is a challenge to do so in a segment of high competition and low added value. With Cost Efficiency and Transport Matrix, areas where performance is already strong, we are looking for greater productivity. In Technology and Automation and Collaborative Business, we will work to create differentiation and services.

*Our goal is to create a logistics ecosystem that is pioneering in the Brazilian industry*

Votorantim Cimentos people (employee, contractor and driver) at the Salto de Pirapora plant, Brazil

In Cost Efficiency, we increased productivity by tracking delivery vehicles, tailored the fleet profile according to the routes taken, made progress in the use of non-road modes, and renovated our fleet of 140 forklifts, among other measures. We inaugurated distribution centers in Birigui (SP), with a 2,000-ton storage capacity, and in Santarém (PA), with the capacity to ship 10,000 tons of cement per month. In 2020, we will inaugurate nine other distribution centers.

Our OTIF (On Time in Full) indicator solidified a segmented view of our customers (retail, construction and industry) and relied on automatic order organization processes that proved to be important in increasing positive customer perception. Also in 2019, our "Customer Within Target" (CWT) indicator, which shows the percentage of customers served on time, was 76.4% compared to 70.7% in 2018.

In Transport Matrix, in 2019 we concluded our Manaus cabotage project through the operation of an exclusive ship to transport products between the Laranjeiras (SE) plant and the Manaus (AM) terminal, acquired in 2018. With a capacity of 20,000 tons, each trip made by the ship offsets the use of approximately 500 trucks, which would consume three times more fuel and emit 25 times more CO<sub>2</sub>.



Docks in  
Charlevoix,  
USA

## COLLABORATIVE BUSINESS

In Collaborative Business and Automation, the focus of 2019 was on independent drivers. We want to support them and provide conditions to improve their work. Each year, 20,000 independent drivers load their trucks from our plants and distribution centers. If we were a transport company, we would be the third largest in Brazil, moving 2.3 million tons of goods, in 92,000 shipments, per month.

We are preparing to automate the registration of independent drivers, a system that will go

into operation in early 2020 and will also incorporate driver integration dynamics, safety training and invoicing. Registration time will be reduced from up to 1 hour to 15 min. We invested in the integration of the Yard Management system (implemented in eight units), and will integrate it to the Driver app, the registration system and Digital Safety, a health, safety and environment app that also started being tested in 2019.

## ACCURATE INFORMATION AT VCEAA

In Spain, as part of our Go to Market initiatives, we launched Mi Ruta, a mobile app for drivers that enables deliveries to be tracked both by us and by our customers. **Mi Ruta** provides accurate order location and status information, and also enables us to manage product returns, receive logistics NPS feedback, assign orders to trucks, optimize fleet utilization, and ensure differentiated services to customers. It also facilitates communication between our Customer Service, transportation planners and drivers. It was inspired by the Driver app used in Brazil.

In Morocco and Tunisia, to improve customer experience inside our plants, we implemented a new automation system for external and internal truck queue control; drivers have cards to check-in when they arrive at the parking lot kiosk and wait to be

automatically called via video systems or SMS message. A fast-track lane for bulk cement was also implemented. When a driver arrives at the weighbridge entrance, he is sent to the optimal loading point inside the plant; upon exiting the plant, the kiosk automatically prints out the delivery note. "The new automation system will allow us to keep improving our customer experience in the future with self-service for bulk cement," said Rodrigo Marra, Go to Market manager at VCEAA.

Also in Morocco, we inaugurated our first distribution center in Sidi Slimane, to get closer to our customers and increase the visibility of our brand (*this initiative is combined with packaging updates and the launch of a loyalty program; see more on page 49*).

A new cement queue automation system enables us to improve the self-service experience

## INTEGRATED NETWORK AT VCNA

At VCNA, where we have an integrated transport network (waterway, rail and road modes throughout the Great Lakes region), we invested nearly 8 million Canadian dollars (or R\$ 32.2 million) in logistics infrastructure, with a focus on customers. We installed new silos to increase storage capacity by 65% at the St Marys Cement terminal in Marysville, Ohio, which serves one of the fastest growing markets in the region. We optimized load time for customers at the St Marys Cement plant in Detroit, Michigan through our bulk loadout project and the modernization of our scale. In addition, we modified our docks in Charlevoix (Michigan) to reduce the loading time for our cement barges. Today, about 95% of the cement produced at the Charlevoix plant is transported to our terminals in the region by barges.

Marysville Terminal construction, Ohio, USA

**MI RUTA APP**

- It eases the tracing of our trucks via GPS.
- Customers can track their orders status and location in real time.
- Contact Center has an overall control of the orders status during the transport process.
- A digital delivery note will be available for Drivers.

Votorantim Cimentos

CDIAROS TEDE Pulmar Probetang

# INNOVATION FOR THE FUTURE

Innovation is part of our daily lives and is a basic condition for performing competitively. Our initiatives include the adoption of alternative energy sources, the development of new products and the use of digital technologies to increase the efficiency of our operations, enhance our relationships with suppliers and customers and integrate finance systems and IT networks. Innovation is also behind the ideas proposed by our employees through the i9 program and the creation of new businesses—such as the Juntos Somos+ customer relationship company (see more details on page 45), established in 2018, the Verdera co-processing unit announced in September 2019, and the new aglime brand which will be launched in 2020 (see pages 40 and 51).

We integrate an ecosystem and form strong partnerships with startups, suppliers, universities, research centers, government agencies and investment funds. Our Open Innovation initiative was created in 2017 and grew in 2019. It now has its own platform, VC Connect, and a specific, formalized purchase process to facilitate and expedite the hiring of research centers and startups. In addition, we increased participation in grant fund activities. “Sharing our business challenges via VC Connect demonstrates our commitment to fulfilling our strategic digital plan by seeking different ways of creating value and, in some cases, breaking down barriers through solutions that incorporate concepts of Industry 4.0, for example,” said Humberto Shida, general manager of Global IT.

## VC CONNECT

VC Connect is the platform where we connect Company challenges with solutions proposed by innovative agents. In the first year, 2017, the theme was Industry 4.0. In 2018, it produced a solution to measure volume on products delivered to customers. In 2019, the platform gained its own brand, VC Connect, and the ability to simultaneously host several innovation cycles: throughout the year, there were three challenges in the areas of aggregates, payment and career paths.

In aggregates, we sought proposals for the development of a mining and crushing process simulator to identify cost reduction opportunities of up to R\$ 1.00 per ton. Of the 15 companies registered, two submitted complementary proposals: one on simulation (Dual Mining) and one on connectivity of production assets (IndWise). The next step is to prepare the solution’s proof of concept.

In terms of payment, in Brazil alone, we issue more than 100,000 bank slips every month. This is the form of payment used in 95% of the Company’s sales in the country, mainly by small customers. The challenge is to devise a way to replace bank slips to improve the shopping experience, with real-time authentication (bank slips take 24 hours to clear). Fifteen startups submitted proposals, four of which participated in DemoDay.

## INTELLIGENCE IN CONCRETE

We teamed up with Senai Climatech University Center to develop an integrated solution for measuring the volume of concrete delivered by concrete mixers. The project is the result of the 2018 Engemix Open Innovation challenge and received public resources from the Brazilian Company of Industrial Research and Innovation (Embrapii). The tests were completed in October 2019 and the solution achieved an accuracy rate between 85% to 99%.



Winners of the  
i9 program in  
2019

# INDUSTRY 4.0

In 2018, we created a Global Industry 4.0 Commission, including all VC COOs, CFOs, and CIOs from all regions. We prioritized investments in operating technology in the areas of Maintenance, Process, Quality and Electric/Thermal Energy, which have the most potential for digital transformation. These opportunities were identified through our Automation and Information Master Plan.

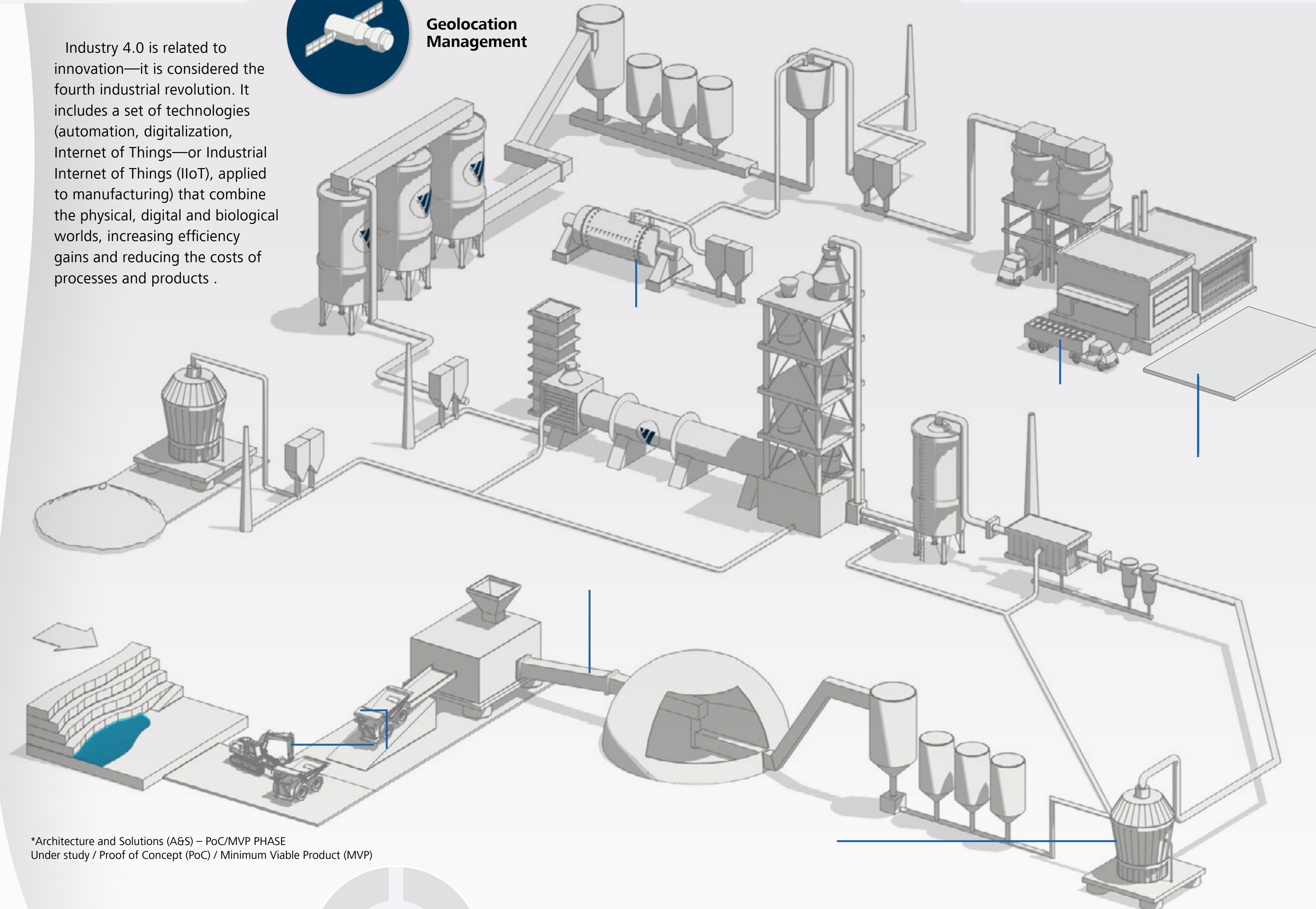
To organize the initiatives, we divided the solutions into four main pillars: Structuring, Data and Image Analytics, Artificial Intelligence, and Robotization. Under Structuring, which is the basis for evolution within industry 4.0, we continually invested in the automation of equipment and industrial networks, with a planned investment of over R\$ 200 million over the next 15 years. Our first step was to integrate industrial and corporate networks to enable cloud technologies to reach the industrial area, with a focus on cyber security.

In Data and Image Analytics, all manufacturing process information is stored as “big data” in a private cloud. In 2019, we began organizing the data science area, with an initial focus on seeking value creation in the sales and production (energy) processes, through a common IT and Business transformation governance model. In Image Analysis, stockpiles of raw material stored in the open are measured using images captured by drones. For shed areas, where drone access is limited, we conducted a proof of concept in Charlevoix (Michigan) using stereo 3D cameras, which allow for more accurate information collection.



## Geolocation Management

Industry 4.0 is related to innovation—it is considered the fourth industrial revolution. It includes a set of technologies (automation, digitalization, Internet of Things—or Industrial Internet of Things (IIoT), applied to manufacturing) that combine the physical, digital and biological worlds, increasing efficiency gains and reducing the costs of processes and products .



\*Architecture and Solutions (A&S) – PoC/MVP PHASE  
Under study / Proof of Concept (PoC) / Minimum Viable Product (MVP)

## SPECTRUM

During 2019, in Artificial Intelligence, we approved the implementation of the Spectrum predictive maintenance system in all plants in Brazil, following the successful experience at the Salto de Pirapora (SP) and Rio Branco do Sul (PR) units in 2018. Spectrum enables us to monitor the Company's main assets online, such as kilns, mills, fans, gear boxes and elevators. Sensors installed on these devices are connected to software that uses artificial intelligence and machine learning capabilities. By comparing actual data with data on effective operation, the system predicts interventions in each piece of equipment.

*A predictive maintenance system, using artificial intelligence, enables us to monitor the Company's assets online*

The use of Spectrum has prevented 300 cases of unplanned equipment. Stoppages with an estimated R\$ 4 million reduction in losses. Through December 2019, we implemented Spectrum in eight units in Brazil and by October 2020 we will reach the remainder of the plants. We are already working on its implementation at VCNA and VCEAA.

Maintenance team in the Primavera plant, Brazil



## DIGITAL TRANSFORMATION AT VCEAA

In 2019, VCEAA began its digital transformation through a process that crosses all areas of the Company and is organized in five pillars. The first one is the transformation of the IT area, which during the year gained a new organizational structure, renewed its team and had part of it relocated from Vigo, in northern Spain, to Madrid, to get closer to our strategic customers. The governance of the area was redesigned, and the digital transformation strategy was aligned with the business objectives. The second pillar is operations and supply chain; the third is sales. There are also the finance and back office, and the infrastructure pillars, which host Central Finance, the area's most important project in 2019. "We have a vision and a strategy, and we have started a modernization process that will be ongoing," said Persio Morassutti, CFO of VCEAA.

The region currently uses six different versions of the SAP system and a non-integrated environment with high development costs. That is why, through Central Finance, we started the preparation for the new version of the SAP management system, S/4Hana. "We'll be relying on real-time data, including customer relationship and product line data, to ensure better and faster insights. We will have better auditable fiscal and statutory reporting controls, standardized financial processes and centralized data governance," said Morassutti.

## OWNERSHIP WITH I9

The creativity and ownership of our employees are also part of our innovation capital. I9 is VCBR's program to foster this capital and recognize ideas that contribute to creating value and improving our results. The solutions categories are VCFaz ("VC Does": routine), VCTransforma ("VC Transforms": medium complexity) and VCSupera ("VC Exceeds": high complexity).

Participation is voluntary and grows year after year. In the 2018 cycle, concluded in 2019, 404 ideas were submitted, 740 employees participated, and 141 solutions were implemented. The winning ideas, among eight finalists, were: Ramp UP, to increase the ton-per hour productivity of the filler at the Cajamar mortar plant (SP); Reduction of bagged cement overweight in filling machines, at the Rio Branco do Sul plant (PR); and Recovery of the bagging nozzle seals, at the Pecém plant (CE).

# FROM THE CUSTOMER'S PERSPECTIVE

A subtle but important change in customer relationships marked our performance in 2019. To make it even clearer that we want to do what our customers want, the way they expect it, we now view customer focus as our way of joining with our customers to focus on their needs, rather than us simply focusing on them. "It's a review of our organizational culture, where we now look at the customer perspective and not just at the customer himself," said Marcelo Castelli, global CEO. To this end, we are working towards more differentiation of products, services and value proposition—in a way that is clearly perceived by consumers.

Customer and retail sales promoter in Brazil



Customer and retailer at a store in Brazil

from the performance of our sales force to reducing bureaucracy and improving efficiency for concrete buyers (no project should stop because a concrete mixer is late), as well as improvements in logistic and sales channel processes. We believe that these initiatives resulted in an improvement in the indicator, reflecting the value we place on customers and their perspective and demonstrating our ability to quickly adapt to market demands. **GRI VC-1 | GRI 103-2**

Every year, in the second half of the year, we measure our NPS through interviews conducted by an independent outsourced provider with different types of customers throughout Brazil. In addition to answering whether they would recommend Votorantim Cimentos to a relative or friend, the customers we interview are asked about the reasons behind their score. The

*The growth of ten percentage points in the Net Promoter Score (NPS) reflects initiatives to increase customer satisfaction*

In Brazil, we measure our NPS (Net Promoter Score, which evaluates customer loyalty) annually, which enables us to guide our strategy for each region and product we survey (cement, mortar and concrete). After a slight drop in 2018, we grew 10 percentage points in 2019 (from 63 to 73 points, our best score since we started applying this survey in 2004). Among the initiatives that helped with this recovery are the creation of a committee that monitors everything

Customer and retail sales promoter in Brazil

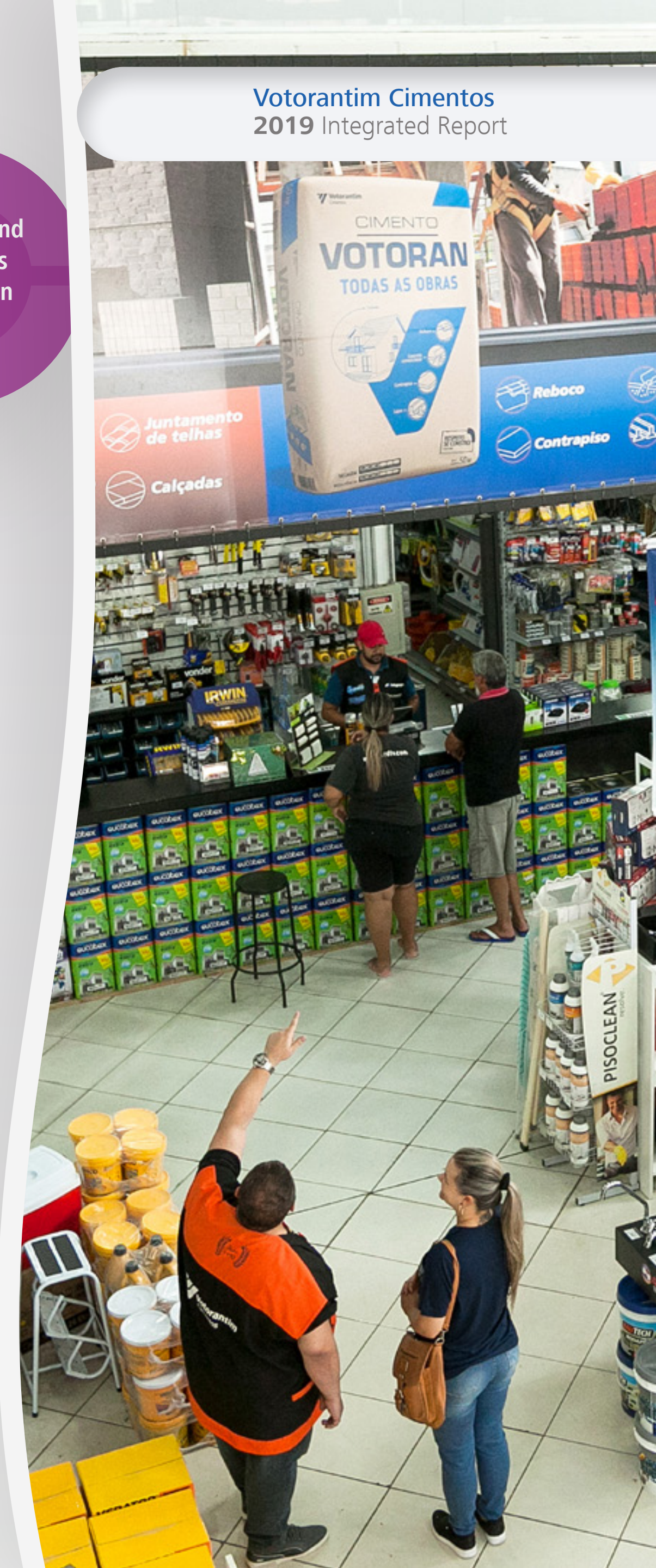
analysis of their responses enables us to determine our strategy and act in line with the expectations of our customers, both by regions within the country and by segment (self-construction, real estate and industrial) and by product (cement, mortar and concrete). **GRI 102-43 | GRI 103-3**

Every six months, we organize Customer Council meetings, where large business customers discuss relevant issues. For example: "How much should we invest in a concrete mixer management and logistics app ("The Uber of Concrete")?" or "Should we charge when an order is cancelled (considering that, in Brazil, between 15% and 20% of all orders are canceled on the day of delivery)?"

### OMNICHANNEL

Another ongoing program is Omnichannel, our Customer Relationship Management (CRM) platform, to offer faster services, connect the sales team directly to the system and provide recommendations for each customer. The platform results from mapping all processes related to our customers. As a single, integrated solution with a global reach, it replaces several legacy systems, software and processes. It includes three main projects:

- 1 implementation of a construction industry sales portal (through a marketplace/internet store);
- 2 modernization of phone, chat, e-mail, sales, after-sales and Customer Service solutions; and
- 3 integration of information between Customer Service and the External Sales area.





Among the Omnichannel initiatives already completed, a system that enhances customer information, reduces double entries and provides users with an easier and more intuitive experience (specifically for concrete sales) started operating at VCNA in November. "Named One Stop Shop, the system is scheduled to be extended to cement areas in the first quarter of 2020," said Resha Watkins, VP of Strategy and AFR at VCNA. In the United States and Canada, many of our operations are focused more on concrete than cement and most of our investments are being made to reduce the loading time of both trucks and barges (at the Detroit, Charlevoix and Marysville plants).

At VCEAA, we continued to work on a project to integrate information from commercial areas (the sales center and store-to-store salespersons), which is expected to be completed by May 2021, as part of our digital transformation strategy (*read more on page 46*). "In customer relations, our first step was to define who we want to be, with different ambitions in different countries," explained Günther Smetana, COO of VCEAA and Head of VC Latam. "Then, we determined internally what we need to do to better serve each stakeholder." In this direction, we launched customer loyalty programs in Morocco (Asmenty) and Tunisia (Mercim).

Contact Center is the name of the new phone, chat, e-mail, sales, after-sales and customer service solution in Brazil. "We implemented the system in October, aiming to reduce order time, which was 10 minutes on average," said Hugo Armelin, director of Marketing, Sales, and Concrete at VCBR. The virtual representative, which is powered by artificial intelligence, was named Vic (an acronym based on Votorantim Customer Interaction).

