



Sustainability
MRN 2021

The pride of the present
in every step into the future.





There is a big difference between being present in the Amazon and being part of it. And this begins in learning, in the immeasurable inspiration provided by the strength, the wealth, and the people who make it unique.

MRN is present and is part of this history. A history marked by listening, by the relationship with nature and local culture. To live the region, to respect and to understand its unique context that permeates the meanderings of everyone, of those who belong to that land and of those who have made a choice to live there. To feel the pulse of each action and to trace the natural relationships existing among all of them. To connect.

The consequence generated by these connections broadens the dialog, provides new learning, and strengthens partnerships.

The Amazon teaches that everything is MOVEMENT.

In this report, you will learn details about the way MRN develops sustainable mining in the Amazon, with respect for man and the environment, and how this has transformed the lives of thousands of people.

Enjoy it!

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A word from the CEO



2021. A year in which our commitment to people and the environment was reflected, expanded, and reverberated in many actions.

It is a pleasure to bring you a summary of what we did in 2021. In five years as MRN's CEO, I am convinced that my purpose has become increasingly solid: to add to the initiatives that have made MRN a world benchmark in sustainable mining.

And this translates into business results. We are marked by a culture of respect and care for people and the environment. This way of being makes those who relate to MRN share the same purpose, so that together we can build a better future for everyone.

The Amazon: a place that connects everything.

This differentiated way begins naturally in a learning process with the region itself. We are involved in an ecosystem where everything is movement: rivers, communities, fauna and flora. All being connected and in balance. And every day MRN is inspired to be an integral part of this process. Being here is more than working in a company and taking care of a project. It is about caring for the surroundings, the forest, the rivers, and the people.

Throughout the year, we continued consolidating socioenvironmental projects that promote the transformation of life through environmental preservation, encouragement for education and culture, promotion of health, and opportunities for income generation.

We do believe that it is possible to operate in a sustainable and conscious way. We are a proof of this by developing a mining industry with initiatives that drive development, people's prominence, and add to the construction of a sustainable legacy for future generations.

Reforestation. 7.5 thousand hectares in 42 years.

MRN replanted 523.8 hectares in 2021, totaling 7.5 thousand hectares in 42 years. A commitment that makes us even prouder due to the participation of the community, who have the opportunity to earn income by providing the seeds for our Tree Nursery, with a production capacity of one million seedlings per year. In addition, we invest in technology and innovation in our operations, always adopting the best global practices in the market.


More than R\$23 million in socioenvironmental programs.

Another important highlight is our socioenvironmental initiatives (voluntary and in compliance with requirements), support, and sponsorships in the communities. More than R\$23 million were invested in key actions, such as income generation, education, culture, health, and environmental and asset preservation.

ASI Certification and Chain of Custody.

To be ready for thinking ahead.

One of the milestones of the year was obtaining the ASI - Aluminium Stewardship Initiative Performance Standard certificate, the only global voluntary sustainability initiative for the aluminum value chain, with 59 principles ranging from biodiversity and leadership to transparency and management policies. The seal attests to the market and the society the company's commitment to sustainable bauxite production. We are in the Amazon, within a conservation unit, and the constant search for responsible production becomes even more significant.



After the Performance Standard certification, our next challenge is the achievement of the CoC ASI Standard, which sets the requirements for the creation of a Chain of Custody for the material that is produced and processed through the aluminum value chain. MRN has been working hard to adapt its internal processes from bauxite ore extraction to final shipment to customers, thus closing the aluminum's chain of custody cycle.

ESG. Commitment that requires continuity.

ESG (Environmental, Social and Corporate Governance) is a theme that permeates MRN's operation. Our management is geared at exceeding the requirements of the legislation, with respect to the constant dialog with the various stakeholders. The initiatives that contribute to this operating model include full compliance with socioenvironmental requirements, the quest for continuous improvement in our processes, relationships with neighboring communities, and transparency toward the society at large.

The company also vehemently combats the violation of human and labor rights, and encourages the adoption of best global integrity practices throughout its supply chain.

Through the Sustainability Committee, the managers of the areas involved in assessing the risks and impacts of the operation are constantly trained and committed to the vision of sustainable bauxite mining.

New branding platform. To show the world the pride in being MRN.

MRN has always maintained a strong relationship with people and nature, thus providing the world the raw material for one of the metals most broadly used by the modern society – aluminum. We are proud to be part of a history that integrates economic development and sustainability in the region where we operate.

It is this feeling, this way of doing and acting that MRN incorporates in its new branding platform. I would say that it is not a new positioning, but rather strengthening the company's operation philosophy. The Company brings together what it already does on a daily basis, with direct and indirect employees, neighboring communities and cities, and other social players: the way of doing things driven by dialog, by real connections.

Diversity. Together we are more.

We celebrate one year of our diversity and inclusion program, 'MRN pra Todos' (MRN for Everyone), which seeks more inclusive and integrated environments with respect and equity of gender, ethnic origin, religious beliefs, sexual orientation, different skills or backgrounds.

The program provides for a strong educational bias about respecting differences and leads to rethinking the company's actions in order to secure equity both in people management policies and practices, and in business strategy. Furthermore, the initiative allows for combining different cultures and providing unique experiences that add value, promote innovation, improve coexistence, and enable the exchange of learning through a diversified, inclusive team.

GPTW – Unprecedented recognition.



Finally, we are proud to be part, for the first time, of the **Great Place to Work** – Industry, ranking 38th in the Large Size category. In the same year, the company also achieved the 4th place in the local category, moving up four positions from 2020, as one of the best companies to work for in the Northern region.



2021.
**I am proud to share
it with you.**

Guido Germani



New Branding



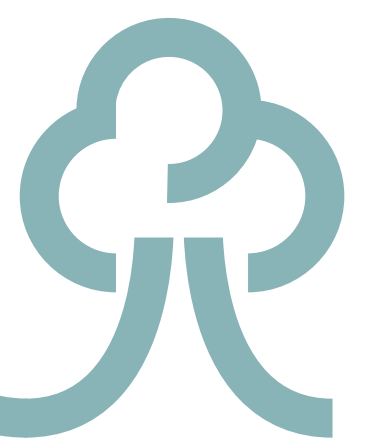


The new brand
that translates
our purpose and
the MRN way.

2021 ended with great news for everyone who is related to MRN, such as direct and indirect employees, partners, neighboring communities, and the entire ecosystem that drives the company to be what it is. That is, it is no surprise for those who participate in this history dedicated to the economic development linked to sustainability.

In November, MRN introduced its **new branding platform**, the most daring change in its history, which now showcases the company with new colors, shapes and speech, bringing together all the values that highlight its purpose of contributing to social and human development and nature preservation.

**Transformation is the business.
Ore, people, and the environment.
Always for the better.**



Transformation. MRN's core business is intertwined with the entire production process. Each stage of bauxite production goes through initiatives that contribute to the quality of life of the population, respect for cultures and traditions and environmental conservation.

Therefore, the transformation of the logo, visual communication, and adoption of a closer speech were not a complete surprise, thus bringing transparency and openness to dialog to all of those who relate to the brand.

“

In my opinion – I've been here for over 25 years now – it's somewhat strange. New uniforms, this new brand. But then I realized that it has everything to do with what we have always done. Here we always think about people and the environment. I could say that our bauxite is full of life. And, ultimately, everything this new communication has brought is just like us!

Aureclévea Coelho, Technical Manager of the Beneficiation Area of MRN.

”

And a brand that is part of the lives of so many people couldn't help but listen to them.

“

It was a long process of listening to partners, suppliers and public authorities. The perception of most of them is that we are a responsible mining company, one that is committed to the environment and engaged in transforming the community around us. And we felt this way of being was missing in our communication.



Evaldo Printes, Communications Analyst who assisted the team responsible for designing the new branding.

”

And dialog took place from the beginning to the end. The employees were called to get to know the brand firsthand, before internal campaigns geared at the community, in communication channels, redesign of MRN's site and visual communication. The new brand is supported by a purpose that is in tune with its essence: "Bauxite that connects us to the sustainable world" and the motto "Sustainable Bauxite – from Pará to the world", which confirms the pride of being and valuing its place of origin, reverberating this legacy on all continents.

“

MRN is a benchmark in its production process in the respect for the people and the environment. The strengthening of this positioning is not about a change in the company, but to show and highlight what we already do, strengthening the connections we have to everything around us and to the world.

”



Karen Gatti, General Communications Manager

The visible changes to the brand include, the colors and graphic elements, in addition to the more organic and smoother forms. The shade of green chosen for the brand reflects respect for the environment and the construction of a sustainable legacy for the entire ecosystem.



The element below the typography, now totally redesigned, makes reference to the riverbed, showing the connections with the company's business, since the bauxite is shipped by river. The new component also reaffirms the connections with people and the environment.

MRN's logo has changed over time while keeping the original lines. These lines are still referenced in the new brand. However, they have gained a new concept, with rounded colors and shapes, which create a connection with the region.



1976



2003



2021



*At the same time, the new brand manages to establish a communication link with the essence of our business and with our purpose, which is to operate with sustainability. For all that, we want to be the pride not only of the people of Pará, but also of Brazil. Our way of doing things is driven by dialog, by real connections and by the legacy to the one that provides us with everything: **the Amazon Forest.***

Guido Germani, MRN's CEO.



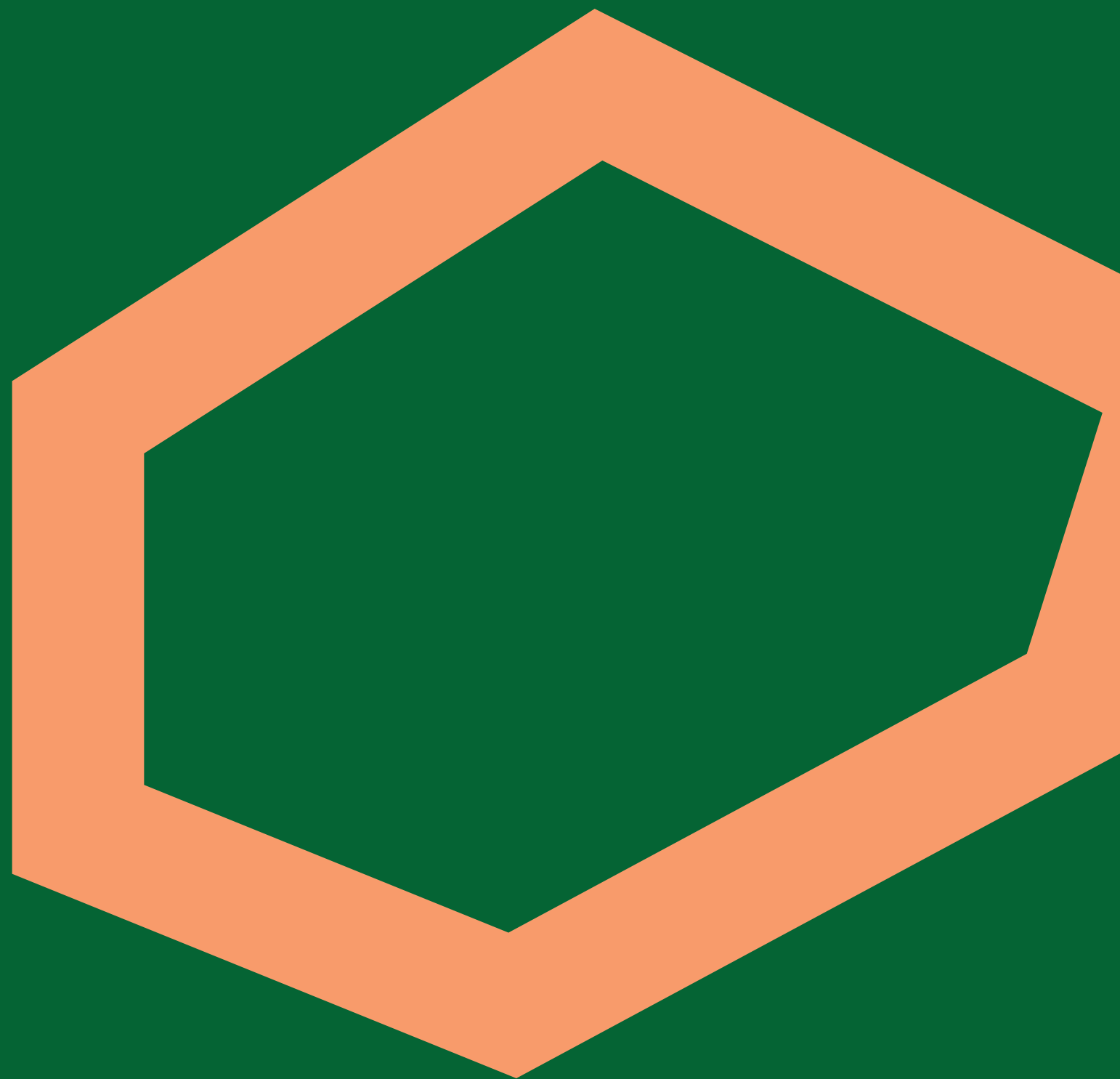
Watch the launch video



Learn more about the new brand



MRN Profile



Introducing MRN.

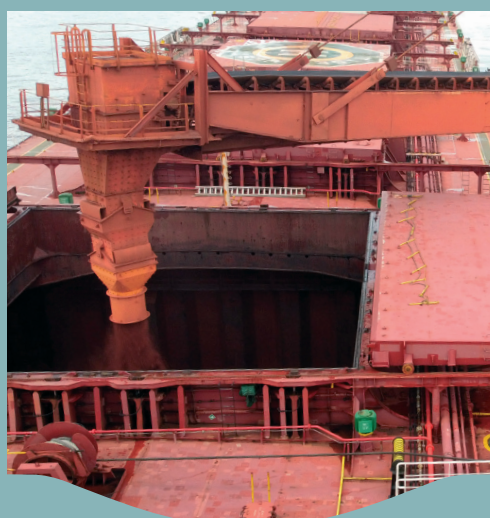
To size the extent of the actions to which you will have access in this publication, nothing better than a brief introduction. Some figures, information, and many values that are part of the DNA of the company, which is committed to sustainability throughout its production chain.



More than 5 thousand professionals



More than 12 million tons of bauxite produced per year



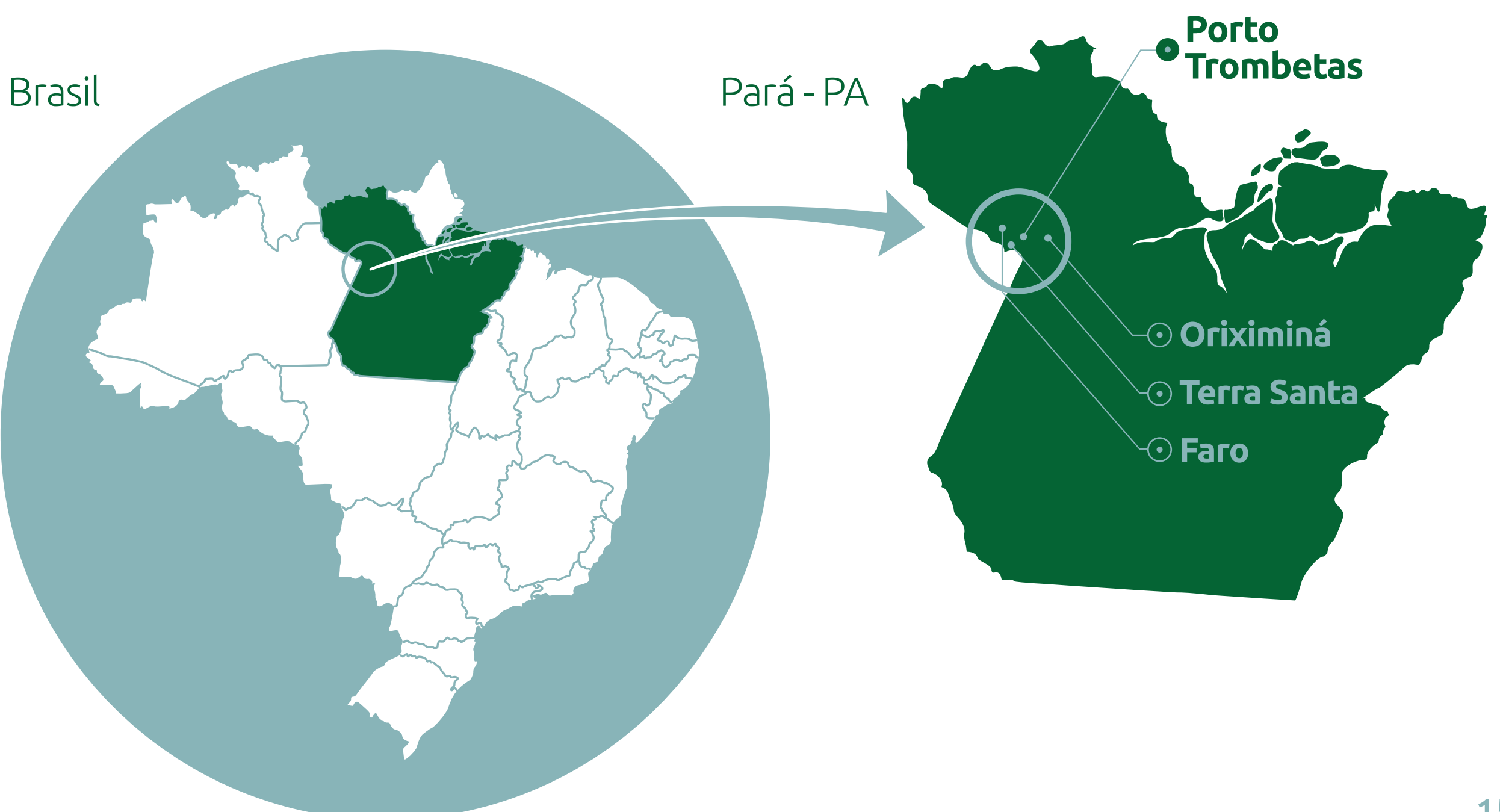
Exports to three continents



More than 60 socioenvironmental initiatives in the region where it operates

Located in Pará, connected to the world.

