2021
Sustainability Report

CBMM

INDEX

MESSAGE FROM THE MANAGEMENT

GRI 102-14, 102-15

We have been operating for more than six decades, but our Organizational Culture remains young, dynamic and always evolving.

In line with the global megatrends of electrification, urbanization, sustainability and digital transformation, we reinforce our plans for accelerated growth based on new applications in the steel industry and the diversification of our markets. For this, in 2021, we invested even more in the strategy aimed at new businesses, seeking to accelerate the entry of applied Niobium technologies in the global market, especially in the battery segment.

To support our growth plans, we completed the largest industrial plant investment cycle in our history, with the expansion of our complex in Araxá, Minas Gerais, raising our production capacity from 100 thousand tons to 150 thousand tons of ferroniobium equivalent, a level higher than the current demand of the world market. The expansion is in line with our strategy of always anticipating the journeys of demand growth through technology and innovation to generate value for society.

As part of the strategy of accelerating growth via new businesses, in the past year, we invested in two startups – the English company Echion and the American company Battery Streak. Investments aim to accelerate new developments in materials for lithium-ion batteries. In 2021, the volume of sales of niobium products for battery applications totaled 50 tons and, for 2022, this number is expected to reach 500 tons.

Contributions to the Technology Program also followed an upward curve and totaled BRL 195 million in 2021. For 2022, investments in research, development and new technologies are expected to increase by more than 40%, reaching BRL 278 million.

The combination of investments made and the resumption of the global economy after the most critical phase of the Covid-19 pandemic, especially in the steel and aeronautical sectors, was reflected in a 64% increase in the Company's net revenue in 2021 compared to 2020, which totaled BRL 11,4 billion. Net income was BRL 4,5 billion, 78% higher than last year.

Throughout the year, we have maintained as a priority the preservation of the health and well-being of our employees and, even with the advancement of vaccination, we continue to adopt preventive actions in our industrial park and offices around the world, always in line with the guidelines of national and international health agencies. As of 2022, we will return to the offices in hybrid format, with protective measures.

In addition, we are proud to pursue the evolution of our Organizational Culture. Our Commitment has guided our actions and behaviors on a daily basis. We are confident that this mindset, combined with our long-term growth plan, will take our Company further and further.

In this report, we share the main results achieved in 2021 and our expectations for the medium and long term.

Enjoy your reading!

Eduardo A. Ayroza Galvão Ribeiro
CEO of CBMM

ABOUT THE **REPORT**

Prepared in accordance with the Standards of the Global Reporting Initiative (GRI), a standard adopted worldwide for sustainability reports, this annual publication gathers economic, social, environmental and governance information from CBMM, as well as our initiatives, performance and results achieved from January 1 to December 31, 2021. **GRI 102-50, 102-52**

The content and scope of this report are based on our materiality matrix, which was prepared in 2020 and revised in 2021.

The eight material topics reviewed guide the organization of the chapters and the selection of the qualitative and quantitative indicators reported, while PwC performed the external assurance engagement on the GRI standards. **GRI 102-49, 102-56**

The Preparation Basis table presents complementary information to the sustainability report and was prepared to meet PwC's methodology. Click here to acess the complete Base de Preparação.

The publication also contextualizes our presence in the global niobium market and, with technology and innovation, acts to further develop this market, expanding the relevance of our products to optimize resources and make the world more sustainable.

In this line, we also present our sustainability agenda and how the United Nations' Sustainable Development Goals (SDGs), linked to our material topics, support the decisions and guide the construction of our ESG (Environmental, Social, Governance) plan. For more information about this report, please contact cbmm@cbmm.com. **GRI 102-53**

MATERIALITY

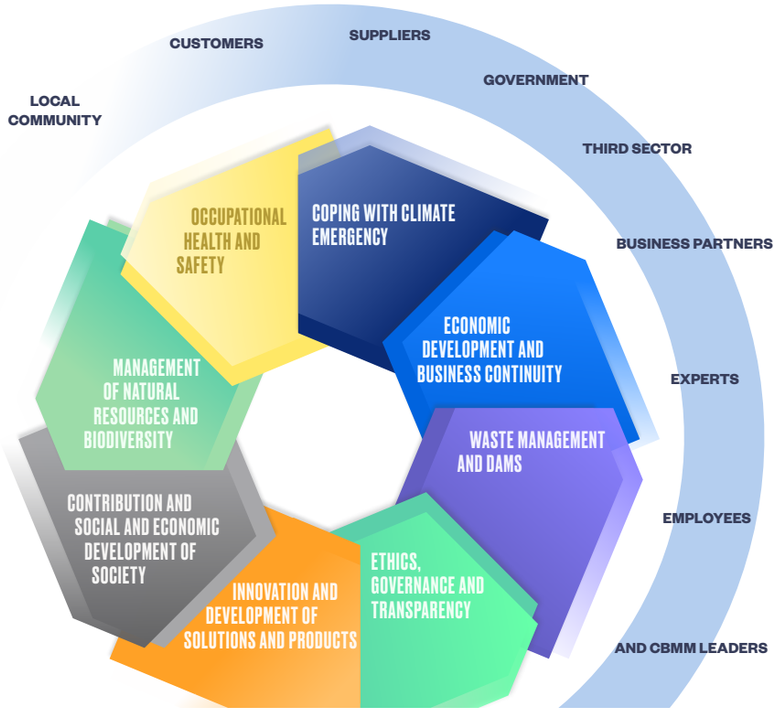
Prepared in 2020 according to the GRI methodology, our materiality matrix was built in a process divided into four stages: identification, prioritization, analysis and validation.

In the identification phase, we map our impacts and audiences. From the cross-study of internal, industry-related and benchmarking documents, an initial list was drawn up with 12 potential material topics for CBMM divided into the environmental, social and governance dimensions. In addition, we consolidated a map formed by nine categories of stakeholders: local community, customers, suppliers, government, business partners, third sector, specialists, employees and leaders of CBMM. **GRI 102-40, 102-42, 102-44**

From there, 284 people were consulted in the engagement and prioritization phase in internal and external interviews, in addition to the online poll stage, which had 274 responses. Eight of the 12 initial topics were selected as material, which were subsequently validated by the Company's management. **GRI 102-43**

Following the best market practices, our materiality matrix was revised in December 2021 in a reprioritization process conducted by the specialized consultancy rpt. sustentabilidade. Two internal interviews and one meeting with a focus group comprised by six key employees were held on this faster stage, still complying with GRI standards. The result can be found below.

STAKEHOLDERS



Among the material topics, we currently emphasize three aspects:

Climate change - We are working to reduce our carbon footprint and adapt to the events of heavy rainfall and extended drought. As such, we have initiatives to reduce the consumption of fresh water, have energy guarantee (in addition to hydroelectric) and intensify safety in waste disposal structures and in the mine.

Optimization of natural resources - About 3% of the materials handled in the mine are transformed into products and co-products. We worked to increase the percentage of reuse of these materials by 2030.

Local community development - Our Technical Commission for Social Investment directs resources to labor training programs, environmental education programs, and encourages social institutions and organizations. To ensure that the work positively impacts and enables the autonomous and sustainable performance of organizations in the medium and long term, we rigorously and systematically monitor the implementation and evolution of all associated projects.

LIST OF MATERIAL TOPICS GRI 102-40, 102-44, 102-46, 102-47, 103-1

Topic	Impact Limit	GRI Indicators
1. Natural Resource Management and Biodiversity Responsible management and use of water; efficient management and use of mineral reserves; efficient management and use of energy; use of clean renewable energy; investment in research and development of solutions for the preservation of fauna and flora; investment in environmental education initiatives in the community; management of production processes aimed at eco-efficient practices and environmental improvements.	Inside and outside the Company	301-1, 301-2 || 302-1, 302-2, 302-3, 302-4, 302-5 || 303-1, 303-2, 303-3, 303-4, 303-5 (2018) || 304-1, 304-2, 304-3, 304-4 || 306-1, 306-2, 306-3, 306-4, 306-5 (2020) || 307-1 || MM1, MM3
2. Contribution and social and economic development of society Getting prepared for changes in society and the market; ESG agenda; SDG, SASB; relationship with communities; support for economic activity and local entrepreneurship; support for communities for health and community development; investment in social projects and volunteer program.	Outside the Company	201-1 || 203-1, 203-2 || 413-1, 413-2
3. Innovation and development of solutions and products Promotion and investment in new solutions and technologies; product development and quality; promotion of innovation in a collaborative and participative way with the involvement of different partners.	Inside and outside the Company	CBMM-01, CBMM-02 (owned)
4. Ethics, governance and transparency Anti-corruption policies and practices; management conduct; constant placement of executives and CBMM via internal and external communication channels; reinforcement of the practices of the commitments declared by CBMM; conduct in the relationship with stakeholders and business.	Inside and outside the Company	405-1 || MM6, MM7, MM11
5. Waste management and dams Waste and operational safety management; reduction, treatment, and correct disposal of different wastes, including mining and hazardous wastes; effluent treatment and remediation; management of pollutant emissions; management of environmental liabilities; contamination prevention, process traceability, and emergency preparedness.	Inside and outside the Company	
6. Economic development and business continuity Risk, finance and solutions management for strengthening markets; digital transformation; capital attraction and impact investment, in terms of environmental, social and governance aspects.	Inside and outside the Company	404-1
7. Coping with climate emergency Acting in coping with climate change and protecting the planet.	Inside and outside the Company	201-2 || 305-1, 305-2, 305-3, 305-5
8. Occupational health and safety Investments in the integral health and well-being of employees; diligent monitoring of the safety indexes of employees and third parties; maintenance of ongoing improvement processes for workplace conditions and safe behavior.	Inside and outside the Company	403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10 (2018)

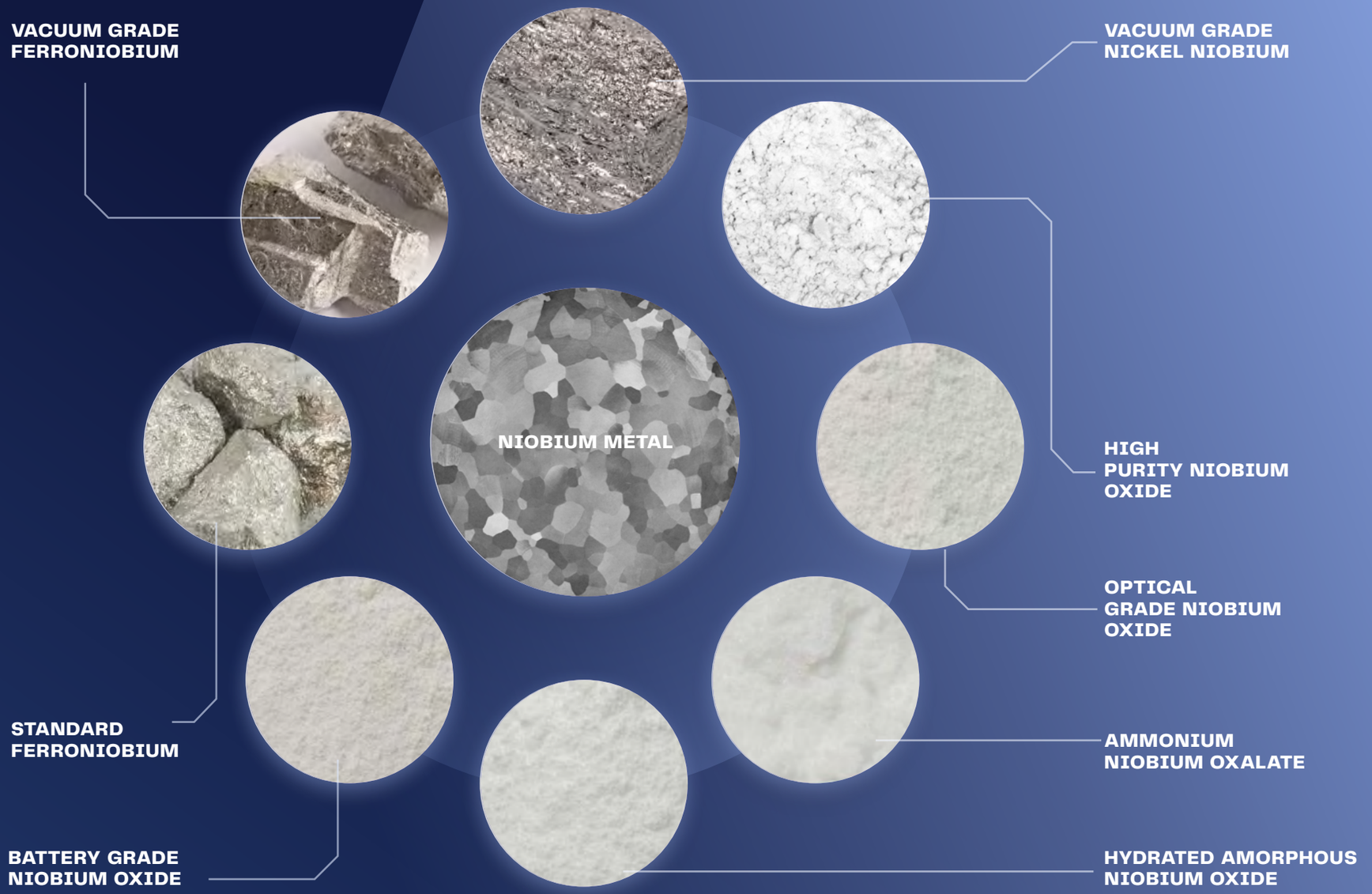
CBMM

IN THIS CHAPTER

CBMM

Innovation and long-term business vision have been driving us since 1955, when our history began. We were born from an innovation: the processing of niobium to make other materials more efficient, safe and sustainable. **GRI 102-1**

For this reason, throughout our trajectory, we have invested in the development of our own technologies for producing niobium and contributed to the expansion of the global market. We are the only company in the world to produce and market the following set of products:
GRI 102-2



IN PRACTICE:
THE BENEFITS OF NIOBIUM

Discovered in 1801 by English chemist Charles Hatchett, niobium began to gain relevance only after the 1960s. Before our foundation in 1955, little was known about this transition metal. We pioneered the development of this technology. Due to its characteristics, such as high electrical conductivity, malleability, ductility (amount of deformation supported), toughness and resistance to heat, corrosion and wear, niobium added to other materials improves its properties and makes them more efficient and sustainable.

Even when added in small amounts, niobium improves the other materials. For example: the addition of minimum levels of ferroniobium, of approximately 0,05%, already makes the steel mechanically more resistant, without reducing its toughness (ability to deform plastically without bursting). Therefore, our products are already used in various applications in the mobility, energy and large civil construction structures sectors, as well as more specific solutions for airplane turbines, magnetic resonance imaging devices, pacemakers, space probes, rockets, gas pipes and electronic components.

Some of the benefits provided by the application of niobium are:

- increased safety by making other materials stronger and more flexible;
- reduced maintenance due to its resistance to wear;
- reduced weight and size, contributing to miniaturization;
- optimization and integration of electrical systems by high conductivity;
- efficiency gains and lower energy consumption;
- reduction of the carbon footprint throughout the chain.

More practical examples of niobium applications can be found in the Innovation in Products and Solutions section.

CORPORATE PROFILE

A world leader in the production and marketing of niobium products, we are proud to be a truly Brazilian Company. With head office and Industrial Park in Araxá, Minas Gerais. Our operational plants constitute three large complexes integrating mineral, metallurgical and chemical activities.

GRI 102-3, 102-4, 102-6

PRODUCTION CAPACITY:

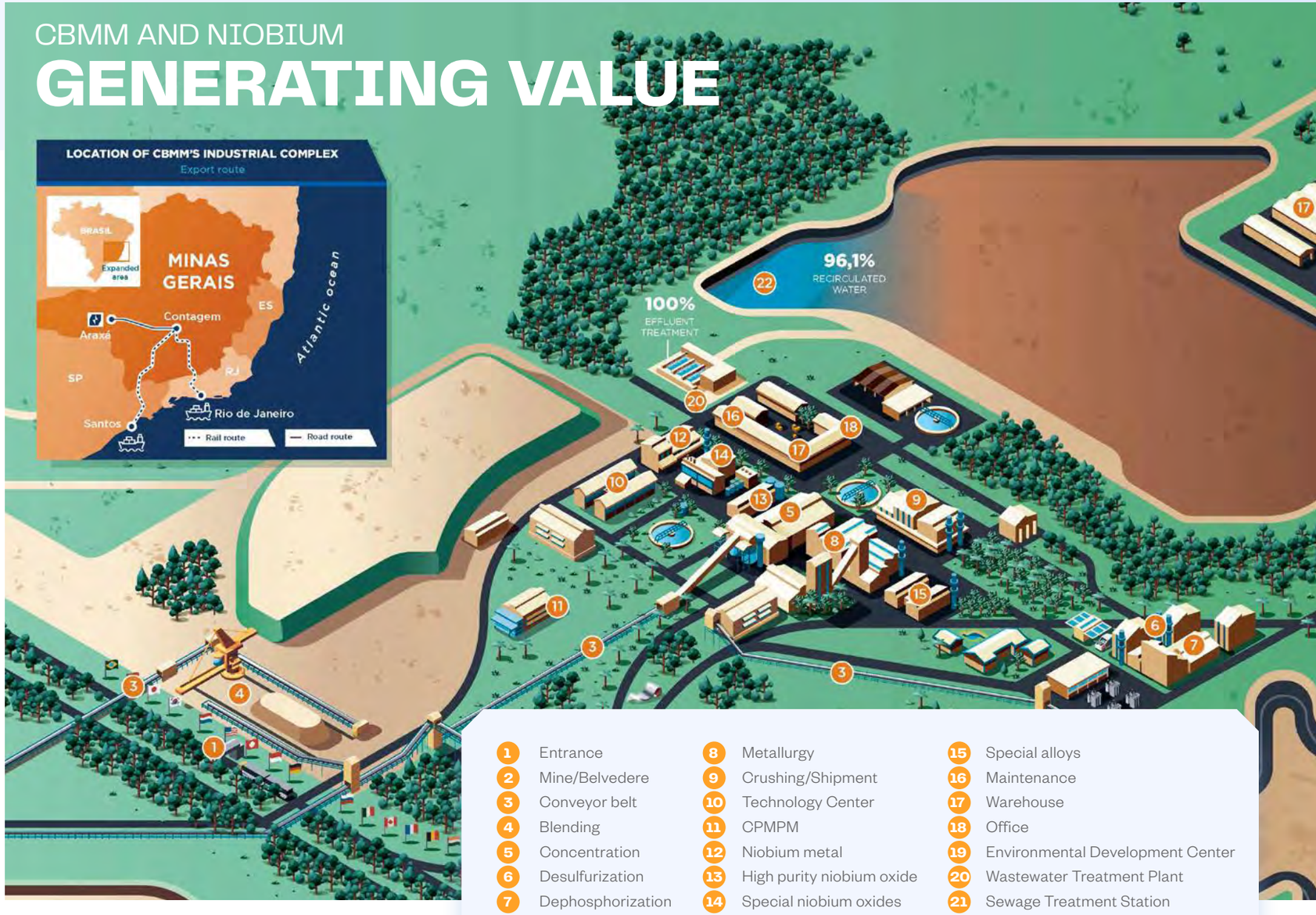
150.000
tons/year of ferroniobium equivalent