*"In customer relations, our first step was to define who we want to be, with different ambitions in different countries. Then, we determined internally what we need to better serve each stakeholder."*

**GÜNTHER SMETANA,**  
COO of VCEEA

## SALES PORTAL

From a commercial standpoint, our self-service channel, which in 2018 was called VC Online, accounted for 73.4% of all orders. The initiative was so successful that in July, the first construction sales portal was launched in Brazil: the Virtual Store. Like VC Online, the Virtual Store is housed inside Juntos Somos+, a company we created in 2018 together with Gerdau and Tigre that already brings together more than 20 companies in the sector. Through the internet, resellers can buy cement, steel, pipes, fittings and other construction items in a single order. The Virtual Store went live in September and is now available in all of Brazil. Our focus is on small resellers—usually the owners of family businesses, who sometimes have up to 6,000 different products in stock.

One of the most important components of Juntos Somos+ is JS+ Retail, which, from 2018 to 2019, grew from 40,000 to 65,000 registered building materials stores. Juntos Somos+ Professionals, a program aimed at construction workers, already has more than 250,000 registered participants.

Also on the topic of small retailers, in 2019 our Pague Flex tool (which allows

them to choose their payment term, from seven up to 56 days) accounted for 13.2% of VCBR's total revenue (compared to 10.1 % in the previous year). In addition, as a benefit to the Company, the new system reduced default to zero, since all transactions are facilitated by the banks, with immediate payment.



Sales promoter in Brazil



Vista Tower  
in Chicago,  
USA

### EXCHANGE

In the concrete area, we strengthened the partnership between VCBR and VCNA. Employees of the Prairie Material unit in Illinois came to Brazil to exchange best practices, such as the use of GPS in our 500 concrete mixers that, when combined with sensors, prevent cargo (or part of it) from being delivered to the wrong address. Everything is controlled through a system and our customers can access all the information via an app. In 2019, the Brazilian customer base using this app grew and reached 48%, surpassing utilization in the U.S., where the system has been in place for several years.

## NEW PRODUCTS

In 2019, we expanded our product portfolio worldwide. The most significant investment was in the area of aglime, in Brazil. In the concrete area, VCBR started to operate in the individual consumer segment, which was not being served in Brazil. A sales center was created—0800-CONCRETO (0800-2662-7380)—to serve individual consumers interested in purchasing at least three cubic meters of concrete to be used for renovations or new buildings.

At VCNA, we continued to perform studies with various concrete mixes, for the specific needs of each project. Lightweight concrete enables builders to reduce the steel structure in high-rise buildings. “We are known for having some of the best concrete solutions in the market,” said Edilson Chimilovski, president of Concrete and Aggregates at VCNA. In Canada and the United States, special mixes that offer better quality and therefore have more added value account for 40% of our sales. The line is called Concrete Solutions because it offers complete solutions to archi-

tects, engineers and contractors—and not just the product itself. VCNA’s concrete is part of the construction of Vista Tower, the third tallest building in Chicago (USA) and the tallest in the world designed by a woman architect, and the Gordie Howe Bridge, which connects the cities of Detroit (USA) and Windsor (Canada), expected to be completed in 2024.

*Lightweight concrete developed by VCNA enables builders to reduce the steel structure in high-rise buildings*

In Brazil, our Pecém (CE) plant started producing an E-40 line that uses slag and enables the production of more durable concrete. In other words, cement that is “doubly good”: from an environmental standpoint, it emits less CO<sub>2</sub> during production and, functionally, it has a longer life. The Laranjeiras (SE) unit is producing a high-strength CP-V type cement, more suitable for cement artifact and precast applications. In addition, we are also offering a premium, high-performance sand that increases the strength of concrete by producing a mix that is more compact and results in fewer gaps. Finally, the 25-kg bag of All Constructions cement met a market demand and found space in large urban centers, for use in home remodeling.

# BUSINESS DIVERSIFICATION

**B**razil is one of the largest agricultural producers in the world. Each year, nearly 50 million tons of inputs are consumed across the country to ensure crop production. We have been participating in this market for several decades, selling limestone-based soil correctives, oxides and mixed mineral fertilizers that improve soil quality and increase plant growth. In 2019, with the expansion of the Nobres (MT) plant and the increase in storage capacity in Xambioá (TO), we took the first step to reposition our business in this sector, an operation that will be inaugurated in 2020 with the launch of a new brand, our aglime business unit in Brazil.



Limestone-based  
soil corrective  
application on a  
field in Brazil

“This is a very fragmented market, with more than 250 players,” explained Laercio Solla, general manager of Aglime and head of the newly created business unit. “As much as we are recognized for our quality, many people compare us to fertilizer companies and think: what is Votorantim Cimentos doing here?” That’s why we created a new identity under a new brand, to be closer to our customers and able to serve them even better.

The area of aglime has great synergies with our operations, since there is optimal use of our mineral resources and a few cement by-products, all products are manufactured in existing plants, and it extends logistics distribution to our service offering. It also strengthens our sustainability pillar, since the greater share of agricultural products enables us to reduce the generation of sterile material while also directing high-value mineral products to the field. The Go to Market strategy brings a distinctive value proposition, which includes the use of the Company’s logistics structure to focus on delivering products with excellence, a dedicated customer service center and a technical sales team trained to identify the best solutions.

Also, a partnership with Nexa, the zinc and copper miner of the Votorantim Group, is yielding a highly positive benefit to the environment: waste from the mining process involved in the production of zinc concentrates is directed to the agricultural limestone market, transforming this material into something that our consumers need.

### EXPANSION

In 2020, we will diversify and increase our production capacity by more than 1 million tons: 600,000 tons of blended mineral fertilizers (200,000 in Nobres, 200,000 in Xambioá and 200,000 in Itapeva, in the São Paulo countryside), and 470,000 tons of limestone (350,000 in Itaú de Minas and 120,000 in Xambioá).

A few items were launched in 2019: bagged fertilizers, in smaller packages to cater to producers in specialized segments (such as flower producers in the Holambra region of São Paulo) and the horticultural sector (in the green belt of large cities); filler-type high-performance limestones, for precision application; and blended limestone-sulfur mineral fertilizers, which benefit producers, since they come in a single application and ensure greater efficiency in soil correction, mobility and nutrition.

*“We created a new identity in aglime under a new brand, to be closer to our customers and able to serve them even better.”*

**LAERCIO SOLLA,**  
General manager of Aglime

Itaú  
de Minas  
plant, Brazil



# FOR A MORE DIVERSE COMPANY

GRI 103-2: 405

**D**iversity and Inclusion (D&I) have never been so alive at Votorantim Cimentos than in 2019. Our focus during the year was to reinforce that, more than ever, “we work to create an environment where each of us has the confidence to express our true selves.” We have solidified our position and publicly shared our Manifesto for Diversity in all of our regions. We had a special day in Brazil for everyone to participate in an event held to communicate this position, join forces with D&I allies and celebrate our progress so far. Our position reflects a set of commitments and initiatives to expressly convey that we do not tolerate discrimination or prejudice, we respect people and we foster the creation of a safe work environment .

Votorantim  
Cimentos  
employees at the  
Corporate Office in  
São Paulo, Brazil



Based on our position, we developed specific activities and strategies in each of our regions. In Brazil, we focused on four major themes: race and ethnicity, gender (with a focus on women's empowerment), LGBTI+ and people with disabilities. We do not have set quotas or goals. We want teams to be increasingly diverse, year after year. And this is a concern that is priority for all of our operations.

GRI 103-2 GRI 103-3: 405

In addition to programs and initiatives in these areas, we created groups of allies, made up of employees who dedicated themselves to discussing and proposing activities to implement these changes at VC. In these groups, more than 120 people discussed inclusion and diversity issues as something beyond their job function—because

they understand that living diversity is a mission that each and all of us share.

We know that this is an educational journey, since without knowledge and without empathy, we will not open our minds to inclusion. And to offer everyone the opportunity to learn and talk about D&I, we launched a booklet that is now our guide to help change behavior and provide more information for discussions on this subject.

We ended 2019 with a staff of 11,953 employees (85% men and 15% women). At VCNA, for example, 25% of all directors are women. This is a very significant achievement, when we consider

Employees in the Poty Paulista plant, Brazil

TOTAL EMPLOYEES WORLDWIDE

GRI 102-8  
GRI 405-1

11,953  
total employees in 2019

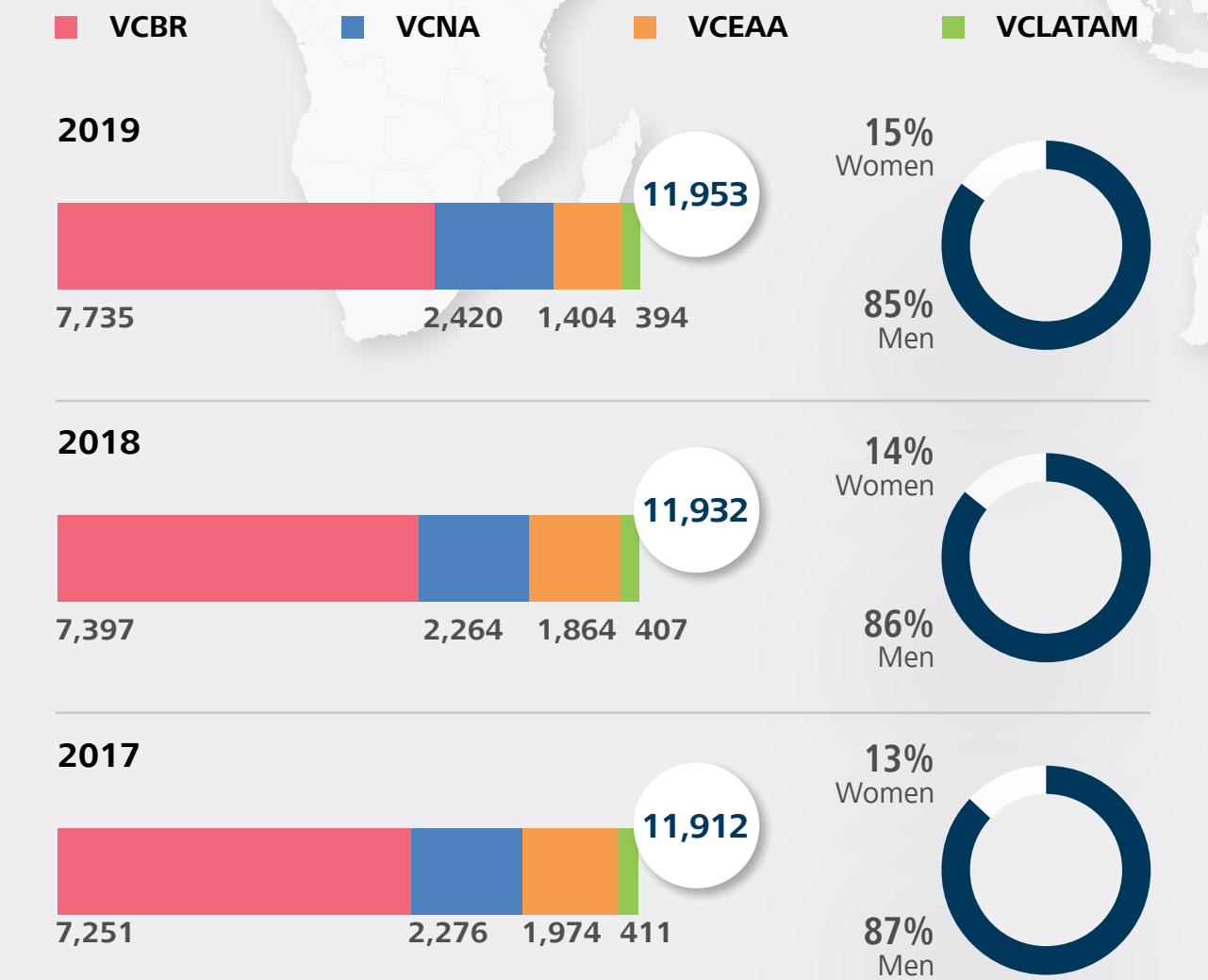
2,420  
VOTORANTIM CIMENTOS NORTH AMERICA (VCNA)<sup>1</sup>

7,735  
VOTORANTIM CIMENTOS BRAZIL (VCBR)

1,404  
VOTORANTIM CIMENTOS EUROPE, ASIA AND AFRICA (VCEAA)<sup>2</sup>

394  
VOTORANTIM CIMENTOS LATIN AMERICA (VCLATAM)<sup>3</sup>

TOTAL EMPLOYEES<sup>4</sup> AND EMPLOYEES BY GENDER



<sup>1</sup> Canada and United States  
<sup>2</sup> Morocco, Spain, Tunisia and Turkey in 2019  
<sup>3</sup> Argentina, Bolivia, and Uruguay in 2019  
<sup>4</sup> Considers only Company employees



Votorantim Cimentos employees in VCEAA, Spain

that only between 9% and 10% of all people working in the construction industry in the United States are women. At VCEAA, what sets us apart is the diversity of cultures, since we operate in four countries (Morocco, Spain, Tunisia and Turkey), with different languages, religions, cultures and history. In Morocco, Spain, Tunisia and Corporate, there is at least one woman in the Executive Committee. In Turkey, the first female plant manager was appointed in 2018.

**ADVANCES** GRI 103-2 GRI 103-3: 405

In 2019, in Brazil, 63% of the candidates approved for our trainee program were women; 23 women were selected for technical training in our operations; and 15 of our managers and general managers were selected to participate in our women in leadership program.

Our partnerships not only continued but expanded. In addition to new alliances with several groups that work to promote diversity and inclusion in Brazil, we became signatories of two UN initiatives: the Business for LGBT+ charter (to end discrimination against the LGBTI+ population in the workplace) and the Women's Empowerment Principles (for gender equity and women's empowerment).

The 23 participants of the 2019 Potenciar Program became mentors for college students from Zumbi dos Palmares. Strengthening relations with people of colours is an important part of the racial inclusion we consider essential to building new paths for a joint future.

Because we understand that navigating the workplace can be especially challenging for individuals with different gender orientations, we created the "Adminis-Tra-Trans" professional training program to help prepare 20 members of the LGBTI+ community to enter the work force, by highlighting their skills and abilities over any other personal characteristics.

Along the same lines, in August VCBR hosted its first Pride Week, focusing on freedom of sexual orientation. Lua Stabile, a United Nations expert on LGBTI employee placement, was our guest on the first day

of the event, which featured face-to-face lectures that were broadcasted live via Workplace and testimonials. The activities involved over 200 employees in offices and plants across Brazil. "Who could imagine, two or three years ago, that in 2019 we would be discussing the importance of parental leave for same-sex couples?" asked Cristiano Brasil, global director of People, Management and Communications.

In September, discussions on how to include people with disabilities in the workplace took place at Votorantim Cimentos. Paralympic fencing athletes performed a demonstration at the Company. The event also included sensory experiments to help employees understand the different challenges of people with disabilities. Approximately 40 people participated in the activities, showing that this is not only a responsibility of the Human Resources area, but one that is shared by all employees.

We also shared stories, facilitated discussions and trained more than 100 leaders in unconscious biases and their role in D&I; we saw our initiatives multiplying in different locations and through different people, demonstrating that the concepts included in our Manifesto continue to take hold.

In 2019, we also worked to build our long-term strategy, because we know that the road ahead is still long, but more and more real.

*We formed new alliances with organizations that work for diversity and inclusion and signed two UN initiatives*

In November 2019, we hosted Diversity Day at VCNA for the fifth consecutive year, in the United States and Canada. Steve Gallagher, VP of Human Resources for the region, said that it all started with the goal of improving Company practices, which were often seen as outdated. "Since then, we have been making progress mainly on gender issues. Our more experienced women employees act as mentors for younger women, in this industry that is so predominantly male," he said. "Our Diversity Manifesto stresses this philosophy and pushes us to improve our organizational culture around the world. Everyone has the freedom to be who they want, just the way they want," he said.

Trainee candidates working in the collection of recyclable materials



## ENGAGED TRAINEES

GRI 103-2 GRI 103-3: 405

Our pursuit for Diversity and Inclusion also marked our entryway programs through the search of diverse profiles.

We launched the Technical Internship Program for women, with the goal of increasing the number of women in entry-level positions in our operations: 23 interns were selected to work in several plants in Brazil. A similar logic inspired the Cement Leaders program: the class starting in 2019 was the first one to include a woman.

With regard to our Trainee Program, we once again avoided the obvious to seek what brings us closer to our purpose. As in 2018, the entire initial phase of the selection process was blindly conducted to prevent the "standardization" of candidates and ensure diversity of gender, race, education, upbringing and social status. We had close to 21,000 applicants, selected without us knowing in what area they were majoring or from which college they were coming. In the videos where candidates present their life stories, we can see diversity from all angles: black, women (more than men),

and different sexual orientations. New last year was our partnership with the Pimp my Ride organization during the first face-to-face phase, during which candidates worked in groups collecting recyclable materials, experiencing the reality of garbage collectors in the city of São Paulo. This activity created awareness of co-processing, ensuring the link between the experience and our strategy.

"All of the trainees from the group selected in 2018, which spent 2019 working in different areas of the Company, delivered more than expected; they were purposeful, engaged and concerned about building lasting relationships," said Cristiano Brasil, global director of People, Management and Communications. The 16 candidates selected for the 2020 trainee program, which is expected to last 16 months, started working in January.

*"All of the trainees from the group selected in 2018, which spent 2019 working in different areas of the Company, delivered more than expected. They are purposeful, engaged and concerned about building lasting relationships."*

**CRISTIANO BRASIL,**  
Global director of People,  
Management and  
Communications





# RE-ENERGIZING KNOWLEDGE

GRI 103-1 GRI 103-2 GRI 103-3:404

Throughout the year, we maintained our training policies to support the personal and professional growth of our employees. Our key programs have been around since 2014 and are called Essential Leadership Program (ELP), Advanced Leadership Program (ALP) and Master Leadership Program (MLP). Contents are reviewed regularly to incorporate new approaches.

In 2019 we worked to solidify and strengthen our Training and Development initiatives and programs. With a focus on skill-building, we recognized the need to re-energize technical knowledge more linked to the industrial area, which resulted in the creation of the VC Technical School. One of our priorities was training for our managers. We used customized materials for the Operations personnel, in addition to real cases built with the plant team and in alignment with our management tool, the Integrated Management System (IMS). We had two classes that were made up of our leadership members (managers, coordinators and supervisors) and engineers from the Xambioá unit (TO).

*We created VC's Technical School with a focus on building technical knowledge more linked to the industrial area*

Another initiative prioritized during the year in Brazil was the Training Module for Plant Managers. The objective was to align practices, concepts and what is expected from this very important function within our operations. We brought together newly appointed plant managers and future successors, from cement, aggregate and mortar operations. The themes were presented by internal facilitators.

Likewise, aiming to continuously strengthen and ensure the performance of our Brazilian sales team, in 2019 we also launched the Sales School. We held more than ten classes with the participation of salespeople and managers. Participants received online and face-to-face training, divided into three main blocks: Business Processes, Sales Tools and Commercial Management. As part of the Sales School, we also reviewed the sales and marketing integration process, through which every new director undergoes a week of training in Curitiba (PR), which allows them to learn more about the Company, our policies, our manufacturing process and the products they will sell, as well as sales pitches and work tools.

Development programs aimed at developing the skills needed for future challenges remained strong during the year. As part of the training of new employees in early stages of their careers, 11 trainees performed different jobs while mentored by Company executives. Our trainees, together with 12 other internal employees, participated in the Potenciar Program, which offers developmental training, practice and projects.

In Leadership training, we had classes in the Essential Leadership Program (for early leadership), Advanced Leadership Program (for mid-leadership) and Master Leadership Program (for senior leadership). In addition, we launched a new class, the Cement Leaders program, to develop leaders in cement operations through projects, technical training and leadership training. In 2019, the program included 16 participants.

VCBR employees at the Corporate Office in São Paulo, Brazil

In line with our focus on development, in 2019 we redesigned our performance and career assessment processes, with changes to ensure a more continuous, fluid assessment process, with greater focus on people. This new design involved new systems, methodology and evaluation criteria to position career ownership as the main source of development.

At VCNA, where a new process standardization project was launched in three plants in the region, a platform was built to assist with technical training activities. One of the focuses is to enable employees in the future to move to different units without the need for re-training. Another prominent theme in the 2019 training curriculum was emotional intelligence. Approximately 40 managers from different facilities in Canada and the USA participated in group activities organized by the Corporate University team, which has been in existence for ten years.

## CLIMATE SURVEY

GRI 103-3 GRI 102-43

GRI 103-1 GRI 103-2: 404

Another way of focusing on people and continuing to work to build an increasingly more inclusive company is by conducting engagement surveys. In 2019, we conducted the survey in all regions, with an average participation rate of 87% in the countries.

In Brazil, we had an increase of six percentage points in relation to the last survey, carried out in 2017, reaching a favorability rate of 83%. At VCNA, the favorability rate was 66%, four percentage points above the previous survey. At VCEAA, we had an increase of seven percentage points, reaching an average 72% favorability rate in the region. "Despite macroeconomic challenges, we, as a group, see a brighter future; we are feeling more engaged and on the right track," said Marcelo Castelli, global CEO.

Thatiana Soto Riva, global manager of Recruitment, Training and Development, pointed out that the main points where we saw improvement are related to leadership and people development. "The rating for the sentence 'I feel more valued and recognized by Votorantim Cimentos' went from 57 to 72 in Brazil, an increase of 15 percentage points. In addition, at VCBR maintained the same levels as our 2017 survey", she said.

*"The rating for the sentence 'I feel more valued and recognized by Votorantim Cimentos' went from 57 to 72 in Brazil, an increase of 15 percentage points. In addition, we did not see any decrease in our scores."*

**THATIANA SOTO,**  
Global manager of  
Recruitment, Training  
and Development



## GLOBAL COMMUNICATIONS

GRI 103-3 GRI 102-43

In 2019, our Corporate Communications area focused on themes that included engagement, leadership and collaboration among employees. In its third year, Workplace has established itself as the main channel for internal communications, exchange of information and interactions across our international locations. The Votorantim Cimentos platform ended 2019 with 7,389 registered users and 694 groups. Over the course of the year, more than 38,000 posts (texts, photos, files and videos) were published in all regions where we operate. The corporate groups (Radar Brasil, Radar VCNA, Radar VCEAA and Connection) are open to all employees, who are empowered to share content they believe is of interest, relevance and value to other employees.

In 2019, Votorantim Cimentos was mentioned in 2,851 news items in several different media (print, online, TV and radio), a 35% increase in relation to the previous year (2,116 news items). In recognition of our relationship with the media, in 2019 the Company received the "Companies that Best Communicate with Journalists" award in the Civil Construction industry in Brazil, presented by Negócios da Comunicação magazine and by the Communication Studies Center (Cecom).