Headquartered in the district of Porto Trombetas, in western Pará, MRN maintains operations that cover the municipalities of Oriximiná and Terra Santa. MRN is present in the heart of the Amazon region and very close to important economic and tourist centers in the Northern Region, such as Santarém (in Pará State), Parintins and Manaus (in Amazonas State).



Vision

To be an excellence-oriented, sustainable company and a benchmark in the mineral sector throughout the life cycle of the business.

Mission

To produce bauxite while meeting customer's needs and generating return to shareholders and respecting people and the environment.

Purpose

To produce bauxite that contributes to a sustainable world.

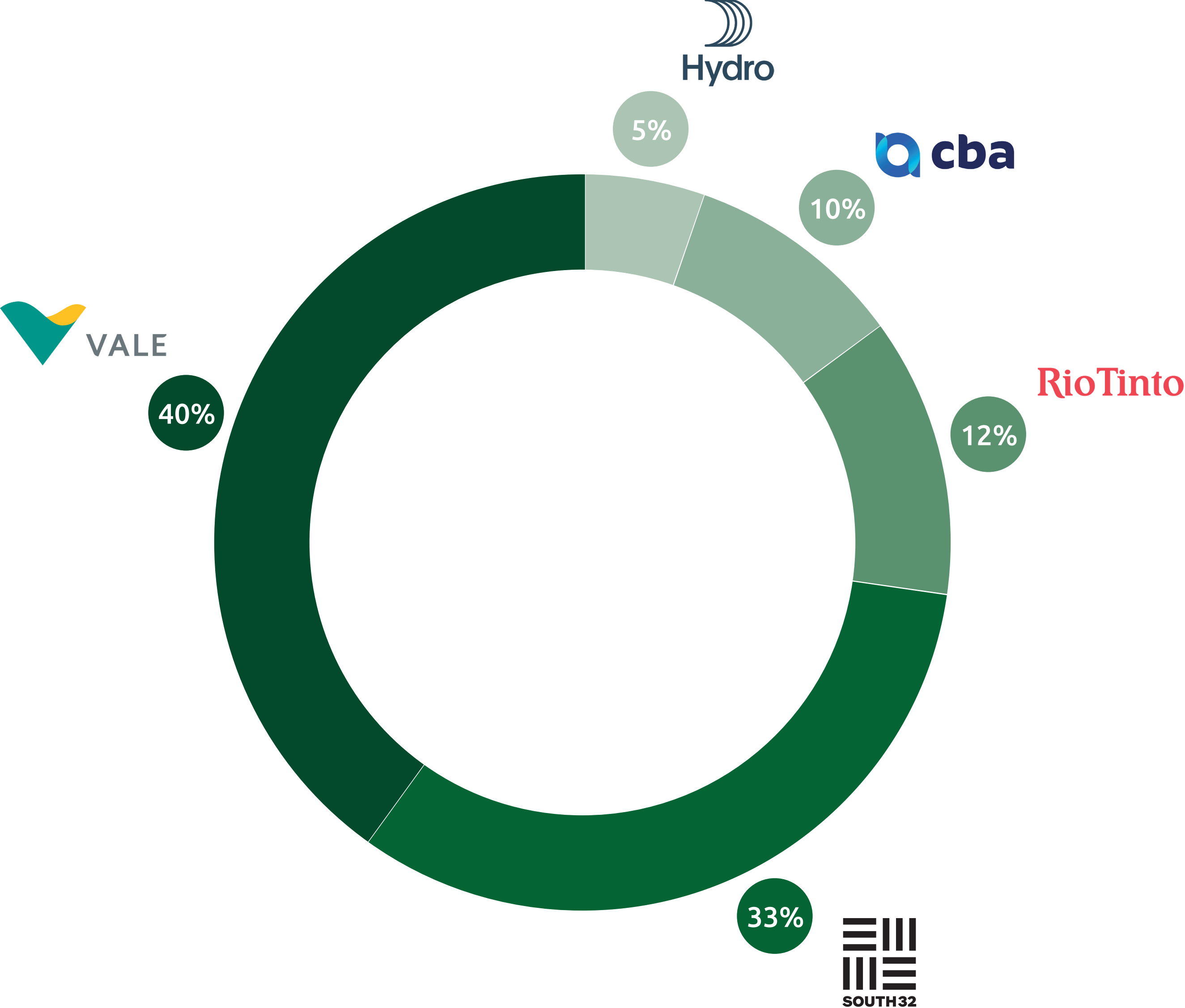
Values

Safety, respect, integrity, sustainability and continuous improvement.



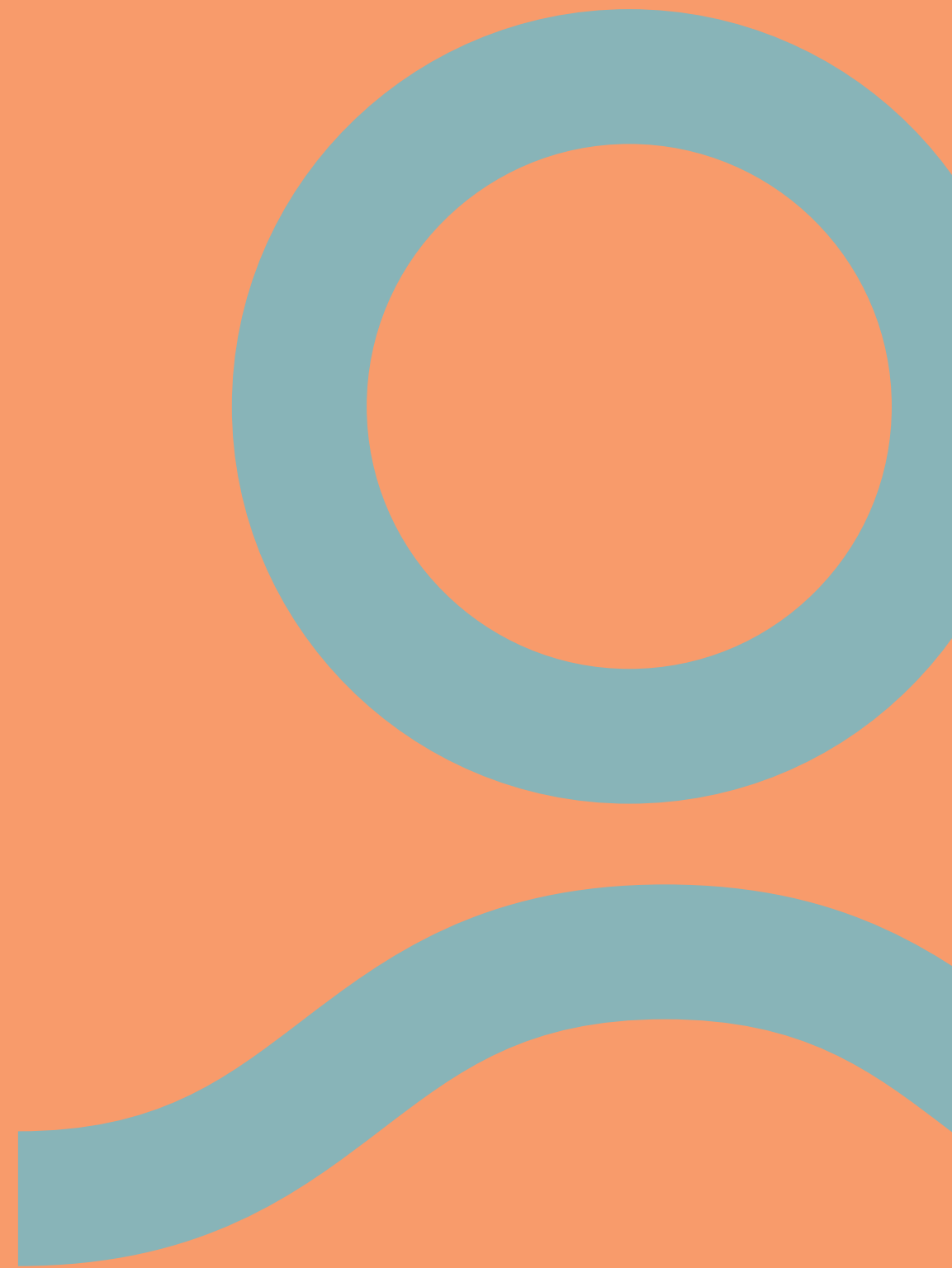


Shareholding Structure:





Governance



Attaining the ASI (*Aluminium Stewardship Initiative*) Performance Standard certification embraces a new way of thinking and acting.

Planning based on the current scenario and prospective trends. This is how MRN defines the short-, medium- and long-term directions of the company. More than financial results, the company pursues the best for the environment and the people, whether customers, employees, contractors, community and the society at large.

The guidelines that underpin management steer the legal compliance with constraints and seek to contribute to a more sustainable world.

Integrated Management System (IMS).

MRN's IMS guides and controls the performance of its guidelines based on three sustainability-related pillars, namely: environment, social and governance.

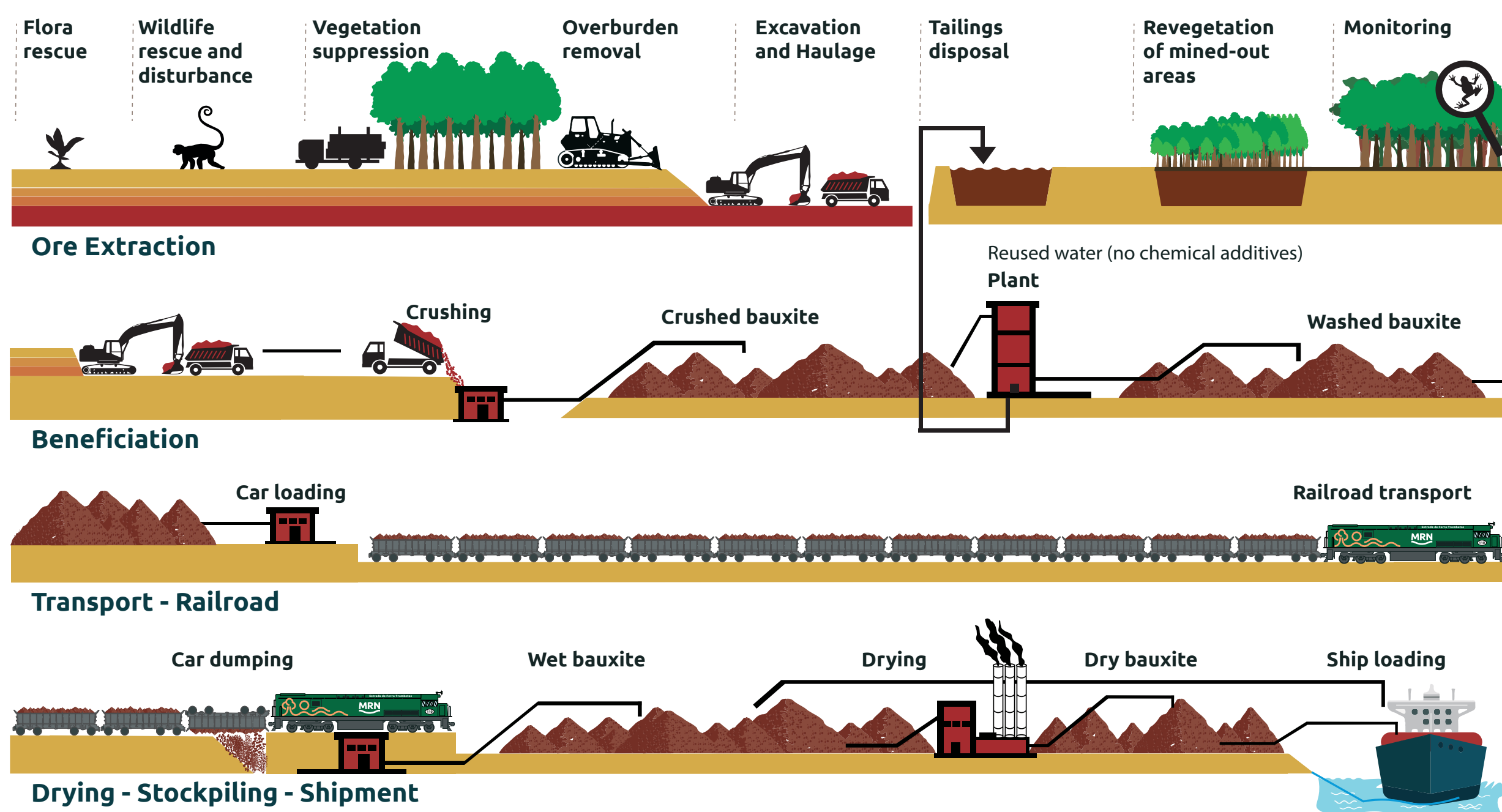
Early in 2022, MRN achieved an important addition to its IMS by obtaining the ASI certification, which is the only comprehensive voluntary global sustainability-related initiative for the aluminum value chain.

The ASI Performance Standard establishes 11 requirements, broken down into the 3 ESG (Environment, Social, Governance) pillars, as shown below:

ASI (<i>Aluminium Stewardship Initiative</i>) Criteria and Requirements		
GOVERNANCE	ENVIRONMENT	SOCIAL
1 COMPANY INTEGRITY	5 GREENHOUSE GAS EMISSIONS	9 HUMAN RIGHTS
2 POLICY AND MANAGEMENT	6 EMISSIONS, EFFLUENTS AND RESIDUES	10 LABOR RIGHTS
3 TRANSPARENCY	7 WATER RESIDUES MANAGEMENT	11 OCCUPATIONAL HEALTH/SAFETY
4 MATERIALS MANAGEMENT	8 BIODIVERSITY	

The ASI requirements are implemented in a cross-sectional manner within MRN and permeates all the company's processes, whether management, product execution and support processes.

Get to know our operation



Integrated Management.

With the ASI certification, MRN advances even more towards improving the Integrated Management System and its processes, especially regarding the adoption of ESG requirements.

Environment.

MRN's operations are carried out in the middle of the Amazon forest and play a decisive role in environmental conservation, considering natural resources and people at local and global level.

In view of this, the company takes special care with plant and animal species, the water table, and the soil, prioritizing the protection of the surrounding ecosystem and the Amazon biome.

The actions are fully supported by environmental permitting processes and the procedures adopted by the teams are guided by legislation, authorizations, permits, local bylaws, and voluntary commitments.

To complement environmental management, as proactive measures, MRN plans for plant suppression, the management of industrial/urban waste and replanting of areas. The company is also committed to a 23% reduction in the emission of greenhouse gases by 2030.

Social.

With the ASI certification, the commitment to human rights has gained even more strength in the company. The priorities include dialogs with traditional populations neighboring the company's areas of operation, such as riverside dwellers and Quilombolas (descendants of Afro-Brazilian slaves).

MRN performs Human Rights Due Diligence (HRDD), which is a periodic independent technical audit as a tool and methodology to verify the company's performance in view of the human rights principles and norms in observance of the responsibility to respect them regardless of the states where it operates. It also implies the prevention and remediation of negative impacts on human rights. In HRDD, the actual and potential impact of its activities is measured and accounted for by means of reports, among other means.

The relations with employees and contractors are based on the labor legislation, and MRN provides all the infrastructure support, remuneration and training, so they can better perform their activities with professional appreciation and safety.





Governance.

MRN's corporate responsibility is based on values such as integrity, compliance, transparency and corporate responsibility. It is the trust that governs the relations with stakeholders, whether communities, governmental and non-governmental agencies, direct employees, outsourced workers, family members, suppliers and investors, among others.

MRN's leadership is committed to establishing and disseminating the Compliance conduct to meet the requirements of national, state and local legislation applicable to all the areas in the Company by adopting the best tools for managing compliance-oriented requirements.

MRN partners with institutions representing the mining sector, such as the Brazilian Mining Institute (IBRAM) and the Brazilian Aluminum Association (ABAL), so as to converge interests for the company, the government and the society at large.

Integrated Management Policy.

MRN's Integrated Management Policy guidelines are unfolded by the leadership that follows the implementation thereof in all levels of the organization by engaging the teams into understanding and complying with maximum corporate sustainability standards.