1.854 Employees

1.855 Suppliers

CBMM AND NIOBIUM

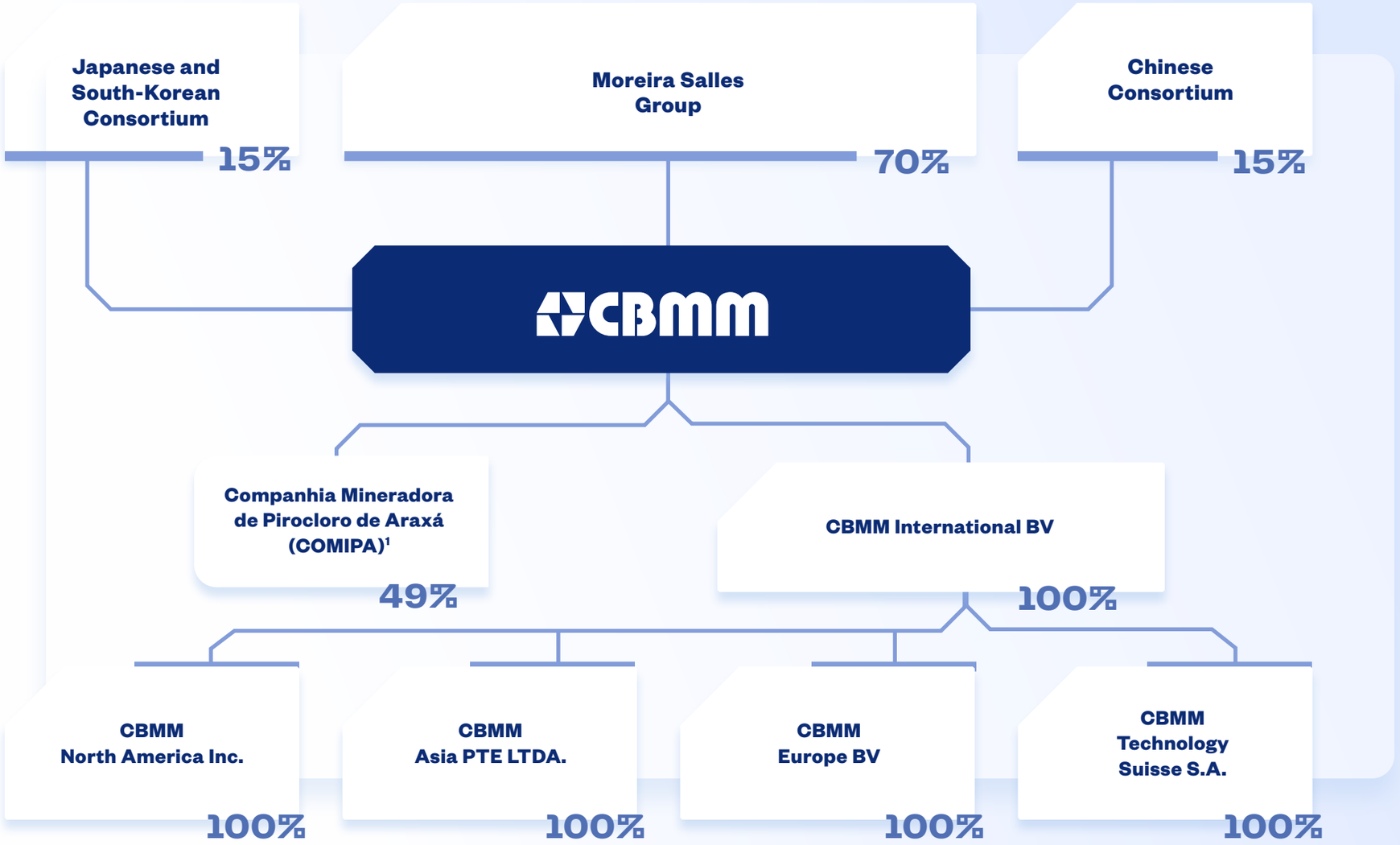
GENERATING VALUE



SHAREHOLDER BREAKDOWN

We are a private corporation with 70% of our capital equity held by the Moreira Salles group. The remaining 30% is divided between two consortia – one formed by Chinese companies and the other formed by companies from Japan and South Korea – each with a 15% interest in the Company.

GRI 102-5



[1] A COMIPA é uma empresa de controle compartilhado entre CBMM e CODEMIG, que tem o propósito específico de realizar a lavra do minério.

BUSINESS MODEL

INPUTS

Financial – Shareholders' capital, revenue from sales of products and financing.

Manufactured – Industrial Park, transport assets (partners).

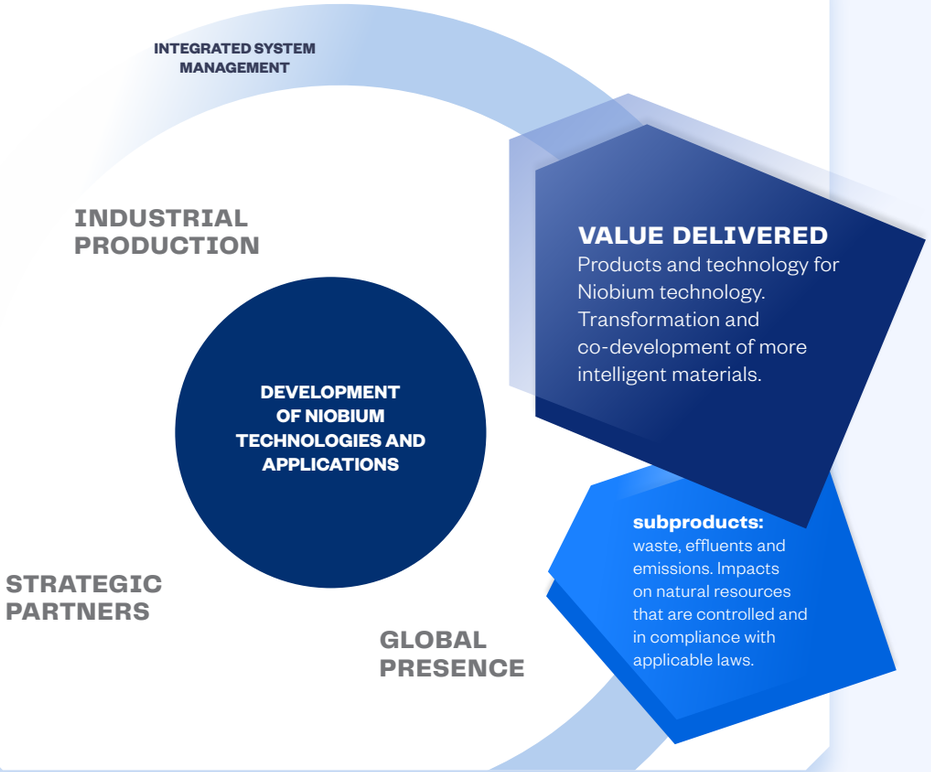
Human – Trained and skilled employees and third parties.

Intellectual – International certifications and licenses, brands (CBMM and Niobium), technology and know-how about niobium, integration with universities and research, science and technology centers.

Social and Relationships – Identity relation with community, strategic suppliers and partners, partnerships with public entities.

Natural – Pyrochlore, energy (hydroelectric power), and water (dam reservoirs).

CORE BUSINESS ACTIVITIES



IMPACT

Financial – Investment capacity, profit for shareholders and revenue for public companies, PSI (Private Social Investment).

Manufactured – Operational safety and quality, production capacity and expansion, availability and speed of delivery in a global market.

Human – Human development, strong educational and formative, technical and behavioral approach.

Intellectual – Innovation development, new technologies and applications, creation of awards, knowledge dissemination.

Social and Relationships – Community support, dialogue and transparency, development of cultural, educational and health-related projects.

Natural – Conservation of fauna and flora (Environmental Development Center), GHG reduction, reuse of water and environmental education.

GLOBAL PRESENCE

GRI 102-4, 102-6, 102-7

Our industrial park has six specialized centers, three of them with exclusive operation to support our core business: the Technology Center, the Metallurgical Processes and Materials Research Center and the Battery Materials Center, inaugurated in 2021. The other three reflect our commitment to ESG: Integrated Monitoring Center (focused on safety), Environmental Development Center, and Human Development Center, which since 1980 guarantees free quality education to our employees' children from three months to five years old.

Directly from our plant in Araxá, we produce niobium technology for more than 400 customers in 50 countries. We also have four subsidiaries (Switzerland, the Netherlands, the United States and Singapore) and two representative offices in China (Beijing and Shanghai), which, in addition to being responsible for the relationship with global customers, act in the development of applications and opening new market segments for niobium. To this end, we partner with our customers, providing technical support for development of customized solutions that increase the efficiency of their processes, the quality of their products and the sustainability of their business.

We have distributors in China, Japan, South America, India and Taiwan, as well as 26 warehouses strategically positioned to ensure the quality of our logistics delivery services.

To learn more,
scan the QR code below

GLOBAL PRESENCE

EUROPE

SUBSIDIARY
CBMM Europa
Amsterdã – Países Baixos

SUBSIDIARY
CBMM Technology Suisse
Switzerland – Geneva

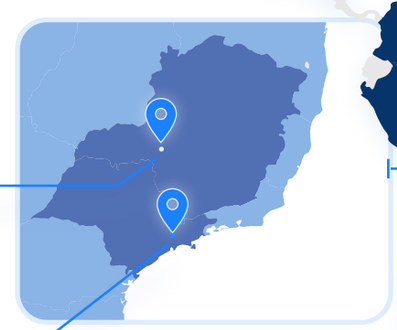
NORTH AMERICA

SUBSIDIARY
CBMM North America
USA – Pittsburgh

SOUTH AMERICA

HEAD OFFICE
Industrial Park
Minas Gerais – Araxá

OFFICES
CBMM Sales and Technology Applications
São Paulo



ASIA

DISTRIBUTOR
Sojitz – Japan – Tokyo

REPRESENTATIVE OFFICES
China – Shanghai
China – Beijing

DISTRIBUTOR
CITIC Metal –
China – Beijing

SUBSIDIARY
CBMM Asia
Singapore

2021 IN THE SPOTLIGHT

PRODUCTION CAPACITY

150 thousand tons of ferroniobium equivalent per year

WATER

96,4% water is recirculated

ENERGY

21,19 GJ of energy is consumed to produce one tonne of ferroniobium

77% of energy comes from renewable sources

GHG EMISSIONS

0,58 tCO_2e of GHG is emitted per tonne of niobium products

100% of electricity comes from renewable sources[1]

→ Member of the Brazilian GHG Protocol Program since 2013, with inventories available for consultation

[1] Market-based method (CEMIG certifies exclusive origin via hydroelectric)

WASTE DISPOSAL

→ Waste Disposal Structure Project - EDR9 receives Preliminary License from the State environmental agency

FINANCIAL RESULTS

BRL 11,4 billion net revenue

BRL 4,5 billion net profit

BRL 1,6 billion net equity

INNOVATION

324 projects in Niobium solutions and applications

R$ 195 millions invested in R&D

→ Materials Center for Batteries Inaugurated

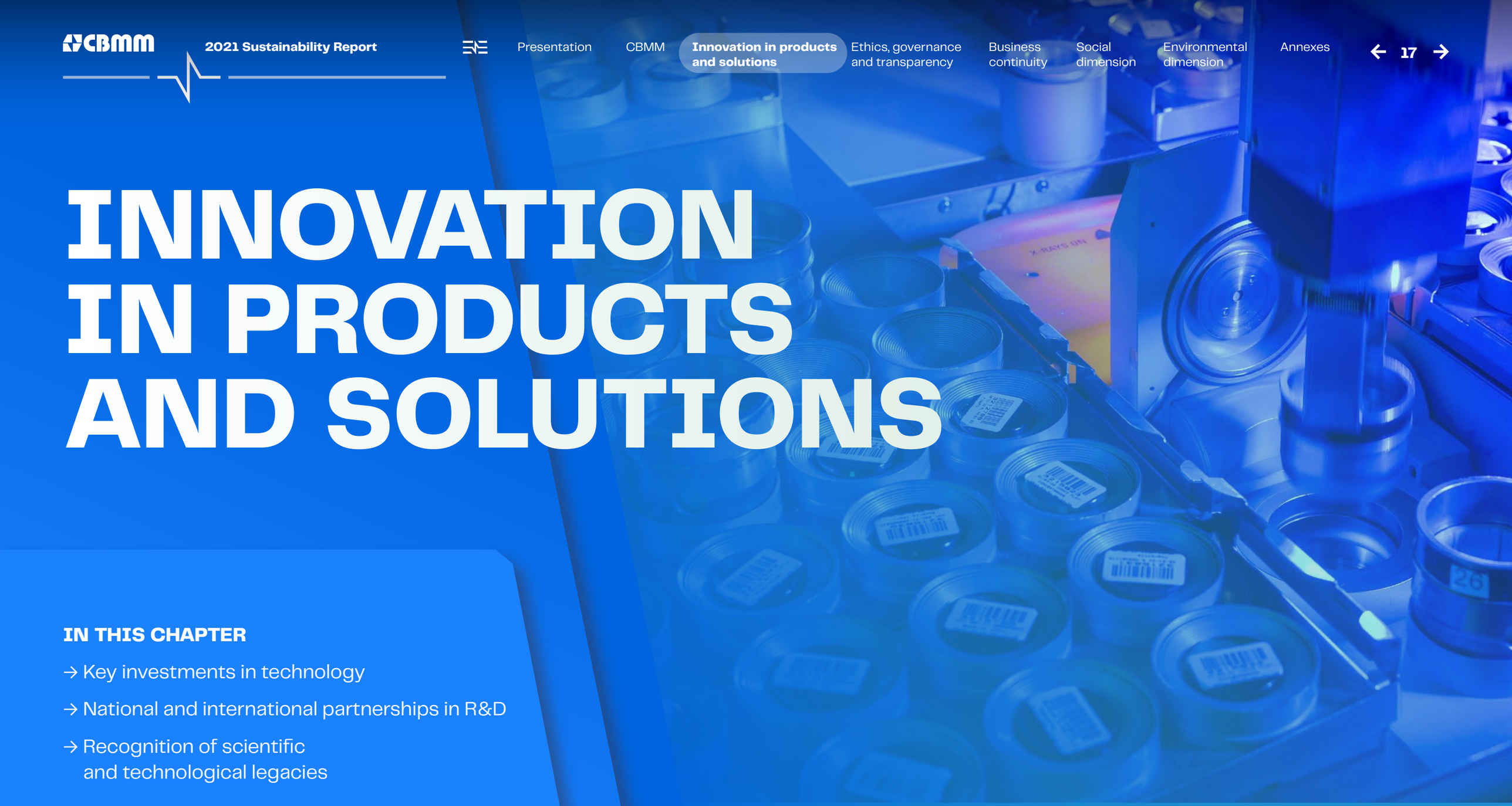
GENERAL

→ Over 400 customers in more than 50 countries

→ 3rd edition of the CBMM Science and Technology Award of the Charles Hatchett Award

→ About BRL 46 million invested in infrastructure and services in the community

INNOVATION IN PRODUCTS AND SOLUTIONS



IN THIS CHAPTER

→ Key investments in technology

→ National and international partnerships in R&D

→ Recognition of scientific and technological legacies

INNOVATION IN PRODUCTS AND SOLUTIONS

GRI 102-7, CBMM-01, CBMM-02

The guarantee of product delivery to our customers has always been one of our differentials. Therefore, in order to anticipate the growing global demand for Niobium, in November 2021, we inaugurated facilities that increased our annual production capacity from 100 thousand to 150 thousand tons of ferroniobium equivalent per year. As of 2023, we will start a new expansion cycle, with an expected investment of BRL 9 billion, with the objective of doubling the Company's sales volume by 2030.

Innovation is part of our Organizational Culture. We innovate in niobium applications and technologies for our own industrial processes. For this purpose, four years ago we invested resources and efforts in the implementation of the concept of Industry 4.0 in our industrial park, aiming to optimize our deliveries to become increasingly efficient and agile.

And, when it comes to delivering innovation to customers, our three specialized centers, located in the industrial park, are responsible for the Research and Development (R&D) projects:

Metallurgical Processes and Materials Research Center: it has 11 professionals dedicated to the development of prototypes of alloys and superalloys, seeking to contribute with new special products containing Niobium, for example, for the aerospace and energy industries. With three registered patents, all processes developed on site are AS9100 (Aviation, Space and Defense Industry) certified, and NADCAP (National Aerospace and Defense Contractors Accreditation Program)

ANNUAL PRODUCTION CAPACITY

150 thousand tons of ferroniobium equivalent

+BRL 9 billion in investment as of 2023

accredited for chemical analysis in nickel alloys. We were the first company in South and Central America accredited on the quality of the tests performed, which placed us among the best laboratories in the world.

Technology Center: develops new products and applications of niobium technology in three fields: steel base materials, iron base materials and special products. The Center also researches for ways of improving our own production processes, such as increasing niobium recovery in ultrafine fractions, niobium recovery in metallurgical plants and development of by-products from waste. It has a team of 14 researchers and 27 technicians. **GRI MM11**

Center for Battery Materials: inaugurated in 2021, it has a team of trained professionals and support from technological partners. With a BRL 13.7 million investment, in a 1.000m^2 area, it integrates all the necessary steps for production and characterization of niobium oxide exclusive for batteries. It can produce one tonne of material per month, which is sufficient for the technological validation processes and market demand.

Two management initiatives were implemented over the period to make R&D investments more focused and efficient.

TRL (Technological Readiness Levels) Methodology: with a unique language and compatible with the practice of the world market, the methodology aims to accelerate, prioritize investments and improve the evaluation of the readiness level of the different technologies developed, connecting them with the Company's growth plan.