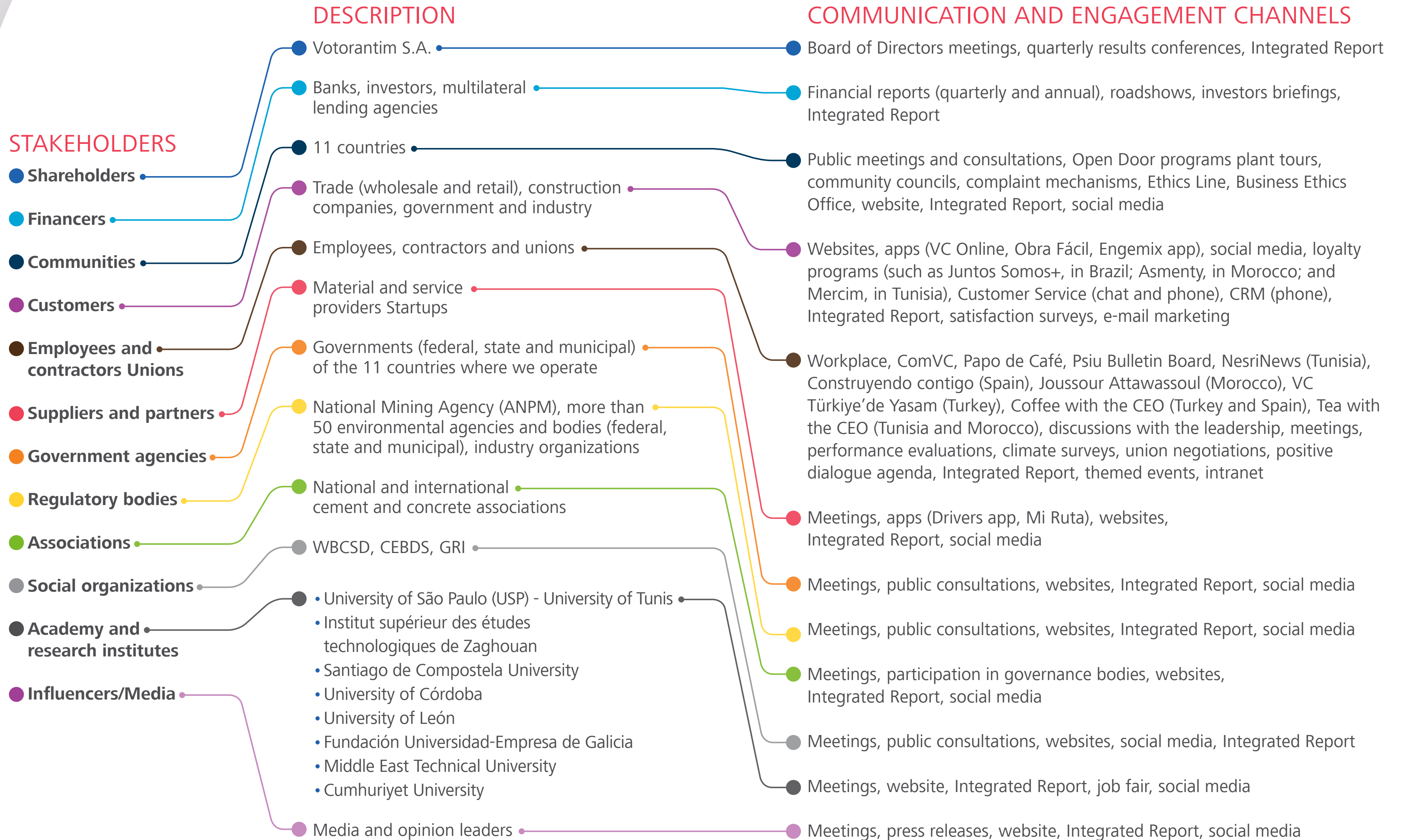
# OUR STAKEHOLDERS

We determined the stakeholders we want to engage based on workshops we held in 2018 during the process of defining our material topics, with the participation of representatives from Sustainability, Investor Relations, Institutional Marketing and Legal. The participants analyzed the actual or potential economic, social and environmental impacts that our businesses have on individuals, groups of individuals and/or organizations, and how these stakeholders may affect our activities.

GRI 102-40

GRI 102-42

GRI 102-43



# ONE STEP AHEAD

In 2019, our Social Responsibility area was renamed Social Transformation, recognizing that, as an industry leader, we play an important role in helping change reality—both in Brazil and in the other countries where we operate. “‘Social Responsibility’ is often associated with something that is required by law, while ‘Social Transformation’ makes it clear that we can make a difference,” explained Álvaro Lorenz, Global Director of Sustainability, Institutional Relations, Product Development and Engineering. In addition, for environmental issues, we have an international environmental policy that underpins some of the 2020 Sustainability Commitments.

Babassu coconut:  
an example of  
Circular Economy  
projects

We maintain sustainability commitments that are based on topics of high impact to our operations and their surroundings and we set targets for sustainable management and performance through 2020 in all of our units. We constantly evaluate the achievement of these targets and work to increase awareness regarding the importance of these themes. And, we are already working to set new goals—now with an eye on 2030 and a greater focus on linking these indicators to the United Nations Sustainable Development Goals (SDGs).

Our sustainability strategy will be divided into three “waves”: what we want to do by 2020, by 2025 and by 2030. “The main challenges are how to engage the entire Company on the issue of sustainability, improve governance, constantly reduce our environmental footprint and position ourselves in relation to macrotrends for the future,” said Lorenz. “This is a mission shared by the entire Company; it needs to be connected to the business strategy, to ensure that it will turn into action. Otherwise, we risk setting goals without having the support and guidelines to achieve them.”

Throughout 2019, for example, we conducted research to assess what our suppliers are already doing in this area. Based on the data collected, we will increase our efforts to enhance our participation as agents of transformation. Concern for the environment

has also enabled us to reach an agreement with seven international banks to obtain a “Sustainability Linked Loan (SLL)” credit line. In addition to credit risk, our interest rate is affected by indicators that are based in sustainability targets that are relevant to our industry. As a result, our sustainability performance can either increase or decrease the financial costs of the credit line. Being eco-efficient will now result in more tangible financial gains, translated into lower financing costs *(read more on page 34, in Financial Management)*.

*Sustainability commitments cover high-impact issues in and around our operations*

This same level of commitment extends across regions. “We’re working closely with our North American industry associations to convey to the media and general public the progress we’re making to become greener and more sustainable, both as a company and an industry,” said Filiberto Ruiz, CEO, VCNA. “We are making a lot of progress in environmental issues.

Our investments in aglime in Brazil, for example, are another step in this direction, since they are made with sterile raw materials that would not be used in cement production but are very useful as soil nutrients,” added Laercio Solla, general manager of Aglime *(more on page 51, in Customer Focus)*.

Filiberto Ruiz,  
CEO, VCNA



## COORDINATED GLOBAL ACTION

We are one of the founding members of the Global Cement and Concrete Association (GCCA). The organization was created in 2018—replacing and broadening the scope of work of the Cement Sustainability Initiative (CSI), transferred from the World Business Council for Sustainable Development (WBCSD)—and brings together 38 companies, representing 40% of worldwide cement capacity, plus universities, trade associations and other institutions that participate in the production chain and are interested in improving working conditions in the industry.

In 2019, seven working groups were organized around topics such as safety, communications and the future of construction. We have representatives in three of these groups and participate in Innovandi, a collaborative innovation initiative created by GCCA. This is a platform that brings together lines of scientific research to pursue solutions for the entire industry. This is not about finding competitive advantages for a product, but about finding techniques that can reduce emissions and might benefit all associates.

*We participate in Innovandi, GCCA's innovation platform that seeks solutions for the entire industry*



**Fábio Cirilo,**  
Global Sustainability  
coordinator

## SUSTAINABLE PATH TO CEMENT

We actively participated in the process of developing the Brazilian version of the Cement Technology Roadmap, launched in 2019. This study, led by the International Energy Agency (IEA), sets the path and targets for reducing the carbon footprint of the cement industry. Brazil was the second country in the world (after India) to produce a national document with specific targets and collaborative proposals to act against global warming and to keep the temperature rise at a maximum of 2°C by the end of the century.

The document sets clear and ambitious targets for the Brazilian cement industry to align its efforts on emissions reduction with the goals of the Paris Agreement and shows which initiatives will be implemented to get there. "The Roadmap is a major public commitment made by the cement industry. Through it, we recognize the challenges we must face and outline a series of commitments to ensure that this transition will be possible by 2050. Our 2030 goals will reflect this challenge," said Fábio Cirilo, Global Sustainability coordinator.

"As industry leaders, we will have even more ambitious goals and we want to lead this transformation," said Álvaro Lorenz, Global Director of Sustainability, Institutional Relations, Product Development and Engineering. There are four key action levers: reduce the use of fossil fuels in the production process, reduce the percentage of clinker used in cement, reduce the consumption of thermal and electric energy in the units and, in case these three initiatives are not enough, capture, sequester and reuse carbon dioxide emitted by plants.

As an example, at VCNA, we used a CarbonCure technology in the concrete we provided for the construction of The Form condominium in Toronto, Canada, resulting in improved operations and a reduced carbon footprint. We supplied over 11,000 m<sup>3</sup> of concrete for this project, of which about 2,300 m<sup>3</sup> were treated with CarbonCure, which encapsulates CO<sub>2</sub> in the concrete. Since 2017, this technology has been used by our Toronto-based business, Canada Building Materials (CBM), to prevent CO<sub>2</sub> emissions.

# COMMITMENT AGAINST CLIMATE CHANGE

We are committed to fighting climate change. Our strategic plan incorporates important initiatives in this area: using alternative fuels and materials to reduce our environmental footprint and investing to adapt our operations to reduce fossil fuel use and optimize energy consumption. **GRI 103-2: 305**

This topic is part of discussions on decisions regarding investments—which include feasibility analyses that take carbon price into account—as well as of our internal commitment to sustainable development and unit performance evaluations.

We participate in working groups within the Global Cement and Concrete Association (GCCA), the Global Compact and the Brazilian Business Council for Sustainable Development (CEBDS). We inventory greenhouse gas emissions from our cement plants and concrete, aggregates, mortar and other product units annually. We follow the GCCA methodology for cement and the GHG Protocol tool for other products.

In December 2019, we participated in the United Nations Conference on Climate Change (COP25), held in Madrid, where our Sustainability coordinator, Fabio Cirilo, presented Votorantim Cimentos' commitment to sustainability. As part of a Low Emissions Solutions panel, he also shared our best practices, such as the use of alternative fuels, the optimization of clinker factor and the capture of CO<sub>2</sub> by microalgae.

Our last internal emissions audit took place in 2018. We also underwent external audits related to the Integrated Report, which included the commitments to the GCCA Charter and the Brazilian GHG Protocol Program. We report our data annually to GCCA's GNR (Getting the Numbers Right) and every four years we go through a third-party audit hired by the GCCA—most recently in 2018, when GCCA was still CSI. All of these assessments provide us with focus areas for improvements and management adjustments and with information that is incorporated into our practices where applicable.

The global targets related to our 2020 Commitment were segmented by units, with annual reduction targets, in order to evaluate if they were met and also increase awareness of the importance of this topic and of the contribution from each area. *(2020 commitments and advances are detailed on page 66).*

We are members of the Carbon Disclosure Project (CDP), a non-governmental organization that collects information on climate risks and carbon opportunities among the world's largest companies, and of the Brazilian GHG Protocol Program. Through these entities, we make our results and emission reduction projects public and improve our governance in climate-related risks.

*Our investment decisions consider the impact of climate change on project viability*

Cement plant in Toral de los Vados (León), Spain



Chicago Terminal in USA

**EMISSIONS** GRI 103-2 GRI 103-3: 305

In 2019, we renewed a revolving credit facility and made it “sustainable”, with commitments linked to CO<sub>2</sub> emissions and sustainability (see more in *Financial Management on page 34*). “This is the first line of credit we’ve received in which the interest rate is linked to our sustainability performance,” said Álvaro Lorenz, director of Global Sustainability, Institutional Relations, Product Development and Engineering.

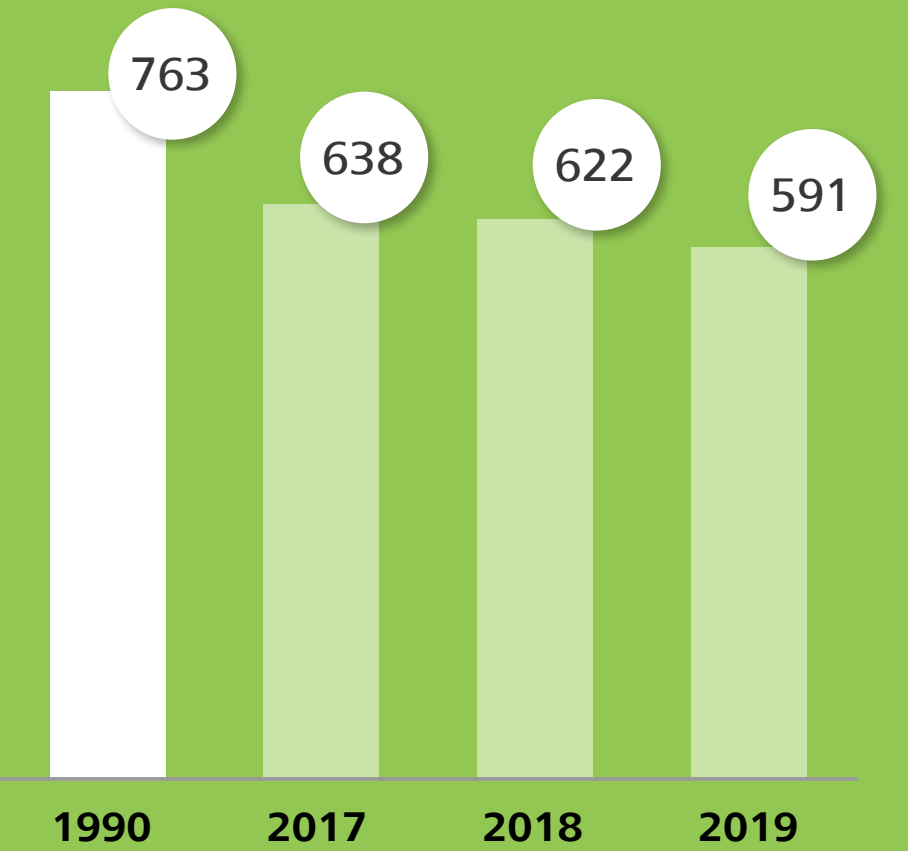
Our goal is to reduce the use of natural resources and fossil fuels, which is fully aligned with our strategic plan and among the main medium- and long-term management focuses in all regions (read more in *Operational Excellence, on page 38*).

*We acquired a revolving “sustainable” credit facility with commitments linked to our sustainability performance*

Reflecting our efforts to improve our environmental footprint, in 2019 we have reduced our CO<sub>2</sub> emissions by 22.6% in relation to the 1990. In 2019, our emissions were 591 kg of CO<sub>2</sub> per ton of cementitious products, compared to 763 kg in 1990. GRI 305-5

**SPECIFIC NET CO<sub>2</sub> EMISSIONS** GRI 305-4

kg CO<sub>2</sub>/t cementitious



**TAXATION IN CANADA**

In Canada, we manage GHG reductions by following a federal regulation in effect since 2019 on the taxation of CO<sub>2</sub> emissions above a pre-established limit. To reduce our emissions, we have been increasing the use of low carbon alternative fuels, producing cement with less clinker to reduce CO<sub>2</sub> intensity (Contempra type), and using supplementary cementitious materials, such as slag.





Employee at Primavera plant, in Brazil

## ENERGY EFFICIENCY GRI 103-1 GRI 103-2 GRI 103-3: 302

The cement business has the highest energy consumption (99%). Our cement production processes consumed 92,658,896 GJ of energy within the organization, from sources under our control, and 8,697,412 GJ in activities outside the organization that are not directly managed by us (such as fuel used by third-party trucks). The total volume corresponded to a global energy intensity of 112.7 kWh per ton of cementitious products, compared to 111 kWh/t in 2018. In 2019, 35% of the energy we consumed in Brazil came from renewable sources, which correspond to self-generated energy in hydropower plants.

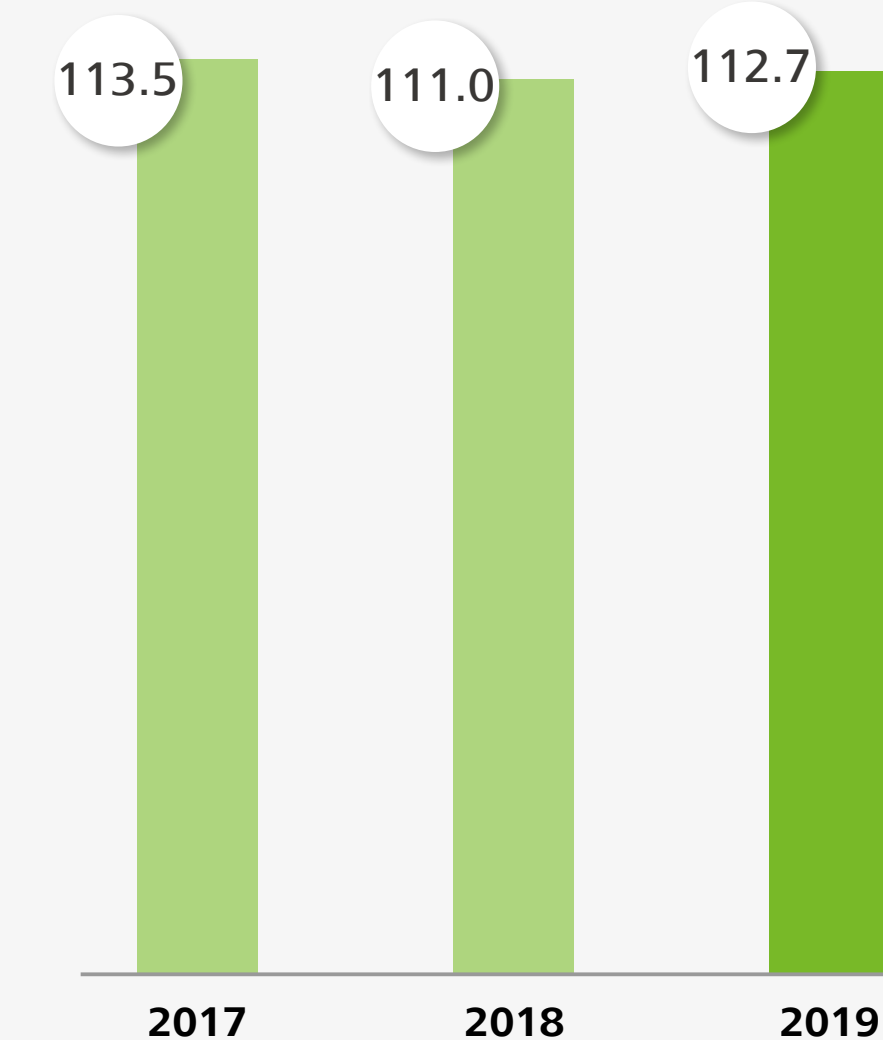
The use of alternative fuels and raw materials is one of our priorities and is reflected in investments to expand thermal substitution in our plants and in the creation of Verdera (see page 40), our new business unit for waste co-processing in our kilns. Our goal is to expand the use of renewable energy. Therefore, we have entered into an agreement with Votorantim Energia to jointly build a wind farm in Northeastern Brazil, aiming to reach 56% of renewable electricity in Brazilian operations.

In all regions, we seek to increase the use of renewable energy, as is the case in Morocco, where 95% of our electricity needs from wind generation power plants, acquired from Wind Energies. In Tunisia, we recover heat from the chimney and transform it into energy using a Waste Heat Recovery (WHR) system. Through it, we have replaced 30% of plant's electricity consumption, thereby reducing our production cost.

At VCNA, in 2019, we extended the Energy Management Conservation Committee (EMC<sup>2</sup>) project to all units, an initiative to reduce energy intensity, energy costs and CO<sub>2</sub> emissions in our plants. This committee is represented in each of our plants to implement our Energy Management Plan. In 2019, we reduced our consumption by 8,750 MW/year and the cost of electricity by 24.6 million Canadian dollars (or R\$ 99.1 million). In Charlevoix (Michigan), thanks to better process control and an initiative from the EMC<sup>2</sup>, we eliminated the use of bypass, which reduced our electricity consumption by 4,8 MW/year.

## ENERGY INTENSITY\*

kwh/t cementitious product GRI 302-3



Electrical energy, does not include fuel consumption.

# 2020 SUSTAINABILITY COMMITMENTS GRI 103-2

✔ Target reached
 ▬ Target on schedule
 ✘ Target behind schedule

2020 Targets	Key achievements in 2019	Status	SDG	SDG Target
<b>Health and Safety:</b> • Ensure the effective adoption of the Global Health and Safety Policy and the Rules for Life	<ul style="list-style-type: none"> <li>Regular meetings with the Global Safety Committee realigning strategy and coordinated actions</li> <li>Emphasis on the adoption of Critical Protocols and Rules for Life</li> <li>Restructuring of the Health area: more humanized, health promotion and prevention</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	8	
<b>Health and Safety:</b> • Promote healthy and safe working conditions for all employees	<ul style="list-style-type: none"> <li>Continuity of investments to adapt work environment and equipment in Brazil , and actions focused on developing a safety culture</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	8	<b>8.8</b>
<b>Health and Safety:</b> • Achieve lost-time injury rate lower than 0.4 among direct employees	<ul style="list-style-type: none"> <li>Global frequency rate: 1.83 for direct employees</li> <li>In 2019, we emphasized the Safestart program, on safe behavior (see page 64). The units that implemented this program during the year have already shown important changes in their frequency rate</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	8	
<b>Supply Chain Standards:</b> • Promote sustainable supply chain standards through our business units	<ul style="list-style-type: none"> <li>100% of suppliers in Brazil certified and approved in negotiations conducted by the Supply team</li> </ul>	<span style="color: green; font-weight: bold;">✔</span>	9 and 12	<b>9.4 12.6</b>
<b>Ethical Business Practices:</b> • Ensure that all our operations are run in an ethical manner and in compliance with the Votorantim Code of Conduct	<ul style="list-style-type: none"> <li>Crisis Manual in Brazil</li> <li>Launch of Internal Audit Policy and Global Government Relations Policy</li> <li>Reassessment of continuing education strategy</li> <li>Expansion of the communication plan</li> <li>Compliance Day held at a global level</li> <li>Implementation of an integrity assessment process for third-parties and critical transactions</li> </ul>	<span style="color: green; font-weight: bold;">✔</span>	16	<b>16.5 16.6</b>
<b>Environmental Policies:</b> • Ensure the implementation of our Global Environmental Policy and Green Rules	<ul style="list-style-type: none"> <li>Global Environment Policy implemented in all regions</li> </ul>	<span style="color: green; font-weight: bold;">✔</span>	12 and 15	<b>12.2 12.5 15.2 15.3</b>
<b>Sustainable Products and Services:</b> • Promote the launch of new sustainable products, solutions, services and innovations • Achieve a clinker/cement factor of 72%	<ul style="list-style-type: none"> <li>We ended 2019 with a 74.3% clinker/cement factor, compared to 75.2% in 2018</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	12 and 13	<b>12.5 12.6</b>
<b>Renewable Fuels:</b> • Reach a 30% level of non-fossil fuels use in our cement plants	<ul style="list-style-type: none"> <li>We reached a 22% rate in the use of alternative fuels in clinker kilns, compared to 18.5% in 2018 with a strong increase in all geographies</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	7, 12 and 13	<b>7.a 12.2 12.5</b>
<b>CO<sub>2</sub> Emissions:</b> • Reduce our CO <sub>2</sub> emissions per ton of cement by 25% compared to 1990 levels	<ul style="list-style-type: none"> <li>Our emissions were 22.6% lower than in the base year (1990), due to an increase in thermal substitution and a decrease in our clinker/cement factor</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	12 and 13	<b>12.2 12.4 12.6</b>
<b>Emissions:</b> • Reduce emissions of particulate matter, NOx, and SOx, to 65g, 1,950g, and 750g per ton of clinker, respectively	<ul style="list-style-type: none"> <li>Our emissions of particulate materials, NOx and SO2 were 56, 1,657 and 709 g/t of clinker, respectively, compared to 69, 2,102 and 847 g/t of clinker in 2018</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	11 and 12	<b>11.6 12.2 12.4 12.6</b>
<b>Water:</b> • Implement a water management plan in our business units located in areas of scarcity	<ul style="list-style-type: none"> <li>We met 78% of our target for measure 1 (measurement and monitoring). We also advanced on measure 4 (incentive to good practices), reaching 71% of our target</li> </ul>	<span style="color: red; font-weight: bold;">✘</span>	6 and 12	<b>6.3 12.2 12.4</b>
<b>Biodiversity:</b> • Ensure that all of our quarries have rehabilitation and biodiversity management plans for local and sensitive biodiversity regions	<ul style="list-style-type: none"> <li>93% of our mines have a closure plan</li> <li>58% of our mines in areas sensitive to biodiversity have a biodiversity management plan in place</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	15	<b>15.1 15.5</b>
<b>Communities:</b> • Ensure the implementation of community engagement plans in the locations where we operate that have a high degree of social vulnerability	<ul style="list-style-type: none"> <li>We implemented and executed community relations plans in 100% of the communities with a high degree of social vulnerability in Brazil</li> <li>The percentage of operations with local community engagement activities (regardless of their degree of vulnerability) per region are: VCBR: 27%; VCNA: 32%; VCEAA: 71%; and VCLatam: 36%.</li> </ul>	<span style="color: blue; font-weight: bold;">▬</span>	10	<b>10.2</b>

# OUR POSITIVE AND NEGATIVE IMPACTS

We mapped out the impacts generated by the different products and services of Votorantim Cimentos. See the impacts related each company activity and how they fit into a broader context involving company risks, trends, strategy and goals.