In 2021, MRN updated its Integrated Management Policy by prioritizing aspects such as:

- Meeting stakeholders' legal, institutional, and contractual requirements.
- Permanent relations with customers, suppliers, communities and others, with a commitment to inquiries and participation of employees.
- Providing adequate resources to manage business risks while meeting quality, safety, occupational health, and socioenvironmental requirements.
- Preventing work-related accidents and diseases by assessing and monitoring possible risks.
- Environmental protection through its operations and commitment to continuous improvement of environmental performance by means of sustainable activities.
- Social and human rights commitments related to freedom of association, gender and racial equality, forced, slave or compulsory labor, child labor, discrimination relating to employment and its activities, sexual exploitation, especially those involving children and adolescents.
- Compliance with the Code of Conduct, thus preserving the integrity of the company with regard to conflicts of interest, corruption, extortion and bribery practices, and respect for good practices in the interaction with labor, the environment and the society.
- Involvement of employees in decision-making processes related to the company's management system, focusing on risks and business excellence.
- Continuous performance improvement to increase operational performance, value creation, increased competitiveness, and human development through new technologies and innovation opportunities.
- Establishing responsibilities, objectives, and goals to guide the systematic and continuous evaluations of processes and dissemination of results achieved and everyone's contribution in meeting the goals.

Management of Business Risks.

In 2021, we advanced in the qualification of internal auditors to improve the quality of process risk assessment and adopted the best global risk management practices, taking the following as references:

International Risk Management Standard – ISO 31000.

Act No. 13.709/18 – General Data Protection Act (LGPD).

COSO-ERM – Committee of Sponsoring Organizations of Treadway Commission.

Federal Act No. 11.846 – Anticorruption and Government Agency Relations Policy.

COSO Internal Control.

Corporate Code of Compliance, IBDEE (Brazilian Institute of Business Law and Ethics).

For MRN, the strict identification of non-conformities is important to address situations as opportunities for improvement. It is a way of seeing the existence of problems in order to solve them.

Main actions:

Benchmarking with mining companies.

Structuring of the GRC (Governance, Risk, Compliance) model.

Implementation of shareholders' audit recommendations and risk management consulting.

Implementation of risk controls.

Optimizations to the risk management software.

Highlights and improvements

Systematization of the risk control methodology.

Multidisciplinary teams for risk assessment.

More effective probability and impact measurements for risk assessment.

Increased frequency of audits throughout the year.

Adding the assessment of social impacts in all risks.

Financial analysis of the company's main risks.

Development of inherent and residual risk monitoring.

Standardization and exclusion of obsolete and redundant controls

Risk Management Process Framework.

The Risk Management process is conducted according to the methodology and criteria defined by MRN, based on the 7 stages presented in the flow chart below:



Each stage is conducted thoroughly by observing the internal and external environment as well as the events that may hinder the achievement of the company's business objectives.

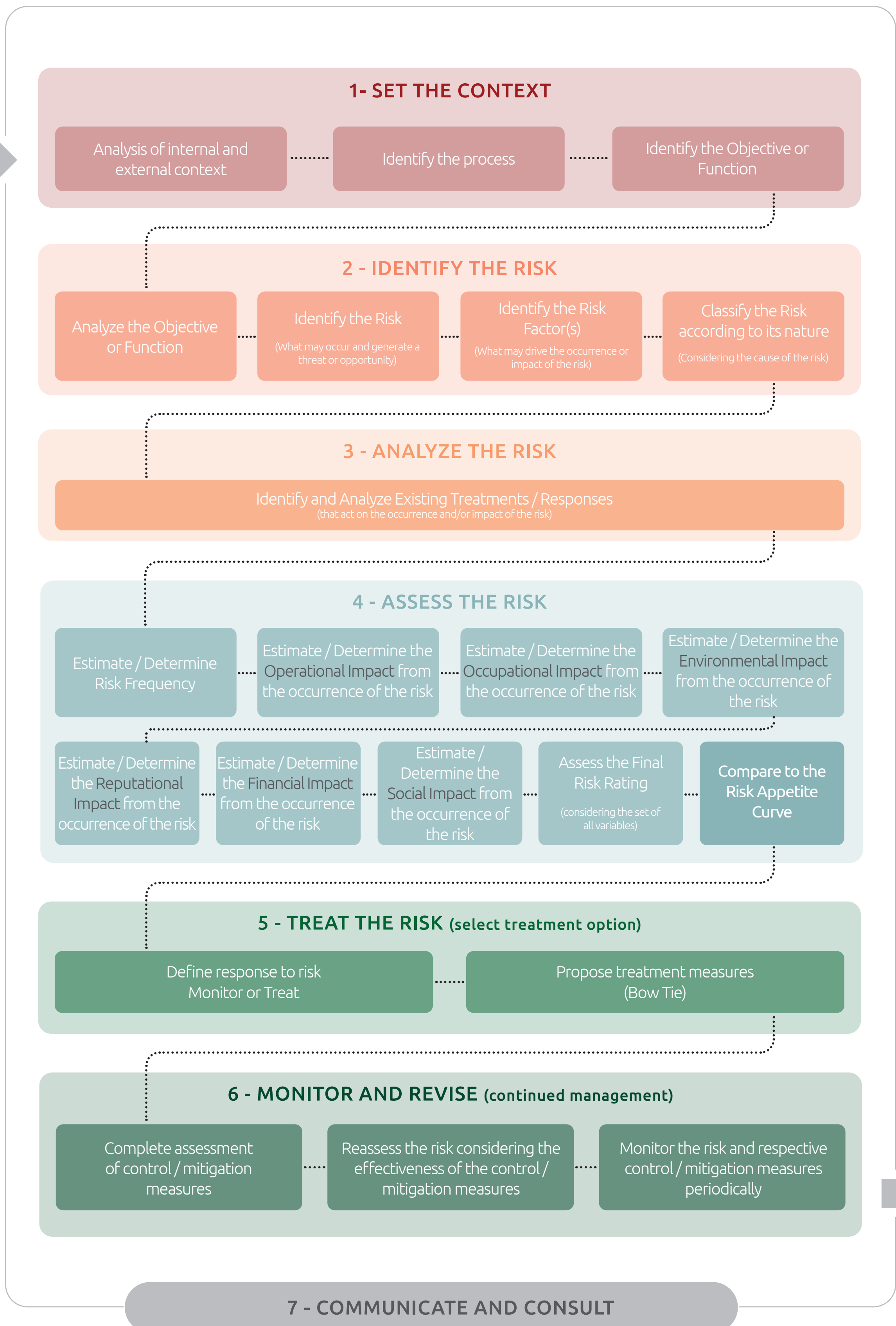
Then, the possible causes are identified, while determining the nature of each cause according to previously established classification criteria (Strategic, Fatalities, Tactical and Operational), and also their impacts (Environmental, Financial, Reputation, Occupational, Operational and Social).

Subcommittees discuss qualitative aspects that have direct impact on the risk being raised and identify the current risk condition (inherent risk), also evaluating the frequency, probability of occurrence and impacts generated by the risk, should it occur.

Treatments are defined and actions and measures of preventive control and reactive control to be adopted to respond to this risk are formalized.



The monitoring and review of risks are also performed continuously by control tests. Besides, MRN promotes communication and consultation actions involving the different agents that make up its Risk Management structure.



The Nature of the Risks at MRN.

The nature of the risks is identified as follows:

	Risks to Monitor		Risks to Treat		Total Risks
2021	Fatality Risks	66	1		67
	Strategic Risks	62	30	+	92
	Tactical Risks	21	10	=	31
	Operational Risks	179	24		203
		262 RISKS		131 RISKS	393 RISKS

Fatality Risks:

Risk of death caused by an accident or by the quality of the disaster that may cause the death of one or several people. At MRN, all risks that can impact on fatalities are also considered strategic.

Strategic Risks:

These are related to the objectives that support the company's mission and vision, associated with the strategies and linked to the company's strategic planning.

They have great importance for achieving the objectives defined by the senior management.

They are associated with senior management decision-making and can generate substantial loss to the company's economic value.

Tactical Risks:

They are focused on the short term. They are driven by the main actions of the areas or departments and related to the existence of structures that require cooperation for alignment and fulfillment of the defined objectives.

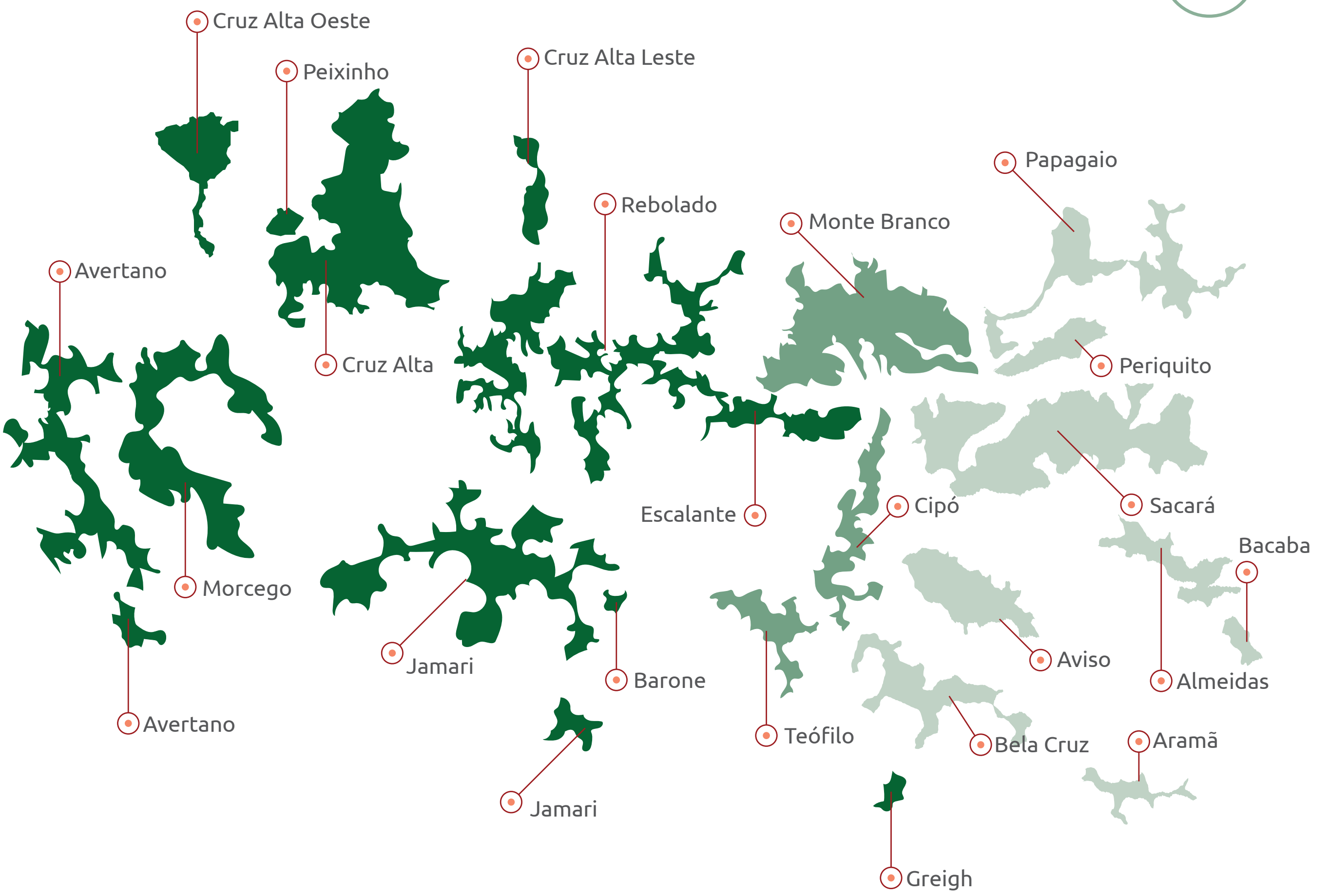
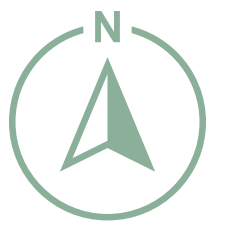
Tactical risk management is concerned with the "micro" view of the whole.

Operating Risks:

They are related to the efficiency and effectiveness of the processes, and may include objectives related to performance, profitability, utilization and safeguarding of the company's resources.

They are linked to the processes, areas and departments that support the execution, maintenance and continuity of the company's operation.

Map of Mines.



Eternal aluminum: the metal can be recycled indefinitely.

Close your eyes and imagine a can of soda being opened. The situation is so commonplace that you can even hear the characteristic noise of the seal breaking and feel the freshness of the cold beverage.

It is properties such as thermal insulation that make aluminum so present in people's daily lives. If combined with other materials, these properties confer high value to engineering, architecture and the industry as a whole.



Aluminum can be applied in the automotive sector as well as in the tinsmithing, food and construction industries. The metal is part of people's everyday lives in houses and buildings, household appliances, vehicles, cosmetics, and food, for example.

Its good conductivity and mechanical strength make it excellent for infrastructure and telecommunications, thus reducing energy consumption and helping to carry electricity over billions of kilometers through overhead and underground cables.

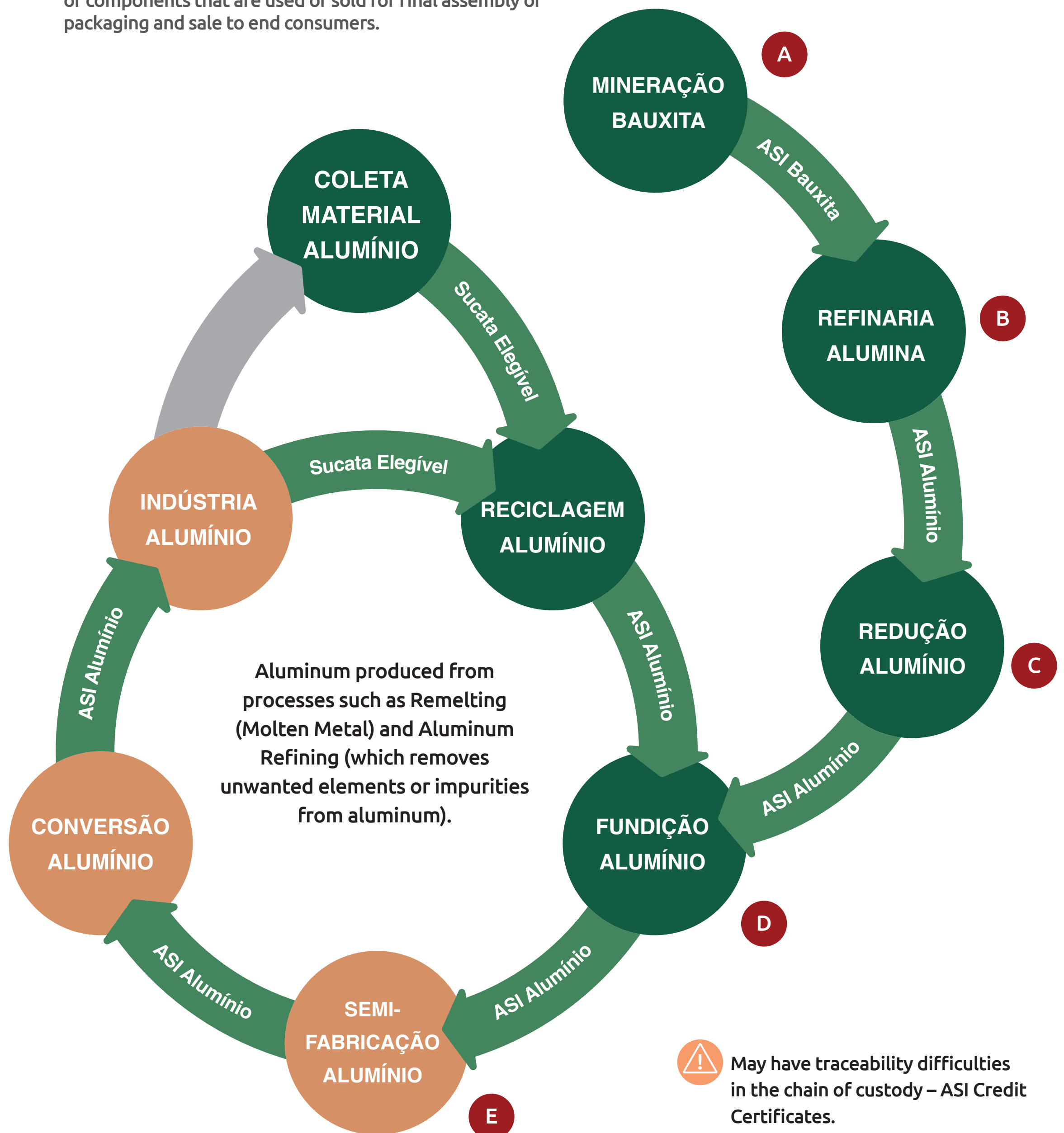
In the pharmaceutical sector, it is chosen for its characteristics that prevent oxidation and corrosion and ensure impermeability, which are fundamental to maintain the active principle of the drugs. Aluminum compounds are also used in vaccines to make them more efficient.

Since it is a highly recyclable material, aluminum has become a source of income to many people. An example of that is the aluminum beverage can. Aluminum's lightness and infinite ability to be recycled reduce the carbon footprint and make it more sustainable for society.

Aluminum's Chain of Custody:

After the ASI Performance certification, MRN has been working hard on the adequacy of its internal processes, from bauxite ore extraction to final shipment to customers, thus closing the virtuous cycle of the aluminum chain of custody.

- 1 An ASI membership class open to organizations that manufacture consumer or commercial goods containing aluminum in the following industries: aerospace, automotive, construction, consumer durables, engineering, IT and similar; and organizations in the beverage, food, pharmaceutical and similar industries that use aluminum in their product packaging. Industrial users are required to seek ASI certification for at least one of their facilities or products.
- 2 – Further processing (e.g. cutting, stamping, bending, welding, forging, product casting, packaging production etc.) of aluminum castings or semi-fabricated products into products or components that are used or sold for final assembly or packaging and sale to end consumers.