KM (Knowledge Management) System: all the knowledge acquired over the years by our Technology Program is consolidated into a single platform, integrating the technical reports of our systems.

KEY INVESTMENTS IN TECHNOLOGY IN 2021

With a total investment of BRL 195 million on the four areas (batteries, steel base materials, iron base materials and special products), 324 projects were carried out in 2021 (207 technical, 87 focused on processes and products and 30 for batteries). All initiatives have a direct connection with the Company's growth and diversification plan, addressing solutions in mobility, generation and distribution of energy, among others.

BRL 195 million in investment

EXAMPLES OF NIOBIUM APPLICATION IN CITIES

See the presence of niobium in our daily lives

Increasing value
Increased financial return on manufacturing costs, increased component durability and reduced fuel costs

Environment
Reduced consumption of inputs, fuels and raw materials, as well as of GHG emissions during the life cycle

State-of-the-art technology
reduced consumption of inputs, fuels and raw materials, as well as of GHG emissions during the life cycle

Best performance
Malleability, weldability, uniformity and weight reduction

Increased safety
Lighter and more resistant structures

The following projects developed stand out:

Steel Alloys segment – prioritizes the provision of technical assistance to producers in alloy optimization (ADO - Alloy Design Optimization) and process parameters (NPO - Niobium Process Optimization). In large construction structures, the main benefit with the use of niobium solutions is dematerialization. That is, the application of niobium in structural steel enables larger constructions with better quality and safety, using less materials. When applied, for example, in the construction of the Zun Tower, one of the tallest buildings in Beijing, niobium allowed using approximately 3,6 thousand tons less of steel (compared to a conventional building) and could still have an additional reduction of 8.645 tons, if it had been completely designed with 690Mpa mechanical resistance steel – even when it must meet extra safety requirements in case of earthquakes.

Another important application is in steel used in natural gas distribution infrastructures. By reducing the amount of steel and making the material more resistant, nobium ensures the safety and integrity of these structures, which transport gas under high pressure over long distances around the world.

In the automotive sector, for years we have supported the steel industry and vehicle manufacturers (OEMs) to increase the performance of stamped steel. As a result, the tests carried out have proven that niobium solutions applied to both the structure and the components of the engines make the metals lighter and more resistant, increasing the safety of the vehicle, reducing the need for repairs and increasing the efficiency of fuel burning. Thus, each vehicle manufactured with niobium consumes less fossil fuels and emits less Greenhouse Gas (GHG). In 2021, this led some OEMs to change their standards, requesting the addition of niobium in new car models.

Iron alloy segment - the highlight in 2021 was the launch of FeNb Welding, necessary for the production of welding coatings, extending the life of components. In the electronics segment, trends in urbanization and electrification have leveraged the use of higher performance magnetic materials using niobium. Also seeking to increase the energy efficiency and miniaturization of components, the solution is nanocrystalline materials, which contain on average 5% niobium in their composition.

Special products segment - we seek to develop a portfolio of solutions. Chrome-niobium with nitrogen levels of less than ten parts per million was first supplied to the market in 2021. The use of this product is expected to result, for example, in lower maintenance costs for aircraft turbines, due to increased fatigue resistance. We are also expanding the niobium metal market by establishing a supply chain for the production of sheets used as coating material with high corrosion resistance. Another important area is the application in superconductors, the supply chain in this case is also considered fundamental to increase the availability of the material in the market and its use. For application in electronic glass and ceramics, we will continue the work on providing niobium oxides with lower iron and tantalum content, elements considered impurities in these applications.

Innovation is constant for us. We innovate in new technologies and applications for niobium products and in our industrial processes.

Battery segment - in 2021, the main highlight in R&D was our Battery Program, which has been consolidating the Company as a world reference in the development of new niobium technologies for lithium-ion batteries. Find below the main advances in the period:

1. Partnership to test batteries with niobium, which provide increased safety, longer life and ultra-fast charging.

2. In 2021, CBMM became a shareholder with approximately 14% (according to the Financial Statements) of interest in the British company Echion Technologies Limited and 12% (according to the Financial Statements) of US startup Battery Streak Inc. The goal of these investments is to accelerate the go-to-market of ultra-fast charging batteries for use in mobility, drones and electronic equipment.

3. In addition to remaining our traditional customer in the steel sector, in 2021 we started marketing an additional 50 tons per year of Niobium oxides to China for use in micromobility solutions, which offer greater autonomy for tricycles, bicycles and electric scooters.

4. In 2021, we partnered with the Canadian multinational company Nano One Materials Corporation, aiming to develop a process that reduces the cost and increases the performance of cathodes used in lithium-ion batteries, which is much higher than conventional technology.

5. In partnership with Senai's Center for Electrochemical Excellence and EMBRAPII (Brazilian Industrial Research and Innovation Company), we structured a small pilot plant in Curitiba (PR), which includes all stages of lithium battery manufacturing. The goal is to train young technicians at all production stages in Brazil. **GRI 203-2**

6. We have defined another relevant partnership with the National University of Singapore for construction of a research laboratory within the campus, aiming at the development of Niobium-Graphene materials for future application in batteries.

7. The pilot plant for manufacturing mixed oxides was commissioned, which will play a key role in defining quality parameters for Niobium products in this market and will also act in the supply of materials for testing new technologies worldwide.

NATIONAL AND INTERNATIONAL PARTNERSHIPS IN R&D GRI 203-2

At the international level, in addition to the National University of Singapore, we partnered with universities in Japan, England and the United States, among other countries. In Brazil, our investments in the scientific community are equally important. We have 41 partnerships with universities and research centers, in addition to supporting groups abroad that develop cutting-edge studies related to niobium.

We funded studies at USP and at the Institute for Technological Research (IPT), in São Paulo, in addition to other institutions, such as the Federal University of Minas Gerais (UFMG), the Federal University of São Carlos (UFSCar), the Center for Innovation and Technology of the National Industrial Learning Service (CIT-Senai), in Belo Horizonte, among others.

At the end of 2021, we partnered with research institutions for cooperation and technological and scientific development in the area of superconducting materials with niobium application.

Learn more

Niobium has been transforming materials into more efficient, intelligent and sustainable solutions: go to Niobium.tech to have access to exclusive content on our technology.

RECOGNITION OF SCIENTIFIC AND TECHNOLOGICAL LEGACIES

CBMM SCIENCE AND TECHNOLOGY AWARD

To stimulate scientific research and technological development in Brazil, we have promoted the CBMM Science and Technology Award since 2019, recognizing the legacy of Brazilian researchers dedicated to improving the society in which we live. The award has two categories: **Science**, for researchers who have highlighted Brazil in the world scientific scenario; and **Technology**, for professionals who develop practical applications. In the third edition of the award, held in 2021, each winner received BRL 500.000. They are:

Vanderlei Salvador Bagnato (Science): PhD in Physics from MIT, full professor at USP and director of São Carlos Institute of Physics. The physicist demonstrated the effectiveness of photodynamic action for controlling infections, decontaminating organs for transplantation and treating diseases such as pneumonia, Parkinson's and various types of cancer.

LEARN MORE

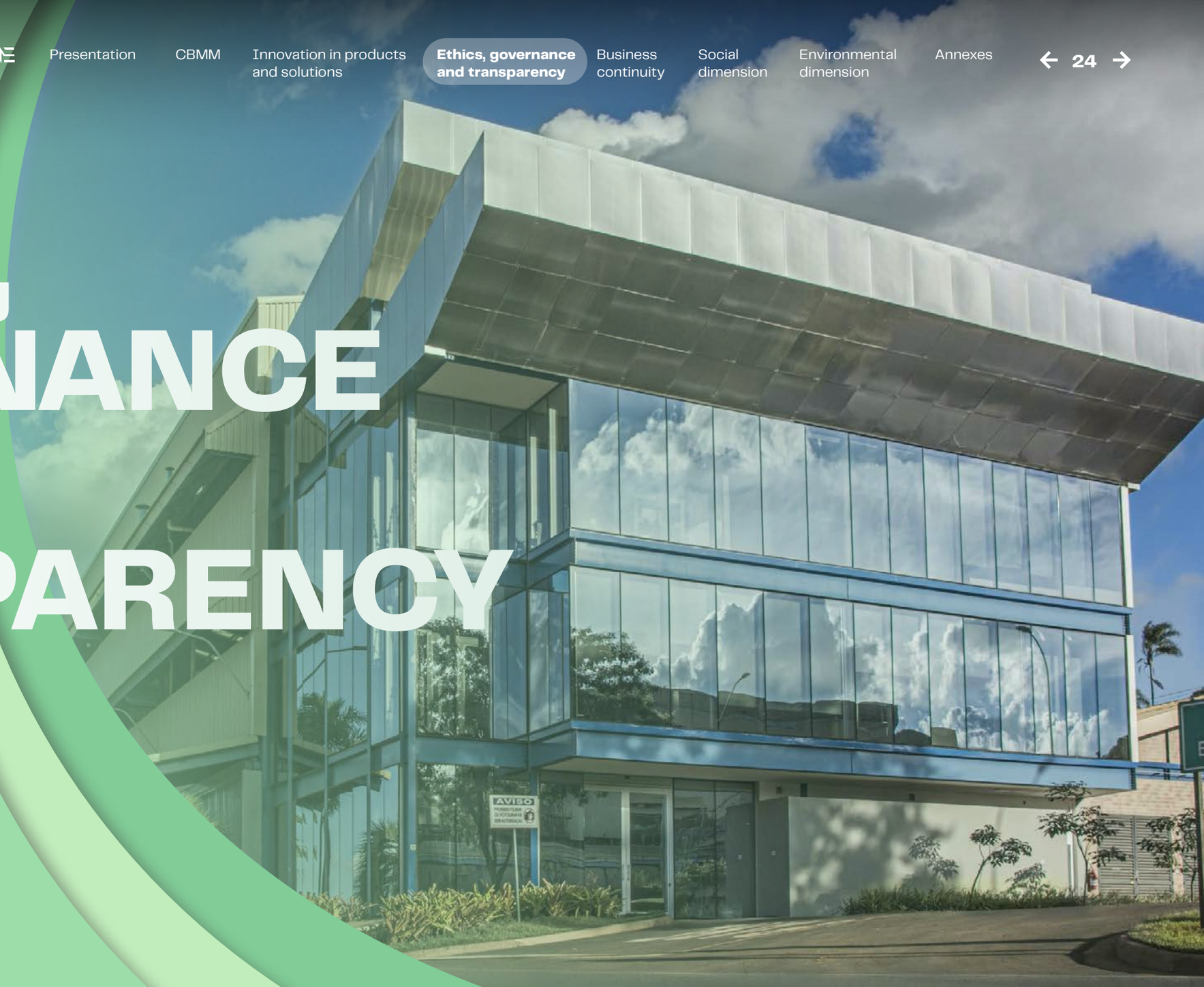
Júlio César Fernandes de Oliveira (Technology): PhD in Electrical Engineering from Unicamp and CEO of idea! Electronic Systems. He is one of the pioneers in the studies of the convergence between photonics and microelectronics in Brazil and has become a reference in the development of lasers, microchips, photonic circuits and other devices for the optical module chain.

LEARN MORE

CHARLES HATCHETT AWARD

Since 1979, we have been a sponsor of the Charles Hatchett Award promoted by the Institute of Materials, Minerals and Mining (IOM3) in England. The award recognizes published works on the application of niobium technology and its alloys. The winners of the 43rd edition of the award in 2021 are the authors of the paper "Giant piezoelectricity in oxide thin films with nanopillar structure", published in the journal Science. **GRI 102-12**

ETHICS, GOVERNANCE AND TRANSPARENCY



IN THIS CHAPTER

ETHICS, GOVERNANCE AND TRANSPARENCY

2021 brought relevant advances in our transparency practices, as we intensified the process of active listening and dialogue with all our stakeholders. The goal is to listen to needs and expectations, but also to identify how to communicate more closely, "translating" to society the practical benefits provided by our solutions and applications of niobium technology.

The starting point was to carry out a reputational evaluation survey with three priority audiences: we heard 300 representatives from Araxá and other communities surrounding our industrial park, we conducted 500 online interviews with residents of several municipalities in the state of Minas Gerais, as well as interviews with 26 journalists, ten representatives from the local press, nine from the regional press and seven from the national press. **GRI 102-43, 102-44**

For decades, we communicated more discreetly. This was reflected in the result of our reputational research: among the three audiences heard, the main outstanding attributes of our corporate image were leadership, performance, products and services and innovation. However, with regard to brand recall (familiarity) and perception of shared value, the indicators showed room for improvement and evolution.

With Reputational Management as one of the main focuses of action, we developed an internal and external communication program to strengthen the positioning of our Company, focusing on the attributes of Citizenship, Governance and the Work Environment. In addition, we reinforced our relationship with the press, expanded our digital performance and remained in contact with representatives of Araxá and neighboring communities. **(item detailed in the topic Waste and Dams).**

For 2022, our main goal will be to increase the familiarity of stakeholders with our brand, reinforcing our contributions to Araxá, to the State of Minas Gerais, to Brazil and to the world.

GOVERNANCE STRUCTURE

GRI 102-18

Based on best market practices, our corporate governance has a structure formed by the Board of Directors, Executive Management, five management advisory committees (Audit and Risks, Strategy, Finance, People and Technology) and specific commissions for our global performance.

In 2021, we intensified the process of active listening and dialogue with our stakeholders

BOARD OF DIRECTORS

GRI 102-8, 102-20, 102-30, 102-31

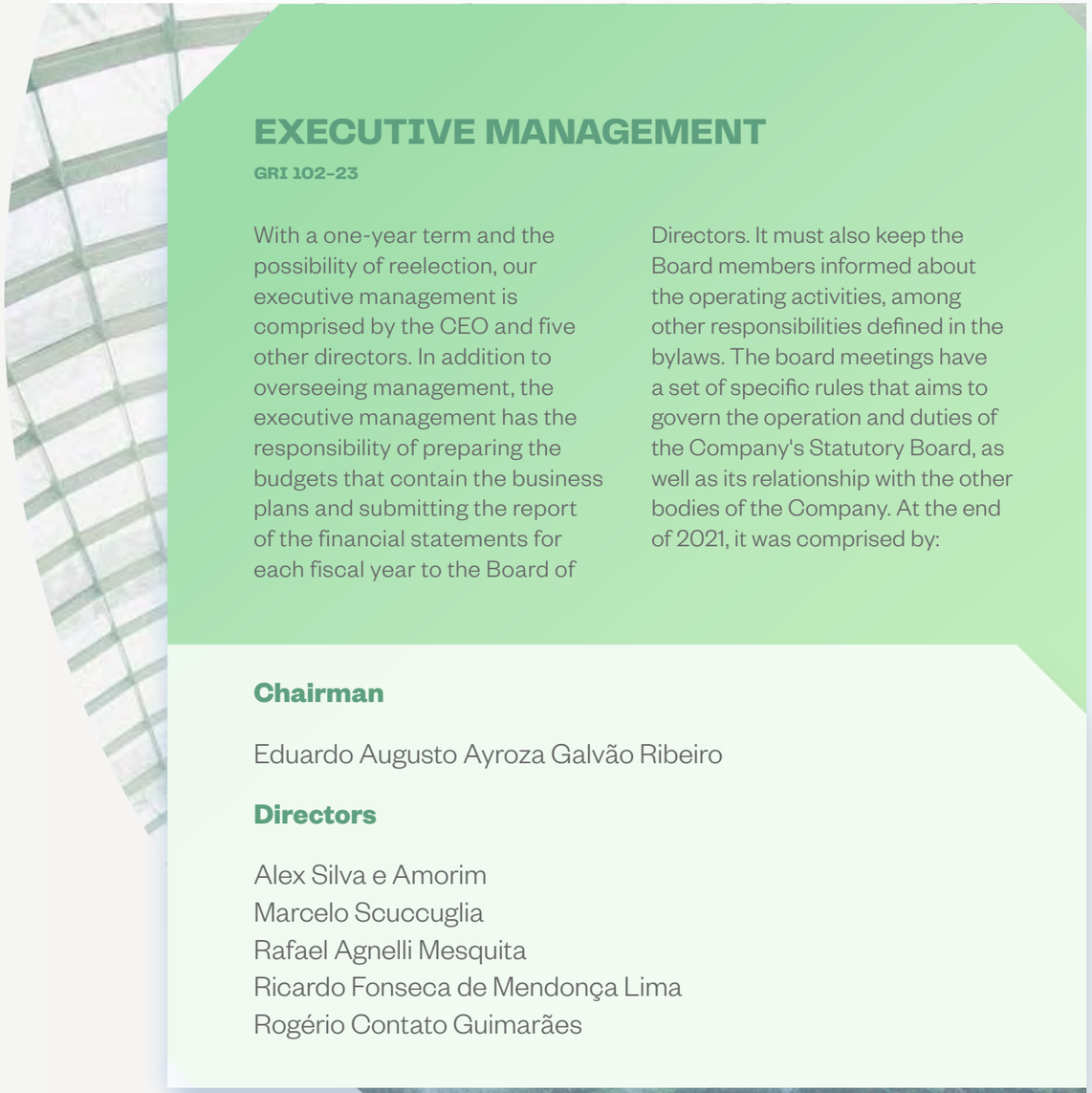
Its main task is to set the business strategy, considering aspects such as the Company's overall performance, analysis of risk and opportunity scenarios and ESG factors. In addition, the Board of Directors shall approve the capital budgets, define the compensation and benefits policy of the directors, elect and remove directors, in addition to supervise compliance with the guidelines transmitted to the management. The board members meet three times a year or whenever necessary.