GRI 102-44

## IMPACT PER ACTIVITY

Click in one of the activities above to see the impact it generates



Employee in one of the Votorantim Cimentos plants in Spain

# HOLISTIC APPROACH TO SAFETY

One major achievement in Health and Safety in 2019 was the implementation of the SafeStart program in eight of the 35 cement plants in Brazil, four concrete units and four distribution centers. This project started in 2016, with a pilot at the Sobradinho (DF) plant, which has been achieving excellent results: the lost-time injury rate in the unit has dropped 46% in four years.

The strategy is to focus on behavioral issues, involving not only our employees but also their families. Divided into modules, the program reinforces the importance of preventing haste, tiredness, frustration and complacency from resulting in critical errors and, consequently, accidents. In line with the "Live Safe" concept, our Global Safety Day theme in 2019, the SafeStart program must be applied not only in the

*SafeStart focuses on the importance of preventing haste, tiredness, frustration and complacency from resulting in accidents*

work environment but also at home and in traffic. At VCEAA and VCNA, although our safety disclosures have improved, the goal is to implement SafeStart in at least one unit in each of these regions by 2020. At VCNA the idea is to implement SafeStart at our Bowmanville and Detroit plants. The plan is to extend the program to all VCBR units by 2021

Another initiative in Brazil focuses on mining. We were qualified through an innovation tender by Sesi (Industry Social Service) to develop a hands-free radio model. This would enable us to reduce the risk of accidents, while still ensuring that the necessary communication can take place in one-way traffic locations, for loading and unloading instructions and for emergency contacts, among other situations.

## SAFETY MANAGEMENT

We reinforce that safety is our main value on a daily and ongoing basis. We have a Global Health and Safety Policy and Rules for Life; these issues are managed globally and monitored by local teams. We maintain a safety system based on the 45001 ABNT Standard, which applies to all employees and operations, and our terminal in the Imbituba Port (SC, Brazil) is certified by the ISO 45001:2018 Standard. **GRI 403-1**

A Global Safety Commission, established in 2018, meets bimonthly to align safety activities across all businesses/all people, ensuring that best practices are shared, disseminated and implemented. In Brazil, the work of Internal Accident Prevention Commissions (CIPAS, for their initials in Portuguese)—used as an instrument to ensure active participation and consultation of workers—is mandatory. **GRI 403-4**

We employ health and safety experts and hire outside consultants, when necessary, to help assess risks and identify specific or complex work-related hazards. Also, Health & Safety is part of our Internal Audit Improvement Process on a yearly basis.

In 2019, we reviewed our critical protocols globally and included the Occupational Risks and Hazard Identification and Assessment Matrix as one of our auditable requirements.

*The Global Safety Committee align activities and ensures that best practices are shared and implemented*

This ensures that the tool is applied to all activities and is up to date with respect to activities and control measures. We also acquired software that will support us in health and safety management (Genu) and implemented a system to manage leaves of absence and our Accident Prevention Factor (AFP). We also mapped the health profile of our employees.

All personal accidents, with or without lost time, as well as material damage with a high potential to cause injury must be investigated by an internal commission. This commission includes Safety employees, the leadership of the area involved, and employees involved in the accident. Where applicable, lessons learned in the investigation process are shared to help prevent future accidents.

In performing routine activities, we use our Daily and Weekly Safety Talks as a tool to reinforce concepts and to warn about the risks associated with daily tasks. Another important instrument is the Preliminary Risk Analysis (PRA), which is used to evaluate factors that may increase the risk of a particular task and assist in the identification of the necessary control and prevention measures.

We encourage our employees to report unsafe situations. This information is consolidated

and handled by the responsible parties. The procedure provides for disciplinary measures, including sanctions for cases in which workers are subjected to situations that may result in accidents. **GRI 403-2**

All hired employees undergo integration training, which includes work-related health and safety risks and information on the Global Health and Safety Policy, Rules for Life and Safety Safety Rules.

According to the type of task to be performed, the worker is trained in procedures that are specific to the unit and required by each country's legislation, and by critical risk protocols. Each country establishes types of training, workload and attendance according to the functions of each worker. Outsourced employees follow the same training requirements as direct employees. **GRI 403-5**

In line with our commitment to ensure the safety of employees and transparency in our processes, in 2019 we reviewed our procedure for disciplinary measures in Brazil. The goal is to specify which violations are subject to disciplinary measures and which criteria will be applied. The document was widely promoted in all of our operations. In 2020, the global document will be revised.

Employee in the Asment Temara cement plant in Morocco



Praire  
Material's  
concrete mixer  
drivers in USA



### COMMITMENT

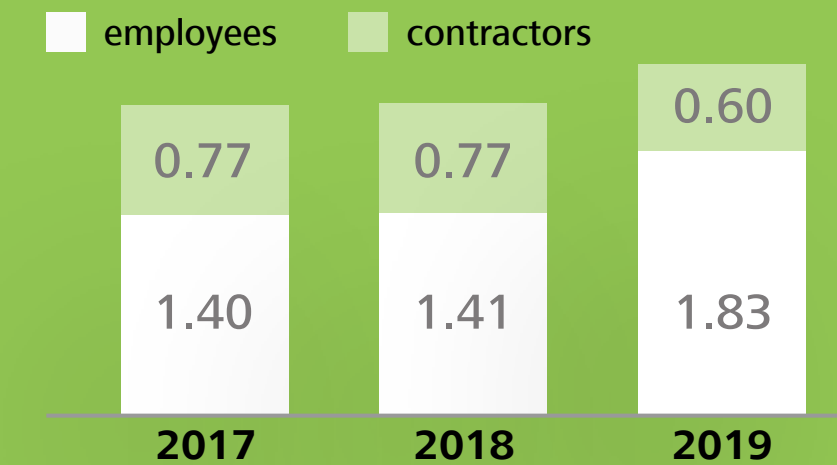
We have a variety of initiatives and tools in place, and in the process of being implemented, to prevent and mitigate significant negative impacts on the health and safety of our employees. We prioritized the elimination of major risks, followed by the implementation of collective protection measures, training of employees and contractors and, finally, the use of Personal Protective Equipment. A few examples include health and safety campaigns; observations of safe behavior; SafeStart implementation in units in Brazil; critical protocol audits performed in all countries; daily safety talks; and training and skill-building sessions. In Ready Mix at VCNA we run a yearly Driver Training. **GRI 403-7**

In 2019, in spite of all initiatives implemented, the total lost-time frequency rate (LTI) was 1.23, higher than in the previous year (1.09). These figures consider both direct employees and contracted workers.

Unfortunately, we had a fatality of a contractor in 2019, at the Asment Temara plant in Morocco (in 2018, we had four deaths in Brazil, one on-site, in our operations, and the others were off-site caused by road accidents). "Loss of life in our operations is unacceptable," said Marcelo Castelli, global CEO. "The industry has evolved in terms of safety, and Votorantim Cimentos has made significant progress, with fewer and less-severe accidents, year after year. However, we are constantly looking for opportunities for further improvement. That's why we are investing in SafeStart, which aims to improve behaviors and help ensure that working conditions are always optimal." **GRI 103-3: 403**

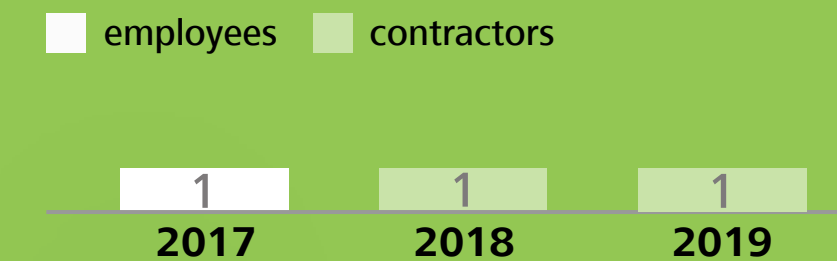
*Our commitment  
for 2020 is to  
have a lost-time  
injury rate below  
1.0*

### GLOBAL FREQUENCY RATE<sup>1</sup> x 1,000,000



<sup>1</sup> Considers the number of lost-time injuries divided by the total hours worked X 1,000,000

### NUMBER OF FATALITIES<sup>1</sup>



<sup>1</sup> Considers occurrences on-site cement, aggregates, mortar, logistics, aglime, and concrete facilities



Employees at Boqueixon Expedition Point, Spain

IMPROVED DISCLOSURES **GRI 103-3: 403**

In 2019, VCNA’s St Marys Cement plant in Ontario, Canada, celebrated 10 years without a lost-time injury (LTI). The aggregates divisions of Canada Building Materials (CBM) and Prairie Material completed 11 and 12 years, respectively, with no LTIs. Some sites at Prairie have gone more than 30 years LTI free. When it comes to safety, we have areas of excellence and, where improvement are needed, expect that SafeStart and a continued focus on positive

reinforcement and recognition will lead to better results.

At VCNA, the total accident frequency rate was 3.31, compared to 1.21 in 2018. Although, on the one hand, the rate increased, we continue to identify and implement improvements with a focus on correcting behaviors and reducing hazards.

At VCEAA, there were fewer accidents than in 2018, causing the frequency rate to fall to 0.30 (vs. 0.41 in the previous year). The rate has been decreasing for the past four consecutive years, demonstrating the success of our safety policy. “We must also remain alert to the fact that we use alternative fuels in cement plants, as they require special care, both in terms of storage and use” explained Günther Smetana, COO of VCEAA and Head of VC Latam.

“The concept of living safely is very much present in our daily lives,” said Rachid Seffar, vice president of Supply Chain and Sustainability at VCEAA. “In 2019, on Global Safety Day, our employees in Spain participated in a video contest showing how they deal with safety in their free time with their family.” In addition, we are conducting a pilot in Spain with an app called Asegurate (or “Stay safe”). Technology not only helps us ensure effective implementation of management tools, but also has the additional advantage of using data to help predict next steps to further reduce accidents.

HEALTH AND QUALITY OF LIFE

**GRI 103-2 GRI 103-3**

In 2019, we implemented a specific health area in Brazil, to integrate occupational and healthcare medicine, with the goal of promoting health, prevention and quality of life. We restructured processes, hired new professionals and started working with medical coordinators in the South, Southeast, Northeast and Center-North regional offices, while maintaining a multidisciplinary team to support employees.

All employees have health insurance and must undergo annual or biennial periodic exams, as per legal requirements, and undergo health history updates during medical examinations and reviews. **GRI 403-3**

Health issues are covered in Daily Safety Talks and discussed on the “Mais Vida” Workplace group, where employees can also post pictures of their families exercising and give tips about health. We promote health campaigns in the units and, starting in 2020, we will have a standardized calendar to address specific themes. **GRI 403-6**

In 2019, VCEAA worked to consolidate our Health and Wellbeing initiatives in the region. The successful initiatives implemented in previous years in each country were grouped within a common strategy for all the VCEAA countries. This strategy aims to create a world-class wellness culture, aligned with VC Values and Beliefs, that empowers our employees to make positive decisions about their health and wellbeing as a natural choice. In all VCEAA countries, communication campaigns were carried out every month to promote physical activity, quitting smoking, breast and prostate cancer awareness, sun protection, hand washing, and cardiovascular disease prevention. In addition, other health initiatives were implemented in the countries, such as company-subsidized physical therapy and Pilates sessions in Spain and a weight-loss challenge under medical supervision in Turkey.

Günther Smetana, COO of VCEAA and Head of VC Latam



Cement unit  
in Bobadilla,  
Spain

# BIODIVERSITY

In 2019, we actively participated in forums on biodiversity; we assumed the leadership of the Thematic Chamber on Biodiversity within the Brazilian Business Council for Sustainable Development (CEBDS) and participated in the Brazilian Council of the Man and the Biosphere (UN program).

At our headquarters, in São Paulo, we promoted an open meeting on the biodiversity management tool we use (Integrated Biodiversity Assessment Tool – IBAT), with the participation of Eugenie Regan, IBAT manager, a multi-institutional work program that BirdLife International, Conservation International, International Union for Conservation of Nature (IUCN) and World Conservation Monitoring Center (WCMC).

This tool provides basic screening of biodiversity risk, gathering globally recognized

information on biodiversity from various IUCN knowledge products: IUCN Red List of Threatened Species, Key Areas of Biodiversity (priority areas for conservation) and World Database on Protected Areas.

This tool enables us to prioritize globally the most relevant units to move forward with Biodiversity Management Plans. In 2019, we completed plans for five more highly relevant units.

We maintained our technical partnership with the Atlantic Forest Biosphere Reserve (RBMA) and the Brazilian Speleology Society (SPE). For the past eight years, we have worked on the pilot implementation of the Guide to Good Environmental Practices in Limestone Mining in Karst Areas and in the development of the Sustainable Land Management Plan at our Sobradinho (DF, Brazil) and Oural (Spain) units (for details, go to: <http://www.cavernas.org.br/cooperacaotecnica/>). We also received the Amigos da Mata Atlântica seal (“Friends of the Atlantic Forest”), a recognition from RBMA of companies that demonstrate their contribution to this biome.

*The IBAT tool enables us to prioritize the most relevant units for Biodiversity Management Plans*

## REHABILITATION AT VCNA

In the province of Ontario, Canada, and in three of the states where we are present in the United States, our main business is concrete, which uses many aggregates. The impact of aggregate mining is a key issue for local communities. “We are very close to people and engaged with the communities surrounding our operations. And we put a lot of work into our relationships with these stakeholders,” explained David Harantty, VCNA Land and Resources director.

Part of this work involves the rehabilitation of pits and quarries after the end of the extraction cycle. Between 2015 and the end of 2018, we rehabilitated the equivalent of 210 hectares (520 acres), turning them into land suitable for growing crops, naturalized areas, forests and wetlands.

In the last four years, we have invested CAD\$ 4.3 million to ensure the quality of these rehabilitation projects. At one of our properties in the Peterborough, Ontario area, crops that had been planted in the rehabilitated lands were found to be comparable to that of the surrounding farmland in just two years, a process that takes five to 10 years with traditional farming practices.

At one of our pits in the Aberfoyle, Ontario area that had been extracted below the water table and rehabilitated back to a naturalized lake, we introduced fish (trout) farming. This activity accelerated the ecosystem recovery by introducing nutrients to the water that would normally take years to naturally obtain. And in a few of our sites in Ontario we have been planting specific flower species to aid in the increase of the local bee pollination.



# SOCIAL TRANSFORMATION

GRI 103-1 | GRI 103-2 | GRI 103-3: 413 | GRI 102-43

We are part of the communities where we operate. In all regions where we work, we maintain important partnerships with local communities, with respect for characteristics of each country and for the uniqueness of each region. In total, in 2019: R\$18.4 million in 124 locations. The main guidelines for our activities and strategies are local development, dialogue with the communities and respect for local cultures.

We maintain a set of mechanisms for listening and responding to several themes from the communities surrounding our production units. We also promote community participation forums, such as Dialogue with the Community, plant tours and open door programs.

*Our social transformation strategy aims to improve our performance guidelines and disclosures.*

We evaluate our performance by monitoring and analyzing indicators for each social activity, project or program, as well as by measuring events and community engagement initiatives, such as crisis management, popular (or unpopular) social media, and spontaneous media exposure.

Through our social transformation strategy, we work to develop and improve our social performance guidelines and our local performance disclosures. To this end, we have increased the percentage of social initiatives on two issues that are relevant to us: circular economy and shared value in our production chain.



Votorantim Cimentos leaders working on a home renovation brigade in São Paulo, Brazil

INITIATIVES **GRI 103-3: 413**

In Brazil, several of our units are located in low-income areas, which further increases the importance of social projects. In big cities, where our offices are located, most of our initiatives revolve around volunteer work. In

2019, we developed a specific policy that guides volunteer activities related to our business and strategic social areas. In addition, a few guidelines that were already in use and established at VCBR were also implemented in other regions, such as the Donations and Sponsorship Policy.

Last year, we promoted volunteer initiatives that used our building materials to renovate houses low-income communities and neighborhoods, to improve housing and reduce unhealthy conditions in the cities of São Paulo, Rio de Janeiro, Curitiba and Recife. This provides employees in administrative areas—who often work exclusively in our offices—with the opportunity to get their hands dirty and help people using the cements and mortars we produce.

During the year, 1,500 VCBR employees participated in volunteer activities focused on education and improving the housing conditions of vulnerable families. Our social transformation initiatives, including our support to social projects on the use of babassu as a source of income in communities in the North and Northeast Brazil, benefited more than 6,000 people throughout the country. In some locations, we have also begun to build a social agenda with direct community participation through dialogue with stakeholders.

Employees working on home renovation brigade in São Paulo, Brazil

Votorantim Cimentos team working on a home renovation brigade in São Paulo, Brazil



TABLE WITH THE AMOUNT INVESTED IN EACH AREA OF ACTIVITY

**BUSINESS CONNECTIONS**

Initiatives aligned with the Company's strategic plan. In general, they address themes related to the core business, supporting the operations to fulfill their objectives, targets and initiatives that seek to generate shared value.

**LOCAL DEVELOPMENT**

Structural social investments that include an in-depth analysis of the territory. These investments aim to generate positive changes in the long run by impacting social indicators and generating positive social transformations.

**COMMUNITY RELATIONS**

Social initiatives based on the identification of a Stakeholder Matrix that aim to promote social dialogue, providing consistency and legitimacy to the definition of projects, sponsorships and/or social programs and ensuring diversity of stakeholders involved in the definition of our social performance strategy.

VCBR SOCIAL INVESTMENTS IN 2019\*

Work area	Currency Conversion		
	\$ Dollar	R\$	% of the total
Business Connections	385,977.85	1,554,838.44	11
Local development	3,134,534.49	12,626,876.64	87
Community Relations	82,322.87	331,622.02	2
<b>Total</b>	<b>3,602,835.21</b>	<b>14,513,337.10</b>	<b>100</b>

\*We revised our categorization of social investments, aiming to report examples of business connections, local development and community relations initiatives in a tangible way. Also, we understand that these are multidisciplinary efforts. For example, a social program that seeks to improve public education is inherently linked to the implementation of feedback and community relations methodologies.



Edilson  
Chimilovski,  
VCNA's president  
of the Concrete  
and Aggregate  
Business

Cement plant in  
Charlevoix, USA

## PROXIMITY

GRI 103-1 GRI 103-2 GRI 103-3: 413

In the United States and Canada, for example, it is common for sites to be located close to residential areas; in many cases development and new construction have brought homes closer to our operations. It's important to maintain open relationships, especially when plants are in areas where the population is small. This is the case, for example, of St Marys Cement, a brand created over 100 years ago. One of our plants is located the Town of St. Marys (Ontario, Canada) with 18,000 residents. Another plant is in Charlevoix (Michigan, USA), where fewer than 3,000 people live. "We want to be transparent, accessible and good corporate citizens, simply because it's the right thing to do," said Steve Gallagher, vice president of Human Resources at VCNA.

Our main social initiatives are community events, donations (to hospitals and other institutions) and sponsorships of local initiatives. Many of these contributions are repeated year after year, precisely to build relationships of trust and partnerships (such as an agreement signed in 2019 to donate US\$ 50,000 over the next

five years for a structure expansion at a hospital in Bowmanville, Ontario). In addition, almost all plants open their doors and offer guided tours to students. "We are seen as leaders and it is common for regional governments to use our units as a model to train inspectors," said Edilson Chimilovski, VCNA's president of the Concrete and Aggregate Businesses.

In Buffalo, marking the beginning of our activities in the area following the purchase of United Materials, we started working on the early phases of a project to revitalize an area of the Niagara River bank, including the redesign of the urban landscape and the creation of spaces for leisure activities near our plant. The phase of fundraising for the construction is expected to take approximately one year.

In 2019, our VCEAA plants in Morocco, Tunisia and Turkey organized, for the first time, Open Day events, to welcome local residents and show them our facilities—an activity that has been in place in Spain for a few years.

*In our relationship  
with communities,  
we want to be  
transparent,  
accessible and good  
"corporate citizens"*



Concrete mixer drivers and pink trucks of Praire Materials in USA

Pink Truck of Prebetong in Spain

## GOOD CAUSES GRI 103-2 GRI 103-3: 413

At VCNA, we are regularly associated with good causes: fundraising campaigns, initiatives with war veterans, volunteer work, participation in community events, etc. This work focuses on four major areas: 1. education, 2. health and wellness, 3. military and law enforcement (including police and fire departments), and 4. community engagement. Over the past three years, we have raised over US\$ 1 million for charity in the Great Lakes region alone. One notable initiative was the “Driving for change in our communities” campaign, which aimed to show support and raise awareness about breast cancer. We painted some of our concrete mixers pink (named pink trucks) and the idea inspired other sectors, such as emergency services and firefighters, who painted their vehicles in the same color.

In Spain, three concrete mixers were also painted pink in 2019 and we added pink bows to 10 other trucks, with the same purpose as in North America—an initiative that received widespread media coverage given the importance of promoting ways to fight cancer. Another health-related program, this one focused on employees, is the “Around the World Challenge”. To promote physical activity, we encourage everyone to walk, run, swim and cycle to “collect” miles. For every 40,000 kilometers completed collectively (the equivalent of one lap around the Earth), we donate money to local NGOs. In 2019, our employees covered almost 99,000 kilometers.