- A Extraction of bauxite from the earth for commercial purposes.
- B Process of extracting alumina from bauxite ore, usually through the Bayer process.
- C The aluminum atom in alumina is bonded to oxygen and needs to be broken down by electrolysis to produce aluminum metal. This is done in large production lines and is an energy-intensive process, requiring high electricity consumption.
- D Furnace-cast aluminum, usually obtained as molten metal, cold metal and/or other alloy metals, is cast into specific foundry products to meet customer specifications or supplied to a customer as liquid metal.
- E Rolling or extrusion of cast products, as an intermediate stage of processing for further material conversion and/or further processing and manufacture of finished products.



Compliance





Creating the Compliance System consolidates the commitment to Integrity and Safety.

Compliance practices were in place at MRN in 2021, and the topic gained prominence with the complete structuring of the Compliance and Governance Department and the implementation of several mechanisms in the sector. All of them were inspired in the best practices, in the fulfillment of relevant regulatory requirements and in applicable national and international laws to continuously enhance ethics, integrity and transparency throughout the company's businesses.

With a view to ongoing evolution, periodic Compliance risk analyses were developed with an emphasis on such issues as fraud, corruption, discrimination and harassment. In parallel, the Compliance System Standard was implemented and the other system standards were developed.

18 REGULATIONS including revised and drafted ones



In order to strengthen and disseminate the culture of integrity, the Compliance Ambassadors Program was created, which consists of 38 employees and contractors across the various areas of the company.

In all these interactions, the Ombudsman Channel was promoted, thus encouraging employees to use the platform and to contact managers to clarify doubts about the application of the corporate rules.

“

In 2021, we completed several projects and actions that sought to secure adherence to, and compliance with, the legislation and good practices applicable to the processes of Compliance, Ombudsman/ Whistleblower Channel, and the General Data Protection Act within MRN

Henrique Cesar Orlando, Compliance Officer and Data Protection Officer (DPO).

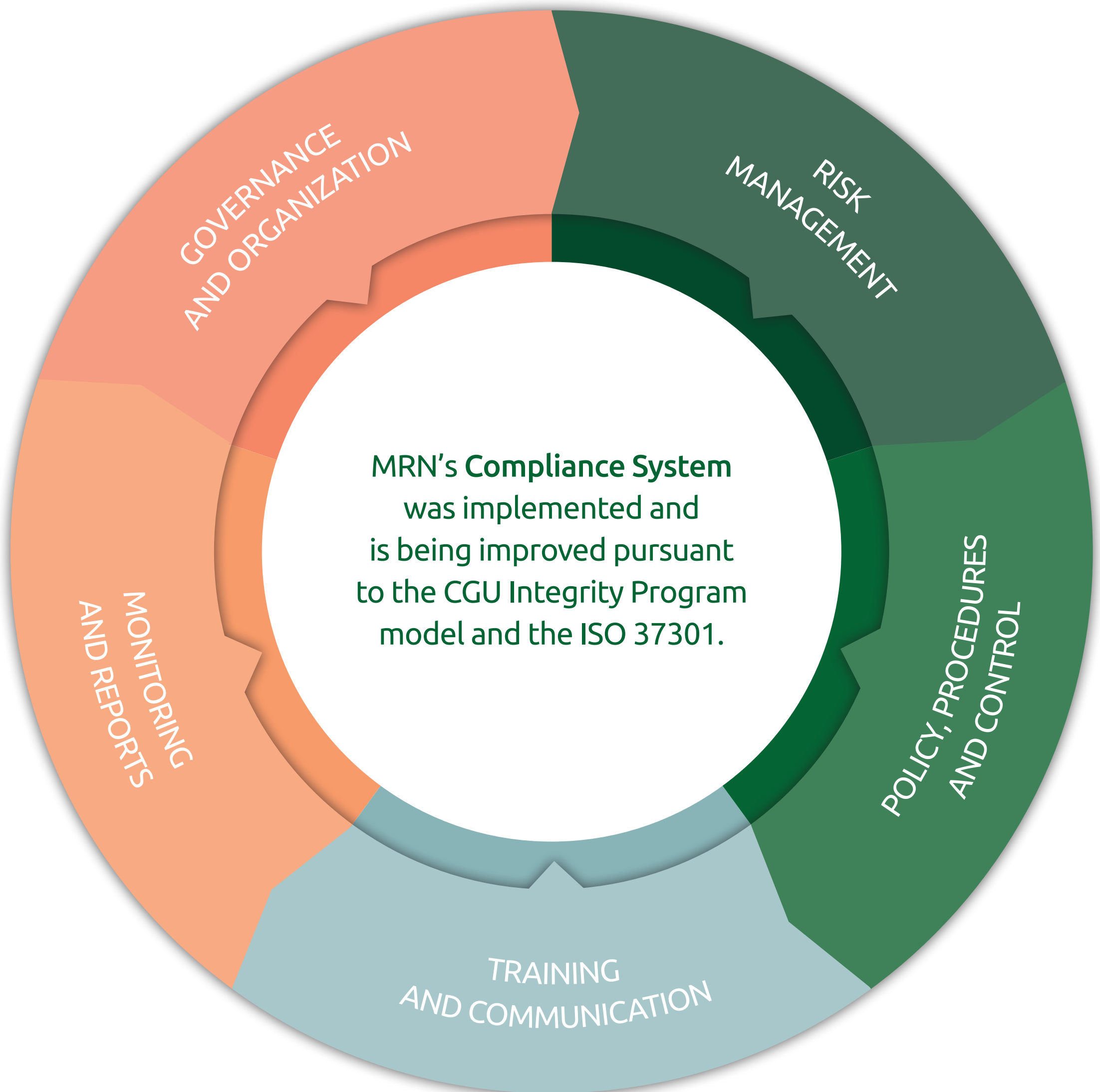
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Pillars of MRN's Compliance System.

Securing continuous improvement.

MRN's compliance management system is based on the principles of good governance, proportionality, integrity, transparency, accountability and sustainability, in the PDCA (Plan-Do-Check-Act) management model, and is structured in five pillars, as follows:



- Relies on MRN's Board of Directors, the Audit Committee and the Executive Board to represent the tone from the top of the company
- MRN's compliance risk management process is structured, systemic and supported by methodology and risk management practices
- The guidelines set forth in MRN's Code of Conduct and in its rules and procedures
- Promotes the culture of ethics and integrity in the organization through actions that guide employees and third parties on how to act in the best way and make the best decisions
- Monitors the company's adherence to Compliance System guidelines by following up processes and managing risks at MRN.

Code of Conduct.

The primary instrument to guide the company's relations with its internal and external stakeholders, the Code of Conduct is a guide of principles and values that materializes the way to act and relate with employees, shareholders, suppliers, customers, business partners, public authorities, and interface communities.

Highlights:

- 1 Development of the management environment for the Compliance System.
- 2 Identification and periodic analysis of Compliance risks, especially regarding the assessment of fraud and corruption risks.
- 3 Structuring and implementation of Compliance System regulations.
- 4 Intensification and formalization of continuous awareness and training actions.
- 5 Implementation of the Compliance and Governance Portal.
- 6 Definition of the Compliance System Monitoring Plan.
- 7 Implementation of an inventory tool for legislations applicable to Compliance, aiming to ensure process conformity and to improve the mechanisms of prevention, detection and correction, which prevent the occurrence of deviations of conduct and harmful acts..
- 8 Implementation of the Compliance Ambassadors Program.

Compliance Management in numbers.

Review and Drafting of 18 Compliance Regulations.

30 Compliance Communication Actions (messages from the Senior Management and Compliance Pill). Completing a Compliance Quiz about the Compliance System.

Handing out of a Guide to Prevent and Fight Discrimination and Harassment = + 1000 copies.

Employees that attended the training:

Code of Conduct = **1,300+**.

Fight and Prevention against Discrimination and Harassment = **1,034**.

Anticorruption = **40**.

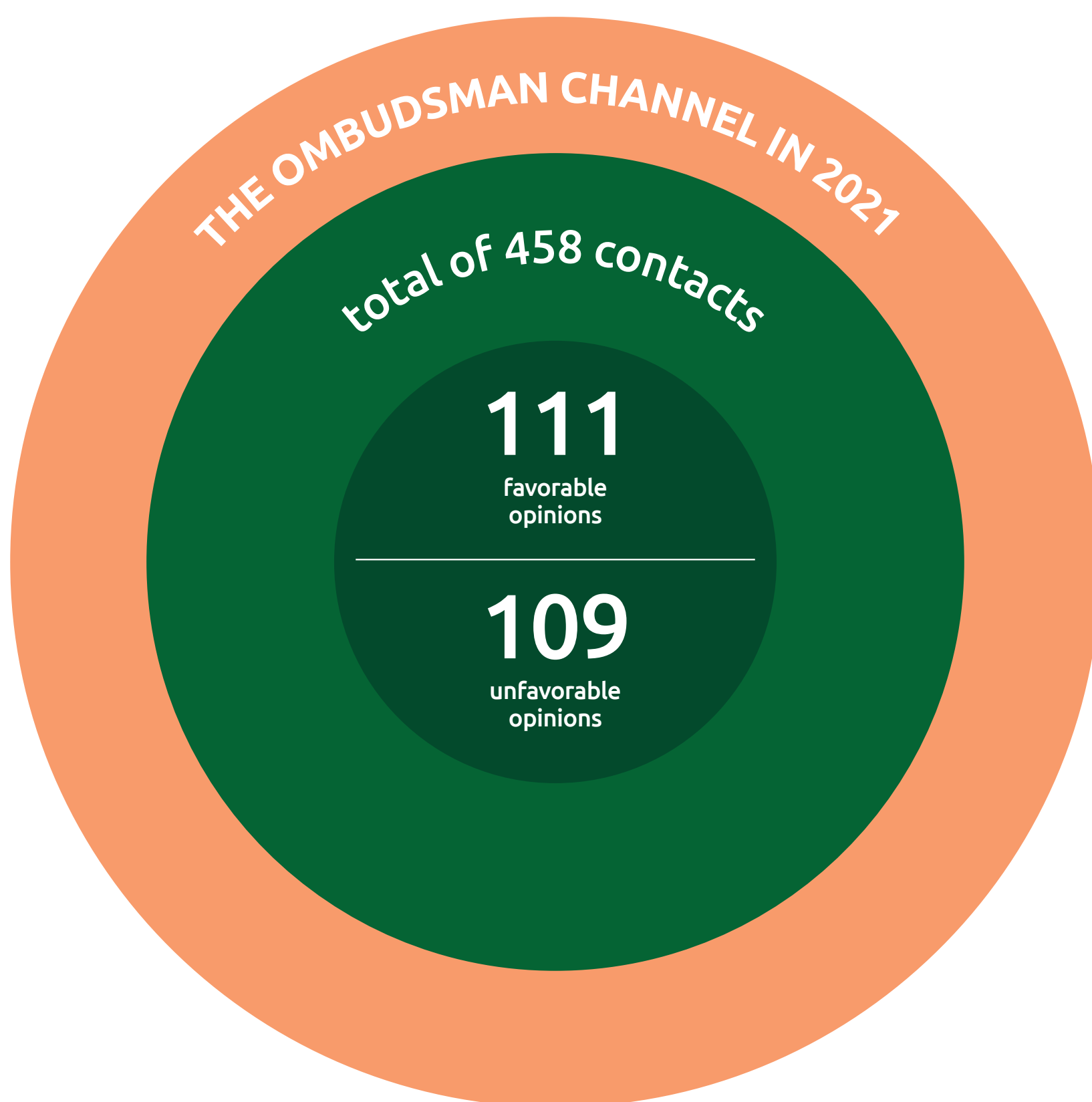
MRN's Compliance System = **514 attendees**.

Ombudsman Channel.

MRN has a process for receiving reports and complaints, called the Ombudsman Channel, available to the internal and external public.

The Ombudsman Channel guarantees the confidentiality of information and the identity of the parties involved. All claims and complaints are treated in a transparent and impartial manner in absolute confidentiality.

Anyone who wants to report a case of misconduct, as well as violations of laws, regulations, policies and other internal rules, can access the channel through MRN's website, by phone **0800 727 6776**, by e-mail: **ouvidoriamrn@relatoconfidencial.com.br** or in person to the **MRN's Ombudsman team.**



General Personal Information Protection Law (LGPD). Right to privacy.

Under the guidance of the Compliance and Governance Department, MRN made efforts to comply with the General Personal Information Protection Law (LGPD). Through its own and contracted legal support, the company performed the Assessment and Implementation of the LGPD, which resulted in the drafting of nine regulations and the acquisition of a tool to meet the rights of data owners.

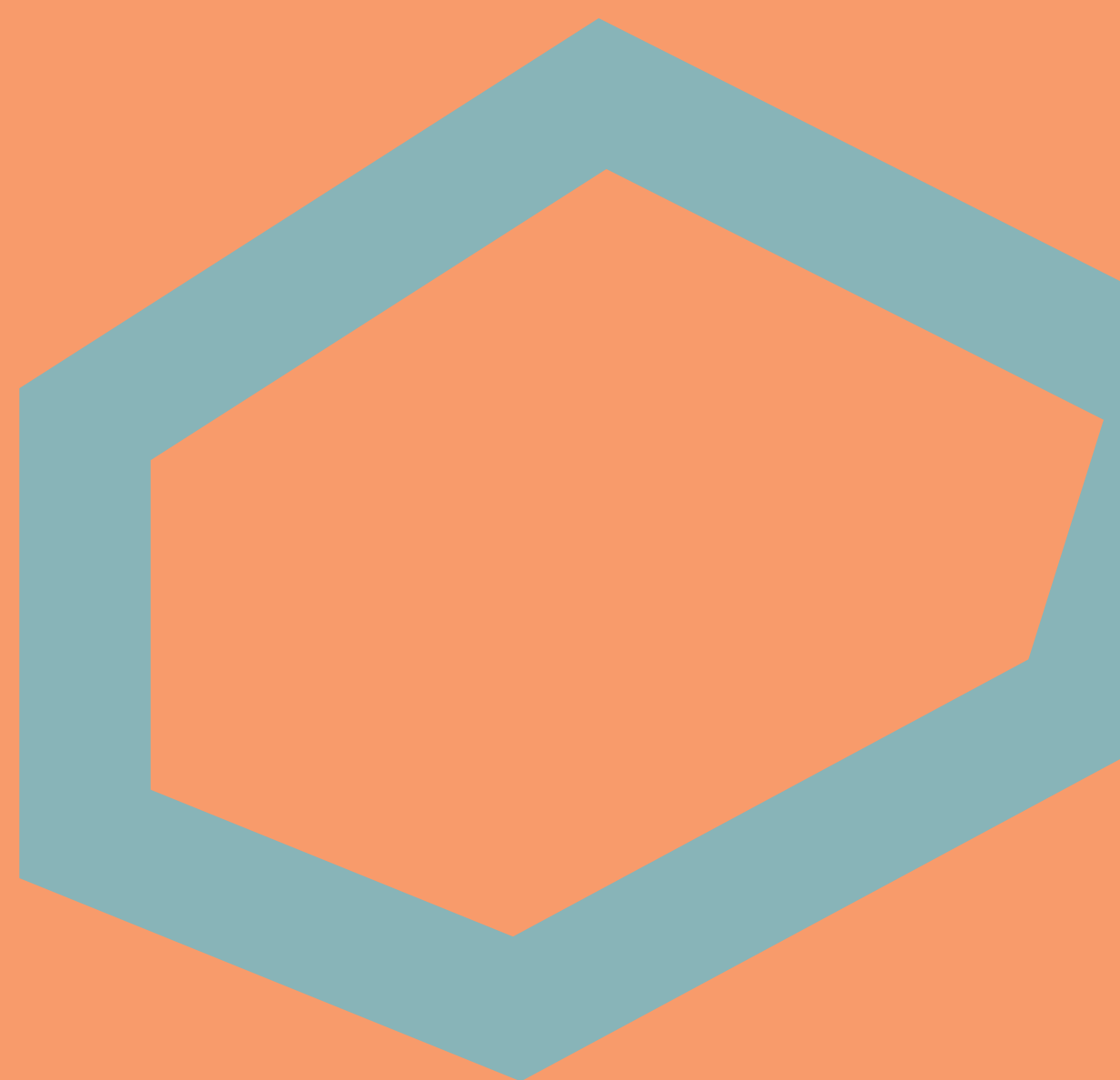
MRN's privacy program is based on the principles of good governance, proportionality, integrity, transparency, accountability and sustainability, in the PDCA management model.

Among the actions to disseminate the data protection culture in the company's business areas, the Compliance team provided training for employees and specific training for the areas with the highest volume of personal data processing, and through communication actions, the Company produced 'knowledge pills' about the LGPD





Operations & Innovation



Efficiency, responsibility, and awareness. Managing all optimization possibilities with an open mind.

Seek to implement clean energy generators. Adopt initiatives that maximize the safety of our operations. Create and promote methodologies that contribute to the people development, ranging from employees to local communities. Learn more about the Company's operations.

Tailings System Management. Monitoring to prevent environmental risks.