It is formed by a chairman, a vice chairman and the other elected members considering their different views of business and experiences. As of December 31, 2021, it had the following composition:

Chairman
Pedro Moreira Salles

Vice-chairman
Fabio Colletti Barbosa

Members
Demosthenes Madureira de Pinho Neto
João Fernando Gomes de Oliveira
Mauro Agonilha
Tomoyuki Kawashima
Youngseob Jang
Siegfried Kreutzfeld
Sun Yufeng
Zhihai Wang



EXECUTIVE MANAGEMENT

GRI 102-23

With a one-year term and the possibility of reelection, our executive management is comprised by the CEO and five other directors. In addition to overseeing management, the executive management has the responsibility of preparing the budgets that contain the business plans and submitting the report of the financial statements for each fiscal year to the Board of Directors. It must also keep the Board members informed about the operating activities, among other responsibilities defined in the bylaws. The board meetings have a set of specific rules that aims to govern the operation and duties of the Company's Statutory Board, as well as its relationship with the other bodies of the Company. At the end of 2021, it was comprised by:

Chairman

Eduardo Augusto Ayroza Galvão Ribeiro

Directors

Alex Silva e Amorim
Marcelo Scuccuglia
Rafael Agnelli Mesquita
Ricardo Fonseca de Mendonça Lima
Rogério Contato Guimarães

COMMITTEES[1]

STRATEGY COMMITTEE

Alex Silva e Amorim
Demosthenes Madureira de Pinho Neto
Eduardo Augusto Ayroza Galvão Ribeiro
Fabio Colletti Barbosa
João Fernando Gomes de Oliveira
Marcelo Scuccuglia
Mauro Agonilha
Pedro Moreira Salles
Rafael Agnelli Mesquita
Ricardo Fonseca de Mendonça Lima
Rogério Contato Guimarães
Siegfried Kreutzfeld

STAFF COMMITTEE

Demosthenes Madureira de Pinho Neto
Eduardo Augusto Ayroza Galvão Ribeiro
Fabio Colletti Barbosa
Pedro Moreira Salles
Ricardo Fonseca de Mendonça Lima

FINANCE COMMITTEE

Alex Silva e Amorim
Demosthenes Madureira de Pinho Neto
Fabio Colletti Barbosa
Mauro Agonilha

AUDIT AND RISK COMMITTEE

GRI 102-15, 102-30

Fabio Colletti Barbosa
Mauro Agonilha
Ricardo Baldin

TECHNOLOGY COMMITTEE

João Fernando Gomes de Oliveira
Rafael Agnelli Mesquita
Ricardo Fonseca de Mendonça Lima
Siegfried Kreutzfeld

[1] Composition in alphabetical order referring to Dec/31/2021.

RISK MANAGEMENT AND COMPLIANCE

GRI 102-15

Ethics, integrity and respect for laws and regulations in the evolution of our business are principles exercised in all our relationships with stakeholders in Brazil and abroad. For this reason, we seek to detect business exposure factors, protect our reputation and strengthen our corporate governance structure, increasing transparency in the relationship with our stakeholders.

Adhering to ISO 3100, our Risk Management evolved in 2021 with the pilot project to unify the Risk Matrix in the same digital platform, enabling both an integrated view of all critical factors and decentralized management in each area. The tool provides a macro perspective of how risks intertwine and details the consequences of each of them, which enables the definition of even more efficient contingencies and mitigation plans. Validated by external audit, the new system will be implemented in every area of the Company throughout 2022.

COMPLIANCE PROGRAM

Created to guide, prevent, detect, and remedy possible discrepancies in conduct and violations of the company's bylaws, as well as the laws and regulations applicable to our business, CBMM's Compliance program also advanced technologically in 2021. Through the Meritum system, the flows of the main routines of the Compliance Department regarding the operationalization of the demands arising from the Conflicts of Interest, Gifts, Gifts and Hospitality and Donations and Sponsorship policies, were organized. In addition to optimizing the

procedures resulting from the practical application of Compliance policies and improving the interaction between the Department and internal customers, the Meritum System allows greater traceability and recordability of processes, systematization of controls, obtaining and monitoring indicators, as well as the concentration of data in the system, reducing its circulation through other tools.

In order to disseminate the culture of ethics and integrity, a calendar of face-to-face and online training and qualification is released at the beginning of each year, aimed at leaders and all other employees. The topics covered range from the most general, such as our Code of Ethics and Conduct, Compliance Policy or Reporting Channel, to more specific issues such as moral and sexual harassment, intellectual property or the General Data Protection Law (LGPD 13.709/2018), which regulates the processing of personal information by public and private companies - and to which we already adapted. To support our operations in the international market, in 2021, we also conducted training on best competitive practices and our Economic Sanctions and Embargoes Committee adopted a digital tool to monitor sanctions and embargoes that may affect the Company's business, in real time around the world. **GRI 102-16**

As they are dynamic and due to the constant need to adapt to new situations, in 2021, our Compliance policies were reviewed and revalidated at a Executive Board meeting. Another highlight of the year was the launch of the Compliance Partners program, very well received by employees. To ensure its representativeness within the Company, ten employees were selected in the first edition of the project, representing all areas and subsidiaries. **GRI 103-2**

The first edition of Compliance Day was also held, which featured debates and lectures and had the participation of the Company's executive management and external guests Francisco Petros and Clóvis de Barros Filho, both reference on the topics of integrity and ethics. For 2022, a new cycle of the Compliance Partners program and the second edition of the Compliance Day are already scheduled, as well as the continuity of the activities of diagnosis, analysis and action plan for correction of gaps, aiming at adapting to the requirements of ISO 37001 standard and its consequent certification.

Ethics, integrity and respect for the law in conducting business are the principles that guide our relationship with all stakeholders

CONFIDENTIAL LINE

Totally secure and confidential, the Ethics and Reporting Channel can be used by all internal and external audiences to report discrepancies or violations of the Code of Ethics and Conduct and bylaws. We have reduced the response time to address the issues reported. In 2021, 140 new reports were registered, of which 47 were solved in the same year and the rest are still under internal analysis.

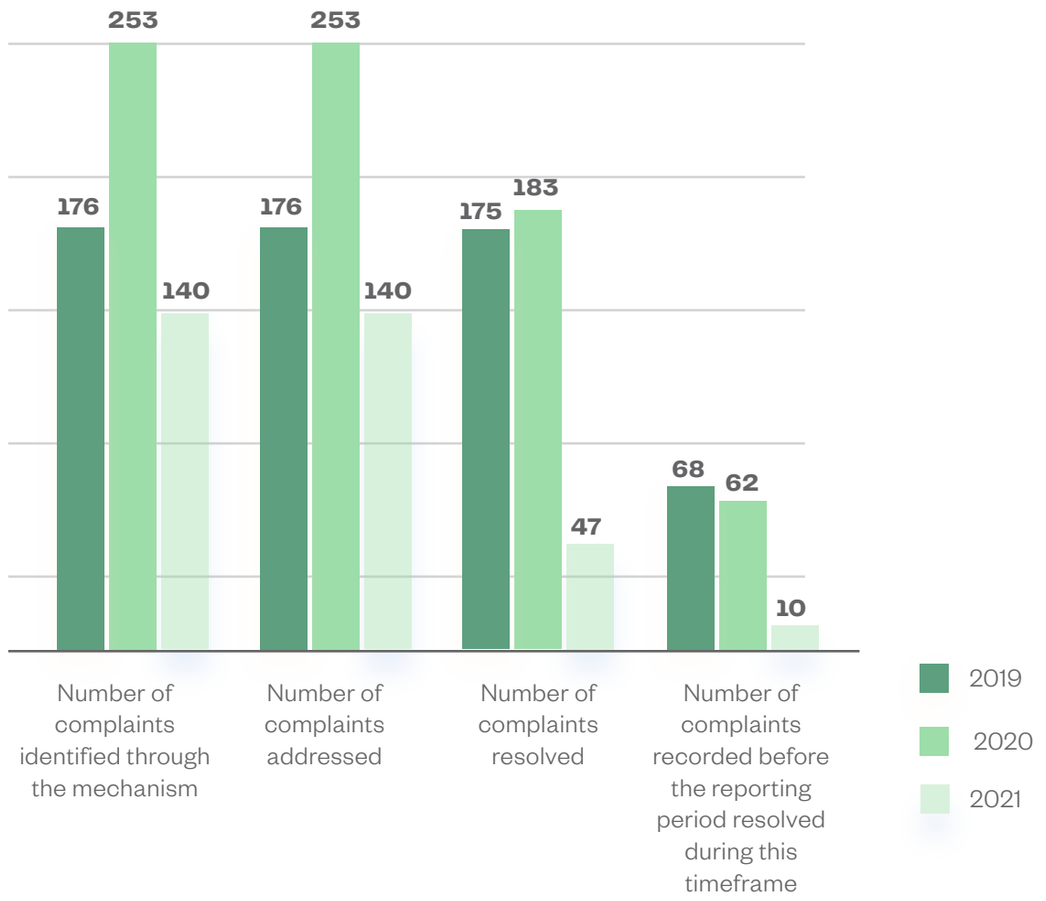
Website: www.cbmmcompliance.com

Phone lines available 24 hours a day, seven days a week:

- **Brazil:** 0800 7210754
- **USA:** 1-800-982-0934
- **Switzerland:** 0800-835-088
- **Netherlands:** 0800-022-2352
- **Singapore:** 800-852-3836
- **Other countries:** +55 11 27394508 (this number accepts collect calls)

COMPLAINTS MECHANISMS

GRI 102-15



BUSINESS CONTINUITY

IN THIS CHAPTER

INTEGRATED MANAGEMENT POLICY

GRI 103-2, 103-3 | 403 | 307 | 413

We live in an increasingly complex and interdependent environment in which deep changes happen fast. For this reason, our strategic business plan is defined with a long-term vision until 2030, but we review it annually to adapt guidelines, tactics and goals to the new scenarios.

This continuous search for adaptability to different contexts is incorporated into CBMM's Organizational Culture. All our decisions and activities must adhere to our Code of Ethics and Conduct, Our Commitment (detailed in People Management) and our Integrated Management Policy.

Integrating the concept of participatory management, the environmental perspectives, occupational health and safety, innovation, excellence in quality, as well as ethics and integrity, our Integrated Management Policy offers us the nine guiding principles:

Our strategic business plan is defined with a long-term vision until 2030

1. Provide a safe and healthy workplace to prevent occupational accidents, injuries and illnesses in business processes;
2. Manage occupational safety and health hazards and risks and environmental impacts through integrated and dynamic practices;
3. Ensure involvement and discussions with employees, service providers and, when applicable, their representatives on matters related to health and safety at work;
4. Protect the environment with pollution prevention measures, sustainable attitudes and management of risks and opportunities arising from our activities, products and services;
5. Elevate customer satisfaction meeting requirements, innovations and technological solutions;
6. Ensure the competence, impartiality and consistent operation of our activities, products and services;
7. Engage people (employees and service providers) in participative management and ethical performance to achieve results.
8. Comply with laws and other requirements applicable to its activities, products and services.
9. Continuously improve Management Systems in order to increase performance and effectiveness.

All our employees are responsible for the good performance, efficiency and continuous improvement of management systems and processes, with the support of our Integrated Management System (IMS), which also incorporates all our programs in the areas of environment and health and safety. The IMS sets guidelines, indicators, standards and methodologies to drive continuous improvement in pursuit of operational excellence. With this integrated management model, periodically audited, we have already achieved the following certifications and accreditations:

CERTIFICATIONS AND ACCREDITATION ACHIEVEMENTS:

1994

ISO 9001
Quality Management

1997

First institution in the industry to be certified by **ISO 14001 – Environmental Management**

2002

OHSAS 18001
Occupational Health and Safety Management

2005

ISO/IEC 27001
Information Security Management

2008

ABNT 17025
Competence of Testing Laboratories

2010

NBR ISOMEC
Laboratory Tests

2017

NADCAP
Materials Testing in Laboratories

2020

AS9100
(Aviation, Space and Defense Industry)

2021

ISO 45001
Occupational Health and Safety Management

EXTERNAL **DIALOGUE**

GRI 102-13

We contribute to the development of public policies by participating in forums such as: Mineral Forum, Research and Development Forum and Municipal Council for Environmental Protection (CODEMA). With the federal government (ministries of Mines and Energy and Science and Technology) and the State government, we deal with institutional matters, such as compliance with standards and technological demands. In addition, we developed projects and partnerships with the city of Araxá, in infrastructure, social, educational, environmental and cultural works.

We also participate in actions related to public commitments to sustainability, development and research, working to reduce greenhouse gas (GHG) emissions, water and biodiversity conservation, better soil use in mineral exploration, product and process development, resource optimization and applications of cleaner and more economical technologies. To foster this external dialogue, we support the Brazilian Association of Metallurgy, Materials and Mining (ABM) and we have a relationship with research institutes like Institute for Technological Research of the State of São Paulo (IPT) and the Center for Innovation and Technology (CIT/SENAI/FIEMG). The Company is also associated with the Brazilian Mining Institute (IBRAM), through which we participate in discussions with the business sector.

We act in the development of public policies attending various forums

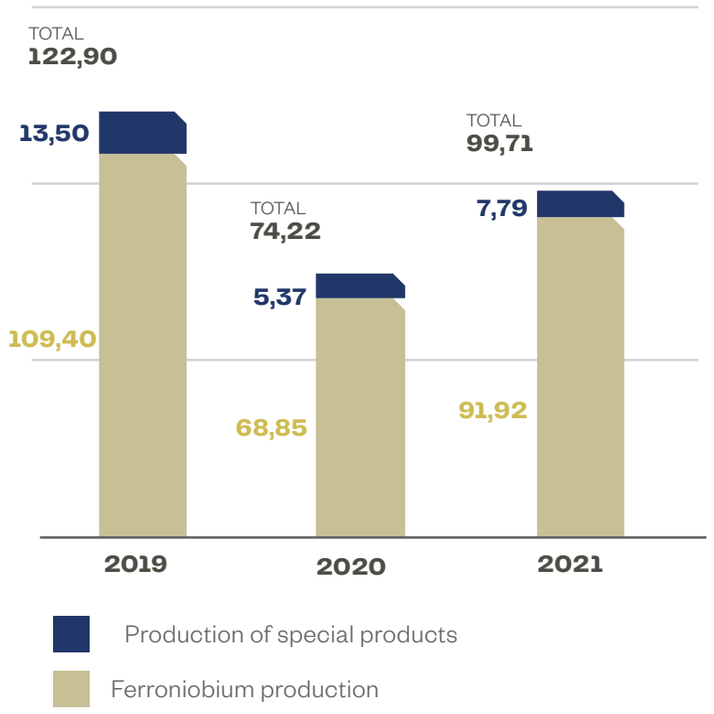
BUSINESS PERFORMANCE

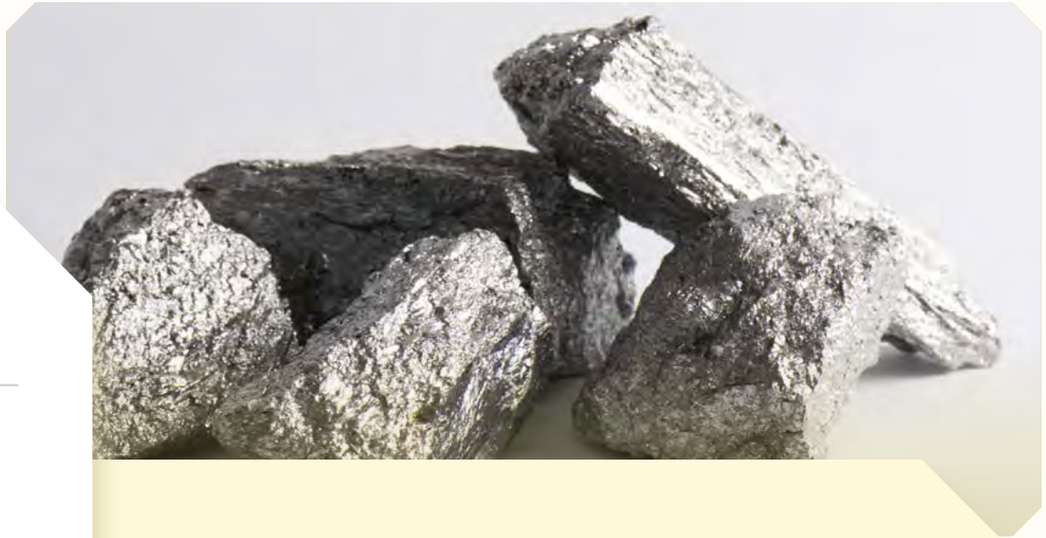
CBMM - 02

The main policy in planning and control of production and materials is that of inventories. It is also a premise for the activity, the shipments accuracy goal (mix of shipments), in addition to the strategic commitment to supply the market.

Our total production in 2021 was 99,71 thousand tons, with 92% of ferroniobium and 8% of special products.

PRODUCTION DATA (THOUSAND TONS)





EVOLUTION OF THE AMOUNT SOLD AND EXPORTED (T)

Sold/domestic market	2019	2020	2021
Ferroniobium	3.654	2.386	3.275
Special products	471	45	64
Total	4.125	2.431	3.339
Exported/foreign market	**2019**	**2020**	**2021**
Ferroniobium	88.342	59.313	83.143
Special products	6.520	2.339	3.999
Total	94.868	61.652	87.142
TOTAL [1]	**98.993**	**64.083**	**90.481**

[1] The total of 90,4 thousand tons differs from the total of 99,71 thousand tons of production because there is a volume of stock.

FINANCIAL RESULTS

GRI 103-2, 103-3 | 201

In line with the global megatrends of electrification, urbanization, sustainability and digital transformation, we reinforce our plans for accelerated growth based on new applications in the steel industry and the diversification of our markets. For this, in 2021, we invested even more in the strategy aimed at new businesses, seeking to accelerate the entry of applied Niobium technologies in the global market, especially in the battery segment.

The combination of the solid investments made by the Company and the resumption of the global economy after the Covid-19 pandemic, especially in the steel and aeronautical sectors, reflected in a net revenue of BRL 11.4 billion in 2021, an increase of 64% compared to 2020. Of the 90.4 thousand tons sold in 2021, 3.6% were destined to the domestic market and 96.4% to the foreign market, which led to an increase of BRL 3.1 billion in revenue for the year in relation to the value obtained with 2020 exports.