Through events, donations and sponsorships, more than 150 initiatives were supported in VCEAA region. Other initiatives included employee participation in blood and food donations in Spain and Turkey, the renovation of the local school located near our plant in Tunisia, and contributions to the primary school in Sivas, Turkey.



A member of the military with a VCNA concrete mixer truck



## SKILL-BUILDING AT VCLATAM GRI 103-2 GRI 103-3: 413

At VCLatam, social responsibility initiatives are based on six pillars: Health, Education, Culture, Environment, Economic Development, Social Development and Support for Public Management.

In Yacuses (Santa Cruz de la Sierra province, Bolivia), where our cement plant is located, we implemented campaigns to provide vitamins and eliminate parasites in children, a project that benefited more than 250 residents. In addition, we provided training to prepare young adults to work with computers and in information technology or in construction, and held workshops for small businesses in the villages near the plant. We also offered scholarships

and building materials for community projects (in 2019, a multi-sport court and restrooms were built in the village of Puerto Quijarro) and supported the maintenance of community gardens and apiaries.

In Uruguay, we prioritize programs for children and adolescents on topics such as cement production, environmental care and safety. In 2019, we focused mainly on monitoring the social program started the year before to address extreme poverty around the Sayago plant. We conducted a study on the social impact of the mine and are working to determine a systematic strategy for future projects.

## TEENAGERS IN VULNERABILITY

As we have done for several years, we organized (in November and December) a campaign to encourage employees to donate part of their income taxes to help enable the SuperAção program, in Rio Branco do Sul (PR), where we have a cement plant. Brazilian law allows individuals to donate 6% of their taxes to social projects. Our goal, in 2019, was to raise R\$ 121,000 to help address issues such as high rates of sexual violence, truancy and teenage pregnancy. We were able to surpass our goal, thanks to the participation of our employees across the country. This initiative is a partnership between Votorantim Cimentos and the Votorantim Institute.

At VCNA, we supported many student by giving them the opportunity to work in our businesses over their summer break, as a way to attract a new generation to careers in the construction industry.

*For our social incentive for the sale of products, we were selected for Young SDG Innovators*

## ACCELERATING WITH THE UN

We were one of the companies selected to participate in the Young SDG Innovators, an initiative coordinated by the Global Compact Brazil Network, linked to the United Nations Development Program (UNDP). The selected project (Social incentive for sales of construction products) is aligned with SDG 11 (Sustainable Cities and Communities) and aims to develop a social impact business that encourages the sale of construction products through social incentives for the renovation of homes in unhealthy conditions. The project also includes training and raising the awareness of local resellers to social causes.

“This will be another great opportunity for the young people in our Company to develop new skills and create business opportunities,” said Álvaro Lorenz, Global Director of Sustainability, Institutional Relations, Product Development and Engineering. The program will last ten months and will train professionals under 35 years old in innovation and new technologies. The agenda includes in-person workshops, webinars, case studies and field trips. The participants will be able to network with professionals from other countries and will present their ideas at the Innovation Summit scheduled for July 2020 at the UN headquarters in New York.

**Álvaro Lorenz,**  
Global Director of Sustainability,  
Institutional Relations, Product  
Development and Engineering

# RAQUEL COSTA



Raquel Marques da Costa,  
UNEP-Finance Initiative  
Brazil Coordinator for the  
Good Growth Partnership

I feel honored to have been invited by Votorantim Cimentos to review its 2019 Integrated Report. I congratulate VC for its continuous commitment to improve its performance by welcoming external views from professionals in this field.

With regard to the materiality matrix, two points caught my attention: (1) the difference in perception between shareholders and employees and (2) the slight disconnect in the materiality of themes that seem to be strategic for the Company. Let me explain: among the seven topics included in the materiality matrix, shareholders listed as a priority only “climate change”, which was the only topic not mentioned by employees. As for the topics not listed in the matrix, it is intriguing that “waste management” is not perceived by stakeholders as relevant when the report itself shows that the Company’s strategy has taken a different path. The recent creation of Verdera is a reflection of the fact that waste management is an important issue to VC, which has been successfully addressing it from the perspective of a circular economy. Would it not therefore be a good suggestion to devote more energy to raising the awareness of these groups so that the Company’s strategy can become clearer?

Debt borrowing through a Sustainability Linked Loan demonstrates that VC is looking to integrate sustainability into its finances. In this regard, I invite VC to undertake an exercise of enhancing its quarterly reports to include a report on sustainability results, in addition to financial statements. This is because the tables at the end of this report, in the annex section, presenting the Company’s performance in the last three years in disclosures pre-selected by the Global Reporting Initiative (GRI) or the Global Cement and Concrete Association (GCCA), are exactly what investors and funders are looking to conduct their environmental, social and corporate governance (ESG) analyses.

I would like to underline my appreciation for a Brazilian company that has relevant environmental and social impacts being aware of its positive role in a society that urges us to rethink the relations between man and planet Earth. As an example, I applaud the change of the name from the area of “Social Responsibility” to “Social Transformation”, demonstrating VC’s awareness that the role of companies is to lead this process in a purposeful way. Finally, I want Votorantim Cimentos to use its greatest value, flexible solidity, to face yet another extremely challenging year.

# GERARD BOS



Gerard Bos, Director of  
the Global Business and  
Biodiversity Programme at  
the International Union of  
the Conservation of Nature  
(IUCN)

In 2018, the World Business Council for Sustainable Development (WBCSD) rated Votorantim Cimentos' as the best integrated report, which, in my view, has further improved in 2019.

This deep dive into the integrated report was an interesting journey in discovering the business culture, the management vision and the results of the combined efforts of the nearly 12,000 Votorantim Cimentos employees.

Starting with recognizing a diverse set of employees is an excellent idea and fits well with the shift from "Social Responsibility" to "Social Transformation", which is an interesting choice the Company has made.

I was surprised to note that biodiversity was not considered to be material, and in my current role at the International Union for Conservation of Nature (IUCN), I had to highlight this aspect. However, there is a very positive reason for this. The biodiversity topic is managed so well that it has remained low on the radar screen of internal and external stakeholders and no major issues have been raised over the recent years. Votorantim Cimentos has, over the last three years, dramatically increased the percentage of sites closure plans in place to 93% and augmented the implementation rate of biodiversity action plans to 58%. This is a good example to follow.

Both the "Our Production Process and the Circular Economy" and the "Concrete Applications: the Built Environment" maps on page 15 and 16 are very instructive and demonstrate the multiple efforts to be a thought leader and technologically advanced player in the industry.

The materiality review in future reports could explicitly present the difference between the internal and external views. This might point out some perception gaps. It could also be referencing to the material impacts derived from the megatrends. This would demonstrate how Votorantim Cimentos is permeable to the outside world and the transformation needed. This is in line with how much new technology and innovation is integrated in the Company's co-processing efforts and collaboration with others.

I was surprised to read Votorantim Cimentos is one of the largest agricultural producers and it can be proud of being a key actor in improving soil quality. How could the Company expand on that and become a net positive contributor to nature on soil fertility and quarry rehabilitation?

Reconciling the short-, medium- and long-term efforts and objectives is a key feature and strength of sustainable companies. Votorantim Cimentos' management clearly demonstrates that ability to be able to navigate and manage the risk and opportunities side at these different timescales—a key strength that the Company has to maintain to be successful in the future.

Some of Votorantim Cimentos' peers have gone into a major collaborative effort in valuing all their social and environmental impact in economic terms alongside the financial metrics. It would be good to see the Company taking part in that effort as this would strengthen how positive and negative impacts are presented in this report.

Finally, I appreciated the opportunity to share my main views on this excellent report and hope Votorantim Cimentos will be rewarded again for such a comprehensive, informative and well-designed integrated report.

# GRI STANDARDS DISCLOSURES

In this section we detail our performance against the GRI standards, including a comparison with 2017 and 2018. Possible changes on measurement methods will be indicated next to the results for each item.

GRI 102-48

## PROFILE

### SUPPLY CHAIN GRI 102-9

We currently have a base of 8,178 suppliers in several categories. On average, local suppliers account for 48% of our supply spending. The main supply categories in terms of expenses are: Inputs (bagging materials, diesel, additives, coke, sand, explosives, etc.); Services (internal handling, mechanical maintenance, sterile removal, IT, consulting, forklifts, etc.); and Materials (refractory materials, spare materials, casts, belts, undercarriages and industrial equipment). Most of the service categories are provided by local suppliers, while continuous services, materials and inputs are provided, in most cases, by suppliers operating nationwide.

## EXTERNAL INITIATIVES AND PROJECTS GRI 102-12

### GLOBAL CEMENT AND CONCRETE

**ASSOCIATION (GCCA):** Industry association of which we are a founding member; it represents us internationally on cement- and concrete-related issues through various initiatives and defines sustainability indicators.

### GLOBAL CEMENT AND CONCRETE

**RESEARCH NETWORK:** Initiative launched this year by GCCA to manage innovation initiatives, Innovandi. Pioneering effort to which most GCCA members will also contribute resources.

**GLOBAL COMPACT:** In 2019, we became a signatory of the UN Global Compact. Prior to that, VC was a signatory as one of the companies of the Votorantim S.A Holding.

**YOUNG SDG INNOVATORS PROGRAM:** In 2019, we were selected by the UN Global Compact to participate in this program, which is an accelerator of ideas focused on achieving UN Sustainable Development Goal 11: Sustainable Cities and Communities.

### BRAZILIAN BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (CEBDS):

Organization that represents the World Business Council for Sustainable Development (WBCSD) in Brazil. It brings together approximately 60 of the country's largest business groups, which together account for approximately 40% of Brazilian GDP and are responsible for more than one million direct jobs.

### COMMITMENT LETTER OF THE BUSINESS MOVEMENT FOR INTEGRITY, TRANSPARENCY AND FIGHT AGAINST CORRUPTION: GRI 103-2: 205

By signing this document in August 2018, together with 36 other companies, we reaffirmed our commitment to adopt practical measures to fight corruption in the business environment and public-private relationships, which is already part of our Compliance Program.

### COOPERAÇÃO TÉCNICA SBE VC RBMA

**(TECHNICAL PARTNERSHIP):** Partnership among Votorantim Cimentos, the Brazilian Society of Speleology and the Atlantic Forest Biosphere Reserve to develop and disseminate good socio-environmental practices in cave areas and the Atlantic Forest region.



**CARTA ABERTA AO BRASIL SOBRE MUDANÇA DO CLIMA (THE ETHOS INSTITUTE'S OPEN LETTER ON CLIMATE CHANGE):** Initiative of the business sector in Brazil to fight climate change.

**REDE ACV (LIFE CYCLE ANALYSIS):** We have institutional participation and exchange experiences on the use of the life cycle analysis tool, which is key to our industry.

**CDP (CARBON DISCLOSURE PROJECT):** We are part of the CDP Benchmark Club. CDP is an institution that assesses how companies prepare for climate change and new climate risk scenarios. We have been working to improve our CDP rating. This information is shared with investors and shows our commitment to climate change; last year we received a score of A- and became a benchmark of our industry.

**VANZOLINI FOUNDATION:** Environdec is a system that files our Environment Product Declaration (EPDs), which are documents that are requested by customers seeking LEED certification.

## MEMBERSHIP OF ASSOCIATIONS GRI 102-13

### GLOBAL

- Global Cement and Concrete Association (GCCA)
- World Business Council for Sustainable Development

### BRAZIL

- Instituto Brasileiro de Mineração (Ibram)
- Associação Brasileira de Cimentos Portland (ABCP)
- Associação Brasileira da Indústria de Materiais de Construção (Abramat)

- Sindicato Nacional da Indústria de Produtos de Cimento (Sinaprocim)
- Instituto Brasileiro do Concreto (Ibracon)
- Sindicato da Indústria da Construção Civil do Estado de São Paulo (Sinduscon/SP)
- Sindicato Nacional da Indústria de Cimento (SNIC)

### TURKEY

- Turkish Cement Manufacturers' Association (TCMA)
- Cement Industry Employers' Association (ÇeiS)
- Turkish Ready Mixed Concrete Association (TRMCA)

### TUNISIA

- National Chamber of Cement Producers of Tunisia
- Arab Association for Cement and Building Materials

### MOROCCO

- Association Professionnelle des Cimentiers (APC)
- Association des Bétonniers (AMBPE)
- Union Arabe des producteurs de ciment (AUCBM)
- Confédération Générale des Entreprises du Maroc (CGEM)

### SPAIN

- Fundación Laboral del Cemento y el Medio Ambiente (Cema Foundation)
- Fundación Laboral Andaluza del Cemento y el Medio Ambiente (Flacema)
- Oficemen – Agrupación de Fabricantes de Cemento de España
- European Cement Association (Cembureau)
- Instituto Español del Cemento y sus Aplicaciones (IECA)

- Asociación Nacional Española de Fabricantes de Hormigón Preparado (ANEFHOP)
- Asociación Nacional de Áridos (ANEFA)
- Asociación Industrial de Canarias (ASINCA)
- Asociación Nacional de Fabricantes de Morteros (AFAM)

### BOLIVIA

- Câmara de Industria, Comercio, Servicios y Turismo de Santa Cruz (Cainco)
- Câmara de Exportadores de Santa Cruz (Cadex)
- Instituto Boliviano del Cemento y Hormigón (IBCH)
- Fundación Germán Busch

### URUGUAY

- Construction Chamber of Uruguay
- Exporters Union of Uruguay
- Spain-Uruguay Business Chamber
- APPCU, Private Promoters Of Construction Uruguay

### CANADA

- Cement Association of Canada (CAC)
- Concrete Ontario
- Ontario Stone, Sand & Gravel Association (OSSGA)

### UNITED STATES

- Portland Cement Association (PCA)
- National Ready Mixed Concrete Association (NRMCA)
- Illinois Association of Aggregate Producers (IAAP)
- American Concrete Pavement Association (ACPA)
- Slag Cement Association (SCA)

# REPORTING PRACTICES GRI

GRI 102-44 GRI 102-46

Analysis of boundaries of material topics and themes prioritized by stakeholders

Material Topic	Explanation of Material Topics GRI 103-1			Stakeholder group that raised the topic GRI 102-44
	Why is it material	Where the impacts occur	Involvement with the impacts	
Healthy and Safe Working Conditions	Safety comes first at VC   Industry is subject to high risk of occupational accidents   Constant improvement opportunities	All operations	VC, suppliers	Senior leadership   Customers/consumers   Suppliers   Communities   Employees  NGOs
Customer relations and satisfaction	Customers focus is one of our strategic pillars	All operations	VC	Senior leadership   Customers/consumers   Suppliers   Carriers  Employees
Research and Innovation	Competitiveness   Operational efficiency   Solutions for more affordable buildings   Financial risk	All operations	VC, suppliers, customers	Customers/consumers   Suppliers     Communities   Employees
Human Capital Development	Maintain qualified professionals to support business growth and efficiency   Organizational climate   Global company with cultural diversity	All operations	VC	Customers/consumers   Employees
Ethics and Business Integrity	Ethics is one of VC's values at VC   Brazilian environment: complaints and anti-corruption investigations   High volume of investments   Regulatory, reputational, operational and financial risks	All operations	VC, suppliers, governments, customers, communities	Senior leadership   Carriers  Employees
Climate Change and GHG Emissions	Cement sector is one of the world's largest emitters of greenhouse gases (GHG)   Competitiveness   Demands and pressures from customers and society   Environmental, reputational and regulatory risks	All operations	VC, suppliers	Senior leadership   Shareholder/financier   ONGs
Regulation and Compliance	Constantly evolving laws and regulations   Licenses to operate   Regulatory, reputational, operational and financial risks	All operations	VC	Senior leadership   Employees

ECONOMIC PERFORMANCE

ECONOMIC VALUE GENERATED AND DISTRIBUTED (thousand R\$ mil)	GRI 201-1	2017	2018	2019
<b>Economic value generated</b>		6,075,098	7,211,517	<b>7,130,491</b>
Net revenue		10,928,221	12,609,876	<b>13,027,009</b>
Cement		7,795,887	8,902,225	<b>9,127,793</b>
Concrete		2,103,201	2,487,147	<b>2,606,247</b>
Aggregates		401,140	459,227	<b>425,218</b>
Mortar		419,951	453,776	<b>481,304</b>
Other		208,042	307,501	<b>386,447</b>
<b>Economic value distributed</b>	<b>GRI 201-1</b>	6,694,697	7,201,117	<b>6,581,251</b>
Employee remuneration <sup>1</sup>		2,029,468	2,199,590	<b>2,301,930</b>
Taxes and fees <sup>2</sup>		2,213,143	3,027,997	<b>2,603,860</b>
Third-party capital remuneration <sup>3</sup>		2,452,086	1,973,530	<b>1,675,461</b>
Economic Value Retained <sup>4</sup>		-619,599	10,400	<b>549,240</b>

<sup>1</sup>Direct remuneration, retirement plan and pension plan, social charges and benefits

<sup>2</sup>Federal, State, Municipal and Deferred taxes and contributions

<sup>3</sup>Financial expenses and passive exchange variations and rents

<sup>4</sup>Non-controlling interest, profit (loss) retained and profit (loss) from discontinued operations

SUPPLIERS	GRI	2017	2018	2019
<b>Proportion of spending with local suppliers at significant operating locations <sup>1</sup></b>	<b>GRI 204-1</b>			
Total amount spent with suppliers (million R\$)		1.48	1.47	<b>1.87</b>
Proportion of spending with local suppliers at significant operating locations <sup>2</sup>		53%	49%	<b>49.3%</b>
<b>Contracting of suppliers <sup>1</sup></b>				
Total number of new suppliers		13,685	10,989	<b>8,178</b>
Total number of new suppliers selected according to environmental criteria <sup>3</sup>	<b>GRI 308-1</b>	639	549	<b>751</b>
Total number of new suppliers selected according to social criteria <sup>4</sup>	<b>GRI 414-1</b>	96	89	<b>751</b>
% of new suppliers that were selected using environmental criteria	<b>GRI 308-1</b>	4.7%	4.9%	<b>9.2%</b>
Number of suppliers identified as causing negative environmental impact and actions taken	<b>GRI 308-2</b>	Not monitored	Not monitored	<b>Not monitored</b>

SUPPLIERS	GRI	2017	2018	2019
% of new suppliers that were selected using social criteria	<b>GRI 414-1</b>	0.7%	0.8%	<b>9.18%</b>
Number of suppliers identified as causing negative social impact and actions taken	<b>GRI 414-2</b>	Not monitored	Not monitored	<b>Not monitored</b>

<sup>1</sup> Results refer to VCBR operations.

<sup>2</sup> The incentive for hiring with a focus on the development of local companies happens through the approval of purchases of up to R\$ 5,000 (services) and R\$3,000 (materials) to be made directly by the units without the involvement of Procurement.

<sup>3</sup> 100% of suppliers hired by the Supply area are submitted to a certification process via Equipo/SIPM. As part of this process, suppliers must present required environmental documents according to the selected supply category (according to the CNAE in their CNPJ), which must be validated by VSA's certification area. Suppliers can be disqualified if they fail to present the complete mandatory documentation.

<sup>4</sup> In 2019, we considered all suppliers that were subjected to and approved in the certification process, in which we request documents that validate the economic and financial situation of the suppliers that are hired by Votorantim Cimentos.

LOCAL HIRES	GRI 202-2	2017	2018	2019
<b>Proportion of senior management<sup>1</sup> hired from the local community<sup>2</sup> at significant locations of operation</b>				
VCBR		3.09%	3.10%	<b>3.13%</b>
VCNA		93.0%	81.0%	<b>100%</b>
VCEAA		59.1%	54.2%	<b>35.29%</b>
VCLATAM		15.4%	25%	<b>40%</b>
<b>Percentage of employees from the local community<sup>2</sup></b>				
VCBR		99.8%	99.8%	<b>99.8%</b>
VCNA		99.9%	99.9%	<b>96.61%</b>
VCEAA		97.4%	96.6%	<b>96.4%</b>
VCLATAM		69.3%	69.3%	<b>70.81%</b>

<sup>1</sup> Includes senior managers, general managers, directors and the CEO.

<sup>2</sup> Employees born or naturalized in the country of operation are considered to be local hires at VCNA and VCEAA and in Uruguay. At VCBR and Bolivia, due to specific local characteristics, we adopt regional criteria.

GOVERNMENT RELATIONS	GRI	2017	2018	2019
<b>Political contributions (in R\$) <sup>1</sup></b>	<b>GRI 415-1</b>	0	0	<b>0</b>

<sup>1</sup> Scope: VCBR, VCNA and VCEAA.

CONSUMER RELATIONS	GRI	2017	2018	2019
<b>Net Promoter Score (NPS) survey results<sup>1</sup></b>	<b>VC-1 102-43</b>	68	63	<b>73</b>

<sup>1</sup> Scope: VCBR. The NPS survey has been conducted since 2014. In 2019, due to a change in the supplier, the methodology was adjusted. As a result, we were only able to retroactively recalculate the results after 2016 (2016 - 59; 2017 - 68; 2018 - 63). What is clear, however, is that in 2019 we reached our best historic results: 73 points. In addition, we also had our highest growth, increasing 10 points in comparison to the previous year.

ECONOMIC PERFORMANCE

OPERATIONS ASSESSED FOR RISKS RELATED TO CORRUPTION	GRI 205-1	2017	2018	2019
Percentage of operations assessed		100%	0%	0%
Significant corruption-related risks identified through this assessment	Obtaining or renewing documents, Contracting of third parties, Payments to private third parties, Acquisition of products or services of public entities, Gifts, presents, travels, lodging and entertainment. Participation in commercial associations and / or unions, Participation in licenses and consortia, Provision of products to public entities.	The assessment on anti-corruption within Votorantim Cimentos operations is not conducted on an annual basis. To ensure compliance with our anti-corruption code, we perform this assessment every three years through an external consultancy. This process will be conducted again globally in 2019.	<b>Last year, the Compliance area conducted a self-assessment of its Compliance Program at a global level, including the Anti-Corruption pillar. The self-assessment, which involves several areas of the Company, aims to provide insight into the level of maturity of the pillars that make up the Votorantim Cimentos Compliance Program through an integrated and consolidated panel, as well as to direct the strategy and priority actions to improve compliance over the next years.</b>	

ANTI-CORRUPTION COMMUNICATION AND TRAINING <sup>1</sup>	GRI 205-2	COMMUNICATED		TRAINED	
Employees		Number	Percentage	Number	Percentage
President/Director		17	100%	6	35%
Manager/General Manager		232	100%	57	25%
Coordinator/Consultant		397	100%	102	26%
Technician/Analyst/Supervisor		2,036	100%	600	29%
Trainee		11	100%	11	100%
Operator		4,377	100%	1,921	44%
Intern		425	100%	288	68%
Apprentice		232	100%	168	72%
<b>Total</b>		<b>7,727</b>	<b>100%</b>	<b>3,153</b>	<b>41%</b>
Members of governance bodies		Number	Percentage	Number	Percentage
<b>Total</b>		<b>1</b>	<b>8%</b>	<b>1</b>	<b>8%</b>
Partners communicated about anti-corruption policies and procedures		Number	Percentage	Additional comments	
<b>Total</b>		<b>4,159</b>	<b>~50%</b>	<b>Documents referring to anti-corruption policy</b>	

<sup>1</sup> Scope: VCBR

ANTI-CORRUPTION	GRI 205-3	2017	2018	2019
Number of cases of corruption confirmed by the Business Ethics Office		0	0	0

Note: The disclosure covers cases of corruption received by the Business Ethics Office (EthicsPoint System), which has global reach.