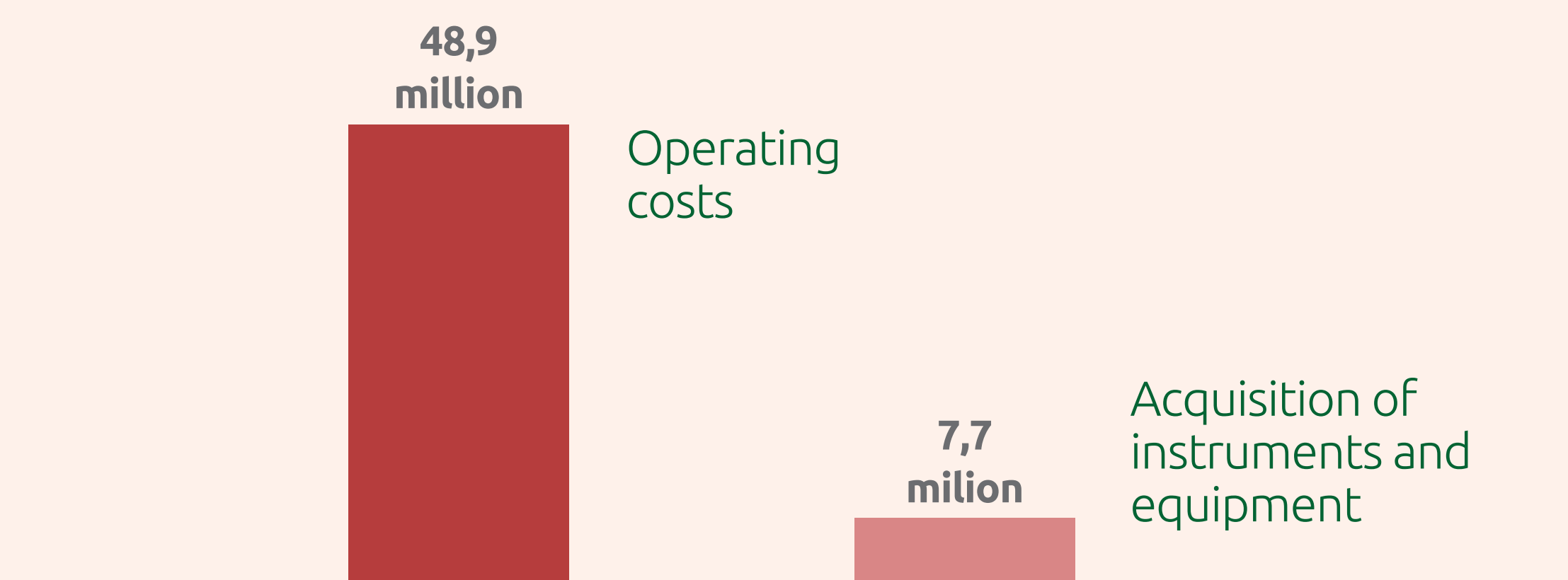
MRN is constantly investing in new technologies and monitoring and inspection management systems to minimize the risks to its reservoirs/dams.

Professionals experienced in Geotechnics came to add to the Dam Management area in 2021, thus further prioritizing the autonomy of the teams and the focus on the processes of structural safety, disposal and thickening of tailings, and water control.

Still under the strong influence of the Covid-19 scenario, the company spared no efforts to run a safe and efficient operation of its Tailings Disposal System.

Tailings System:

Resources amounting to roughly **R\$56.6 million** distributed in:



Investments amounting to **R\$163.7 million** in projects and works relating to dam safety.



Highlighted initiatives:

- Improvement in the water storage and handling management process to obtain a more accurate water balance for the entire tailings disposal system - water abstraction and rainfall management, regularization of access roads, leveling and improvement of embankment crest drainage, construction of berms, new signaling, instrumentation etc.
- Development of the Water Management Master Plan (WMMP) projects, the main objective of which being to increase the reliability of the water system during periods of heavy rainfall, encompassing the re-sizing of the pond and riser systems, water discharge and reagent dosing and control systems for the clarification of occasional discharge water.
- Consolidation of the geotechnical and rheological characterization tests of the tailings to review the dam break studies of the reservoirs to meet the new standards of the National Mining Agency (ANM).
- Testing of the MudFarming equipment is underway to evaluate the potential to expedite tailings settling cycles.
- Acquisition of “penetrometer” (CPTu) to perform tests inside the SPs to verify geotechnical characteristics and provide greater assurance in comparison with the results of the installed instrumentation.
- Conducting pilot tests to optimize the operating conditions and projects to be implemented at Saracá West through the construction of two experimental ponds for disposal and control of tailings settling.
- Continuation of the geotechnical studies to evaluate the safety factors of the structures together with the execution of hydrogeological studies to optimize the structures’ strengthening projects (except for the need to erect reinforcement berms and/or to replace them with a more cost-effective solution).
- Contracting and partnering with the Federal University of Pará (UFPA) to develop studies for better rainfall predictability in the region; acquisition and installation of new automatic rainfall monitoring stations.

Keywords:

Ridges: Elevation of soil between two furrows.

Mudfarming: up-to-date technology for controlled thickening of the tailings.

Penetrometer: a control instrument used for quantifying the compaction of a given material.

Berm: longitudinal surface used for reinforcing the slopes of the main embankment.

SP: Settling Pond (thickening reservoir)

The company also conducted the first industrial tests for mechanized removal of dry tailings, mainly aiming at disposal in mined-out pits and at using it in the conformation of old reservoirs, thus increasing the service life of the existing system and providing for a more sustainable operation.

**Regarding dam safety,
the following actions
are underway:**

Construction of the SP-25.

Tailings disposal flow reversal activities to push the water away from the reservoir external walls.

Spillways with stoplogs.

Campaign for installation/automation of electric piezometers and inclinometers.

Commissioning of alarm camera and siren systems for monitoring purposes.

Consolidation of the control room processes for geotechnical monitoring, reinforcement berms, and crest leveling at the structures.

Global Industry Benchmark in Tailings Management (GIBTM).

In 2021, MRN and an international consulting team started a detailed assessment of the requirements for the implementation of the GIBTM. Procedures were established for the safe management of tailings disposal facilities to avoid any harm both to people and the environment, with zero tolerance for fatalities.

Keywords:

Piezometer: equipment for measuring static pressures or the compressibility of liquids.
Inclinometer: instrument used to measure slope and elevation angles.

Monitoring of Dams.



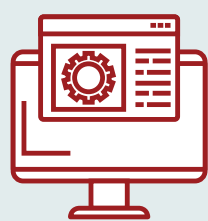
Robust investments in technology have enabled the creation of the Dam Monitoring Room, 100% dedicated to the safety of the 24 tailings reservoirs and the two sediment dams, A1 and Água Fria, which are used to accumulate and clarify rainwater that falls on the ore shipment yard.

The Monitoring Room is the first line of defense for the safety of the company's reservoirs and dams. The data from the sensors are compiled there, and most of it is automated, where any abnormality in the tailings disposal structures and sediment dams can be detected, making it possible to immediately initiate emergency action protocols, should the need arise.

24-hour Monitoring.
1,000 sensors installed.
Piezometers for measuring hydrogeological pressure.



Daily inspections by expert technicians and engineers.



Software for processing and cloud storage.



Satellites for measuring variations on the surface.



Sirens actuated remotely





Emergency Action Plan for Mining Dams (PAEBM).

The PAEBM is a technical document outlining the actions to be taken in potential emergency situations.

- Includes simulation dam break studies of MRN's tailings reservoirs and dams.
- Defines the Self-Rescue Zones (ZAS), which are the areas from where people must leave immediately in case of a dam-related emergency and move to the meeting points.
- Defines actions to be taken in an emergency situation, thus allowing for immediate safety protocols to be started. It includes visits to the communities and other groups interested in getting to know the Company's structures up close.
- Promotes socialization seminars and simulations in the communities.

PAEBM Socialization Cycle

In 2021, MRN carried out an evacuation drill to evaluate the performance of the PAEBM as well as to improve the engagement and train employees working at the Saracá plateau to perform self-rescue in the event of dam breaks.

Periodic PAEBM training sessions were also held in the Boa Vista, Boa Nova and Sacará communities, on the Sapucuá Lake. Guidance seminars were held in all these locations and a simulated dam emergency in the Boa Vista community. All these activities occur in a collaborative manner between MRN, the Civil Defense of the municipality of Oriximiná, the 4th Military Fire Brigade of Santarem, the 9th Military Police PPD of Porto Trombetas and community associations.

MRN also hired a specific consulting company to audit the PAEBMs that will issue the Conformity and Operability Reports (RCO) and the Conformity and Operability Statements, in accordance with the requirements of the February/2022 ANM Resolution N° 95.

Mining Management. Efficiency, productivity, safety.

The focus on natural resources such as bauxite or other components is oriented to secure the best quality of aluminum's raw material and the appropriate treatment of the tailings, basically composed of clay and water and no chemicals are added.

Because it is a vital resource for the conservation of the biodiversity around the mines, MRN uses water in its operations in a responsible and conscious manner.



85%

of the water used in MRN's operations is recirculated.

In 2021, the company upgraded its inspection routines of edges, slopes, and drains using applications and tablets to issue complete reports, thus increasing labor productivity and eliminating rework.

This technology was also important for measuring the level of readiness of operators at the beginning of the daily work and after meals through the Atento App, which indicates the results APTO (OK) or INAPTO (NOT OK) for the job. The initiative helps prevent events caused by drowsiness or fatigue.

The tool measures the level of readiness and informs the manager whether the employee is able to perform his tasks before the operation.





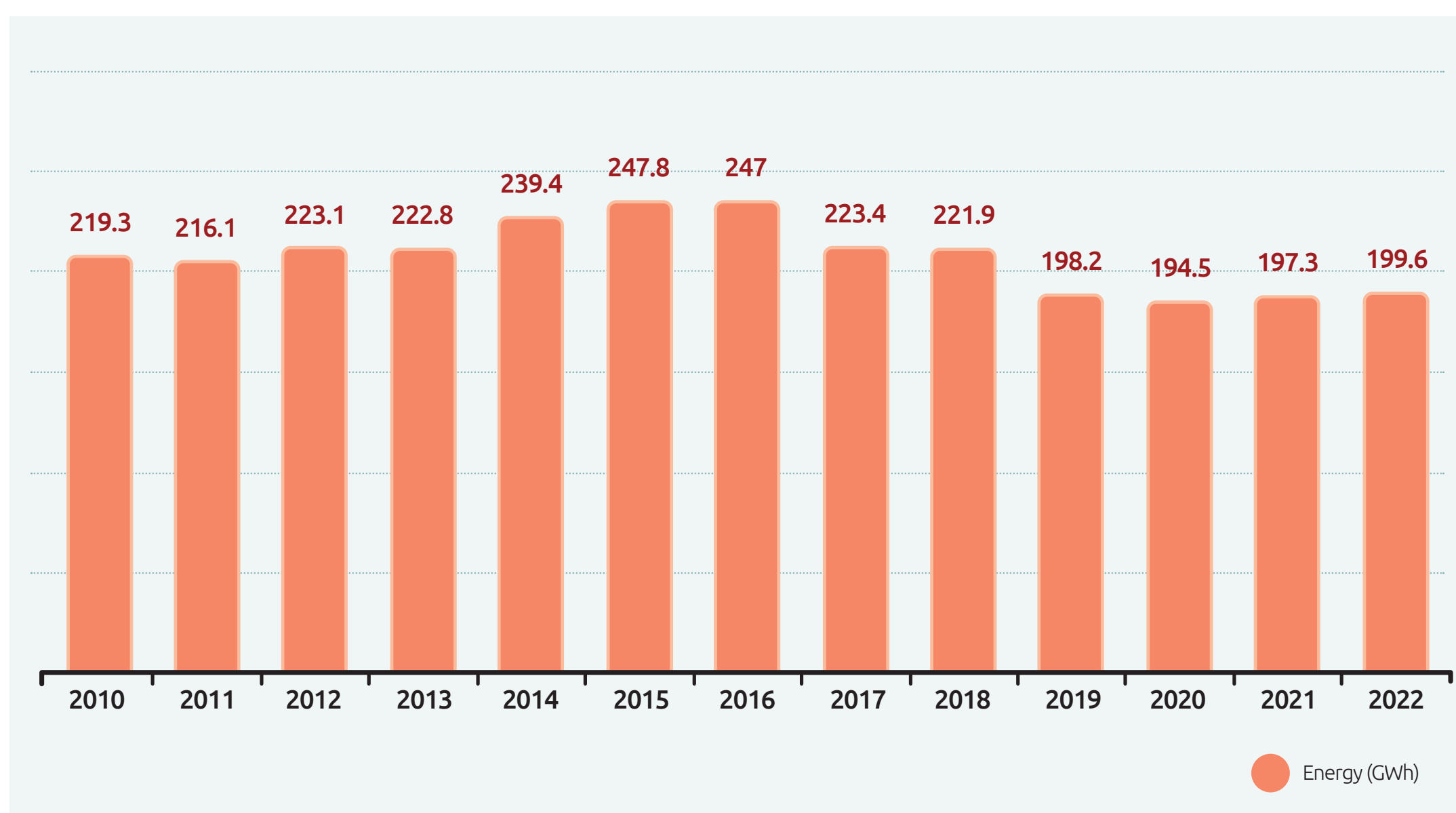
Power Management.

Power Generation. Alternatives with less environmental impact.

MRN's power generation is 100% self-sufficient within an isolated system, with no connection to the national power grid. The plant meets the requirements of the entire industrial complex, mine and port, support infrastructure and townsite.

In addition to changing internal processes, requiring increasingly stricter controls, in 2021 one of the plant's five engines was replaced by a newer model, and that allowed for lower fuel consumption and consequently lower greenhouse gas emissions.

Generated Power - Gigawatts/hour



Energy.

MRN has a series of studies to improve the energy matrix and one of them refers to the use of a renewable energy transmission line, with zero emission of gases related to fuel consumption for energy generation.

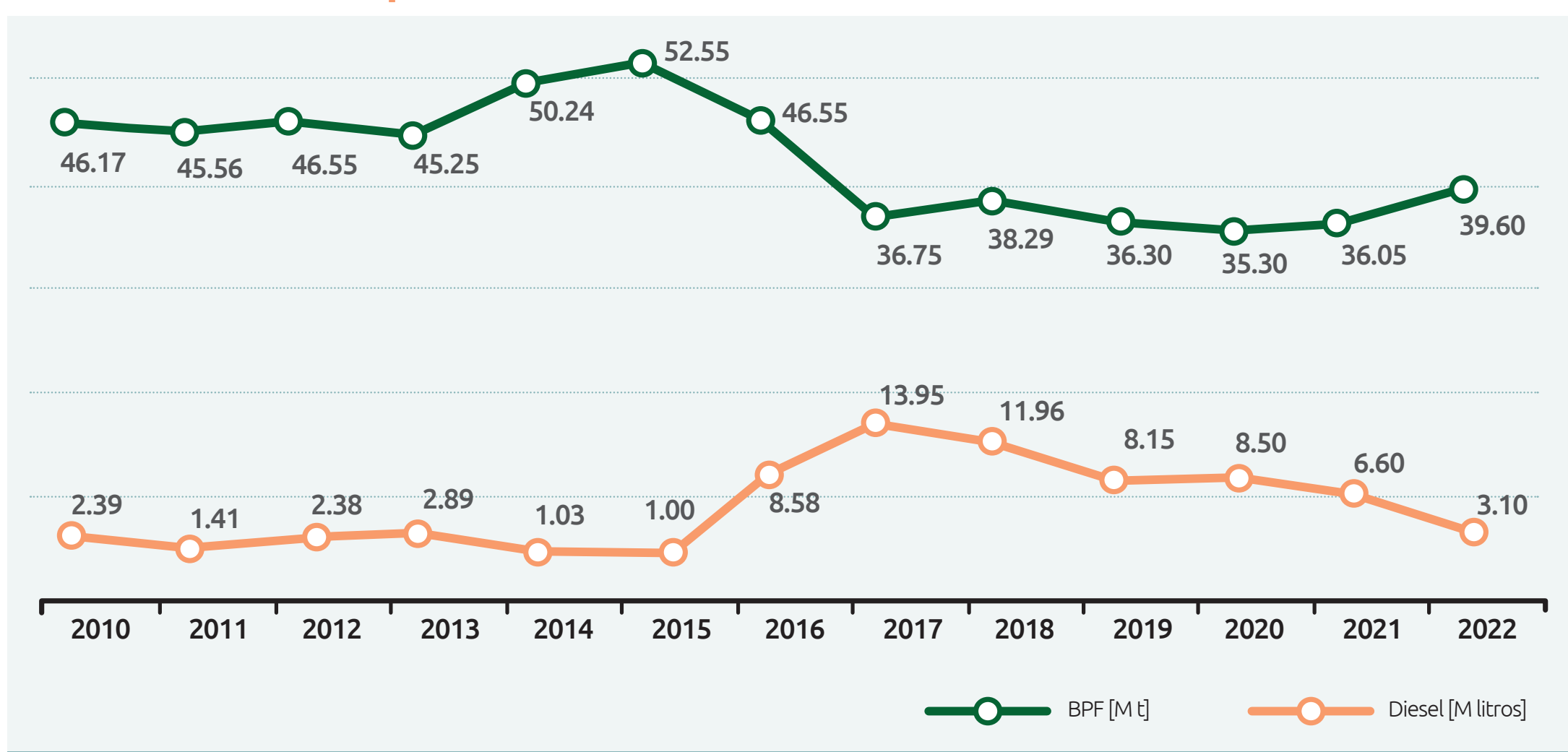
The fuels being used are diesel and heavy oil with Low Pour Point (BPF). MRN has been reducing its diesel consumption, as shown in the chart below. The company has been considering converting its engines to use natural gas, thus eliminating the use of BPF.