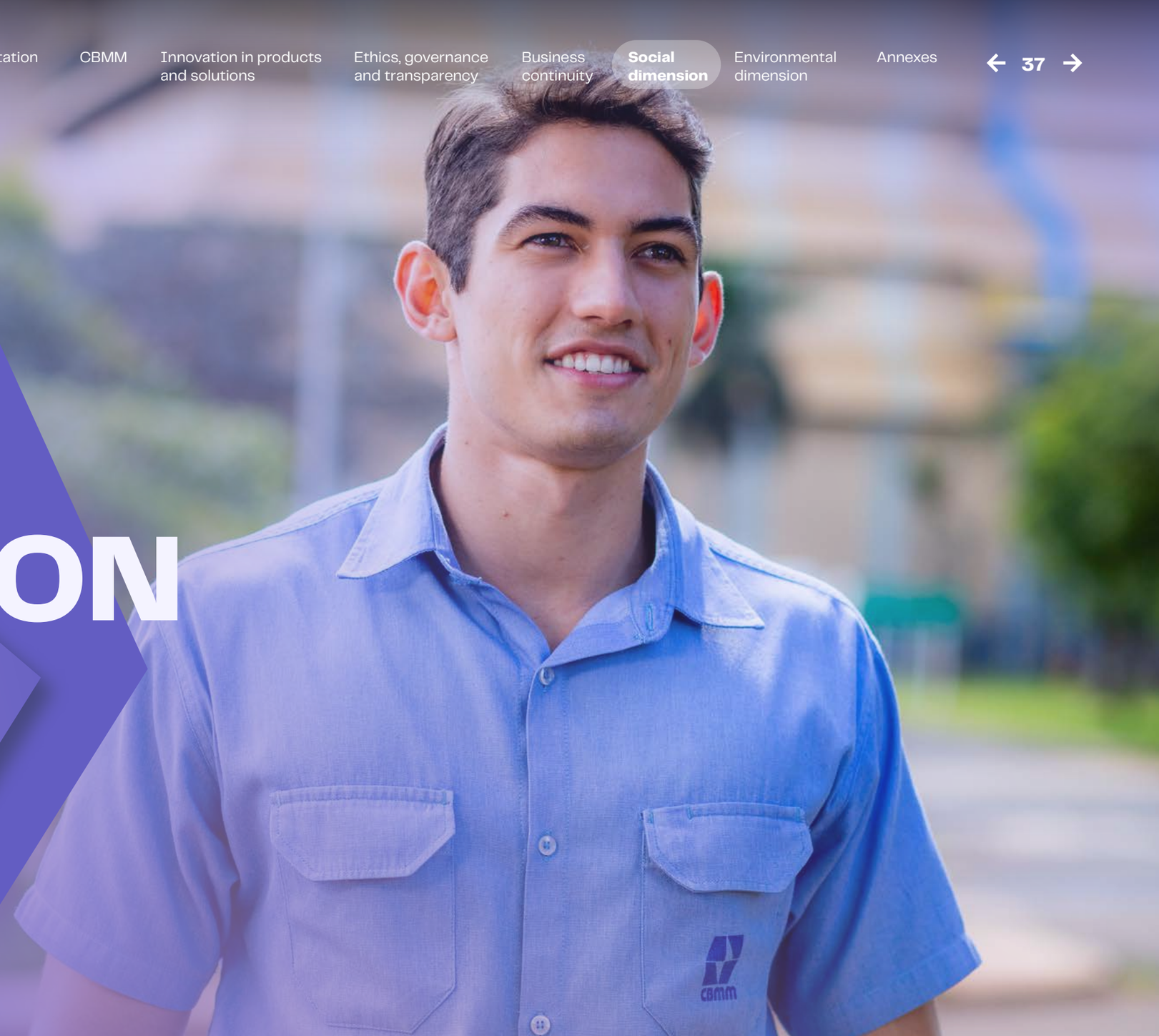
ECONOMIC INDICATORS (BRL BILLION)

	2019	2020	2021
Net revenue	**8,6**	**7,0**	**11,4**
Net equity	**1,7**	**2,1**	**1,6**
Net profit	**2,,9**	**2,5**	**4,5**

EVOLUTION OF EXPORT REVENUE (BRL BILLION) CBMM

	2019	2020	2021
Ferroniobium	7,20	7,28	10,30
Special products	0,90	0,62	0,91
Total	**8,10**	**7,90**	**11,21**

SOCIAL DIMENSION



IN THIS CHAPTER

PEOPLE MANAGEMENT

We have been operating for more than six decades, but our Organizational Culture remains young, dynamic and always evolving. This is largely due to the stimulus offered for each employee to be proactive, open to the new, exercise creativity and be the protagonist of human development - their own and of others.

For this reason, since 2019, we have translated our work philosophy into Our Commitment, a program that guides the expected behaviors of employees and guides all our policies and practices. Divided into seven pillars, two of which are exclusive to leaders, Our Commitment presents clarity and transparently what is expected and what is not accepted in our Organization. The goal is to stimulate the development of different skills, which go beyond technical competencies. **GRI 102-16**

COMMITMENTS **FOR ALL OF US:**

- **Candor** – keep close, respectful and equitable relationships with openness to different and/or innovative perspectives;
- **Leave it to Us** – think about the collective and act responsibly and proactively;
- **Building the Future** – exercising creativity and innovating in the day-to-day work;
- **Excellence in Every Detail** – having quality as a goal for external and internal customers;
- **Performance Defines Us** - to understand and practice the continuous improvement of processes and results as a sustainability factor.

ADDITIONAL COMMITMENTS **FOR LEADERS:**

- **Leaders Developing Leaders** – lead by example of adherence to Our Commitments and understand that their main mission is the development of new talents;
- **Always Connected** – it's not enough to think outside the box, our leaders must live outside the box and know how to anticipate trends, in addition to share knowledge.

EMPLOYEE PROFILE

GRI 102-8, 102-41

We reached the end of the period, with a total of 1.854 employees, 99,78% covered by a collective bargaining agreement. This year as well, we registered a low turnover rate in our teams. Check out the following indicators:

We encourage our employees to be proactive, open to new ideas, creative and protagonists of human development

EMPLOYEES BY TYPE OF EMPLOYMENT CONTRACT AND GENDER GRI 102-8

Type of contract	2019[1]			2020[1]			2021[2]		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Permanent	1.696	178	1.874	1.598	180	1.778	1.587	199	1.786
Temporary	23	8	31	11	7	18	59	9	68
Total	**1.719**	**186**	**1.905**	**1.609**	**187**	**1.796**	**1.646**	**208**	**1.854**

[1]Only employees located in São Paulo and Araxá were considered.

[2]In 2021, in this amount, three permanent employees based in an office in China were considered.

EMPLOYEES BY TYPE OF EMPLOYMENT CONTRACT AND REGION GRI 102-8

Region	2019			2020			2021		
	Fixed-term contracts	Indefinite term contracts	Total	Fixed-term contracts	Indefinite term contracts	Total	Fixed-term contracts	Indefinite term contracts	Total
Araxá	31	1.796	1.827	18	1.701	1.719	68	1.712	1.780
São Paulo	-	78	78	-	77	77	-	74	74
Total	**-**	**1.874**	**1.905**	**-**	**1.778**	**1.796**	**-**	**-**	**1.854**

EMPLOYEES BY TYPE OF EMPLOYMENT GRI 102-8

Job type	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Full time	1.716	180	1.896	1.608	181	1.789	1.645	202	1.847
Part time	3	6	9	6	1	7	1	6	7
Total	**1.719**	**186**	**1.905**	**1.614**	**182**	**1.796**	**1.646**	**208**	**1.854**

EMPLOYEES BY AGE GROUP GRI 102-8

	2019	2020	2021
Under 30 years	221	170	190
From 30 to 50 years	1.519	1.470	1.499
Over 50 years	165	156	165
Total	**1.905**	**1.796**	**1.854**

WORKERS BY JOB CATEGORY AND GENDER GRI 102-8

	2019			2020			2021		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**	**Men**	**Women**	**Total**
Trainees	29	15	44	31	17	48	38	27	**65**
Interns	2	4	6	3	9	12	2	2	**4**
Third parties	176	10	186	156	16	172	-	-	**-**
Trainees	4	4	8	0	0	0	2	2	**4**
Total	**211**	**33**	**244**	**190**	**42**	**232**	**42**	**31**	**73**

Only employees located in Araxá and São Paulo were considered.

EMPLOYEES BY JOB CATEGORY GRI 102-8

	2019	2020	2021
Executive management	5	5	5
Management	65	70	70
Leadership/ coordination	56	86	65
Technical/supervision	440	403	387
Specialists	0	0	103
Administrative	246	265	220
Operational	1.092	967	1.004
Total	**1.905**	**1.796**	**1.854**

In an environment of well-being, inspiration and opportunities, our people improve together

EMPLOYEE ENGAGEMENT

The results of our biennial organizational climate surveys show the connectivity of culture with our employees. In 2021, with 79% of spontaneous responses, our engagement rate was 85%, maintaining the index of the last survey.

The research brought as a point for improvement the timeliness of the Company's decision-making processes. Due to its growing relevance, this is an issue that has been kept on the radar of our leaders and is already included in Our Commitment as one of the pillars of our Culture. As part of the Always Connected commitment, one of the expected behaviors is that our leaders feel "encouraged to work in an increasingly complex, fast, and interdependent environment." That is, our leaders must be ready to decide and act in a global scenario of accelerated and constant changes. Our leadership is committed to seeking solutions to streamline processes, without abdicating the consistency and robustness of decision-making.

CANDOR

We keep communication channels open to dialogue, which make the relationship between our employees and leaders closer and more transparent. Through Direct Connection, Talk to Eduardo (CEO) or Coffee with HR, everyone has the opportunity to interact. There is no anonymity in the internal communication channels as a way to horizontalize and stimulate honest and constructive conversation between everyone. **GRI 102-43, 102-44**

Our Internal Communication team has two other relevant tasks: to foster actions to reinforce our organizational culture and adherence to Our Commitment; and to disseminate strategic guidelines and business results to stimulate contributory behaviors and the perception of belonging of employees. Annually, the Internal Communication plan also provides for integration and engagement actions, as well as educational campaigns related to sustainability, health and well-being and safety issues.

PEOPLE CYCLE

GRI 103-2, 103-3 | 404, 404-1

In 2021, the People Cycle Program focused on improving performance evaluation and career development processes. Always based on our Commitment, the performance evaluation has become more inclusive, also adopting the 360° vision.To continuously increase adherence to our culture, in the same period, leaders were trained with emphasis on opening up to dialogue and quality feedback as a way to stimulate the development of new talents. Thus, instead of filling vacancies hiring new employees, we prioritized internal recruitment: in the last cycle, there were 123 movements of professionals already hired by the Company.

LEADERSHIP TRAIL

The Leaders Development Program (Leadership Trail), in partnership with Fundação Dom Cabral, was also offered to managers, coordinators, specialists, supervisors and masters professionals. In 2021, in its second cycle, the main topics addressed were: Systemic Vision and Role of the Leader, Growth Mindset, Walk The Walk Leadership, Communication and Decision Making, High Performance Teams, Organizational Paradoxes, Innovation, Situational Leadership, Communication and Relations, Collaboration, Trust and Performance. For 2022, one of our goals in People Management is to set and implement an Individual Development Plan (IDP) so that each professional, in addition to having the support of managers, can appropriate their professional career and assume the role of their career development.

GATEWAY

We have three specific initiatives for training and professional development of young talents, which form the Gateway Program. In 2021, our Young Apprentice Program had 65 participants who, after training at SENAI, are more prepared for the job market. The Internship Program provided experience to 15 students from the technical and higher education levels. The Trainee Program allows the newly graduated candidate to have the opportunity to strategically know all the Company's processes to build a successful career. In 2021, we selected four trainees, who, after spending a year in our training program, were hired to work in Technology and Production.

THE BEST BENEFIT IS EDUCATION

We encourage each person to take the lead in their development, so we consider that the best benefit that can be offered is education. Our teaching aid offers financial support for the employee to take technical or higher education courses and for their children to attend elementary, high school, pre-university and higher education. In addition, since 1980, the children of our employees aged between three months and five years have access to free education at our Human Development Center (CDH). With its own methodology to develop language, reasoning and socialization through playful and interactive activities. In 2021, the CDH assisted 442 children.

Under technical training, the Career Trail and Leadership Trail were conducted through distance learning, due to the pandemic. With an investment of BRL 3.5 million in 2021, we offer training on topics ranging from leadership skills to mandatory courses on Regulatory Standards. As a differential, we also encourage training in various skills through specializations - in Brazil and abroad -, in addition to supporting language courses. To monitor the performance, we have defined indicators and standards for training, giving more transparency and visibility to the opportunities offered by the Company.

AVERAGE HOURS OF EMPLOYEE TRAINING BY GENDER AND JOB CATEGORY GRI 404- 1

By gender	2021
Men	14,66
Women	19,31
Total	**15,20**

By job category	2021
Executive management	31,20
Management	35,02
Leadership/ coordination	30,32
Technical/supervision	21,86
Specialists	16,99
Administrative	13,67
Operational	10,45
Total	**15,20**

[1] The average of previous years was 20 hours.

BRL 3,5 million
invested in training and qualification during the year

OCCUPATIONAL HEALTH, WELL-BEING AND SAFETY

GRI 103-2, 103-3 | 403, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10

Incorporated into the Integrated Management Policy and monitored with the Integrated Management System (IMS), the health and safety area of our employees and third parties has its own structure, supported by external service providers and a strategic plan with a five-year horizon. With the program called Safety Value, the Company monitors the evolution of our maturity in the area.

There are formal groups to disseminate actions aimed at health, accident prevention and emergency action, such as the Safety Engineering and Occupational Medicine Specialized Service (SESMT); the Internal Commission for Accident Prevention (CIPA); the Emergency Response Action Brigade (BARE); and the Occupational Health and Safety Facilitators.

The area's risk management is based on procedures that establish guidelines to identify and assess the significance of risks related to the environment, health and safety at work. The elimination and/or reduction of hazards and risks are conducted everyday in our operations and field inspections are used. The GRISC tool calculates the likelihood and severity of each risk and audits check the effectiveness of the program. Internal audits are planned according to an internal indicator that calculates the Global Management Maturity Index. External audits follow the certification

and maintenance cycle of ISO 9001, 14001 and 45001 standards.

We have a training matrix for employees who carry out activities considered risky, but above all, we encourage the right to refuse to perform possibly unsafe tasks, after all, safety is a priority.

Specifically in health, our Environmental Risk Prevention Program (PPRA) establishes measures that control, reduce or eliminate risks, preserving the physical and mental integrity of employees and third parties, while the Medical Control Program for Occupational Health (PCMSO) establishes flows for admission, periodic, return to work and dismissal exams. All documents and information related to the employee's health are kept confidential, according to the General Data Protection Law (GDPL - Law 13.709/2018).

For prevention of occupational diseases and/or accidents, our plan includes programs for: respiratory protection, hearing conservation, accident prevention with perforating-cutting materials; in addition to the health service waste management program. No occupational disease was recorded in 2021. Controls continue to be constantly reassessed in partnership with the Occupational Safety and Hygiene Department.

WORK ACCIDENTS GRI 403-9

	2019		2020		2021	
	Employees	Workers[1]	Employees	Workers[1]	Employees	Workers[1]
Number of hours worked[2]	4.757.206	6.381.450	4.481.509	5.931.918	4.499.710	3.796.043
Number of serious work-related injuries	0	4	2	5	4	4
Rate of serious work-related injuries	0	0,63	0,45	0,84	0,89	1,05
Number of work-related injuries	6	15	8	12	4	4
Rate of work-related injuries	1,26	2,35	1,79	2,02	0,89	1,05

[1]Workers who are not employees, but whose work and/or workplace is controlled by the organization. | [2] The base number of hours worked is 1.000

ALERT IN THE FIGHT AGAINST COVID-19

With the continuation of the Covid-19 pandemic, in 2021, our priority continued to be the preservation of the health and physical and psychological well-being of our employees and their families. Our pandemic response committee continued to work actively and did not relax any of the measures that had already been taken in line with the guidelines of national and international health agencies.

Our administrative and support professionals continued working from home throughout 2021 and the outbreak of the Ômicron variant at the end of the year extended this type of work. For the operation teams, who continued working on site, all prevention and control measures were kept, such as: distance rules in transport vehicles for work, daily temperature measurement, use of masks and hand sanitizer and testing whenever necessary. We kept a 24-hour on-call phone available to all employees: in case of any symptom or doubt, the employee only had to call to receive guidance from a health team.

In addition to psychological support programs for employees and family members, we continue with our internal campaign #TodosJuntos (All Together), as a way to reduce the impact of the social distancing rules between people. The initiative, adopted since 2020, kept all our employees informed and integrated, no matter where or how they were working – from home or on site.

During this period, we reinforced our social commitment, especially with the city of Araxá and the state of Minas Gerais. In addition to the donations already made in the previous year that totaled BRL 16 million, in 2021, we allocated approximately BRL 4,8 million in tests and materials to support vaccination against Covid-19. Other initiatives adopted to stimulate development and benefit the Araxá region and the state of Minas Gerais are detailed in the topic Economic Development.

ECONOMIC **DEVELOPMENT**

GRI 103-2, 103-3 | 203, 413

We seek to ensure that our projects in the community generate the greatest social impact and become autonomous and sustainable in the medium and long term

Our governance in the area of social responsibility sought to focus, in 2021, on sharing value with society, especially in the city of Araxá and in the state of Minas Gerais. To this end, at the inauguration of the expansion project, our industrial plant, in November, signed a protocol of intent with the government from Minas Gerais. Our focus is to foster social and economic development of Araxá region, with increased opportunities for direct and indirect employment, increased revenues for the municipality and its surroundings, as well as the implementation of productive activities that add value and technology to the state.

This protocol, in fact, expands the scope of the work that our Technical Commission for Social Investment (CTIs) has already been carrying out on the fronts: social, health, sports, education and culture, whose total contribution to projects reached approximately BRL 46 million in 2021. More than receiving, evaluating and defining the investments (with incentives or not) that will be made, CTIs shall monitor the implementation and evolution of the projects to ensure that the actions generate the greatest social impact and become autonomous and sustainable in the medium and long term.

In Araxá, our main commitment is to support children and adolescents and, for this, we have sought to expand our work in partnership with the City Hall, the Public Prosecutor's Office and social organizations with local operations.

For professional training in the community in 2021, we signed an agreement with

SESI-SENAI of Araxá and two new technical courses were opened in the city: one on electromechanics and the other on surveying. This program aims to enhance socioeconomic development through professional qualification, dissemination of opportunities for hiring labor and suppliers located in Araxá. The Company covers all educational costs for students who, in the future, will be better prepared for the job market. These students will have the potential to act in the construction and operation of Waste Disposal Structure No.9 - EDR9 (detailed in the topic Waste and Dam Management). **GRI 203-2**

Although it was delayed by the pandemic, we also continued with the construction of the Araxá Cultural Center, which will have a library and a theater with a capacity for 500 people. With computerized infrastructure and rooms for group or individual study, the library will meet the needs of Uniaraxá and the community. Two other examples are Cientistas do Cerrado (Cerrado Scientists) and the Eye on the Future Projects, which are part of our Environmental Education program and are detailed below in the topic on **Biodiversity**.