COMPETITION	GRI 206-1	2017	2018	2019
Total number of legal actions for unfair competition, trust and monopoly practices <sup>1</sup>		2*	2*	2
Value of legal actions (million R\$)		6,100	6,100	6,100

<sup>1</sup> Considers only legal actions above R\$ 98 million, in line with the standards applied for M&A and Due Diligence.  
\*Revised figure. [GRI 102-48](#)

SOCIOECONOMIC COMPLIANCE *	GRI 419-1	2019
Total number of significant fines received in the year		0**
Total monetary value of significant fines received in the year		0**
Total number of non-monetary sanctions		0**
Number of cases (both fines + sanctions) brought through dispute resolution mechanisms		0**

\* This disclosure has been reformulated to better align with the GRI criteria. Significant monetary fines: value above R\$ 1 million. Non-monetary sanctions that cause interruptions or adjustments over R\$ 5 million.  
\*\* Scope: VCBR and VCEAA..

## ECONOMIC PERFORMANCE

DISCRIMINATION	GRI 406-1	2017	2018	2019
<b>Total number of incidents of discrimination received by the global business ethics office and the corrective actions taken</b>				
Race/color		3	0	2
Age group		2	1	0
Gender		0	0	0
Religion		2	0	0
Political opinion or other opinion		0	0	0
Nationality or social origin		1	2	1
Physical conditions		0	0	1
War veterans		0	0	0
Other incidents (discrimination)		0	0	0
<b>Total number of incidents analyzed</b>		<b>8</b>	<b>3</b>	<b>4</b>
Analyzed and considered unfounded		7	3	2
Under analysis		1	0	0
Substantiated		0	0	1

Note: One case analyzed was considered inconclusive. Considers only cases of discrimination. Does not include alleged harassment allegations.

CHILD LABOR	GRI 408-1	2017	2018	2019
Operations at significant risk for incidents of child labor		Not monitored	Not monitored	Not monitored
Operations at risk of having young workers exposed to dangerous work		Not monitored	Not monitored	Not monitored
Suppliers at significant risk for incidents of child labor		Not monitored	Not monitored	Not monitored
Suppliers at risk of having young workers exposed to dangerous work		Not monitored	Not monitored	Not monitored

FORCED OR COMPULSORY LABOR	GRI 409-1	2017	2018	2019
Operations at significant risk for incidents of forced or compulsory labor		Not monitored	Not monitored	Not monitored
Suppliers at significant risk for incidents of forced or compulsory labor		Not monitored	Not monitored	Not monitored

Note: Compulsory and child labor are issues included the Votorantim Cimentos Code of Conduct, which addresses our commitment to the United Nations Universal Declaration of Human Rights and the UN Global Compact and has among its principles to eliminate all forms of forced or compulsory labor and eradicate all forms of child labor from our production chain. These practices are prohibited in all company and commercial partners' facilities. It is also prohibited to hire any organization that does not follow our Company's conduct guidelines. This issue is also addressed in the event of complaints to our Business Ethics Office, which is prepared to carry out investigations and verify the materiality of the complaint. The Office of Labor (within the Ministry of Economy) Restricted List is cross-checked with our SAP list of suppliers. If there is evidence of misconduct, the supplier is demobilized and blocked to prevent future hiring. In 2019, no incident was identified. The Votorantim Cimentos General Conditions Term states that all suppliers must follow our Code of Conduct (ethics, values and compliance with labor legislation). Through the new SIPM tool, suppliers must accept our General Conditions Term; otherwise they are rejected in the certification process. They must also fill out a Compliance Survey, in which they need to address several topics, including child labor. If the survey answers are unsatisfactory, the supplier is submitted for analysis by the Compliance area and may be rejected in the certification process.

RIGHTS OF INDIGENOUS PEOPLES	GRI 411-1	2017	2018	2019
Incidents of violations involving rights of indigenous peoples		-	0	0

## ENVIRONMENTAL PERFORMANCE

ENVIRONMENTAL INVESTMENTS	GRI 103-2	2017	2018	2019
<b>Total Environmental Capex and Opex by type (million R\$)</b>				
<b>Environmental Compliance</b>				
Environmental investments (Capex) (R\$)		45.5	42.5	103.6
Environmental expenses (Opex) (R\$)		37.7	41.7	124.46

Note: as of 2019, in addition to VCBR, the scope of this item also includes results from VCEAA, VCNA and VCLATAM. Exchange rate: December 31, 2019.

MATERIALS USED	GRI 301-1	2017	2018	2019
<b>Renewable materials (tons)</b>				
VCNA		-	-	-
VCBR		-	-	54,429
VCEAA		-	-	-
<b>Total</b>		-	-	54,429*
<b>Non-renewable materials (tons)</b>				
VCNA		-	-	6,734,703
VCBR		-	-	28,126,910
VCEAA		-	-	9,186,477
<b>Total</b>		<b>54,680,000</b>	<b>65,390,000</b>	<b>44,048,091</b>

Note: The scope covers VCNA, VCEAA and VCBR cement operations.

Materials include raw materials used in the raw meal (flour) phase and in the cement grinding phase, alternative raw materials and other materials.

\*All materials used in our process are non-renewable, except biomass.

NON-COMPLIANCE WITH ENVIRONMENTAL LAWS AND/OR REGULATIONS*	GRI 307-1	2019
Total number of significant fines received in the year for non-compliance with environmental laws and/or regulations		0
Total monetary value of significant fines received in the year		0
Total number of non-monetary sanctions		1
Number of cases (both fines and sanctions) brought through dispute resolution mechanism		0

\* This disclosure has been reformulated to better align with the GRI criteria. Significant monetary fines: value above R\$ 1 million. Non-monetary sanctions that cause interruptions or adjustments over R\$ 5 million.

ENVIRONMENTAL PERFORMANCE

DIRECT CO <sub>2</sub> EMISSIONS AND EMISSION INTENSITY	GRI 305-1 305-4 GCCA	2017	2018	2019
<b>CEMENT</b>				
Gross absolute CO <sub>2</sub> emission (tCO <sub>2</sub> )		21,691,217.66	21,699,138.18	<b>19,027,608.58</b>
Net absolute CO <sub>2</sub> emission (tCO <sub>2</sub> )		21,059,697.45	21,023,761.77	<b>18,280,538.07</b>
Gross specific CO <sub>2</sub> emission (kg CO <sub>2</sub> /t cementitious)		656.70	641.54	<b>615.3</b>
Net specific CO <sub>2</sub> emission (kg CO <sub>2</sub> /t cementitious)		637.58	621.57	<b>591.1</b>
<b>AGGREGATES</b>				
Gross absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e)		5,163.02	4,909.36	<b>4,939.23</b>
Net absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e) (kg CO <sub>2</sub> /t aggregate)		1.54	1.43	<b>1.30</b>
<b>CONCRETE</b>				
Gross absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e)		14,000.38	15,360.89	<b>17,836</b>
Net absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e) (kg CO <sub>2</sub> /m <sup>3</sup> concrete)		9.69	8.71	<b>9.22</b>
<b>MORTER</b>				
Gross absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e)		1,711.66	1,475.63	<b>1,853.45</b>
Net absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e) (kg CO <sub>2</sub> /t mortar)		2.35	2.04	<b>2.62</b>
<b>LIMES AND AGRICULTURAL INPUTS</b>				
Gross absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e)		170,705	177,772	<b>158,226</b>
Net absolute CO <sub>2</sub> emission (tCO <sub>2</sub> e) (kg C CO <sub>2</sub> /t lime and input produced)		86.28	99.70	<b>76.19</b>
<b>Total – Scope 1</b>		<b>21,882,798</b>	<b>21,898,656</b>	<b>19,215,648</b>
<b>Biogenic Emissions - Scope 1 (tCO<sub>2</sub>)</b>		<b>889,293.09</b>	<b>1,050,875.97</b>	<b>1,185,768</b>

Historical figures have been updated. Scope 1 emissions include cement operations in Brazil, VCNA, VCEAA and VCLATAM, and also Uruguay concrete operations, through a consolidation approach. Emissions from the Cement business were calculated considering the GCCA guidelines for calculating the sector's CO<sub>2</sub> emissions. Emissions from other businesses were calculated considering the guidelines of the Brazilian GHG Protocol Program. The gases included in the calculation for scope 1 and 3 were: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O. For scope 2 only CO<sub>2</sub>.

INDIRECT CO <sub>2</sub> EMISSIONS	GRI	2017	2018	2019
<b>Indirect CO<sub>2</sub> emissions (purchased energy) (tCO<sub>2</sub>)</b>				
	<b>GRI 305-2</b>			
Cement		967,735	816,984	<b>660,807</b>
Concrete		289	232	<b>230</b>
Aggregates		978	773	<b>772</b>
Mortar		699	558	<b>595</b>
Limes and agricultural inputs		4,107	3,386	<b>3,569</b>
<b>Total – Scope 2</b>		<b>973,808</b>	<b>821,934</b>	<b>665,974</b>
<b>Other indirect emissions - scope 3 (tCO<sub>2</sub>e)</b>				
	<b>GRI 305-3</b>			
Transportation of inputs and final products		596,850	585,340	<b>583,526</b>
<b>Total – Scope 3</b>		<b>596,850</b>	<b>585,340</b>	<b>583,526</b>
<b>Biogenic emissions – Scope 3 (tCO<sub>2</sub>)</b>		<b>46,554</b>	<b>57,487</b>	<b>61,437</b>

Historical figures have been updated. Scope 2 activities consider emissions related to electricity purchased by Brazilian operations and VCNA, VCEAA and VCLATAM cement operations, and also consider Uruguay concrete operations, using the location method. Scope 3 emissions consider the transportation activities of cement business and other businesses in Brazil and the emissions from Uruguay concrete activities.

REDUCTION OF GHG EMISSIONS	GRI	2017	2018	2019	Base year / denominator
Percentage of CO <sub>2</sub> reduction, as a direct result of reduction initiatives	<b>GRI 305-5</b>	-16.5%	-18.6%	<b>-22.6%</b>	Base year: 1990 Unit: kg CO <sub>2</sub> /t cementitious produced

Considering that emissions from the cement production process are the most significant for the activities in Brazil, we highlight the increase in the use of biomass and alternative fuels to petroleum coke. At VCEAA, the initiatives include the use of energy generated by a wind power plant and the use of alternative fuels in almost all units, except Sivas and Toral. In Uruguay, the initiatives include the adoption of alternative fuels, optimization of electricity consumption and ISO 50001 certification.

ENVIRONMENTAL PERFORMANCE

ENERGY CONSUMPTION INSIDE THE ORGANIZATION	GRI 302-1	2017	2018	2019
<b>Non-renewable sources (GJ)</b>				
Cement		83,510,720	83,942,443*	<b>71,742,433</b>
Aggregates		71,626	69,774*	<b>73,067</b>
Concrete		187,735	205,959*	<b>221,907</b>
Mortar		26,357	22,570*	<b>28,130</b>
Lime and agricultural inputs		25,508	32,508*	<b>29,644</b>
<b>Total</b>		<b>83,821,946</b>	<b>84,273,254</b>	<b>72,095,181</b>
<b>Renewable sources (GJ)</b>				
Cement		5,183,103*	7,205,274*	<b>8,593,890</b>
Aggregates		6,087*	7,260*	<b>7,913</b>
Concrete		21,171*	26,237*	<b>28,134</b>
Mortar		49*	153*	<b>216</b>
Lime and agricultural inputs		2,274*	3,447*	<b>3,222</b>
<b>Total</b>		<b>5,212,684</b>	<b>7,242,372</b>	<b>8,633,375</b>
<b>Electricity (MWh)</b>				
Cement		3,602,246	3,660,140	<b>3,422,937</b>
Aggregates		10,548*	10,452*	<b>10,294</b>
Concrete		3,115	3,142	<b>3,067</b>
Mortar		7,539*	7,545*	<b>7,928</b>
Lime and agricultural inputs		44,306*	45,763*	<b>47,561</b>
<b>Total</b>		<b>3,667,754</b>	<b>3,727,041</b>	<b>3,491,786</b>
<b>Total Consumption (GJ)</b>				
Cement		101,661,909	104,324,221	<b>92,658,896</b>
Aggregates		115,687	114,661	<b>118,038</b>
Concrete		220,120	243,507	<b>261,080</b>
Mortar		53,545	49,884	<b>56,887</b>
Lime and agricultural inputs		187,283	200,702	<b>204,087</b>
<b>Total</b>		<b>102,238,544</b>	<b>104,932,975</b>	<b>93,298,988</b>

Scope: VCBR (all operations) and other cement operations (VCEAA, VCNA and VCLA).

ENERGY CONSUMPTION OUTSIDE THE ORGANIZATION <sup>1</sup>	GRI 302-2	2017	2018 <sup>1</sup>	2019
Transport and distribution		8,689,589*	8,724,131	<b>8,697,412</b>

<sup>1</sup> Scope: VCBR  
\* Revised figures [GRI 102-48](#)

ENERGY INTENSITY	GRI 302-3	2017	2018	2019
<b>Fuels <sup>1</sup></b>				
Cement (MJ/ton of cementitious product)		2,795*	2,764*	<b>2,645</b>
Aggregates (MJ/ton of product)		23*	22*	<b>21</b>
Concrete (MJ/m <sup>3</sup> of concrete)		145*	132*	<b>140</b>
Mortar (MJ/ton of product)		36*	31*	<b>40</b>
Lime and agricultural inputs (MJ/ton of product)		14*	20*	<b>16</b>
<b>Electricity <sup>1,2</sup></b>				
Cement (kWh/ton of cementitious product)		113*	111*	<b>112.7</b>
Aggregates (kWh/m <sup>3</sup> )		3	3*	<b>3</b>
Concrete (kWh/ton of product)		2	2	<b>2</b>
Mortar (MJ/ton of product)		10*	10	<b>11</b>
Lime and agricultural inputs (kWh/ton of product)		22*	26	<b>23</b>

<sup>1</sup> Scope: VCBR (all operations) and other cement operations (VCEAA, VCNA and VCLA).

<sup>2</sup> The cement business has the highest energy consumption (99%). In 2019, we made progress in terms of thermal energy consumption and fuel use. With regard to electricity, electric consumption per unit of consumption had a slight increase. VC's goal is to achieve a 30% rate of substitution of conventional fuels with alternative fuels by 2020.

\* Revised figures. [GRI 102-48](#)

ENVIRONMENTAL PERFORMANCE

OTHER AIR EMISSIONS	GRI 305-7	2017	2018	2019
<b>NOx</b>				
Number of kilns reported		40	34	34
Total emissions (metric tons/year)		47,774	40,393	36,486
Average specific concentration (g/metric ton clinker)		1.900	1.701	1.657
% Reduction in NOx compared to the previous year		-5.6%	-10.5%	-2.6%
<b>SO2</b>				
Number of kilns reported		40	34	34
Total emissions (metric tons/year)		13,364	17,014	15,612
Average specific concentration (g/metric ton clinker)		532	717	709
% Reduction in SO2 compared to the previous year		-20.9%	34.8%	-1.1%
<b>MP</b>				
Number of kilns reported		40	34	34
Total emissions (metric tons/year)		1,335	1,349	1,223
Average specific concentration (g/metric ton clinker)		53	57	56
% Reduction of PM compared to the previous year		-19.9%	7.0%	-2.3%
<b>Mercury</b>				
Number of kilns reported		40	34	34
Total emissions (kg/year)		260	483	144
Average specific concentration (mg/metric ton clinker)		19	6	12
% Reduction of mercury compared to the previous year		87.2%	-68.5%	105.8%
<b>VOC</b>				
Number of kilns reported		40	34	34
Total emissions (metric tons/year)		1,348	1,457	1,400
Average specific concentration (g/metric ton clinker)		55,04	61,38	63,58
% Reduction of VOCs compared to the previous year		-33.9%	11.5%	3.6%
<b>Dioxins/Furans</b>				
Number of kilns reported		40	34	34
Total emissions (mg/year)		12,372	14,154	2,239
Average specific concentration (µg/metric ton clinker)		0,49	0,60	0,10
% Reduction of dioxins/furans compared to the previous year		190.1%	21.2%	-82.9%
<b>HM1 (CADMIUM + THALLIUM)</b>				
Number of kilns reported		40	34	34
Total emissions (Kg/year)		423	332	499
Average specific concentration (mg/metric ton clinker)		2	1	2
% Reduction of HM1 compared to the previous year		124.2%	-16.9%	62.0%

OTHER AIR EMISSIONS	GRI 305-7	2017	2018	2019
<b>HM2 (antimony + arsenic + lead + chromium + cobalt + copper + manganese + nickel + vanadium)</b>				
Number of kilns reported		33	35	34
Total emissions (Kg/year)		14,371	22,308	20,079
Average specific concentration (mg/metric ton clinker)		571.60	939.54	911.77
% Reduction of HM2 compared to the previous year		35.2%	64.4%	-3,0%
<b>Monitoring Data</b>				
Total monitoring coverage rate (KP1) – Total coverage rate <sup>1</sup>		68.8%	81.8%	94.9%
Continuous monitoring coverage rate (KP2) - PM, NOx and SO2		84.9%	99.5%	100%

<sup>1</sup> Percentage of clinker produced in kilns covered by the monitoring system for Particulate Matter, NOx, SOx, VOC/THC, heavy metals (Hg, Cd, Ti, Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V) and PCDD/F. Historical figures were adjusted. [GRI 102-48](#)

BIODIVERSITY AND RESOURCE CONSERVATION	2017	2018	2019
<b>Total number of active mines</b>			
Global	99	86	86
VCBR	40	26	26
VCNA	28	29	29
VCEAA	31	31	31
<b>Number of areas of high biodiversity value<sup>1</sup></b>			
Global	GRI 304-1		
Global	20	14	12
VCBR	12	9	7
VCNA	6	4	4
VCEAA	3	1	1
<b>Number of high biodiversity value areas with existing biodiversity management plans<sup>1</sup></b>			
Global <sup>1</sup>	2	3	7
<b>Percentage of high biodiversity value areas with existing biodiversity management plans</b>			
Global <sup>1</sup>	9.9%	21%	58%
<b>% of quarries with closure plan<sup>2</sup></b>			
Global <sup>1</sup>	GRI MM10		
Global <sup>1</sup>	90	90	93

<sup>1</sup> Scope includes VCBR, VCEAA, VCNA and VCLATAM and considers three factors:  
 - The importance of the area of high biodiversity relevance overlapping with the mining area;  
 - The percentage of overlap between the area of high biodiversity relevance and the mining area (considering a 5-km radius from the center of the mine);  
 - The distance of the area of high biodiversity relevance to the mining center.

<sup>2</sup> Information on the total amount of the financial provision for the closure of activities is not available.  
 Note MM10: In 2019, the total number of VCBR mines rose from 59 to 61; in the same period, six pending closure plans were prepared for the mines of Santa Isabel, Itapeperica da Serra, Campo Grande, Cajamar and Poty Paulista. Our goal is to develop closure plans for all of its mines in operation by 2020.



ENVIRONMENTAL PERFORMANCE

BIODIVERSITY	GRI 304-3	2017	2018	2019
<b>Habitats protected or restored (in hectares)<sup>1</sup></b>				
<b>Amazônia</b>		2,873	2,873	<b>2,873</b>
Type of area			LR, PPA	<b>LR, PPA</b>
Status of the area			Preserved	<b>Preserved</b>
<b>Caatinga</b>		336	336	<b>336</b>
Type of area			LR, PPA	<b>LR, PPA</b>
Status of the area			Preserved	<b>Preserved</b>
<b>Cerrado</b>		2,848	2,552	<b>2,552</b>
Type of area			LR, PPA, PRNH, WRA	<b>LR, PPA, PRNH, WRA</b>
Status of the area			Preserved	<b>Preserved</b>
<b>Mata Atlântica</b>		5,075	5,003	<b>5,003</b>
Type of area			LR, PPA, PRNH	<b>LR, PPA, PRNH</b>
Status of the area			Preserved	<b>Preserved</b>
<b>Pantanal</b>		169	169	<b>169</b>
Type of area			LR, PPA	<b>LR, PPA</b>
Status of the area			Preserved	<b>Preserved</b>
<b>Pampa</b>		422	422	<b>422</b>
Type of area			LR, PPA	<b>LR, PPA</b>
Status of the area			Preserved	<b>Preserved</b>

<sup>1</sup> Disclosure considers all VCBR's businesses. No new preservation areas were incorporated in 2019. The result of restoration measures in all areas is approved by external experts. Brazilian classification of areas: Legal Reserve (LR), Permanent Protection Area (PPA), Private Reserve of Natural Heritage (PRNH), Wildlife Refuge Area (WRA)

BIODIVERSITY	GRI 304-4	2017	2018	2019
<b>Total number of species in the IUCN Red List and national conservation lists with habitats in areas affected by operations<sup>1</sup></b>				
Critically endangered		33	33	<b>33</b>
Endangered		118	118	<b>118</b>
Vulnerable		104	104	<b>104</b>
Near Threatened		64	64	<b>64</b>
Least concern <sup>2</sup>		NA	NA	<b>NA</b>

<sup>1</sup> Disclosure includes information from VCBR (cement and aggregates). In addition to the IUCN classification, state listings from the states of São Paulo, Santa Catarina, Federal District and Rio Grande do Sul were also considered.

<sup>2</sup> Information not available. Due to the focus on identifying the species of greatest concern for conservation, it will be necessary to review reports and build a new database to identify all species.

WATER WITHDRAWN BY SOURCE	GRI 303-3	2017	2018	2019
		All areas	All areas	All areas Areas with water stress
<b>Cement (megaliter)<sup>1</sup></b>				
Surface water	Freshwater	0.00	0.00	<b>11,960.71</b>
	Other water	0.00	0.00	<b>0.00</b>
Groundwater	Freshwater	1,339.63	2,246.38	<b>1,750.39</b>
	Other water	0.00	0.00	<b>0.00</b>
Rainwater	Freshwater	238.26	7.17	<b>5.70</b>
	Other water	0.00	0.00	<b>0.00</b>
Produced water	Freshwater	ND	ND	<b>31,213.32</b>
	Other water	0.00	0.00	<b>0.00</b>
Third-party water	Freshwater	89.28	219.66	<b>232.59</b>
	Other water			<b>0.00</b>
Total	Freshwater	7,319.22	10,071.88	<b>45,162.69</b>
	Other water	0.00	0.00	<b>0.00</b>
<b>Total</b>		<b>7,319.22</b>	<b>10,071.88</b>	<b>45,162.69</b>
<b>Concrete VCBR (megaliter)</b>				
Surface water	Total	0.00	0.00	<b>0.00</b>
				<b>0.00</b>
Groundwater	Total	414.77	208.03	<b>321.37</b>
				<b>0.00</b>
Rainwater	Total	0.00	0.00	<b>0.00</b>
				<b>0.00</b>
Produced water	Total	0.00	0.00	<b>0.00</b>
				<b>0.00</b>
Third-party water	Total	383.97	372.29	<b>333.63</b>
				<b>0.00</b>
<b>Total</b>	<b>Total</b>	<b>798.74</b>	<b>580.31</b>	<b>655.00</b>

<sup>1</sup> In addition to VCBR and VCEAA, cement data for 2019 also includes VCNA cement operations.