	2020	2019	2018
Energy (GW)	194,47	198,20	223,74
BPF (kg)	34.991.720	33.867.864	38.292.204
Diesel (L)	8.627.339	11.430.940	11.424.234

At the plant, water intake is restricted to the port area for the thermoelectric plant's own consumption (for cooling the engines) and to serve the port's industrial processes, drinking water consumption and steam generation.

MRN reduced the volume of water abstraction by 80% after installing five cooling towers to meet the demand of the thermoelectric plant. All the water used to cool the engines circulates in a closed circuit, and only the water that is evaporated is collected.

Fuel Consumption.



Other projects that shall also contribute to this goal:

- Improved Drying Efficiency: specific consumption.
- Improved Efficiency of the Power Plant (UG01).
- Reduction in UG01 utilization..
- Reinstallation of Engine 04 of the Power Plant.
- Replacement of old light bulbs with LED.
- Assessment of the possible installation of solar energy for partial replacement of the Matrix.

Consumption in 2021

Energy 197.30 GWh	BPF 36.05 Mt	Diesel 6.6 Ml
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MRN is a member of the IBRAM Energy Committee, whose objective is to make the sector reduce greenhouse gases by 5%, thus making energy more renewable.

Geology Management.

From the rock to the world: the bauxite that turns into aluminum.

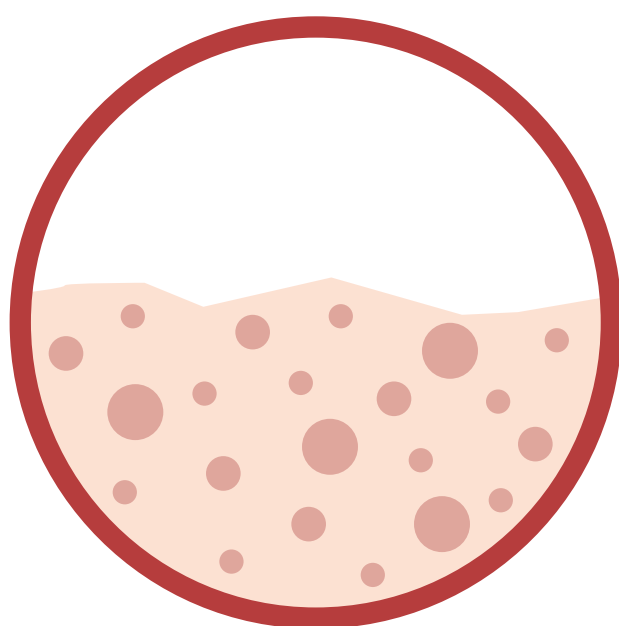
Bauxite is a reddish-colored rock of high commercial value. Brazil has one of the largest bauxite reserves on the planet. MRN's operating deposits are composed of the mineral gibbsite, which is one of the forms aluminum hydroxide.

The formation of this ore is the result of millions of years of physical-chemical transformations. The tropical Amazonian climate (with an average annual temperature above 20°C) is essential for the process of movement of soluble materials in the soil (leaching).

This way, silicates and clay minerals are decomposed, with greater removal of silica and concentration of aluminum and iron oxides.



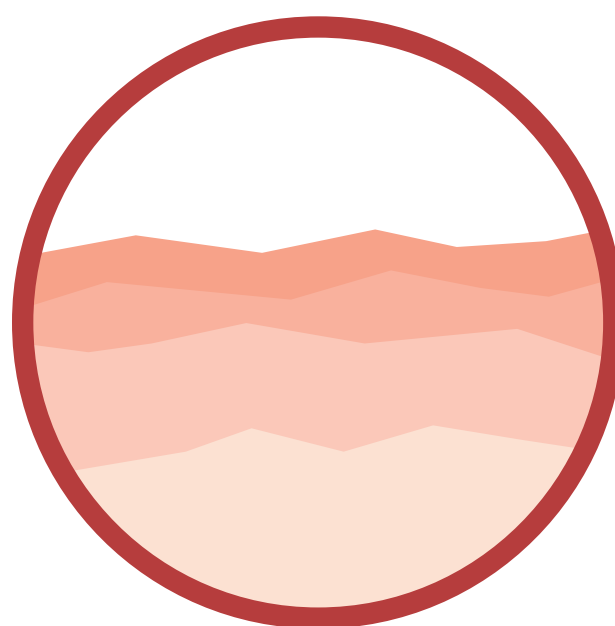
The local geology favors a higher ore formation rate through:



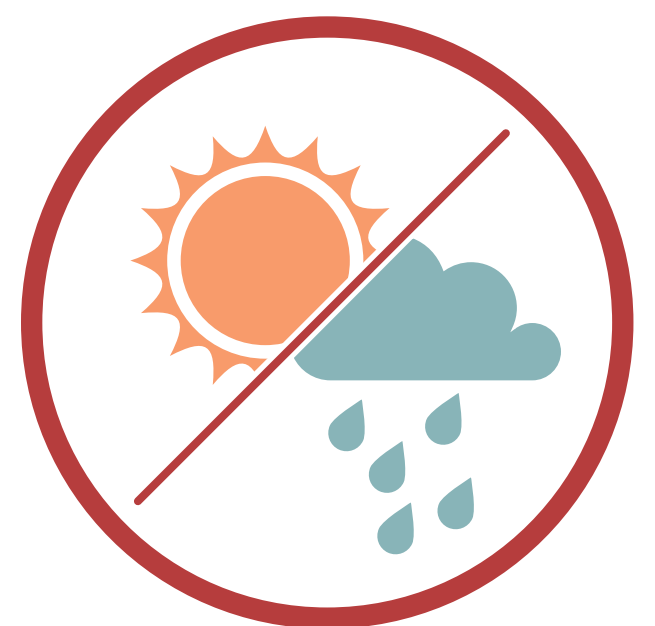
High rock porosity.



Vegetation cover with adequate bacteriological activity.



Flat or gently rolling topography for minimal erosion.



Long period of stability and intense change in weather conditions, especially in the dry and wet seasons.

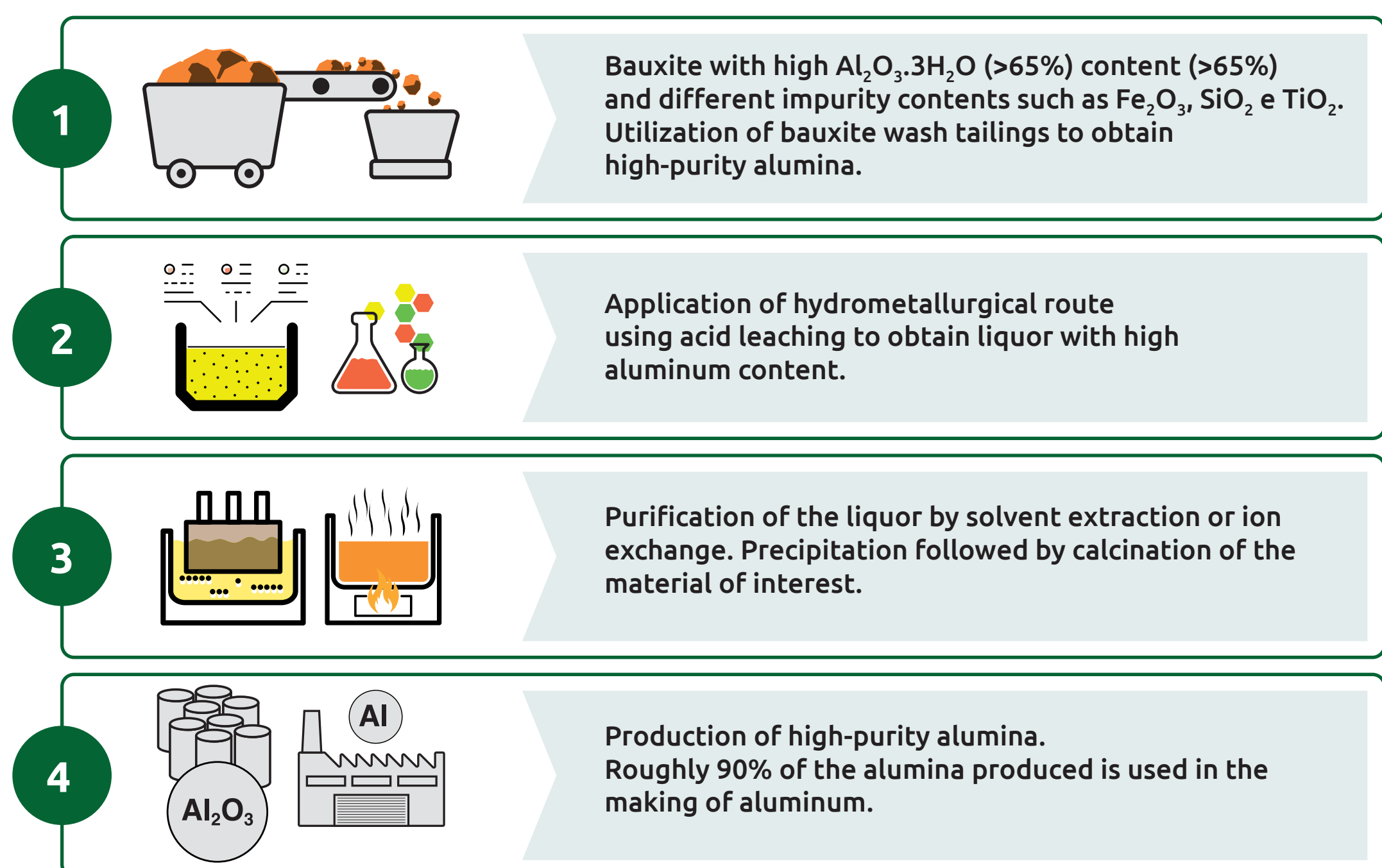
Ongoing projects.

Utilization of Residues from Bauxite Washing.

MRN is studying ways to use the residues from the ore washing process.

In cooperation with the EMBRAPII Unit for Green Chemistry (TecnoGreen), of the Polytechnic School of São Paulo State University (USP), the company is developing a hydrometallurgical route.

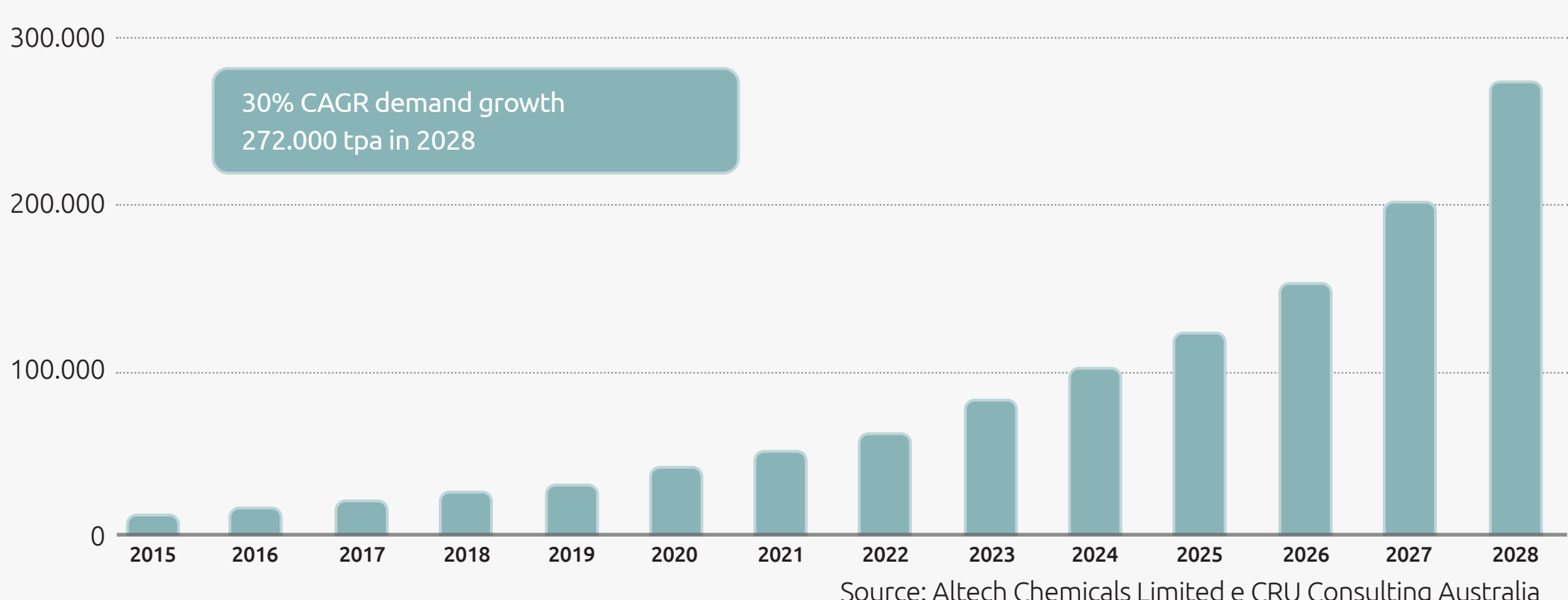
This same route should be applied to the residues from bauxite washing to achieve the alumina used in the production of LEDs and high-capacity lithium-ion batteries (LIBs).



Today, the study connects to the future by looking at the increasing demand for aluminum on a global level.

Alternative technologies should make it possible to extract alumina from other sources as well as to recover alumina from the bauxite wash residues.

Requirement projection chart.



Keywords:

CAGR: Compound Annual Growth Rate
Tpa: tons per annum

Hydrogeological Study.

In a partnership with Frasa Ingenieros Consultores, one of the largest water experts in the world, MRN is deepening its knowledge of the hydrological system in its areas in order to achieve operational control and reduce environmental impact.

In addition to describing the natural context of the presence of water, the study predicts the hydrological behavior during the working phases of each plateau, considering its distinct characteristics and variations in the mining system.

With a multidisciplinary approach, MRN gathers its teams to contribute with improvements that reduce eventual impacts.

The study has already accounted for a gain of 3.3 Mt ROM of ore, thus maximizing the use of this non-renewable resource in an optimized manner and rationalizing the deposit in the mining plan.

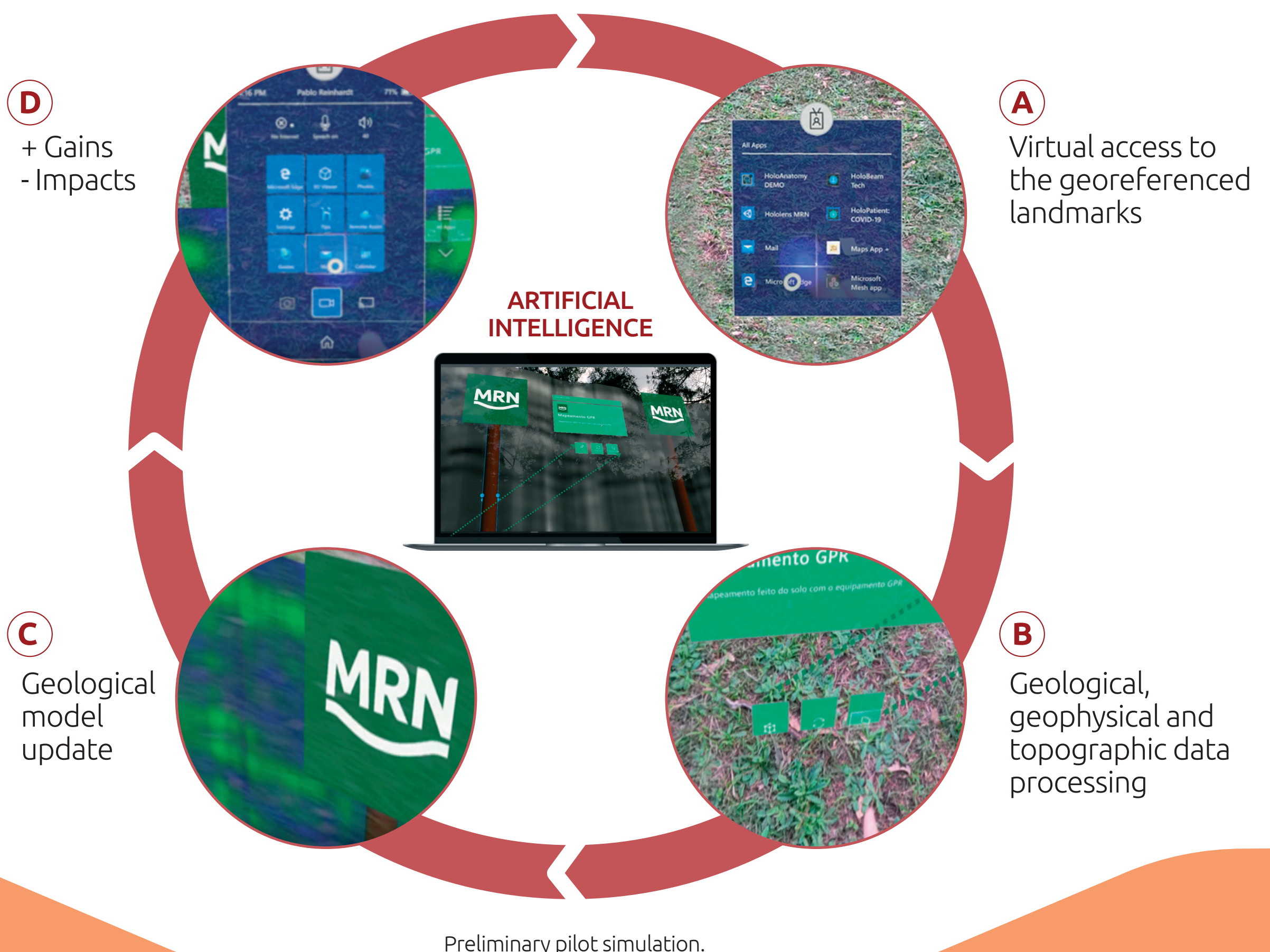
Machine Learning Project.