We also produced the series "People Who Transform", broadcast on the Company's social media and local TV. The series shows stories and experiences of citizens of Araxá who are social transformation agents. Some of the projects covered in the series received technical management support and financial support from the Company through some of the municipal funds managed by Araxá City Hall. With this project, our main goal was to recognize and give more visibility to the protagonism of these people, who have dedicated their talents and efforts to transform the lives of others for the better.

Impacts – Based on participatory processes and continuous monitoring, we carry out social and environmental impact assessments, and its results are publicly disclosed. To mitigate as much as possible the negative impacts of our activities and maximize the positive impacts – listed during the processes of social and environmental studies and licensing – there are several local development programs based on the needs of communities. To this end, we analyzed stakeholder engagement plans that, in addition to the communities, consider work councils, health and safety committees and other representative entities inside and outside the Company. **GRI 413-1, 413-2**

INVESTMENTS IN INFRASTRUCTURE AND SERVICES (BRL) GRI 203-1

Current or expected impacts on local communities and economies		Investment		
		2019	2020	2021
Education	Promote a quality education for Araxá citizens	2.807.318	126.570	391.650
Health	Encourage companies to continue doing what is best for the health of the communities they serve	8.822.093	12.974.994	9.471.080
Sports	Encourage the practice of sports in the community	4.059.138	4.516.490	8.225.971
Culture	Stimulate the public's interest and knowledge of culture in general	21.015.929	10.481.843	14.565.074
Other	Improve the standards of living of the communities served	11.956.327	12.462.227	13.263.544
Total		**48.660.805**	**40.562.124**	**45.917.319**

SUPPLY CHAIN

GRI 102-9, 103-2, 103-3 | 301

One of our commitments is to foster economic development in the region where we operate and, thus, we support new suppliers in improving their processes, with training and qualification, especially in health and safety. In total, 95% of the products are purchased in Brazil and the remaining 5% come from the United States, China and Europe.

In 2021, our supply chain had 1,855 companies, including manufacturers, distributors, resellers and direct service providers, 42% of them from Minas Gerais. During the year, 786 suppliers were hired, 284 from Araxá. In the period, purchases made from suppliers in Araxa accounted for 14% of the total, totaling BRL 291 million.

Our purchases require the traceability of raw materials and inputs, as well as qualification certifications. We conduct annual audits of major service providers to ensure compliance with legal requirements. Since 2019, we have adopted the SAP/R3 system to monitor our purchasing performance, which has brought benefits, such as: achieving budgeted value in the acquisition of raw materials; preferentially buying from suppliers with whom we have a contract; and negotiating through the SAP Ariba system, among others.

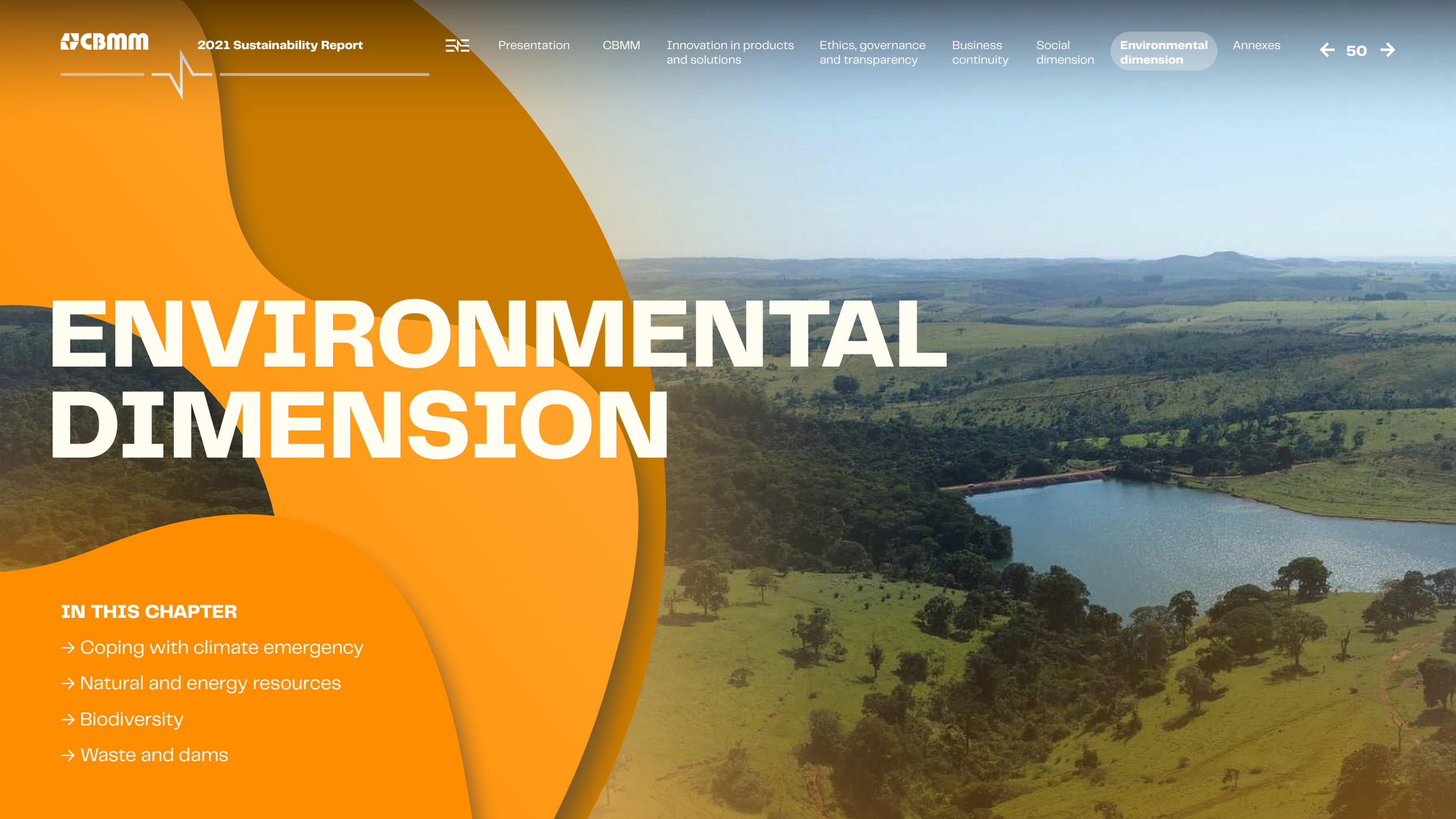
The Supply and Logistics management is responsible for the management of materials, and the process begins with the registration of a code for each input, which will be used from purchase requests, receipts and storage to the internal use of the products. We have a road scale inside the industrial park in Araxá to measure the weight of the goods received, checking the difference in weighing between the entry and exit of the delivery vehicles. The area undergoes internal and external audits periodically to evaluate inventory management.

We manage the negative impacts on the chain and our ESG Program provides special focus, for example, on aluminum suppliers to stimulate the adoption of efficiency gain measures and reduction of greenhouse gas emissions. **Learn more in Environmental Dimension**

MATERIALS USED IN PRODUCTION AND PACKAGING GRI 301-1

Types of material	2019	2020	2021
Non-renewable sources			
Liquid chemical reagents (Kg)	46.230.371,85	28.034.388,01	36.316.738,29
Inputs (Kg)	101.849.811,55	65.227.950,97	85.190.475,61
Ore (t)	6.961.899,00	4.319.248,00	5.749.407,00
Packaging (unit)	1.883.442,00	1.262.491,71	1.570.911,00
Renewable sources			
Renewable inputs (kg)	15.056.409,06	10.055.585,60	13.712.874,99
Renewable packaging (unit)	100.052,00	75.567,00	103.544,00

ENVIRONMENTAL DIMENSION



IN THIS CHAPTER

ENVIRONMENTAL DIMENSION

GRI 103-2, 103-3 | 307

In addition to pollution prevention and emission reduction, our environmental program includes the optimization of natural resources

Based on our Integrated Management Policy and on the data and indicators provided by the Integrated Management System (IMS), the activities of our Sustainability Committee focus on creating an ESG (Environmental, Social and Governance) action program that supports the Company's strategic growth planning.

The Sustainability Committee is comprised by representatives from the Strategy, Legal, Communication, Compliance, Industrial, Technology, Health and Safety, and Environment areas. With a multidisciplinary approach, meetings are also attended by our Vice-President and, whenever necessary, the CEO and the CFO, as well as other professionals specialized in specific topics.

The ESG Program includes actions for Social Development to evolve towards investment in sustainable projects that encourage the protagonism of people and the autonomy of communities. In governance, we will continue to adopt the best market practices, with increasingly agile decision-making processes and ensuring that strategic guidelines are disseminated transparently among our employees and stakeholders.

Conservation programs are aimed at endangered Cerrado species endemic to Araxá region

We continuously innovate so that solutions associated with niobium products generate a much greater positive than negative environmental impact. We adopted the precautionary and preventive principle in studies prior to the implementation of projects and as a directive by environmental agencies for granting licenses. Therefore, we measure the potential impacts and conduct technical and socio-environmental assessments of technological and site alternatives to make the most correct and assertive decisions. **GRI 102-11**

Environmental Program – In addition to pollution prevention and emission reduction – with actions planned from our production and internal processes to the supply chain – our environmental program includes the optimization of natural resources. Thus, we have a system for mapping and evaluating the applicable legislation (CAL) that monitors compliance with all related legislation. A technical staff evaluates the applicability of each new law enacted, establishing, when necessary, action plans and process adjustments within the transition periods provided.

To improve the program in 2022, there are also work teams for each of our themes in sustainable action: water, biodiversity, emissions, mineral resources and waste, community development and health and safety. These teams are responsible for identifying, planning and defining how and when the practical actions related to each theme will be performed.

COPING WITH **CLIMATE EMERGENCY**

GRI 103-2, 103-3 | 305, 201-2

We have evaluated the possible effects of climate change on our plant in Araxá as well as on the global market, especially in Europe and China, the two main regions where our products are marketed.

To this end, we have adopted a series of alternative energy use initiatives in our processes to be implemented as of 2022, such as:

- Replacement of LPG by renewable sources;
- Replacement of diesel in its vehicles by renewable energy;
- Burning of methane generated during wastewater treatment;
- Replacement of petroleum coke by coal in the refining process;
- Emission compensation by reforestation; and
- Development of new carbon capture technologies.

100%
of
electricity

used by CBMM derives from renewable sources and, considering the acquisition of Renewable Energy Certificates (RECs), the related GHG emission is zero

Regarding scope 2, we have been a neutral Company since 2019 with the acquisition of RECs (Renewable Energy Certificates) from Companhia de Energia Elétrica do Estado de Minas Gerais (CEMIG).

In Scope 3, the scenario is positive and with opportunities to expand the market, as applications of niobium products increase the efficiency of other materials, contributing to a more sustainable future and with a lower carbon footprint throughout the chain. A study conducted in the construction of our industrial plant showed a 22% reduction in the weight of its structure with niobium microalloys, in place of carbon steel, ensuring even more resistance and safety to construction.

In addition, niobium applications in batteries and other solutions for the energy and mobility sectors indicate that our sales curve will be upward. To ensure that these opportunities materialize, our technical team works together with customers and end users, as described in the **Innovation of Products and Solutions** section of this report.

EMISSIONS

GRI 103-2, 103-3 | 302, 305

Our emission inventories since 2013 are available for consultation in the Brazilian GHG Protocol Program, with calculations referring to scopes 1, 2 and 3, which consider the emissions generated in our production process and from our main service providers. In 2021, we recorded no reduction in emissions due to increased production to meet the resumption of global demand for niobium products. It is worth noting, however, that the electricity used derives 100% from renewable sources. Considering the acquisition of Renewable Energy Certificates (RECs), issued by the energy supplier, the emission of related Greenhouse Gases is zero. **GRI 305-5**

GHG emissions are monitored and evaluated by external assurances. Internally, we periodically control emissions from stationary sources. There are no emissions of ozone-depleting substances. The gases that cause this effect are kept in refrigerating equipment and, when they need maintenance, thy are packed in pressurized cylinders.

We have developed initiatives to minimize other impacts: access roads are irrigated with water to avoid the dispersion of particles; we have conveyor belts to reduce truck traffic and its emissions; we use ethanol-powered Flex vehicles and hybrid (electric + gas) vehicles; we inspect diesel vehicles that transit in the Company; and monitor greenhouse gas emissions, including third-party operations.

DIRECT GHG EMISSIONS

(tCO_2 equivalent) [1] GRI 305-1

Scope 1	2019	2020	2021
Generation of electricity, heat or steam	37.018,00	23.092,00	31.276,72
Physical-chemical processing	4.590,00	3.165,00	4.801,33
Transport of materials, products, waste, employees and passengers	11.789,00	14.684,00	16.446,57
Fugitive emissions	2.996,00	2.902,00	4.227,47
Total	**56.393,00**	**43.843,00**	**57.664,72**
Biogenic emissions	**44.602,00**	**30.634,00**	**41.335,63**

INDIRECT GHG EMISSIONS

(tCO_2 equivalent) [1] GRI 305-2

Scope 2	2019	2020	2021
Emissions from energy acquisition	28.814,00	17.724,00	48.806,69

OTHER GHG EMISSIONS

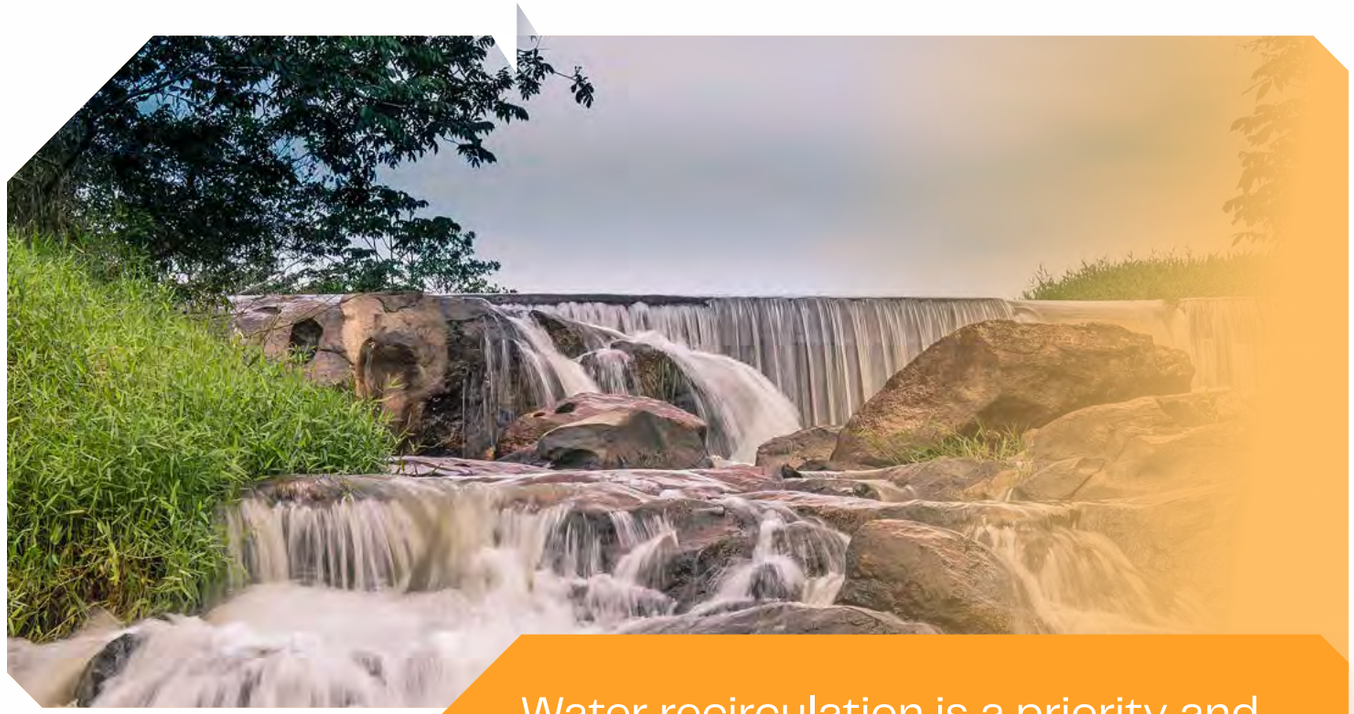
(tCO_2 equivalent) [1] GRI 305-3

Scope 3	2019	2020	2021
Upstream			
Upstream transportation and distribution	13.565,00	4.996,00	5.621,67
Waste generated in the operations	0	0	0
Business travel	2.200,00	372	166,64
Employee transportation	828,00	1.059	2.773,83
Total			
Downstream			
Downstream transportation and distribution	5.604,00	3.840,00	5.265,34
Total			
Total	**22.197,00**	**10.267,00**	**13.827,40**
Biogenic emissions	**2.335,00**	**1.299,00**	**1.675,88**

[1] For calculation of Scope 1, 2 and 3 emissions, the following gases were considered: CO_2, CH_4, N_2O, HFCs.

NATURAL AND ENERGY RESOURCES

GRI 103-2, 103-3 | 301, 306



Water recirculation is a priority and for over 15 years we have invested in maximizing this natural resource, **reusing 96,4% of all water used in our producion**

In addition to our commitment to neutralize GHG emissions, we seek improvements in our processes and the adoption of cleaner and more economical technologies for creating solutions that optimize water, mineral and biodiversity resources.

To obtain the industrialized products of niobium, in 2021, 5.506.028 tons of ore (material not derived from recycling) were used. After the extraction, mining waste and industrial processing stages, the resulting tailings and waste – the quantity and destination of which are regularly reported to environmental and regulatory agencies – undergo specific storage procedures and are also sent for disposal or recycling. Part of these materials, such as aluminum slag, magnetite and barite, is sold for the manufacture of refractory bricks, iron products or canvas of heavy vehicle brakes, for example. **GRI 301-2, 306-2, MM11**

WATER RECIRCULATION

GRI 103-2, 103-3 | 303-1, 303-2

One of our environmental priorities is the recirculation of water used in our production processes. For this reason, for over 15 years we have been investing in the maximization of this natural resource, reaching the level of 96.4% of reuse of water used in our production. We have an Effluent Treatment Plant (ETEL) where the water used in the Company's activities is directed. After due treatment, the resource is sent to Pirapitinga Stream in a volume very close to that captured.