Note 1: The organization has no seawater withdrawal. Withdrawal split between Fresh Water (corresponding to ≤1000 mg/l total dissolved solids) and Other Water (> 1,000 mg/l total dissolved solids) is not available.

ENVIRONMENTAL PERFORMANCE

WATER DISCHARGE BY SOURCE		GRI 303-4		2017	2018	2019	
				All areas	All areas	All areas	Areas with water stress
<b>Cement (megaliter)</b>							
Surface water	Freshwater			2,762.00	4,459.42	35,025.17	27,985.28
	Other water			0.00	0.00	0.00	0.00
Groundwater	Freshwater			0.00	0.00	10.95	0.00
	Other water			0.00	0.00	0.00	0.00
Water send to third-party supplier	Freshwater			0.00	885.85	32.03	8.89
	Other water			0.00	0.00	0.00	0.00
Total	Freshwater			2,762.00	5,345.27	35,068.15	27,994.17
	Other water			0.00	0.00	0.00	0.00
<b>Total</b>				<b>2,762.00</b>	<b>5,345.27</b>	<b>35,068.15</b>	<b>27,994.17</b>

Note 1: In addition to VCBR and VCEAA, cement data for 2019 also includes VCNA cement operations. The organization has no seawater withdrawal. Fresh Water corresponds to ≤1000 mg/l total dissolved solids and Other Water to > 1,000 mg/l total dissolved solids.

Note 2: Water stress analysis was performed using the Aqueduct tool.

Note 3: Priority substances of concern vary among operations. For VCBR, there is a list of organic and inorganic parameters. VCNA considers suspended solids and chloride, whereas VCEAA considers suspended solids and quality parameters such as BOD, COD and pH. These substances of concern are determined in accordance with the applicable legislation. In 2019, there were no incidents of non-compliance with discharge limits.

WATER CONSUMPTION		GRI 303-5		2017	2018	2019	
				All areas	All areas	All areas	Areas with water stress
<b>Cement (megaliter)</b>							
Total water withdrawn		GRI 303-3		7,319.22	10,071.88	45,126.69	32,201.28
Total water discharged		GRI 303-4		2,762.00	5,345.27	35,068.15	27,994.17
<b>Total water consumed</b>		<b>GRI 303-5</b>		<b>4,557.22</b>	<b>4,726.61</b>	<b>10,094.55</b>	<b>4,207.11</b>

SPECIFIC WATER CONSUMPTION		GCCA		2017	2018	2019
Total water consumed (liters) per ton of cement produced <sup>1</sup>				237.17*	153.10*	337.61
Total water consumed (liters) per ton of concrete produced <sup>2</sup>				553.09	329.23	367.50

<sup>1</sup> 2017 considers VCBR operations. 2018 considers VCBR and VCEAA operations. 2019 considers VCBR, VCEAA, VCNA and VCLATAM operations.

<sup>2</sup> Operations: VCBR.

\*Revised figure. GRI 102-48

WASTE MANAGEMENT AND RECYCLING		GRI 306-2		2017	2018	2019
<b>Total non-hazardous waste by disposal method (tons)</b>						
Composting				1,689.00	67.46	2,778.21
Reuse				0.00	27,686.93	6,679.71
Recycling				11,983.00	0.00	16,689.18
Recovery, including energy recovery				4,191.00	210.89	2,169.99
Incineration (mass burn)				360.00	1,684.26	552.82
Deep well injection				1,158.00	44,248.48	154,458.40
Landfill				0.00	0.00	2,593.36
On-site storage				0.00	0.00	812.41
Other (co-processing)				5,128.00	6,190.94	24,840.32
<b>Total non-hazardous waste</b>				<b>24,509</b>	<b>80,089</b>	<b>211,574.40</b>
<b>Total hazardous waste by disposal method (tons)</b>						
Composting				0.00	0.00	0.00
Reuse				0.00	185.53	276.55
Recycling				0.00	0.00	1,250.52
Recovery, including energy recovery				0.00	214.07	326.05
Incineration (mass burn)				2,021.00	96.48	233.96
Deep well injection				300.00	122.04	99.12
Landfill				0.00	0.00	2.31
On-site storage				0.00	0.00	309.42
Other <sup>1</sup>				272.00	154.06	3,709.55
<b>Total hazardous waste</b>				<b>2.593</b>	<b>772.2</b>	<b>6,207.48</b>

Note: as of 2019, in addition to VCBR, the scope of the disclosure also includes VCNA, VCEAA and VCLATAM. During this period, there was better systematization and control of waste generated and disposed by the units, resulting in significant improvement in the quality of services and more precise information regarding volumes, destination and treatments.

Waste is separated and disposed of according to local legislation. It is most often removed by specialized contracted companies. Some units co-process waste, as specified in their licenses.

<sup>1</sup> "Other" include : co-processing, re-refining of contaminated oil, shielding for co-processing, decontamination and treatment of sanitary wastewater.

SOCIAL PERFORMANCE

EMPLOYMENT	GRI 102-8	2017	2018	2019
<b>Total number of employees by employment type, by gender</b>				
Full-time	Men	10,046	9,959	<b>9,818</b>
	Women	1,319	1,360	<b>1,468</b>
	Total	11,365	11,319	<b>11,286</b>
Part-time	Men	266	318	<b>301</b>
	Women	281	295	<b>366</b>
	Total	547	613	<b>667</b>
<b>Total</b>	<b>Men</b>	<b>10,312</b>	<b>10,277</b>	<b>8,868</b>
	<b>Women</b>	<b>1,600</b>	<b>1,655</b>	<b>1,681</b>
	<b>Total</b>	<b>11,912</b>	<b>11,932</b>	<b>11,953</b>
<b>Total number of employees by employment contract, by gender</b>				
Temporary (or determined) contract	Men	NA	NA	<b>148</b>
	Women	NA	NA	<b>18</b>
	Total	NA	NA	<b>166</b>
Permanent contract	Men	NA	NA	<b>9,971</b>
	Women	NA	NA	<b>1,816</b>
	Total	NA	NA	<b>11,787</b>
<b>Total number of employees by employment contract, by region</b>				
Temporary (or determined) contract	VCBR	NA	NA	<b>ND</b>
	VCEAA	NA	NA	<b>163</b>
	VCNA	NA	NA	<b>0</b>
	VCLATAM	NA	NA	<b>3</b>
	VC Global			<b>166</b>
Permanent contract	VCBR	NA	NA	<b>7,735</b>
	VCEAA	NA	NA	<b>1,241</b>
	VCNA	NA	NA	<b>2,420</b>
	VCLATAM	NA	NA	<b>391</b>
	VC Global			<b>11,787</b>

TURNOVER	GRI 401-1	2017	2018	2019
<b>Total number and rate of employee turnover by gender</b>				
Women		543	458	<b>500</b>
Men		2,117	1,796	<b>1,965</b>
Women (%)		4.56%	3.84%	<b>4.18%</b>
Men (%)		17.77%	15.05%	<b>16.44%</b>
<b>Total number and rate of employee turnover by age group</b>				
Under 30 years old		1,026	828	<b>908</b>
30-50 years old		1,187	1,040	<b>1,224</b>
Over 50 years old		447	386	<b>333</b>
Under 30 years old (%)		8.61%	6.94%	<b>7.60%</b>
30-50 years old (%)		9.96%	8.72%	<b>10.24%</b>
Over 50 years old (%)		3.75%	3.23%	<b>2.79%</b>
<b>Total number of employee turnover by region</b>				
VCBR		1,991	1,597	<b>1,742</b>
VCEAA		279	295	<b>268</b>
VCNA		390	362	<b>412</b>
VCLATAM		43	36	<b>43</b>
<b>Total number employee turnover</b>				
VCBR		2,703	2,290	<b>2,465</b>
VCEAA		27.46%	21.59%	<b>22.52%</b>
VCNA		14.13%	15.83%	<b>19.09%</b>
VCLATAM		17.14%	15.99%	<b>17.02%</b>
<b>Total rate of employee turnover</b>				
		10.46%	8.85%	<b>10.91%</b>
		23%	19%	<b>21%</b>

SOCIAL PERFORMANCE

TURNOVER	GRI 401-1	2017	2018	2019
<b>Total number and rate of new employee hires during the reporting period, by gender</b>				
Women		518	527	<b>646</b>
Men		1,583	1,727	<b>1,855</b>
Women (%)		4,35%	4,42%	<b>5,40%</b>
Men (%)		13,29%	14,47%	<b>15,52%</b>
<b>Total number and rate of new employee hires during the reporting period, by age group</b>				
Under 30 years old		1,073	1,172	<b>1,168</b>
30-50 years old		871	976	<b>1,182</b>
Over 50 years old		157	106	<b>151</b>
Under 30 years old (%)		9,01%	9,82%	<b>9,77%</b>
30-50 years old (%)		7,31%	8,18%	<b>9,89%</b>
Over 50 years old (%)		1,32%	0,89%	<b>1,26%</b>
<b>Total number of new employee hires during the reporting period, by region</b>				
VCBR		1,296	1,688	<b>1,975</b>
VCEAA		155	184	<b>87</b>
VCNA		590	350	<b>407</b>
VCLATAM		60	32	<b>32</b>

DIVERSITY	GRI 405-1	2018		2019	
By gender		Men	Women	Men	Women
President/Director		92.50%	7.50%	<b>89.19%</b>	<b>10.81%</b>
Manager/General Manager		85.00%	15.00%	<b>83.20%</b>	<b>16.80%</b>
Coordinator/Consultant		73.17%	26.83%	<b>72.07%</b>	<b>27.93%</b>
Technician/Analyst/Supervisor		78.31%	21.69%	<b>77.02%</b>	<b>22.98%</b>
Trainee		0,00%	100,00%	<b>42.86%</b>	<b>57.14%</b>
Operator		92.79%	7,21%	<b>92.31%</b>	<b>7.69%</b>
Intern		47.88%	52.12%	<b>42.12%</b>	<b>57.88%</b>
Apprentice		58.17%	41.83%	<b>51.29%</b>	<b>48.71%</b>
<b>Total employees</b>		<b>86.14%</b>	<b>13.86%</b>	<b>84.66%</b>	<b>15.34%</b>
<b>Members of governance body</b>		<b>89.04%</b>	<b>10.96%</b>	<b>91.23%</b>	<b>8.77%</b>
<b>People with disability</b>		<b>2018</b>		<b>2019</b>	
President/Director		0.01%		<b>0.00%</b>	
Manager/General Manager		0.03%		<b>1.70%</b>	
Coordinator/Consultant		0.03%		<b>0.96%</b>	
Technician/Analyst/Supervisor		0.34%		<b>1.677%</b>	
Trainee		0.00%		<b>0.00%</b>	
Operator		1.01%		<b>2.79%</b>	
Intern		0.00%		<b>0.24%</b>	
Apprentice		0.00%		<b>0.43%</b>	
<b>Total employees</b>		<b>1.42%</b>		<b>1.94%</b>	
<b>Members of governance body</b>		<b>0%</b>		<b>2.23%</b>	

DIVERSITY BY AGE GROUP	GRI 405-1	2018			2019		
		Under 30 years old	30-50 years old	Over 50 years old	Under 30 years old	30-50 years old	Over 50 years old
President/Director		0.00%	52.50%	47.50%	<b>0.00%</b>	<b>48.65%</b>	<b>51.35%</b>
Manager/General Manager		1.71%	73.63%	24.66%	<b>2.13%</b>	<b>75.47%</b>	<b>22.40%</b>
Coordinator/Consultant		10.62%	70.09%	19.29%	<b>10.11%</b>	<b>74.00%</b>	<b>15.89%</b>
Technician/Analyst/Supervisor		18.08%	67.32%	14.60%	<b>17.77%</b>	<b>67.18%</b>	<b>15.05%</b>
Trainee		0%	0%	0%	<b>40.38%</b>	<b>48.08%</b>	<b>11.54%</b>
Operator		20.92%	58.15%	20.92%	<b>19.05%</b>	<b>60.14%</b>	<b>20.82%</b>
Intern		27.91%	48.47%	23.62%	<b>97.88%</b>	<b>2.12%</b>	<b>0.00%</b>
Apprentice		100%	0.00%	0.00%	<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Total</b>		<b>21.75%</b>	<b>58.60%</b>	<b>19.78%</b>	<b>22.15%</b>	<b>59.71%</b>	<b>18.14%</b>
<b>Members of governance body</b>		<b>0.0%</b>	<b>46.6%</b>	<b>53.4%</b>	<b>28.1%</b>	<b>61.9%</b>	<b>10.0%</b>

Note: Results include VCBR, VCEAA, VCLATAM and VCNA operations.

SOCIAL PERFORMANCE

TRAINING	GRI 404-1	2017	2018	2019
<b>Average hours of training per employee per year</b>				
<b>Men</b>				
President/Director		16	8	11
Manager/General Manager		60	36	51
Coordinator/Consultant		39	35	47
Technician/Analyst/Supervisor		57	24	52
Trainee		125	0	11
Operator		48	18	39
<b>Women</b>				
President/Director		9	1	8
Manager/General Manager		89	28	5
Coordinator/Consultant		34	31	14
Technician/Analyst/Supervisor		29	16	7
Trainee		122	0	0
Operator		20	12	27
<b>Average hours of training (men and women)</b>		<b>46</b>	<b>20</b>	<b>18</b>
<b>COLLECTIVE BARGAINING AGREEMENTS</b>				
<b>GRI 102-41</b>				
<b>Employees covered by collective bargaining agreements</b>				
Total number of employees		9,312	9,116	9,263
Percentage of employees covered		78.2%	76.4%	77.5%

Note: The Itacamba operation (VCLATAM) does not currently have an established union. However, once it is established, approximately 84 employees will be included in the collective bargaining agreements.

OCCUPATIONAL HEALTH AND SAFETY	GRI 403-9	2017	2018	2019
<b>Work-related injuries - company employees</b>				
Number of fatalities		1	0	0
Rate of fatalities		ND	0	0
Number of high-consequence accidents (excluding fatalities) <sup>1</sup>		-	-	4.00
Rate of high-consequence accidents (excluding fatalities) <sup>1</sup>		-	-	0.20
Number of injuries <sup>2</sup>		-	-	42.00
Rate of lost-time injuries <sup>2</sup>		1.39	1.41	1.83
Severity rate		114.60	99.49	222.03
Number of hours worked		25,087,923	23,440,618	22,896,507
<b>Work-related injuries - other employees</b>				
Number of fatalities		6	4	1
Rate of fatalities		0.33	0.57	0.05
Number of high-consequence accidents (excluding fatalities) <sup>1</sup>		-	-	1.00
Rate of high-consequence accidents (excluding fatalities) <sup>1</sup>		-	-	0.05
Number of injuries <sup>2</sup>		-	-	13.00
Rate of lost-time injuries <sup>2</sup>		-	-	0.60
Severity rate		50.83	235.60	19.64
Number of hours worked		24,573,081	22,334,939	21,603,370

<sup>1</sup>The number and rate of high-consequence accidents include amputations or six-month leave of absence and exclude deaths.

<sup>2</sup>The number and rate of accidents consider only lost-time incidents.

Note: rates were calculated based on 1,000,000 hours worked.

Among employees, the main work-related injuries involve the ankles, feet, hands and fingers, and include sprains and fractures. The greatest risks for high-consequence injuries are dangerous energies, moving and rotating parts, high temperatures, possibility of hot flour leakage, movement of machines and equipment, lifting of loads and activities at height and in confined spaces. These risks are determined after a systematic study of the processes and assessment of the hazards and risks involved.

SOCIAL TRANSFORMATION	GRI 413-1	2017	2018	2019
<b>Distribution of Social Investment (%)</b>				
Number of operations with implemented local community engagement, impact assessments, and/or development programs <sup>1</sup>		64	64	124
Total number of operations		329	264	305
Percentage of operations with implemented local community engagement, impact assessments, and/or development programs		19.5%	24%	41%
<b>Global social investment (R\$ mil) <sup>2</sup></b>				
VCBR				14,513.3
VCNA				1,379.5
VCEAA				1,706
VCLATAM				831
<b>Total</b>				<b>18,430.5</b>

<sup>1</sup> Considers initiatives that promote community engagement, mobilization of civil society, strengthening of institutions, groups and leaders, sponsorships, donations, etc. As of 2019, the disclosure includes VCLA operations.

<sup>2</sup> Exchange rate: December 31, 2019. disclosure collected globally as of 2019.

# GCCA CHARTER

CO <sub>2</sub> AND CLIMATE PROTECTION	STATUS 2019
Use the tools set out in the GCCA CO <sub>2</sub> and Energy protocol to define and make public our baseline emissions	Protocol used by all plants of our cement business and audited by a third
Develop a climate change mitigation strategy, and publish targets and progress	CO <sub>2</sub> strategy approved by the Board in 2018
Report annually on CO <sub>2</sub> emissions in line with the protocol	See our Integrated Report 2019
Participate in and contribute agreed datasets to the Getting the Numbers Right global cement database system of CO <sub>2</sub> and energy information	Effective participation since the beginning of CSI (founding member) – current GCCA
RESPONSIBLE USE OF FUELS AND RAW MATERIALS	
Apply the Guidelines for Co-Processing Fuels and Raw Materials in Cement Manufacturin	Effective application (CSI audit 2018) and elaboration, in 2019, of internal VC guideline—more restricting than GCCA guideline
EMPLOYEE HEALTH AND SAFETY	
Apply the Health and Safety in the Cement Industry: Guidelines for Measuring and Reporting	Under implementation
Report to the GCCA annually on employee safety data in line with the guidelines developed for measuring and reporting (fatality data to be reported to the GCCA as of the year of joining)	Through 2019 Integrated Report and report to GCCA
Promote the sharing of good health practices	Under implementation
EMISSIONS REDUCTIONS	
Apply the Guidelines for Emissions Monitoring and Reporting in the Cement Industry	Reports used by all plants of our cement business and audited by the CSI in 2014/2018
Make emissions data publicly available and accessible to stakeholders	See our 2019 Integrated Report
Set emissions targets for main pollutants (NO <sub>x</sub> , SO <sub>x</sub> , dust) and report publicly on progress	Set in the 2020 objectives and monitored annually in the integrated report
LOCAL IMPACTS ON LAND AND COMMUNITIES	
Apply the Environmental and Social Impact Assessment Guidelines and develop tools to integrate them into decision making processes	We adopt environmental and social impact assessment criteria for our new projects and for significant expansion projects
Apply the Guidelines on Quarry Rehabilitation	Guidelines adopted for all cement units in Brazil
WATER	
Apply the Protocol for Water Reporting for the Cement Industry	Reports used by all cement plants

REPORTING AND COMMUNICATIONS	STATUS 2019
Report publicly on all agreed GCCA Key Performance Indicators (KPIs) on an annual basis	See our 2019 Integrated Report
Publish a statement of business ethics	See our Code of Conduct
Establish a systematic dialogue process with stakeholders to understand and address their expectations	See our 2019 Integrated Report
Report progress on developing stakeholder engagement programs	See our 2019 Integrated Report
Develop documented and auditable environmental management systems at all plants	See our Global Environmental Policy
ASSURANCE	
CO <sub>2</sub> emissions data	
Companies will carry out assurance at least once every two years using recognized, independent third-party assurance practitioners	Carried out every year by BVQI
Assurance practitioners will decide on the number of sites to be visited	Decided by BVQI
Assurance statements will explicitly mention the number of sites visited and the corresponding % CO <sub>2</sub> emissions covered	Included in BVQI assurance statement
Safety data	
Companies will carry out assurance at least once every three years using recognized, independent third-party assurance practitioners	Carried out every year by BVQI
NO <sub>x</sub> , SO <sub>x</sub> , and dust emissions data	
Companies will carry out assurance at least once every three years using recognized, independent third party assurance practitioners	Carried out every year by BVQI

	2017	2018	2019
<b>Climate Protection</b>			
Total CO <sub>2</sub> emissions - gross (million ton)	21.7	21.7	<b>19.0</b>
Total CO <sub>2</sub> emissions - net (million ton)	21.0	21.0	<b>18.3</b>
Specific CO <sub>2</sub> emissions - gross (kg / ton cementitious material)	656.7	641.5	<b>615.3</b>
Specific CO <sub>2</sub> emissions - net (kg / ton cementitious material)	637.6	621.6	<b>591</b>
<b>Responsible use of fuels and raw materials</b>			
Specific heat consumption of clinker production (MJ/ton clinker)	3.447	3.542	<b>3.465</b>
Alternative fossil fuel rate (%)	8.80%	9.8%	<b>11.3%</b>
Biomass fuel rate (%)	6.00%	8.7%	<b>10.7%</b>
Alternative raw materials rate (%)	6.6%	6.3%	<b>6.2%</b>
Clinker / cement ratio (%)	76.6%	75.2%	<b>74.3%</b>
<b>Safety</b>			
Number of fatalities (directly employed)	1	0	<b>0</b>
Number of fatalities per 10.000 directly employed	0.7954	0.000	<b>0</b>
Number of fatalities (indirectly employed)	6	4	<b>0</b>
Number of fatalities (third party)	2	0	<b>1</b>
Number of days lost due to injuries (calendar days / employees)	2,875	2,332	<b>4,470</b>
Total Number of days lost due injuries	4,124	7,594	<b>4,889</b>
Lost time injuries per 1 million man-hours (directly employed)	1.40	1.41	<b>1.83</b>
<b>Emissions Reduction</b>			
Overall coverage rate: percentage (%) of clinker produced with monitoring of all pollutants mentioned in the emissions guidelines	69%	82%	<b>95%</b>
Continuous measurement of Coverage rate: percentage (%) of clinker produced with continuous monitoring of main pollutants, dust, NOx, SO <sub>2</sub>	85%	99.5%	<b>100%</b>
Dust - coverage rate (%)	96%	100%	<b>100%</b>
NOx - coverage rate (%)	100%	100%	<b>100%</b>
SO <sub>2</sub> - coverage rate (%)	100%	100%	<b>100%</b>
VOC/THC - coverage rate (%)	83%	90%	<b>98%</b>
PCDD/F - coverage rate (%)	88%	93%	<b>97%</b>
Hg - coverage rate (%)	92%	98%	<b>100%</b>

	2017	2018	2019
Sum of Cd and TI - coverage rate (%)	90%	98%	<b>98%</b>
Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V - coverage rate (%)	90%	98%	<b>100%</b>
Dust - specific emissions (grams / ton clinker)	53,10	56,82	<b>55,52</b>
NOx - specific emissions (grams / to clinker)	1900	1701	<b>1657</b>
SO <sub>2</sub> - specific emissions (grams / ton clinker)	532	717	<b>709</b>
VOC/THC - specific emissions (grams / ton clinker)	55	61	<b>64</b>
PCDD/F - specific emissions (µg / ton clinker)	0.5	0.6	<b>0,1</b>
Hg - specific emissions (mg / ton clinker)	19	6	<b>12</b>
Sum of Cd and TI - specific emissions (mg / ton clinker)	17	14	<b>23</b>
Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V - specific emissions (mg / ton clinker)	572	940	<b>912</b>
Dust - absolute emissions (kton / year)	1.34	1.35	<b>1.22</b>
NOx - absolute emissions (kton / year)	47.77	40.40	<b>36.49</b>
SO <sub>2</sub> - absolute emissions (kton / year)	13.36	17.01	<b>15.61</b>
VOC/THC - absolute emissions (ton / year)	1384	1457	<b>1400</b>
PCDD/F - absolute emissions (mg / year)	12,37	14,15	<b>2,24</b>
Hg - absolute emissions (kg / year)	483	144	<b>274</b>
Sum of Cd and TI - absolute emissions (kg / year)	423	332	<b>500</b>
Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V - absolute emissions (t / year)	14.37	22.30	<b>20.08</b>

Note.: Includes only cement business.