By using artificial intelligence, the Machine Learning Models project seeks to improve geological model reconciliation.

Machine learning algorithms process the information from the geology collected in the short term, and geophysical and topography data to update the long-term geological model.

The constancy and agility in updating the model imply gains in different sectors, especially in mine planning, with less movement of heavy vehicles and potential recovery in the plant.

Therefore, the company can develop mining with lower consumption of the energy matrix and, consequently, a more environmentally sustainable activity.



Innovation and Technology.

MRN has invested in new technologies to optimize processes in several areas. Developed together with the company's Information Technology team, platforms such as Power BI and Checklist, for example, are used by the Geology and Quality Control System.

With these tools, the company has automated the information systems about mineral resources, thus contributing to generate data quickly and accurately, resulting in more agility and optimization of the mining process.



Changes to the applicability of existing software have allowed for economic management aligned with higher productivity. The data acquired favor both a better understanding of the chemical and physical quality in the bauxite beneficiation processes, based on the geology fields, and the perception of which process needs more attention. The data include contaminant type, structures and textures found in the ore, such as increase or decrease of fines/grains in relation to the plan.

The tools provide interactive visualizations and business intelligence capabilities with a simple interface for employees to access reports and charts that support decision-making, especially during shift work changes, where communication needs to be effective to render processes optimized and assertive.

The company has prioritized strategies aimed at structuring data and building monitoring and executive dashboards. Areas such as Mining Planning, Geology, Quality Control, Mine Planning, Production Planning and Control, Mine Operation, Implementation, and administrative areas are already well advanced in these applications.

“

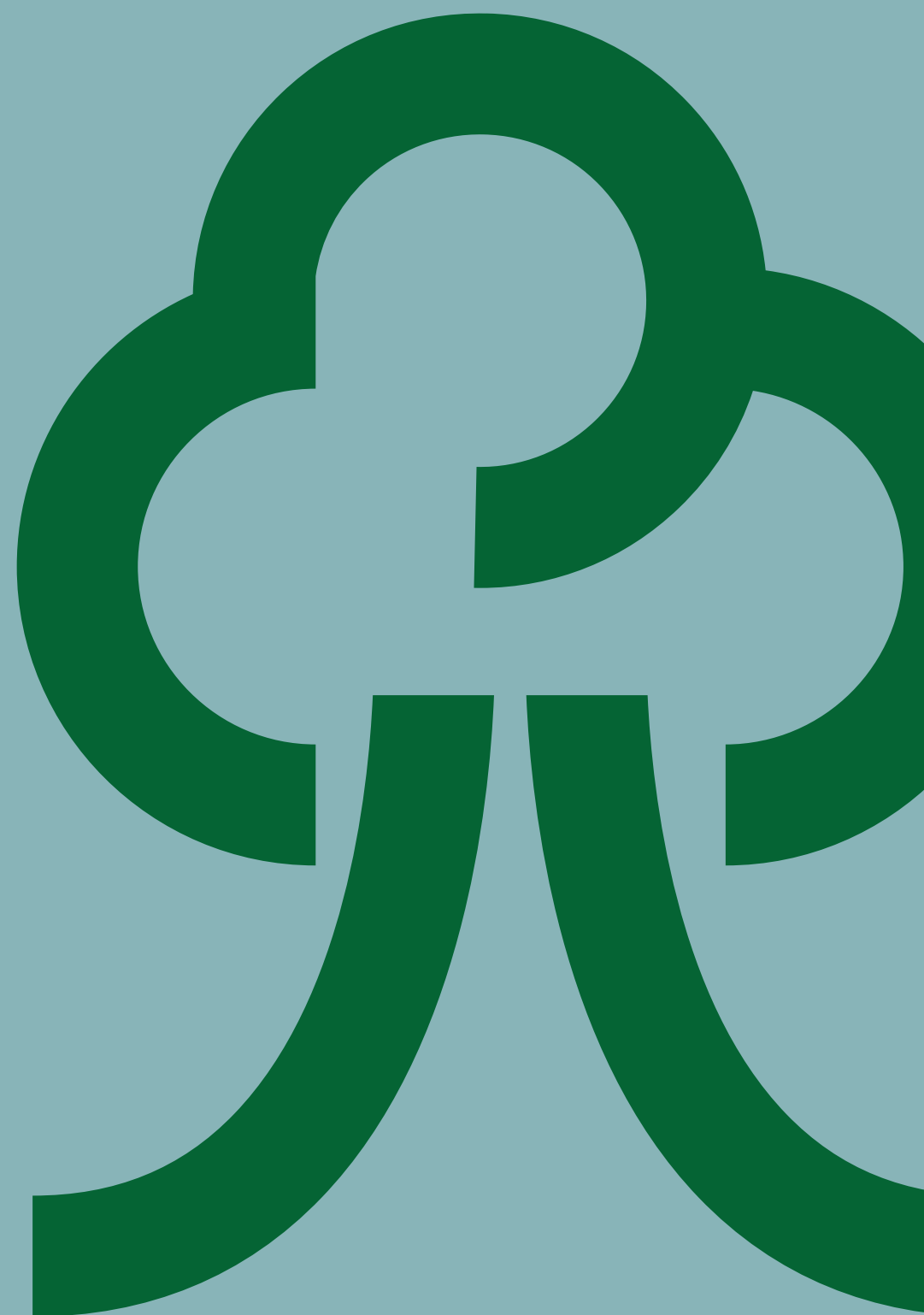
The primary gain was the increase in the interaction time by shift technicians with the mining activities, around 10% to 20%, which represents approximately 60 to 90 additional minutes of activity focused on quality and productivity control. We can justify the difference in production or possible changes as well, which impacts the quality of the product.

Paulo Bezerra, Production Planning and Control Manager.

”



Environment



Reducing the impact and restoring the balance. More than an obligation, it is part of the essence of sustainable mining.

The care with the environment is one of the pillars of a sustainable and responsible mining industry. MRN develops countless actions aimed at the conservation of fauna and flora, reforestation of mined-out areas, management of urban and industrial waste and continuous environmental monitoring of the air, water and soil. To this end, the Company runs environmental programs to ensure that all activities are carried out and controlled in an appropriate way. The actions the company performs include:

Erosive Process Control and Monitoring Program (PCMPE).	Water Control and Monitoring Program (PMH).	Liquid Effluents Management and Monitoring Program (PGMEL).
Sewage Treatment Plant Monitoring Program (PMETE).	Air Emissions Management and Monitoring Program (PGMA).	Solid Waste Management Program (PGRS).
Degraded Area Recovery Program (PRAD).	Brazil-nut Germplasm Bank Implementation Program (PIGC).	Flora Recovery, Rescue, Multiplication and Reintroduction Program (PRSF).
Wildlife Management Program for Mitigating Vegetation Suppression Impacts (PMFS).	Monitoring of Two Species of Apes.	Program for Monitoring the Impact of Roads on Fauna (PMIE).
Limnological and Ichthyological Monitoring of Streams.	Ecological monitoring of the Batata Lake.	Limnological monitoring of the Água Fria Stream and the Trombetas River.

Highlights, 2021.

Learn from the past, act in the present, transform the future.

Among the various programs in place, four initiatives are worth highlighting in 2021, reflecting in practice MRN's dedication and commitment to mining in a sustainable manner within a National Forest through compliance with environmental legislation and operational controls.



Degraded Area Recovery Program



Management of Solid Urban Waste



Management of Solid Industrial Waste



Brazil-nut Germplasm Bank



Degraded Area Recovery Program (PRAD).

Environmental professionals are dedicated to a series of actions to promote environmental reclamation, so that the recovered areas return as close as possible to their physical and biological characteristics, as well as their functionality in the ecosystem.

And the numbers for 2021 speak for themselves:

Production of seedlings of **112 species** from **39 botanical families**, from the acquisition of **5.743,46 kg** of seeds, out of which 5,227.58 kg (91%) came from the Sapucuá Lake communities, 450.19 kg (7.8%) from the communities of the Alto Trombetas II territory, and 65.69 kg (1.2%) were collected by the PRAD team. From the seeds acquired and seedlings rescued, **a total of 858,182 seedlings were produced** in the company's Forest Nursery.

Reshaping and preparation of 512.6 hectares in the Bela Cruz, Monte Branco, Aramã, Almeidas, Cipó, Teófilo and Periquito plateaus.

Planting of 743,198 seedlings in replanted areas at the mine sites of Monte Branco, Aramã, Bela Cruz, Periquito and Teófilo & Cipó road. These seedlings include 110 native tree species, organized into 34 botanical families.

Fight against leaf-cutting ants in the areas under reclamation. In total, **732 ant colonies** were located, 131 in the Monte Branco plateau, 426 in Bela Cruz and 175 in the Bacaba plateau.

An experiment of Conventional x Nucleation planting methods shows that the average vegetation cover in areas with conventional planting was 43.68% and of nucleation areas 65.6%.

Integrated Management Plan of Invasive Exotic Plants (PMIPEI), with the **removal of 60,161 individuals of five exotic species**, being four of the genus *Acacia* and one of the genus *Leucaena*.

Revegetation of tailings ponds by planting 8,970 seedlings of 40 tree species using five types of fertilizers in the SP-04-North Pilot Project. During the survey of mortality of individuals in each plot/treatment, 1,304 dead individuals were recorded, representing only 15% of the total seedlings planted.

Revegetation of slopes along the access roads to the mines by **planting 2,868 seedlings** of 13 native species, distributed in 9 botanical families. These specimens were planted on the slopes of the Periquito and Bacaba plateaus, out of which 2,658 were planted in Periquito and 210 in Bacaba.

Keyword:

Seedlings - small plant resulting from the initial development of the embryo.





Management of Solid Urban Waste.

MRN has a Waste Treatment Station (CTR) where it manages solid urban waste (class IIA, IIB), both organic and inorganic, and health service residues. The CTR has a sorting and composting unit and a landfill. The stages of the waste management process are: **collection, weighing, sorting and final disposal.**

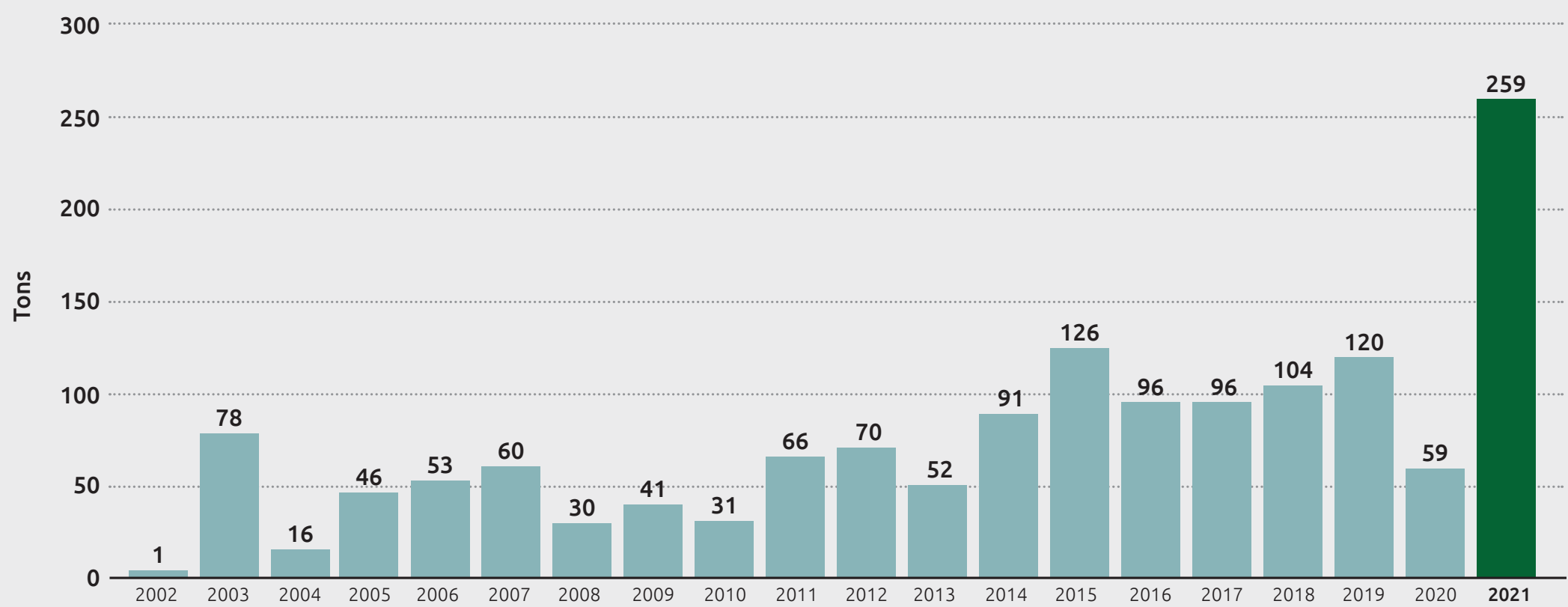
The organic residues are subjected to weighing, sorting, and are then forwarded to the composting area. After that, the compost generated is donated to the residents and the local community.

The inorganic residues are also weighed, then sorted and separated so they can be given the correct destination, always prioritizing recycling. The reusable residues are pressed into bundles and then forwarded to recycling. The non-recyclable materials, or those materials that cannot be reused, are hauled for disposal at the landfill.

At the landfill, the inorganic waste is handled, spread out and compacted. These routine operations are performed so that its efficiency is maximized, thus securing its operation as a sanitary and environmentally adequate final destination for the solid urban waste generated in Porto Trombetas.



In 2021, **259 tons of recyclable waste were recovered**, an increase by approximately **400%** over the past 19 years average



These results were achieved as a result of the development of strong environmental campaigns and actions focused on the correct disposal of waste by promoting environmental awareness of the residents of Porto Trombetas. Another important benefit, regarding the increase of recycled waste, is related to the extension of the life of the end disposal cells, thus reducing possible environmental impacts.





Management of Solid Industrial Waste.

In 2021, MRN concluded the works at the Disposed Industrial Waste Station (CRID), which concentrates all solid industrial waste generated by the company's operational areas.

The CRID comes to solve a logistical issue of MRN, which operates far from major centers that receive, recycle or reuse waste. The treatment and/or final disposal applied to MRN's solid industrial waste complies with Law No. 12.305/10, which provides guidelines regarding the treatment and/or final disposal of waste through reverse logistics, recycling and co-processing.

The CRID is planned and adjusted to the operation, with a focus on increasing the quality of management, and contemplates different stages, such as segregation, storage and destination, which facilitate the reduction, reuse and recycling of waste, besides the reduction of the volume to be treated or disposed of.

The stages of industrial residue management comprise collection, internal transportation, reception, weighing, sorting and preparation of loads, temporary storage at an adequate location, and destination by river transportation for final treatment/destination.

Bundles are made according to type and are forwarded to the appropriate destination, thus minimizing environmental and social risks. The process is monitored both internally and externally, including the approval of suppliers and certification of loads.



The CRID is made up by the following structures:

Checking shed for sorting and preparation of loads. | **Area: 550 m²**

Class II – Non-hazardous waste storage shed | **Area: 1,600 m²**

Class I – Hazardous waste storage shed | **Area: 1,170 m²**

Weighbridge | **Capacity: 80 tons**

Two water/oil separators | **Capacity: 2,000 L/h**

Administrative office, locker room and living area | **Area: 180 m²**

Drainage basin



The actions foster new value chains and enable the systemic vision in waste management, considering the environmental, social, cultural, economic, and technological and public health variables, as recommended by the federal legislation.

In 2021, 4,877 tons of industrial waste were recycled, reprocessed or reused, corresponding to 99.8% of the production, thus providing for a sustainable application for these materials. This number is the result of environmental inspections in the generating areas, of actions and dialogs concerning themes related to environmental awareness aiming at the appropriate segregation and packaging of the waste to optimize the correct destination, recycling and reduction of possible environmental impacts.

The construction of the CRID included the development of engineering, obtaining the consent of the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), and the defense of an investment amounting to R\$38 million.

Brazil-nut Germplasm Bank.

Brazil-nut trees (*Bertholletia excelsa* Bonpl., Lecythidaceae) have a high socioeconomic value, especially for traditional communities living in the region. Securing the perpetuation and dissemination of the species is an environmental and social commitment of MRN.

To this end, the company implemented in 2013 the Brazil-Nut Germplasm Bank, located at the Almeidas plateau, where genetic material of the species is preserved. The collection of seeds that make up the Bank began in 2014. Such samples come of native chestnut groves in different states of the Amazon. In total, 260 parent trees from these Brazil-nut groves served as the basis for seed collection, starting the production of seedlings at the company's Tree Nursery, from 2014 to 2016. Between 2017 and 2020, more than 10,000 Brazil-nut trees were planted at Almeidas.