With an automated and intelligent monitoring system, the measurement of water discharge at ETEL follows an evaluation algorithm, taking into account the limit standards for discharge established by Brazilian legislation, the scrubbing capacity of the receiving water body and the treatment capacity of the unit. With the continuous review of internal processes carried out by our Research and Development area, we were able to reduce by three times the amount of water required to produce a ton of niobium products. That is, we currently use only 25% of the water required compared to 2009. In 2021, despite the water crisis that hit the country, we had water available to operate the industrial park without the need of other sources.

WATER WITHDRAWAL AND CONSUMPTION (megaliter) [1.2]

GRI 303-3, 303-5

	2019	2020	2021
Total water withdrawal by source – surface water (fresh)	2.106,21	1.832,54	3.180,16
Total water stored on Jan/1/2021	3.550,00	2.900,00	2.892,99
Total water stored on Dec/31/2021	2.900,00	2.850,00	2.130,47
Changes in water storage	-650	-50	-763
Specific consumption (ML/t of niobium products)	0,0171	0,0247	0,0232
Specific consumption (ML/t of ferroniobium)	0,0192	0,0274	0,0252

[1] 2021 was atypical due to the low rainfall, with no good water recharge of the new water dam. For the first time, the dam did not reach its maximum volume at any time of the year.

[2] There is no water intake in areas with water stress.

WATER DISCHARGE[1] (megaliter) GRI 303-4

Total volume by destination	2019	2020	2021
Surface water	2.523	3.898	1.023
Water reused by the organization	57.047	45.534	62.256
Total volume of discharged water	2.523	2.898	1.023

[1] There is no water discharge in areas with water stress.

ENERGY CONSUMPTION

GRI 103-2, 103-3 | 302

Most energy resources consumed by CBMM (77%) derives from renewable sources. We encourage the best use of energy in our facilities and in those of third parties, working on continuous improvement projects to reduce consumption. In addition to this gain in efficiency, we have already started studies to evaluate the potential use of wind and solar energy in the region of our industrial park. **GRI 302-5**

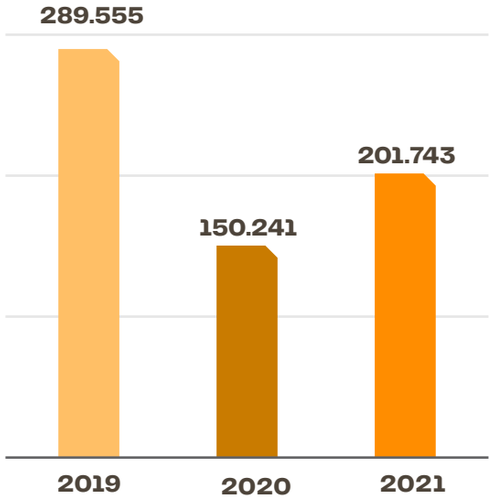
We evaluate annually our consumption by executing the Greenhouse Gas (GHG) inventory and by raising indicators to compose our Sustainability Report, adopting the assumptions and conversion factors of the GHG Protocol calculation tool.

In 2021, our energy consumption from non-renewable sources was 523,546.10 GJ, 14% higher than the previous year, due to the increase in production to meet the resumption of global demand for niobium products. The same happened with the consumption of energy from renewable sources (renewable fuels and electricity), which showed a 33% higher result compared to 2020.

ENERGY CONSUMPTION WITHIN THE ORGANIZATION, BY SOURCE (GJ) GRI 302-1

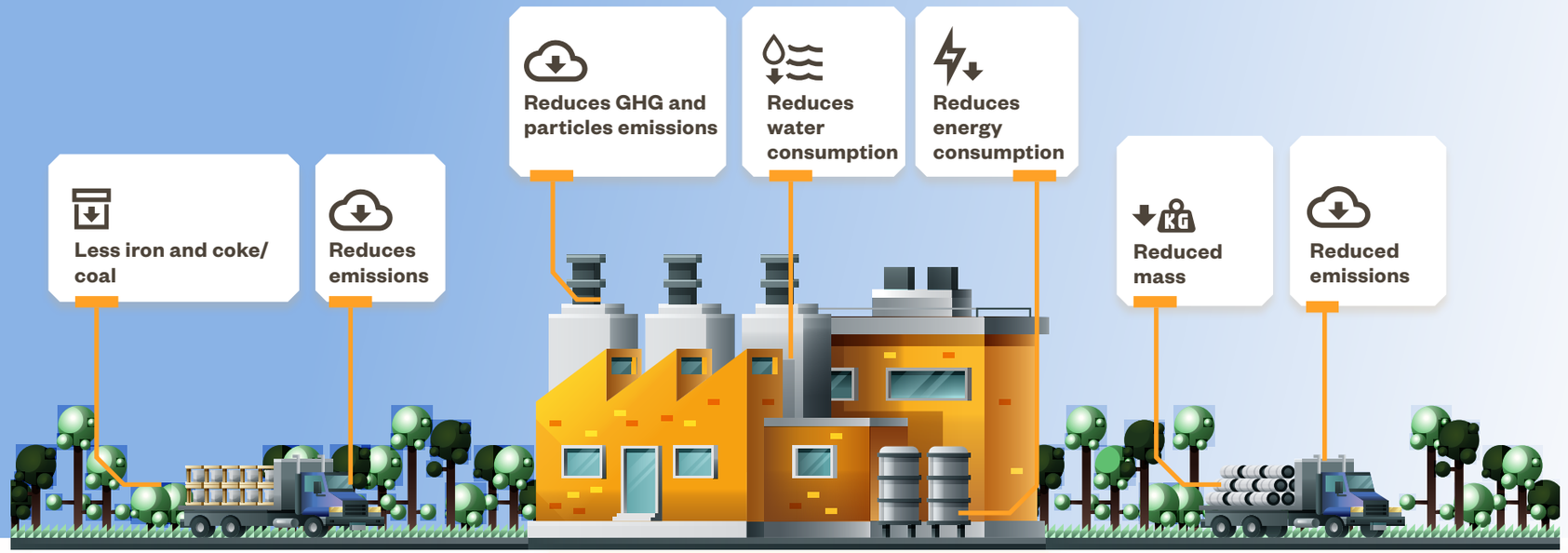
Fuels from renewable sources	2019	2020	2021
LPG	380.918,00	239.104,00	318.537,75
Petroleum Coke	110.234,00	72.289,00	88.146,31
Diesel fuel	146.148,00	183.475,00	113.731,30
Aviation fuel	6.239,00	2.642,00	3.040,74
Total	**643.539,00**	**497.510,00**	**523.456,10**
Fuels from renewable sources	**2019**	**2020**	**2021**
Charcoal	407.227,00	272.004,00	370.888,40
Biodiesel	15.732,00	21.905,00	11.796,85
Total	**422.959,00**	**293.909,00**	**382.685,25**
Energy consumed	**2019**	**2020**	**2021**
Electricity[1]	1.393.006,00	1.027.019,00	1.350.592,04
Total	**2.459.548,00**	**1.818.438,00**	**2.256.733,39**

ENERGY CONSUMPTION OUTSIDE THE ORGANIZATION (GJ) GRI 302-2



Energy intensity (GJ/t)[1] GRI 302-3	2019	2020	2021
Ferroniobium	21,86	23,16	21,19
Niobium products	20,00	24,49	22,63

BENEFITS OF USING **FERRONIOBIUM** IN **STEELMAKING PROCESSES**



It has a positive impact from start to finish of the steelmaking process

START

The use of ferroniobium in the steel production process allows for less use of raw materials and inputs, which in turn reduces GHG emissions and water and energy consumption in the plants, in addition to lowering emissions from transport of these materials to the steel industry.

PROCESS

The use of ferroniobium in the steelmaking process reduces GHG emissions, in addition to the water and energy consumption. It also produces a more homogeneous steel with better properties, which lowers production variances and generates savings.

FINISH

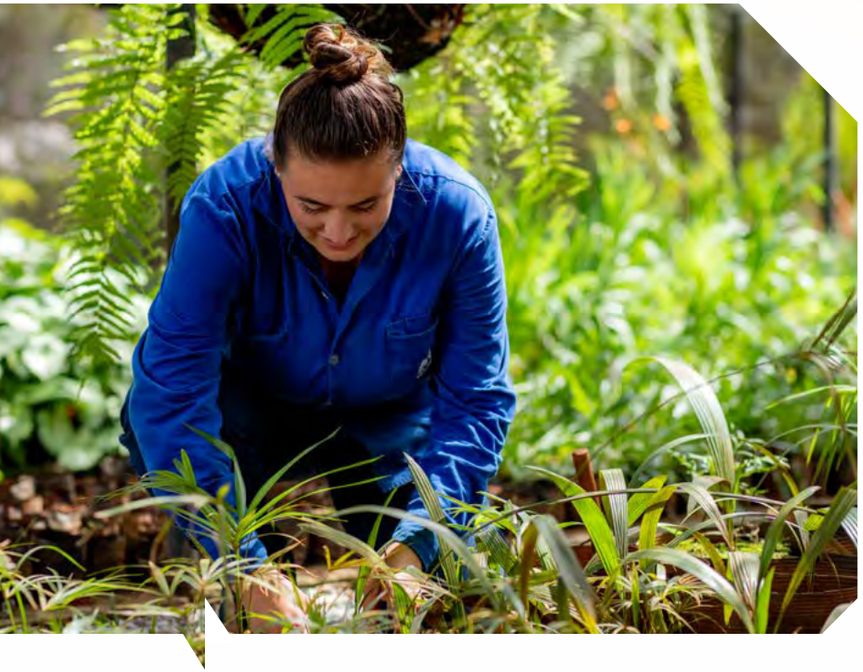
As a result of the lower quantity of higher-quality steel produced (microalloyed with niobium), transport costs are much lower, as well as transport-related GHG emissions.

BIODIVERSITY

GRI 103-2, 103-3 | 304

Located in the heart of Cerrado Mineiro, our industrial park has, since 1980, the Environmental Development Center (CDA), dedicated to the conservation, strengthening of the biome and biodiversity of the region. Research projects, management and reproduction of plants and animals are conducted in there, in addition to environmental education actions for our employees and the community. Occupying six hectares, the CDA is formed by a scientific breeding ground for wild fauna – regulated by the Brazilian Institute for the Environment and Renewable Natural Resources (Ibama), a seedling nursery, an environmental education center, and an area with native Cerrado species.

In our seedling nursery we have reproduced 250 species of plants, 24 of which are rare or endangered, and protected by law, such as the yellow ipê, cedar, pequi, jequitibá-branco, and aroeira-do-sertão, among others. In addition, we maintain green areas of legal reserve, private natural heritage reserve and compensation areas. Some are in the process of regeneration, with compensatory plantings of native species of the Cerrado, using seedlings produced in our nursery.



The work of restoring protected habitats, carried out within the scope of the industrial park and its surroundings, has already ensured the fulfillment of environmental compensation linked to the vegetation suppression of 42 hectares of areas related to the works on dam 8; to the closure works of dam 4 (2,55 hectares), among others. **GRI 304-3**

With approximately 7,67 km², Fazenda São Sebastião and Monte Alto is the only environmental protection area in the vicinity.

The Company does not monitor surface and groundwater in the preservation areas, nor does it have information about the value of biodiversity within or adjacent to the area, characterized by the presence on a protection list (such as the IUCN Protected Area Management Categories, Ramsar Convention, the national legislation). **GRI 304-1**

All direct and indirect impacts on biodiversity caused by our operation are related to environmental licensing and have conditions managed by the Company. Plants were removed in the construction of the infrastructure and there is pollution related to waste disposal (introduction of substances that do not occur naturally in the habitat, from specific and non-specific sources). **GRI 304-2**

At the seedling nursery, we reproduce 250 species of plants, 24 of which are rare or endangered, and protected by law, such as the yellow ipê, cedar, pequi, jequitibá-branco, and aroeira-do-sertão

ENVIRONMENTAL EDUCATION

Our Environmental Development Center, composed by the nursery and the breeding site, has been developing for 29 years the environmental education program aimed at educational institutions in Araxá region, which addresses topics such as environmental technology, natural resources of the region, environment, culture and history. In 2021, together with the Civil Defense and the Fire Department, the program focused on the culture of accident prevention and was carried out in a hybrid manner – online and onsite -, in addition to being shown by TV Araxá Educa to also ensure the participation of the most remote schools. The project aims to share with children, teenagers, teachers, and employees the richness of the biome's fauna and flora, and all the environmental actions promoted by the Company. Since its creation, the environmental education program has reached more than 73 thousand people. As a reference to the impact dimension, Araxá has an estimated population of 108 thousand inhabitants. In addition to Cientistas do Cerrado (Cerrado Scientists) Project, aimed at the external public, we offer our employees, third parties and interns the Eye on the Future Project, which aims to strengthen the culture of sustainability.

More than simply reducing the impact of our operations, we want to leave a legacy of preservation and recovery of the fauna and flora of Cerrado Mineiro. We increasingly want to engage our employees, their families and our community in this work that is so relevant to everyone.

WASTE AND **DAMS**

GRI 103-2, 103-3 | 306, 306-2

Our Integrated Management Policy prioritizes non-generation of waste, therefore, we constantly conduct optimization projects in the consumption of inputs. For third parties, contracts have clauses on best environmental practices, including waste generation.

The waste generated by the organization in its own activities is managed by the Company. Management is carried out in accordance with specific environmental legislation and established internal procedures.

Our industrial park has six dams designed and built with the best engineering techniques at the time of their construction.

The structures undergo frequent checks and evaluations for continuous improvement, thus ensuring high safety standards. One of them is intended for sediment containment, another for the accumulation of fresh water and four for the disposal of waste/tailings from the niobium concentration process. Since the beginning of our operations, we have invested in processes that constantly improve the safety management of our structures and strengthen the transparent relationship with environmental agencies, public agents and the community.

All structures are constantly monitored through the Integrated Monitoring Center (CMI), which operates 24 hours a day, seven days a week. In the CMI, technicians can

verify the instrumentation, the operation of the dams and communicate quickly and effectively any anomaly that may compromise the safety of the structures. Actions to act in an eventual emergency situation are mapped and simulated periodically with the support of the Civil Defense and Protection Agencies, even though there is no population in the self-rescue zone or the possibility of tailings flows to urban areas. All these procedures are described and consolidated in the Dam Emergency Action Plan, available at our unit, in the Municipalities of Araxá, Ibiá and Perdizes, in the Fire Department of Araxá and in the Civil Defense agencies.

In addition to the operational procedures carried out by our own team, independent audits are carried out to check the hydraulic and structural integrity of the dams and attest to the safety of the structures. All information from dam safety management, external audits and Emergency Action Plans are managed based on the Dam Governance Policy, which establishes the procedures for engagement between the operational team, senior management and the Board of Directors.

Our technical team operates in the project stages, implementation, operation, and transformation phases of the dams. These professionals are responsible for verifying compliance with best practices and ensuring safe conditions to the structures.

In 2021, we obtained the Prior License (LP) of the Tailings Disposal Structures Project No. 9 (EDR9) granted by the Environmental Agency of the State of Minas Gerais. This is the first environmental authorization of the three-phase licensing process. This disposal system will be quite innovative and will have the disposal of consolidated fine tailings in a waterproofed dam and raised downstream and coarse tailings will be filtered and deposited dried in compacted stacks. The implementation works of this project are estimated to begin in the first half of 2023, after completion of the second stage of the licensing and authorization process of the environmental agency.

In the tailings/waste disposal dams that have already reached their useful capacities (Dams 4 and 5), works are being carried out to decharacterize their structures, that is, their areas are being reintegrated into the local environment. In 2022, Dam 5's works will be fully completed and, in 2023, Dam 4's transformation will also be completed.

The general assessment of the dams throughout 2021, either by the internal technical team or by External and Independent Auditors, attested that the dams are stable, with safety factors above those recommended by technical standards and required by the current legislation. As for dam and waste management, in 2021, BRL 116 million was invested and the total expected for next year is BRL 230 million: this increase of more than 90% is largely due to the beginning of implementation of the technology for treatment of tailings (densification) that are deposited in the current Dam 8.

The Company has also been developing new technologies that are significantly reducing the need for dams. For example, projects for dry tailings disposal are in progress, where the technical feasibility of stacking up to 40% of the generated tailings has already been evaluated, the licensing of this operation is underway. **GRI MM11**

In the Integrated Monitoring Center, technicians can check the instrumentation, the operation of the dams and communicate quickly and effectively any anomaly

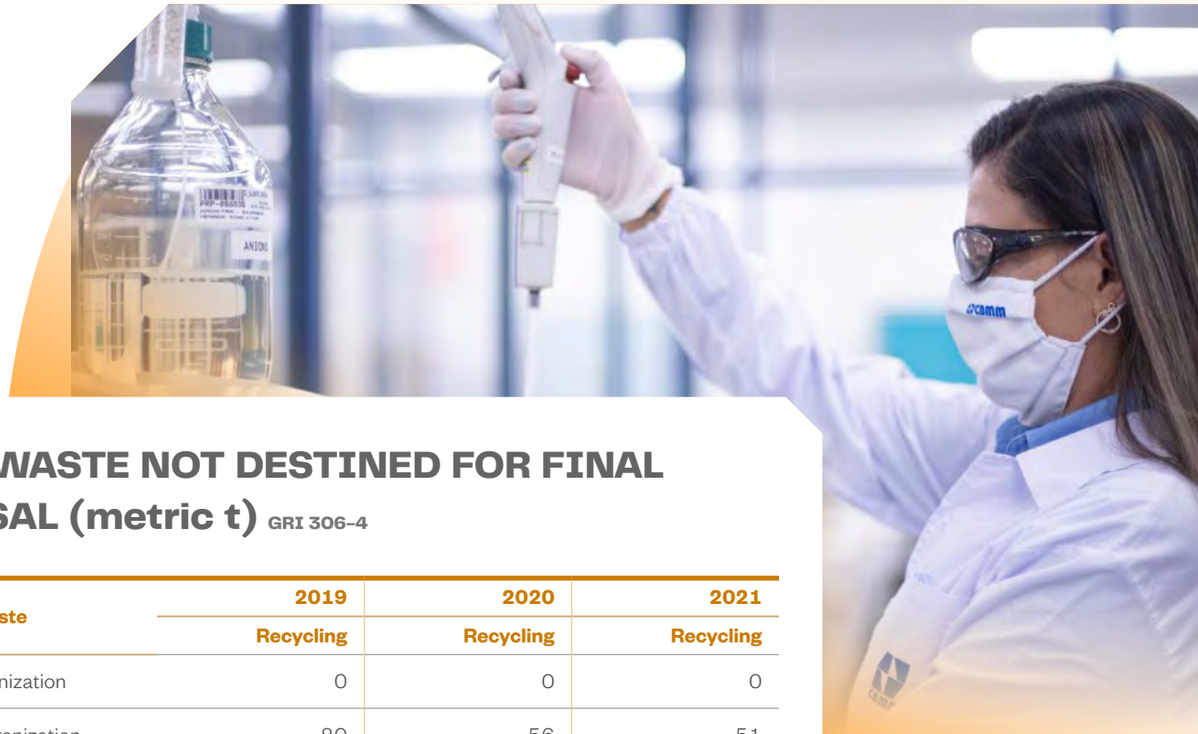
WASTE MANAGEMENT

GRI 306-3

Our waste management considers optimization of resources and pollution prevention. Thus, it is relevant to use raw materials, water and energy rationally and to extend the life cycle of materials to the maximum. When the Company does not reuse or recycle waste, it discharges it, as classified, in Class I and II waste cells, existing in the industrial park.