**Local impacts on land and communities**

	2017	2018	2019
Percentage (%) of sites with existing community involvement plans	19.5%	24%	<b>41%</b>
Percentage (%) of sites with existing mine rehabilitation plans	90%	90%	<b>93%</b>
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity, as specified by <a href="#">GRI 304-1</a> <sup>1</sup>	20	14	<b>12</b>
Percentage (%) of mines with high biodiversity value in which biodiversity management plans are actively implemented <sup>1</sup>	10%	21%	<b>58%</b>

<sup>1</sup> The calculation of this disclosure considers three factors:

- The importance of the area of high relevance to biodiversity overlapping the mining area,
- The percentage of overlapping area of high relevance to biodiversity under the mining area (considering a radius of 5 km from the center of the mine)
- The distance from the area of high relevance to biodiversity under the mining center.

# GRI CONTENT INDEX GRI 102-55

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the report. GRI 102-54



GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>GRI 101: Foundation 2016</b>				
<b>General Disclosures</b>				
<b>GRI 102: General Disclosures 2016</b>	<b>Organizational profile</b>			
	<b>102-1</b> Name of the organization	14		
	<b>102-2</b> Activities, brands, products, and services	13, 14		
	<b>102-3</b> Location of headquarters	14		
	<b>102-4</b> Location of operations	14		
	<b>102-5</b> Ownership and legal form	12		
	<b>102-6</b> Markets served	13		
	<b>102-7</b> Scale of the organization	13, 14		
	<b>102-8</b> Information on employees and other workers	54		<b>8</b>
	<b>102-9</b> Supply chain	80		
	<b>102-10</b> Significant changes to the organization and its supply chain	13		
	<b>102-11</b> Precautionary Principle or approach	29		
	<b>102-12</b> External Initiatives	80		
	<b>102-13</b> Membership of associations	81		
	<b>Strategy</b>			
	<b>102-14</b> Statement from senior decision-maker	7 to 11		
	<b>Ethics and integrity</b>			
	<b>102-16</b> Values, principles, standards, and norms of behavior	27		<b>16</b>
	<b>Governance</b>			
	<b>102-18</b> Governance structure	23, 24		
	<b>102-23</b> Chair of the highest governance bod	24		<b>16</b>
	<b>102-26</b> Role of the highest governance body in setting purpose, values and strategy	24		

GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>General Disclosures</b>				
<b>GRI 102: General Disclosures 2016</b>	<b>Stakeholder engagement</b>			
	<b>102-40</b> List of stakeholder groups	59		
	<b>102-41</b> Collective bargaining agreements	93		<b>8</b>
	<b>102-42</b> Identifying and selecting stakeholders	59		
	<b>102-43</b> Approach to stakeholder engagement	5, 48, 58, 59		
	<b>102-44</b> Key topics and concerns raised	67		
	<b>Reporting practice</b>			
	<b>102-45</b> Entities included in the consolidated financial statements	4		
	<b>102-46</b> Defining report content and topic boundaries	5, 6		
	<b>102-47</b> List of material topics	5, 6		
	<b>102-48</b> Restatements of information	31, 80		
	<b>102-49</b> Changes in reporting	-	No changes	
	<b>102-50</b> Reporting period	4		
	<b>102-51</b> Date of most recent report	-	Votorantim Cimentos Integrated Report 2018 - April, 2019	
	<b>102-52</b> Reporting cycle	4		
	<b>102-53</b> Contact point for questions regarding the report	-	ri@vcimentos.com	
	<b>102-54</b> Claims of reporting in accordance with the GRI Standards	4		
	<b>102-55</b> GRI content index	96, 97, 98, 99		
	<b>102-56</b> External assurance	4		



GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Material topic: Business Ethics and Integrity</b>				
<b>Topic - 205: Anti-corruption</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	27, 29, 80, 66		<b>5, 8 and 16</b>
	<b>103-2</b> The management approach and its components	27, 29, 80, 66		
	<b>103-3</b> Evaluation of the management approach	27, 29, 80, 66		
<b>GRI 205: Anti-corruption 2016</b>	<b>205-1</b> Operations assessed for risks related to corruption	27, 29, 80, 66		
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	<b>205-3</b> Confirmed incidents of corruption and actions taken	84		
<b>Topic - 206: Anti-competitive behavior</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	13, 17, 22, 63, 65		<b>5, 8 and 16</b>
	<b>103-2</b> The management approach and its components	13, 17, 22, 63, 65		
	<b>103-3</b> Evaluation of the management approach	13, 17, 22, 63, 65		
<b>GRI 206: Anti-competitive behavior 2016</b>	<b>206-1</b> Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	85		
<b>Material topic: Research and Innovation</b>				
<b>Topic - 301: Materials</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	85		<b>9 and 12</b>
	<b>103-2</b> The management approach and its components	85		
	<b>103-3</b> Evaluation of the management approach	85		
<b>GRI 301: Materials Approach 2016</b>	<b>301-1</b> Materials used by weight or volume	85		
<b>Material topic: Climate change and reduction of GHG emissions</b>				
<b>Topic - 302: Energy</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	38, 39, 65, 66		<b>13 and 15</b>
	<b>103-2</b> The management approach and its components	38, 39, 65, 66		
	<b>103-3</b> Evaluation of the management approach	38, 39, 65, 66		
<b>GRI 302: Energy 2016</b>	<b>302-1</b> Energy consumption within the organization	87		
	<b>302-2</b> Energy consumption outside of the organization	87		
	<b>302-3</b> Energy intensity	87		

GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Material topic: Climate change and reduction of GHG emissions</b>				
<b>Topic - 305: Emissions</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	38, 39, 63		<b>13 and 15</b>
	<b>103-2</b> The management approach and its components	38, 39, 63, 64, 66		
	<b>103-3</b> Evaluation of the management approach	38, 39, 64		
<b>GRI 305: Emissions 2016</b>	<b>305-1</b> Evaluation of the management approach	86		
	<b>305-2</b> Direct (Scope 1) GHG emissions	86		
	<b>305-3</b> Energy indirect (Scope 2) GHG emissions	86		
	<b>305-4</b> Other indirect (Scope 3) GHG emissions	86		
	<b>305-5</b> GHG emissions intensity	86		
	<b>305-7</b> Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	88		
<b>Material topic: Regulation and Compliance</b>				
<b>Topic - 307: Environmental compliance</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	29, 66		<b>16</b>
	<b>103-2</b> The management approach and its components	29, 66		
	<b>103-3</b> Evaluation of the management approach	29, 66		
<b>GRI 307: Environmental compliance 2016</b>	<b>307-1</b> Non-compliance with environmental laws and regulations	85		
	<b>VC-3</b> Environmental Capex and Opex	85		
<b>Material topic: Human Capital Development</b>				
<b>Topic - 401: Employment</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	91		<b>1</b>
	<b>103-2</b> The management approach and its components	91		
	<b>103-3</b> Evaluation of the management approach	91		
<b>GRI 401: Employment</b>	<b>401-1</b> New employee hires and employee turnover	92		

GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Material topic: Healthy and Safe Working Conditions</b>				
<b>Topic - 403: Occupational health and safety</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	66, 68		<b>3 and 8</b>
	<b>103-2</b> The management approach and its components	66, 68		
	<b>103-3</b> Evaluation of the management approach	66, 68, 70 71		
<b>GRI 403: Occupational health and safety 2018</b>	<b>403-1</b> Occupational health and safety management system	69		
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	<b>403-3</b> Occupational health services	71		
	<b>403-4</b> Worker participation, consultation, and communication on occupational health and safety	69		
	<b>403-5</b> Worker training on occupational health and safety	69		
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<b>403-9</b> Work-related injuries	93			
<b>Material topic: Human Capital Development</b>				
<b>Topic - 404: Training and education</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	53		<b>4 and 10</b>
	<b>103-2</b> The management approach and its components	53 to 56		
	<b>103-3</b> Evaluation of the management approach	54 to 56		
<b>GRI 404: Training and education Approach 2016</b>	<b>404-1</b> Average hours of training per year per employee	93		
<b>Material topic: Human Capital Development</b>				
<b>Topic - 405: Diversity and equal opportunity</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	92		<b>5</b>
	<b>103-2</b> The management approach and its components	92		
	<b>103-3</b> Evaluation of the management approach	92		
<b>GRI 405: Diversity and equal opportunity 2016</b>	<b>405-1</b> Diversity of governance bodies and employees	92		

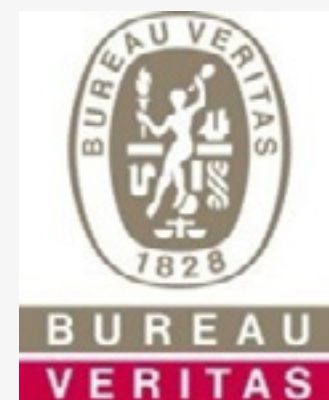
GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Material topic: Business Ethics and Integrity</b>				
<b>Topic - 406: Non-discrimination</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	85		<b>5, 8 and 16</b>
	<b>103-2</b> The management approach and its components	85		
	<b>103-3</b> Evaluation of the management approach	85		
<b>GRI 406: Non-discrimination 2016</b>	<b>406-1</b> Incidents of discrimination and corrective actions taken	85		
<b>Material topic: Business Ethics and Integrity</b>				
<b>Topic - 408: Child Labor</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	85		<b>5, 8 and 16</b>
	<b>103-2</b> The management approach and its components	85		
	<b>103-3</b> Evaluation of the management approach	85		
<b>GRI 408: Child Labor 2016</b>	<b>408-1</b> Operations and suppliers at significant risk for incidents of child labor	85		
<b>Material topic: Business Ethics and Integrity</b>				
<b>Topic - 409: Forced or Compulsory Labor 2016</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	85		<b>5, 8 and 16</b>
	<b>103-2</b> The management approach and its components	85		
	<b>103-3</b> Evaluation of the management approach	85		
<b>GRI 409: Forced or Compulsory Labor 2016</b>	<b>409-1</b> Operations and suppliers at significant risk for incidents of forced or compulsory labor	85		
<b>Material topic: Impact in the regions</b>				
<b>Topic - 413: Local communities</b>				
<b>GRI 103 Management Approach 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	66, 73, 75		<b>1, 2 and 4</b>
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	<b>103-3</b> Evaluation of the management approach	66, 73 to 77		
<b>GRI 413: Local communities 2016</b>	<b>413-1</b> Operations with local community engagement, impact assessments, and development programs	93		

GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Material topic: Regulation and Compliance</b>				
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	103-3 Evaluation of the management approach	28		
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<b>Topic - 419: Socioeconomic Compliance</b>				
GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its boundary	27, 28, 29		16
	103-2 The management approach and its components	27, 28, 29		
	103-3 Evaluation of the management approach	27, 28, 29		
GRI 419 Socioeconomic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	84		
<b>Material topic: Customer Relationship and Satisfaction</b>				
<b>VC topic: Customer Relationship and Satisfaction</b>				
GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its boundary	47, 48, 49		8 and 9
	103-2 The management approach and its components	47, 48, 49		
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<b>Material topic: Research and innovation</b>				
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GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its boundary	22, 44, 45		8, 9 and 17
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GRI 201: Economic Performance Approach 2016	201-1 Direct economic value generated and distributed	83		
GRI 202: Market presence Approach 2016	202-2 Proportion of senior management hired from the local community	83		

GRI Standard	Disclosure Item	Page and/or link	Comments or Reason for Omission	SDGs
<b>Non-material topic</b>				
GRI 204: Procurement practices 2016	204-1 Proportion of spending on local suppliers	83		
<b>Non-material topic</b>				
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	303-3 Water withdrawal	89, 90		
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Sector disclosures: MM2	MM2 The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place	88, 89		
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<b>Non-material topic</b>				
GRI 306: Effluents and Waste 2016	306-2 Waste by type and disposal method	90, 91		
<b>Non-material topic</b>				
GRI 308: Supplier Environmental Assessment 2016	308-1 Percentage of new suppliers that were screened using environmental criteria	83		
	308-2 Negative environmental impacts in the supply chain and actions taken	83		
<b>Non-material topic</b>				
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	85		
<b>Non-material topic</b>				
GRI 414: Supplier Social Assessment 2016	414-1 Percentage of new suppliers that were screened using social criteria	83		
	414-2 Negative social impacts in the supply chain and actions taken	83		

# ASSURANCE LETTER

GRI 102-56



## INDEPENDENT ASSURANCE STATEMENT— BUREAU VERITAS

### TO VOTORANTIM CIMENTOS'S STAKEHOLDERS

#### INTRODUCTION

Bureau Veritas Certification Brazil (Bureau Veritas) was engaged by Votorantim Cimentos, to conduct an independent assurance of its Integrated Report for the year 2019 (hereinafter referred to as the Report).

This assessment was conducted by a multidisciplinary staff with expertise in non-financial data.

#### SCOPE OF WORK

The scope of this assurance verification encompassed the Standard and Principles<sup>1</sup> of the Global Reporting Initiative™ GRI for Sustainability Reports, including the GRI Mining and Metal Sector Disclosure (2013), covering the calendar year of 2019.

The scope of work also encompassed the following guidelines from the Global Cement and Concrete Association (GCCA): Report and Monitoring of Emissions from Cement Manufacturing (October 2019) and Report and Monitoring of Safety in the Cement Manufacturing (October 2019).

#### VOTORANTIM CIMENTOS'S AND BUREAU VERITAS RESPONSIBILITIES

The collection, calculation and presentation of the data published in the report are Votorantim Cimentos's management sole responsibility. Bureau Veritas is responsible for providing an independent opinion to the Stakeholders, pursuant to the scope of work defined in this statement.

#### METHODOLOGY

The assurance work covered the following activities:

1. Interviews with the personnel responsible for material issues and Report content;
2. Analysis of documentary evidence provided by Votorantim Cimentos in relation to the reporting period (2019);
3. Verification of performance data relating

to the principles that ensure the quality of the information, pursuant to the GRI Standards and the Mining and Metal Sector Disclosure;

4. Verification of performance data regarding criteria established in the GCCA Guidelines for Report and Monitoring of Emissions in the Cement Manufacturing and Safety in the Cement Manufacturing;
5. Review of Votorantim Cimentos's internal systems for data aggregation;
6. Visits to the following sites: Global Corporate Center, São Paulo/SP; Operational units of Vidal Ramos/SC and Rio Branco do Sul/PR;
7. Desk review of Votorantim Cimentos's stakeholder engagement activities.

The level of verification adopted was Limited, according to the requirements of the ISAE 3000 Standard<sup>2</sup>, which were incorporated to the internal assessment protocols of Bureau Veritas.

Additionally to this scope of verification, the GHG inventory of Votorantim Cimentos Brasil was separately verified by Bureau Veritas, following a specific protocol.

<sup>1</sup> Materiality, Stakeholder Inclusiveness, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Periodicity, Clarity, and Reliability

<sup>2</sup> ISAE 3000: International Standard on Assurance Engagements

**LIMITATIONS AND EXCLUSIONS**

Excluded from the scope of this work was any assessment of information related to:

1. Activities outside the defined reporting period;
2. Statements of position (expressions of opinion, beliefs, goals, or future intentions) on the part of Votorantim Cimentos;
3. Economic and financial data contained in this Report which has been taken from financial statements verified by independent financial auditors;
4. Data and information concerning operations and activities that are not in the scope of the Report.

**TECHNICAL REPORT**

- Votorantim Cimentos issued the Report in compliance with the GRI Standards and Principles, also including the Mining & Metals Sector Supplement;
- The data published concerning the emissions produced by their industrial processes are in accordance with the criteria of the Guideline for Emissions, Monitoring and Reporting from the Cement Manufacturing;
- The safety disclosures published in the Report meet the criteria of the Guideline Safety from Cement Manufacturing;
- The data presented to comply with the GHG emissions disclosures are part of the GHG emissions Inventory of Votorantim Cimentos. This inventory was verified by Bureau Veritas,

through an independent assurance process. We confirmed that the presentation of data concerning the inventory was based on the GRI standards methodology;

- As regard to biodiversity, we noticed the formalization of a biodiversity policy which has not been totally implemented yet in the units abroad;
- Votorantim Cimentos published data regarding disclosures associated to material topics of the GRI standards and the sector supplement. It is our understanding that there is still room for the publishing of several data associated with relevant disclosures pursuant to the company's materiality matrix;
- We evidenced that the company is creating a system to monitor the protected and / or restored areas in its operational units, being able to complete the data of the GRI-304-3 indicator in the future, which deals with protected and restored habitats;
- Votorantim Cimentos established new procedures for data collection of its disclosures, increasing adherence to GRI standards. However, there is still room for improvement in the reliability of data collection from units abroad.

**RECOMMENDATIONS**

- Prioritize efforts to obtain consolidated data on protected and / or restored areas of the company's operating units;
- During the process of collecting data from

units abroad, seek traceability of this data, in order to obtain a minimum reliability base for the information received;

- Implement the company's biodiversity policy in the units abroad, with the purpose of defining which units need a biodiversity management plan (indicator MM2 of the mining & metals sector supplement).

**CONCLUSION**

As a result of our assurance nothing has come to our attention that would indicate that:

- The information presented in the Report is not balanced, consistent and reliable;
- Votorantim Cimentos has not established appropriate systems for the collection, aggregation and analysis of quantitative and qualitative data used in the Report;
- The Report does not adhere to the Core option and the Principles for defining report content and quality of the GRI Standard.

**DECLARATION OF INDEPENDENCE AND IMPARTIALITY**

Bureau Veritas Certification is an independent professional services firm specializing in Quality, Health, Safety, Social and Environmental Management, with more than 185 years' experience in independent assessment.

Bureau Veritas has a quality management system that is certified by a third party, according to which

policies and documented procedures are maintained for the compliance with ethic, professional and legal requirements.

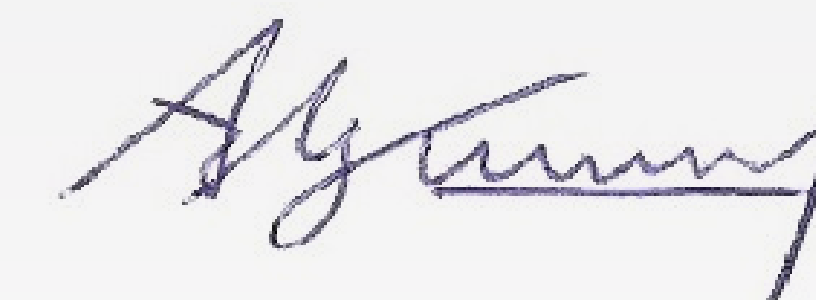
The assurance team has no links with Votorantim Cimentos and the assessment is performed independently.

Bureau Veritas implemented and follows a Code of Ethics throughout its business, in order to assure that its staff preserve high ethical, integrity, objectivity, confidentiality and competence/ professional attitude standards in the performance of their activities. At the end of the assessment, a detailed report was drawn up, ensuring traceability of the process. This Report is kept as a Bureau Veritas management system record.

**CONTACT**

Bureau Veritas Certification is available for further clarification on [www.bureauveritascertification.com.br/faleconosco.asp](http://www.bureauveritascertification.com.br/faleconosco.asp) or by telephone (55 11) 2655-9000.

**São Paulo, Brazil, March 2020.**


**Alexander Vervuurt**

Lead Auditor; Assurance Sustainability Reports (ASR)  
Bureau Veritas Certification – Brazil

# CORPORATE INFORMATION

## BOARD OF DIRECTORS

João Carvalho de Miranda (Chairman)  
 Johann Markus Akermann (Independent director)  
 Alexandre Gonçalves (Independent director)  
 Luiz Antonio dos Santos Pretti (Independent director)  
 Francisco de Sá Neto (Independent director)  
 José Roberto Ermírio de Moraes  
 Fabio Ermírio de Moraes

## EXECUTIVE LEADERSHIP

Marcelo Strufaldi Castelli – Global CEO  
 Filiberto Ruiz – CEO, VCNA  
 Jorge Wagner – CEO, VCEAA  
 Adjarbas Guerra Neto – Global Director of Governance, Risks,  
 Compliance and Audit  
 Álvaro Lorenz – Global Director of Sustainability, Institutional  
 Relations, Product Development  
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 Cristiano Carvalho Brasil – Global Director of People, Management  
 and Communications  
 Gabriela Woge – Global Director of Treasury and  
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 Mariangela Daniele Maruishi Bartz – Global Legal Director  
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**CONTENT AND EDITING:** Editora Contadino

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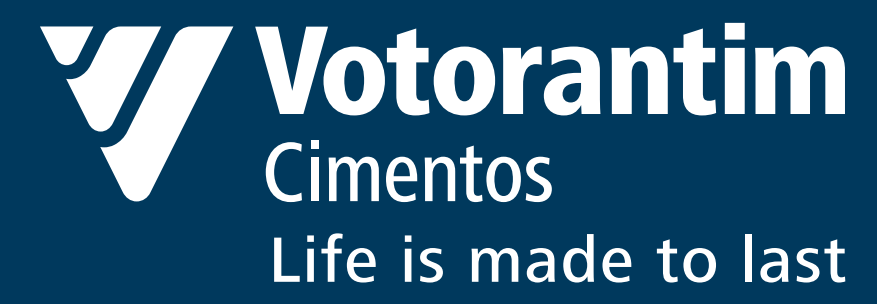
**MATERIALITY:** Ampla Consultoria

**PHOTOS:** Leonardo Rodrigues and Image bank of Votorantim Cimentos

**ENGLISH VERSION:** Claudia Gustavsen

We are grateful for the support and dedication of the corporate and industrial areas of Votorantim Cimentos and, especially, to the Rio Branco do Sul and Vidal Ramos cement plants, which were part of the assurance process and the collection and verification of the information that is included in this document.

Questions about this document or about Votorantim Cimentos, as well as comments and suggestions that may help us improve our reporting process, can be directed to [ri@vcimentos.com](mailto:ri@vcimentos.com) GRI 102-53



[www.votorantimcimentos.com](http://www.votorantimcimentos.com)