The use of the mine's waste for construction of industrial structures also contributes to the reduction of waste generation. As for the disposal of waste, we have the best technologies available on the market, with waterproofed dams downstream that allows recirculating 97% of the water. **GRI MM11**

In 2021, there was an increase of approximately 31% in waste generation due to the increase in manufacturing to meet the resumption of global demand for niobium products. **GRI 306-1**



WASTE GENERATED, BY BREAKDOWN (T) GRI 306-3

Total by type (t)	2019	2020	2021
Non-hazardous[1]	7.149.344	4.494.880	5.878.541
Hazardous[2]	4.362	2.719	3.831
Total	**7.153.706**	**4.497.599**	**5.882.372**

[1]Around 99% of the quantities of non-hazardous waste generated, including tailings, consists of process waste.

[2]In the hazardous waste category, it is mainly fine particles that are collected in the bag filters of the Refinery Departments.

TOTAL WASTE NOT DESTINED FOR FINAL DISPOSAL (metric t) GRI 306-4

Hazardous waste	2019	2020	2021
	Recycling	Recycling	Recycling
Within the organization	0	0	0
Outside the organization	80	56	51
Total	**80**	**56**	**51**
Non-hazardous waste	**2019**	**2020**	**2021**
	Unspecified method	Unspecified method	Unspecified method
Within the organization	69.482	41.721	53.338
Outside the organization	22.529	5.336	8.061
Total	**92.011**	**47.057**	**61.399**
Total	**92.091**	**47.313**	**61.450**

WASTE DESTINED FOR FINAL DISPOSAL BY OPERATION (metric t) GRI 306-5

Non-hazardous waste	2019		2020		2021	
	Landfill	Dams	Landfill	Dams	Landfill	Dams
Within the organization	139.943	6.744.136	92.934	4.170.790	91.528	5.543.070
Outside the organization	441	0	327	0	340	0
Total	140.384	6.744.136	93.261	4.170.790	91.868	5.543.070
Total		**6.884.520**		**4.264.051**		**5.634.938**

Hazardous waste[1]	2019		2020		2021	
	Landfill	Incineration	Landfill	Incineration	Landfill	Incineration
Within the organization	4.274	0	2.649	10	3.766	0
Outside the organization	0	4	0	0	0	10
Total	**4.274**	**4**	**2.649**	**10**	**3.766**	**10**
Total		**4.278**		**2.659**		**3.776**

[1] 100% of CBMM waste incineration process has energy recovery.

QUANTITIES OF MINERAL ACTIVITY WASTE (t)

GRI MM3

	2019	2020	2021
Overburden[1]	6.063.406	6.626.993	4.422.704
Waste[2]	6.737,199	4.170.790	5.543.070
Total	**12.800.605**	**10.797.783**	**9.965.774**

[1] Overburden is non-hazardous, inert waste (Class IIB). The 33% drop in 2021 is related to the intensification of ore mining/mineral processing activities, with a reduction in the removal of sterile material.

[2] Mining waste is non-hazardous and non-inert waste (Class IIA). The increase in generation in 2021 is associated with production demand in the period.

We use raw materials, water and energy rationally and extend the life cycle of materials to the maximum

ANNEXES

IN THIS CHAPTER

GRI CONTENT SUMMARY

GRI -102-55

GENERAL DISCLOSURES

GRI 101: Foundation 2016
GRI 101 has no content

ORGANIZATIONAL PROFILE

GRI Standards	Disclosure	Page	Omission	SDG
GRI 102: General disclosures 2016	102-1 Name of the organization	9		
	102-2 Activities, brands, products and services	9		
	102-3 Location of headquarters	11		
	102-4 Location of operations	11, 14		
	102-5 Ownership and legal form	12		
	102-6 Markets served	11, 14		
	102-7 Scale of the organization	14, 18		
	102-8 Information on employees and other workers	26, 39		8, 10
	102-9 Supply chain	49		
	102-10 Significant changes to the organization and its supply chain	None.		
	102-11 Precautionary Principle or approach	52		
	102-12 External initiatives	23		
	102-13 Membership of associations	34		

GRI Standards	Disclosure	Page	Omission	SDG
Strategy				
GRI 102: General disclosures 2016	102-14 Statement from senior decision-maker	3		
	102-15 Key impacts, risks and opportunities	3, 27, 28		
Ethics and integrity				
GRI 102: General disclosures 2016	102-16 Values, principles, standards, and norms of behavior	29		16
	102-17 Mechanisms for advice and concerns about ethics	30		16
Governance				
GRI 102: General disclosures 2016	102-18 Governance structure	26		
	102-20 Executive-level responsibility for economic, environmental, and social topics	26		
	102-22 Composition of the highest governance body and its committees	27		
	102-23 Chair of the highest governance body	Does not exercise executive function. In addition to the Administrative, it integrates Strategy and People committees.		
	102-30 Effectiveness of risk management processes	20, 27		
	102-31 Review of economic, environmental, and social topics	26		
Stakeholder engagement				
GRI 102: General disclosures 2016	102-40 List of stakeholder groups	6, 7		
	102-41 Collective bargaining agreements	39		8
	102-42 Identifying and selecting stakeholders	6		
	102-43 Approach to stakeholder engagement	6, 25, 41		
	102-44 Key topics and concerns raised	6, 7, 25, 41		

GRI Standards	Disclosure	Page	Omission	SDG
Reporting practice				
GRI 102: General disclosures 2016	102-45 Entities included in the consolidated financial statements	It includes the entire business of the company.		
	102-46 Defining report content and topic Boundaries	7		
	102-47 List of material topics	7		
	102-48 Restatements of information	None.		
	102-49: Changes in reporting	5		
	102-50 Reporting period	5		
	102-51 Date of most recent report	Publlished on July 2021, for the year 2020.		
	102-52 Reporting cycle	5		
	102-53 Contact point for questions regarding the report	5		
	102-54 Claims of reporting in accordance with the GRI Standards	This report was prepared in accordance with the GRI Standards, Core option.		
	102-55 GRI content index	69		
	102-56 External assurance	5, 78, 79		

MATERIAL TOPICS

GRI 200 SERIES ECONOMIC TOPICS

GRI Standards	Disclosure	Page	Omission	SDG
Economic Performance				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 36		
	103-3 Evaluation of the management approach	36		
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed		Indicator not managed by the Organization.	8, 9
	201-2: Financial implications and other risks and opportunities due to climate change	53		13
Indirect economic impacts				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 47		
	103-3 Evaluation of the management approach	47		
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	48		5, 9, 11
	203-2 Significant indirect economic impacts	48		1, 3, 8

GRI 300 SERIES ENVIRONMENTAL TOPICS

GRI Standards	Disclosure	Page	Omission	SDG
Materials				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 49, 56		
	103-3 Evaluation of the management approach	49, 56		
GRI 301: Materials 2016	301-1 Materials used by weight or volume	49		8, 12
	301-2 Recycled input materials used	56		8, 12

GRI Standards	Disclosure	Page	Omission	SDG
Energy				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 58		
	103-3 Evaluation of the management approach	58		
GRI 302: Energy 2016	302-1 Energy consumption within the organization	58		7, 8, 12, 13
	302-2 Energy consumption outside of the organization	58		7, 8, 12, 13
	302-3 Energy intensity	58		7, 8, 12, 13
	302-4 Reduction of energy consumption	In 2021, there were no projects with the PDCA (plan–do–check–act) and Lean Kaizen methodologies that in 2020 led to a 22.426 GJ reduction in energy consumption.		7, 8, 12, 13
	302-5 Reductions in energy requirements for products and services			7, 8, 12, 13
Water and effluents				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 57		
	103-3 Evaluation of the management approach	57		
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	57		6, 12
	303-2 Management of water discharge-related impacts	57		6
	303-3 Water withdrawal	57		6, 8, 12
	303-4 Water discharge	57		6
	303-5 Water consumption	57		6
Biodiversity				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 60		
	103-3 Evaluation of the management approach	60		

GRI Standards	Disclosure	Page	Omission	SDG
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	61		6, 14, 15
	304-2 Significant impacts of activities, products and services on biodiversity	61		6, 14, 15
	304-3 Habitats protected or restored	61		6, 14, 15
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations		There is no quantification of planted species according to extinction risk classification.	6, 14, 15
Mining Sector - Biodiversity	MM1 Amount of land (owned or leased, used for productive or extractive activities) altered or rehabilitated	19	There is no map of land use and occupation with all the requested characteristics.	3, 6, 12, 14, 15
Emissions				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 53, 54		
	103-3 Evaluation of the management approach	53, 54		
GRI 305: Emissions 2016	305-1: Direct (Scope 1) GHG emissions	55		3, 12, 13, 14, 15
	305-2 Energy indirect (Scope 2) GHG emissions	55		3, 12, 13, 14, 15
	305-3 Other indirect (Scope 3) GHG emissions	55		3, 12, 13, 14, 15
	305-5 Reduction of GHG emissions	54		13, 14, 15
Waste				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 56, 63		
	103-3 Evaluation of the management approach	56, 63		

GRI Standards	Disclosure	Page	Omission	SDG
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	56, 66		3, 6, 11, 12
	306-2 Management of significant waste-related impacts	63		3, 6, 11, 12
	306-3 Waste generated	66		3, 6, 12, 14, 15
	306-4 Waste diverted from disposal	66		3, 11, 12
	306-5 Waste directed to disposal	67		3, 6, 11, 12, 14, 15
Mining Sector Supplement – Effluents and waste	MM3 Total quantities of sterile, tailings and sludge and their associated risks	67		3, 6, 12
Materials Management				
Mining Sector Supplement – Materials Administration	MM11 Programs and progress related to materials administration	56, 65		7, 8, 9, 12, 13, 17
Environmental compliance				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 32, 51		
	103-3 Evaluation of the management approach	32, 51		
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	No cases of non-compliance with environmental laws and/or regulations were identified in 2021.		16

GRI 400 SERIES SOCIAL TOPICS

GRI Standards	Disclosure	Page	Omission	SDG
Occupational health and safety				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 32, 44		
	103-3 Evaluation of the management approach	32, 44		

GRI Standards	Disclosure	Page	Omission	SDG
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	44		8
	403-2 Hazard identification, risk assessment and incident investigation	44		3, 8
	403-3 Occupational health services	44		3, 8
	403-4 Worker participation, consultation, and communication on occupational health and safety	44		8, 16
	403-5 Worker training on occupational health and safety	44		8
	403-6 Promotion of worker health	44		3
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	44		8
	403-8 Workers covered by an occupational health and safety management system	44		8
	403-9 Work-related injuries	44, 45		3, 8, 16
	403-10 Work-related ill health	44		3, 8, 16
Training and education				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 42		
	103-3 Evaluation of the management approach	42		
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	42, 43		4, 5, 8, 10
Local communities				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its Boundary	7		
	103-2 The management approach and its components	30, 47		
	103-3 Evaluation of the management approach	47		
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programmes	48		
	413-2 Operations with significant actual and potential negative impacts on local communities	48		1, 2
Mining Sector Supplement – Local Communities	MM6 Number and description of significant conflicts concerning land use and customary rights of local communities and indigenous peoples		There are no occurrences of land use conflict at the CBMM site of operation.	1, 2
	MM7 To what extent mechanisms for referral of claims and grievances were used to resolve conflicts relating to land use, customary rights of local communities		There are no occurrences of land use conflict at CBMM locations.	1, 2

OWN INDICATORS

Acronym	Topic	Page
CBMM-01	Technology and Innovation	18
CBMM-02	Material Production Control Planning	18, 35

SUSTAINABLE DEVELOPMENT GOALS

INDEPENDENT AUDITOR'S LIMITED ASSURANCE REPORT ON THE NON-FINANCIAL INFORMATION INCLUDED IN THE 2021 SUSTAINABILITY REPORT GRI 102-56

To the Board of Directors and Shareholders
Companhia Brasileira de Metalurgia e Mineração
Araxá - MG

Introduction
We have been engaged by Companhia Brasileira de Metalurgia e Mineração ("Company" or "CBMM") to present our limited assurance report on the non-financial information included in the 2021 Sustainability Report of CBMM for the year ended December 31, 2021.

Our limited assurance does not cover prior-period information, or any other information disclosed together with the 2021 Sustainability Report, including any incorporated images, audio files or videos.

Responsibilities of the management of CBMM
The management of Companhia Brasileira de Metalurgia e Mineração is responsible for:

- selecting or establishing adequate criteria for the preparation and presentation of the information included in the 2021 Sustainability Report;
- preparing the information in accordance with the criteria and guidelines of the Global Reporting Initiative (GRI-Standards) and with the basis of preparation developed by the Company;
- designing, implementing and maintaining internal controls over the significant information for the preparation of the information included in the Sustainability Report, which is free from material misstatement, whether due to fraud or error.

Independent auditor's responsibility
Our responsibility is to express a conclusion on the non-financial information included in the 2021 Sustainability Report, based on our limited assurance engagement carried out in accordance with the Technical Communication CTO 01 – Issuance of Assurance Reports related to Sustainability and Social Responsibility, issued by the Federal Accounting Council (CFC) , based on the Brazilian standard NBC TO 3000, "Assurance Engagements Other than Audit and Review", also issued by the CFC, which is equivalent to the international standard ISAE 3000, "Assurance engagements other than audits or reviews of historical financial information", issued by the International Auditing and Assurance Standards Board (IAASB). Those standards require that the auditor complies with ethical requirements, independence requirements, and other responsibilities of these standards, including those regarding the application of the Brazilian Quality Control Standard (NBC PA 01) and, therefore, the maintenance of a comprehensive quality control system, including documented policies and procedures on the compliance with ethical requirements, professional standards and relevant legal and regulatory requirements.

Moreover, the aforementioned standards require that the work be planned and performed to obtain limited assurance that the non-financial information included in the 2021 Sustainability Report, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with the Brazilian standard NBC TO 3000 and ISAE 3000 mainly consists of making inquiries of management and other professionals of CBMM involved in the preparation of the information, as well as applying analytical procedures to obtain evidence that allows us to issue a limited assurance conclusion on the information, taken as a whole. A limited assurance engagement also requires the performance of additional procedures when the independent auditor becomes aware of matters that lead him to believe that the information disclosed in the Sustainability Report taken as a whole might present significant misstatements.

The procedures selected are based on our understanding of the aspects related to the compilation, materiality, and presentation of the information included in the 2021 Sustainability Report, other circumstances of the engagement and our analysis of the activities and processes associated with the significant information disclosed in the 2021 Sustainability Report in which significant misstatements might exist. The procedures comprised, among others:

(a) planning the work, taking into consideration the materiality and the volume of quantitative and qualitative information and the operating and internal control systems that were used to prepare the information included in the 2021 Sustainability Report;

(b) understanding the calculation methodology and the procedures adopted for the compilation of indicators through inquiries of the managers responsible for the preparation of the information;

(c) applying analytical procedures to quantitative information and making inquiries regarding the qualitative information and its correlation with the indicators disclosed in the 2021 Sustainability Report; and

(d) when non-financial data relate to financial indicators, comparing these indicators with the financial statements and/or accounting records.

The limited assurance engagement also included the analysis of the compliance with the guidelines and criteria of the Global Reporting Initiative (GRI-Standards) and the provisions established in the basis of preparation developed by the Company.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Scope and limitations
The procedures applied in a limited assurance engagement vary in nature and timing and are less detailed than those applied in a reasonable assurance. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the level that would be obtained in a reasonable assurance engagement. If we had performed a reasonable assurance engagement, we might have identified other matters and possible misstatements in the information included in the 2021 Sustainability Report. Therefore, we do not express an opinion on this information.

Non-financial data are subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate and estimate these data. Qualitative interpretations of the relevance, materiality, and accuracy of the data are subject to individual assumptions and judgments. Furthermore, we did not consider in our engagement the data reported for prior periods nor future projections and goals.

The preparation and presentation of non-financial information and indicators followed the definitions of the basis of preparation developed by the Company and the guidelines of the Global Reporting Initiative (GRI-Standards) and, therefore, the information included in the 2021 Sustainability Report does not have the objective of providing assurance with regard to the compliance with social, economic, environmental or engineering laws and regulations. However, the aforementioned standards establish the presentation and disclosure of possible cases of non-compliance with such regulations when sanctions or significant fines are applied. Our assurance report should be read and understood in this context, inherent to the criteria selected and previously mentioned in this paragraph.

Conclusion
Based on these procedures performed, described herein, and on the evidence obtained, no matter has come to our attention that causes us to believe that the non-financial information included in the 2021 Sustainability Report of Companhia Brasileira de Metalurgia e Mineração has not been prepared, in all material respects, in accordance with the criteria of the basis of preparation and guidelines of the Global Reporting Initiative (GRI-Standards).

São Paulo, June 1st 2022.

PricewaterhouseCoopers Ltda.
Independent Auditors
CRC 2SP000160/O-5

Maurício Colombari
Accountant CRC 1SP195838/O-3

CREDITS

CBMM

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Georgia Gomes Bemfica

Support

CBMM employees who subsidized
the report with information and suggestions

Consultant

Bruno Fernando Riffel - Leben Consultoria Ltda.

CONTENT, DESIGN AND CONSULTING

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Fábio Valverde – project management
Cristina Sant'Anna and Rejane Lima – content
Thatiele Moura – GRI consultancy
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www.gruporeport.com.br

PHOTOGRAPHS

CBMM stock photos

EXTERNAL ASSURANCE

PwC