In 2021, the environmental teams applied silvicultural treatments and started monitoring the development of the individuals planted from 2017 to 2019, these being the first fruits of the initiative, which has already surpassed its initial goal. .

Plants in
the Germplasm
Bank

Initial Goal:
**8,000
units**

Units
in 2021:
8,633



Other programs that remained strong in 2021.

Water Control and Monitoring Program (PMH).

This Program controls water quality in the areas where MRN operates by observing the progress of the physical-chemical and hydrological composition in the stages of implementation, operation and decommissioning of the mines. Monitoring is carried out in surface and underground waters, and the sampling network is distributed over 251 points.

Surface water monitoring takes place on a monthly basis in streams and rivers and three times a year in springs (twice during the rainy season and once during the dry season) to evaluate interference of the activities developed in the area on the waterways.

On a monthly basis, groundwater monitoring tracks the depth of the water table in deep, central and shallow piezometers installed along the plateaus and also analyzes previously defined parameters.

The company analyzes the results based on the legislation established by Resolutions and NBRs/ABNT Standards. Out of the identified deviations, most are related to the geochemical characteristics of the region, rich in aluminum and iron oxide, and the acidic characteristics of the waters of the Trombetas region.



Ecological Monitoring of the Batata Lake.

The reclamation of the Batata Lake is one of the company's points of dedication and an example of how it revisits the past as a learning process for a better future for everyone. Between 1979 and 1989, under the authorization of government agencies, the tailings from bauxite extraction were dumped into the lake – the tailings are the result of separating the ore from the earth in the beneficiation process, washed with water, without chemical additives, and are non-toxic. In 1989, the practice was discontinued, reinforcing the sustainable culture that MRN has been building over the years. The bauxite tailings are no longer disposed of into the Batata Lake, but into reservoirs.



For more than 30 years, the company has been gradually investing in studies and actions aimed at the reclamation of the lake and its banks.

Collecting samples of the aquatic communities in the Batata Lake for monitoring has been going on since the 1990s in two areas, one of natural regeneration and the other of planting from seedlings produced in MRN's Tree Nursery.

The increase in sediment organic matter, average water transparency levels, and greater diversity of the fish community found in the area are a key indicator.

As for the phytoplankton community, throughout the 34 years of monitoring, it totals 336 species, with a higher number of species of chlorophyceae (120), zignemaphyceae (64), cyanobacteria (48), chrysophyceae (35) and diatoms (25).

The restoration of marginal areas is accelerating the recovery of water and sediment. More than 700,000 seedlings have already been planted in 110 hectares of marshland. The leafy trees – over 30 meters high – bear fruit and attract fauna – another action to be celebrated by everyone involved.

Keywords:

chlorophyceae, zignemaphyceae, cyanobacteria, chrysophyceae, diatoms – Species of algae and bacteria that make up the ecology of aquatic epiphytes.

Flora Recovery, Rescue, Multiplication and Reintroduction Program (PRSF).

This program rescues flora (epiphytes, hemiphytes and terrestrials) from vegetation suppression in the Saracá-Taquera National Forest (Flona) and reintroduces them into replanted areas.

In order to conserve the species, the program stimulates the reproduction of the species in MRN's Epiphytes nursery, monitors their growth and associated ecology, and produces a scientific collection to catalog the diversity of epiphytes. The results have been monitored annually by IBAMA since 2015.

The priorities in germplasm collection encompass rare, endangered and commercial species, which were sorted according to ecological criteria (distribution, abundance, rarity), conservation status (endemic, vulnerable, endangered), economic criteria (commercial) and the number of research lines in which they are inserted (recovery of degraded areas) and conservation.



In 2021, **14,362 specimens** of **103 species**, **44 genera**, and seven families were rescued in the mining area. Out of the total number of plants rescued, **90.18% were intended for reintroduction.**



The use of plants included 3,892 individuals, which are represented by 83 species, 48 genera and 16 families. Among the plants removed from areas with no vegetation suppression (utilization), 51.98% were donated (2,023), 47.84% were reintroduced (1,892), and 0.18% were incorporated (7). The reintroduction of these individuals was intended for the plateaus Aviso (63%), Papagaio (36.09%) and Almeidas (0.91%).



About 174 individuals (rescued and used) belonging to 28 species, 19 genera and three families were incorporated to the living collection of the Epiphytes nursery.



Regarding the seeds rescued in areas of vegetation suppression, 666 seeds were obtained, belonging to three families, five genera and six species. 2,387 propagules of endangered and/or protected species were saved.

77,062 seeds were sown, corresponding to approximately 138 lots distributed in 14 species, five genera, and four botanical families. 1,100 seedlings were sent to introduction.



The active searches in the suppression areas for survey resulted in the recording of 4,612 individuals of epiphytic, hemiphytic and terrestrial habit, besides the collection of 308 propagules from species of tree habit, 19 fruits and 289 seeds, which were processed and sent to the Tree Nursery for seedling production.

Keyword:

Propagules – structures that detach from an adult plant to give rise to a new plant, genetically identical to the original plant (clones).



Program for Monitoring the Impact of Roads on Fauna (PMIE).

The care with animals both in the development of its activities and in the traffic routes of vehicles and the railroad in the Saracá-Taquera National Forest is one of MRN's greatest concerns.

The PMIE identifies and correlates the points of highest incidence of pedestrian collisions by evaluating their spatial distribution and different landscape conditions. The monitoring is carried out from the quantity of species to mitigating measures for protecting the fauna.

The records are entered into a database, considering variables such as weather and species involved in the accidents. It was noticed, for example, that the rainy season favors the occurrences.

In 2021, 1,410 road kills of 160 fauna species were recorded. Out of the total observed, 470 individuals of 62 species were found on the railroad and 940 individuals of 135 species were found on the other roads.

In the year, 71 animals of 37 species were sent to the Wildlife Sorting Center (CETAS) for treatment or for diagnosis of death (those already found dead).

Among the mitigation actions are lower and overhead structures for the crossing of fauna, such as dry pipes, under bridges and drains, and under mats, in addition to environmental awareness actions. For 2022, the proposal is to include the installation of electronic speed bumps to reduce speed on the railroad, where more events occur.



Licensing.

Licenses and Authorizations issued:

License/Authorization	License/Authorization No.	Issuing Agency	Location	Description
Approval	Official Letter No. 177/2021	IBAMA	Saracá	Berm reinforcement at SP-4S and SP-5O
Approval	Official Letter No. 450/2021	IBAMA	Saracá	Berm reinforcement at SP-5L south-side wall (Phase 2)
Vegetation Suppression Permit – VSP	001/2021	SEMMA/Oriximiná	Areal Km 04	Sand mining
Vegetation Suppression Permit – VSP	1053.9.2021.28165	IBAMA	Aramã	Bauxite extraction - Edge rectification
Vegetation Suppression Permit – VSP	1053.9.2021.20634	IBAMA	Saracá West	Mineral prospecting
Vegetation Suppression Permit – VSP	1053.9.2021.24409	IBAMA	Cipó	Mineral prospecting
Vegetation Suppression Permit – VSP	1053.9.2021.61703	IBAMA	Teófilo/Cipó	Bauxite extraction
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2021.43475	IBAMA	Monte Branco	Use of timber generated in 2018
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2021.43488	IBAMA	Monte Branco	Use of timber generated in 2019
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2021.44066	IBAMA	Monte Branco	Use of timber generated in 2020
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2021.25367	IBAMA	Teófilo	Use of timber generated in 2018
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2021.24906	IBAMA	Aramã	Use of timber generated in 2019
Authorization for Use of Forest Raw Material – AUMPF	1053.1.2020.25343	IBAMA	Bela Cruz	Use of timber generated in 2018
Direct Authorization – AD	002/2021	ICMBio Trombetas	Greigh	Trail opening for topographical survey and SPT drilling
Direct Authorization – AD	003/2021	ICMBio Trombetas	Jamari	Trail opening for auger boring and SPT
Direct Authorization – AD	008/2021	ICMBio Trombetas	Cipozinho/Esperança	Trail opening for mineral prospecting – GPR. Renewal of AD No. 008/2021
Direct Authorization – AD	042/2021	ICMBio Trombetas	Porto	Trail opening for SPT drilling – Rectification
Direct Authorization – AD	043/2021	ICMBio Trombetas	Cipozinho/Esperança	Sand mining
Direct Authorization – AD	045/2021	ICMBio Trombetas	Greigh	Optical fiber
Expansion License – LA	001/2021	SEMMA/Oriximiná	Areal Km 04	Rectification of the LO approved by Official Letter No. 223/2021
Installation License – LI	1386/2021	IBAMA	Estrada MRN/Terra Santa	Bauxite mining
Operation License – LO	1772/2018	IBAMA	Aramã	Implementation of cells No. 10, 11, 12, 13, 14, 15 and 16 for expanding the landfill
Operation License – LO	1624/2021	IBAMA	Teófilo/Cipó	Operation of the Urban Solid Waste Treatment Complex
Installation License – LI	3111/2021	SEMAS/PA	CTR	Groundwater abstraction - Wells PA-02 and PA-03
Operation License – LO	12718/2021	SEMAS/PA	CTR	Operação do Complexo de Tratamento de Resíduos Sólidos Urbanos
Grant	5616/2021	SEMAS/PA	Monte Branco	Captação de água subterrânea Poços PA-02 e PA-03

Greenhouse Gases. The commitment of the mining sector to emission reductions.

The emission of Greenhouse Gases (GHG) has always been monitored by MRN, which constantly seeks new alternatives that promote reduction in all of its operations. By means of annual inventories, the impact of these initiatives are evaluated according to several parameters.

After obtaining the ASI in 2021, this culture became even stronger with the indicators becoming more challenging targets in the medium and long term. Now, the inventories are submitted to a third-party audit by an agency accredited by the National Institute of Metrology, Quality and Technology (Inmetro) and then are published in the GHG Protocol platform of the Getúlio Vargas Foundation (FGV).

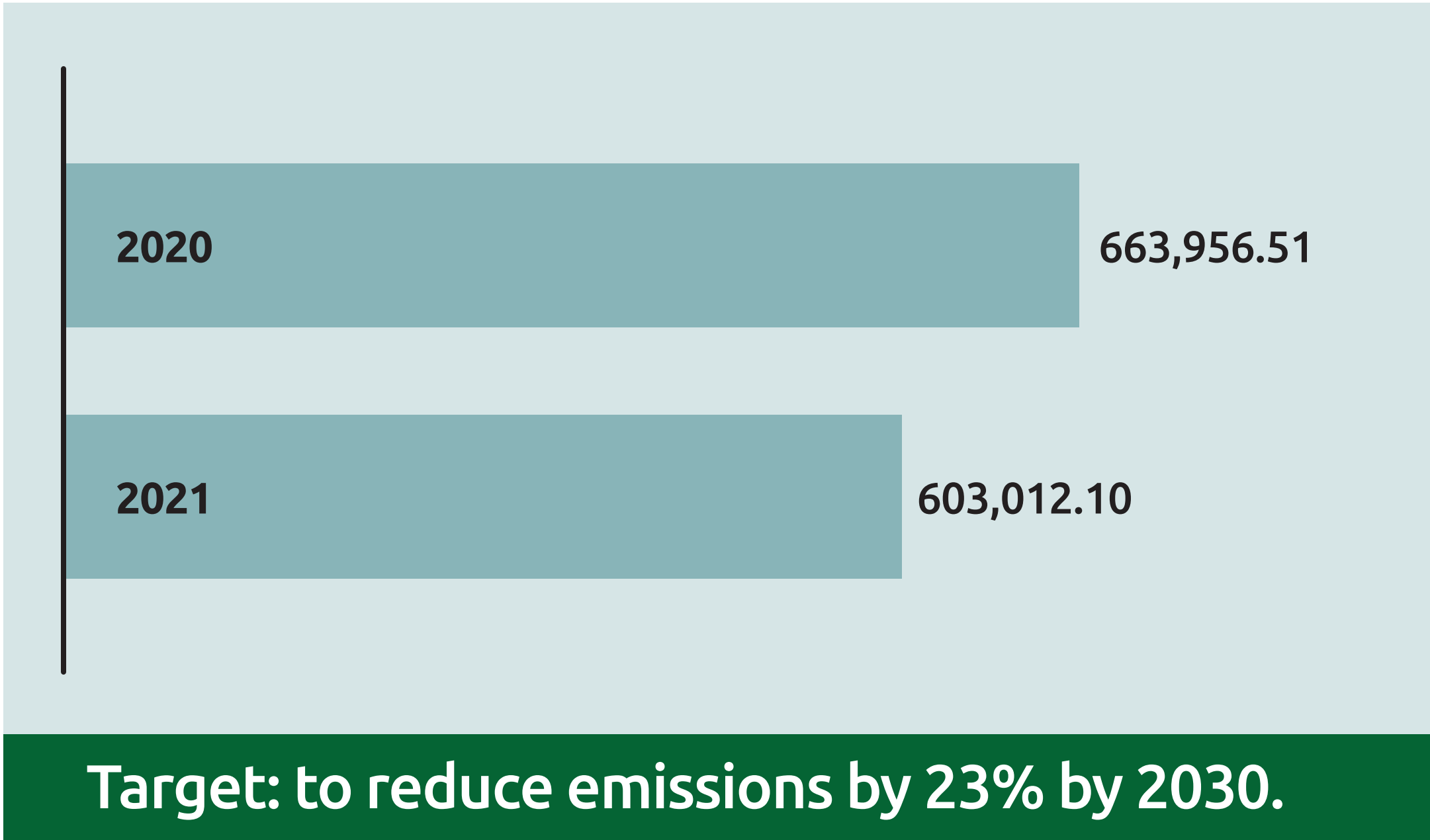
The listings detail the company's GHG emissions by category/scope, for 2021.

Scope 1	587,953.60	97.50%
Agriculture	87.89	0.01%
Stationary combustion	174,079.85	28.87%
Mobile combustion	100,151.61	16.61%
Fugitive emissions (recharge of fire extinguishers and cooling gases)	2,725.49	0.45%
Change in land use	305,955.69	50.74%
Solid waste and liquid effluents	4,953.07	0.82%
Scope 2	1.04	0.00%
Purchase of electric power	1.04	0.00%
Scope 3	15,057.45	2.50%
Leased assets (the organization as a lessor)	2,858.23	0.47%
Purchased Assets and Services	5,323.27	0.88%
Residues generated in operations	6,875.95	1.14%
Total	603,012.10	100.00%

According to the Qualification Policy of the Inventories by the Brazilian GHG Protocol Program platform, MRN received the **Gold Seal** in 2020. The 2021 inventory is in the process of validation to receive this qualification as well, and that enhances the Company's commitment to reducing GHG emissions in its processes.



Reduction by more than 60 thousand tons of CO2



Outstanding initiatives to accomplish this goal:

- Improved drying efficiency.
- Improved Power Plant and industrial facilities efficiency.
- Studies for implementation of photovoltaic panels.
- Replacing old light bulbs with LED bulbs.
- TL230kV (Transmission Line) business case review.



People



Being as broad as the world. Mining activity for and to the people.

You only have to enter MRN to see the commitment to building a diversified environment. From operators of large machines in the mines to area managers who work in the office. From the meeting rooms to the monitoring rooms. A deep-rooted culture which is increasingly fruitful for employees and the society at large.

MRN is proud to act constantly to engage its qualified and committed professionals in its operations. The Human Resources management strives to attract and integrate new employees through innovative processes.

People Development.

MRN continuously seeks the best people development methodologies, thus attracting the main market trends to its processes.

The Integrated People Cycle bolsters MRN's commitment to the development of employees at all levels by means of competency analysis to promote professional growth and skills enhancement.

The agenda is structured based on aspects such as career, future challenges and feedback. Leaders and subordinates jointly draft the Individual Development Plan for the following year as a mechanism for the continuous evolution of the teams.



In 2021, the People Management area implemented the potential assessment by Learning Agility to develop leaders in advance for unprecedented and challenging scenarios. In the same year, 61% of the leadership positions that opened were filled by successors, exceeding the 54% result in the previous year.



Initiatives for the improvement of professionals.

Leadership Development Program.

The performance of leaders is decisive in professional development by guiding the team into achieving the company's goals. In order for leadership to develop the potential of employees, all leaders participate annually in the customized program that, in 2021, had as main themes Diversity & Inclusion, Engagement, Leadership in the New Normal. The results obtained in 2021 include an increase in the perception by employees in relation to the leadership concerning such factors as trust, quality of relationship, leader's communication and competence skills, in addition to the structural and operational support that he/she provides.

Successor Development Program.

The Successor Development Program aims to improve the skills and competencies of employees mapped out to assume their first management position or more complex positions for those who already hold the position. The program has customized tracks for each leadership passage and supported the promotion process of 19 leaders.

Trainee Development Program.

This program focuses on the development of technical and behavioral skills through learning in the area, career mentoring, training, thus promoting the adaptation of these young people to the mining context and to the labor market.

Young Apprentice Development Program.

This program prioritizes the continued development of young people, coming predominantly from the communities, in technical qualification, thus allowing for greater preparation in pursuing their first job. The program is carried out in partnership with the National Service for Industrial Learning (Senai) and focuses on both theoretical and practical development.

Development actions within the Individual Development Plan.

Additionally to the programs, several actions were offered, according to the Individual Development Plan, considering the specific development requirements of each public and promoting professional growth and improvement of their competencies and skills.



Training & Development.

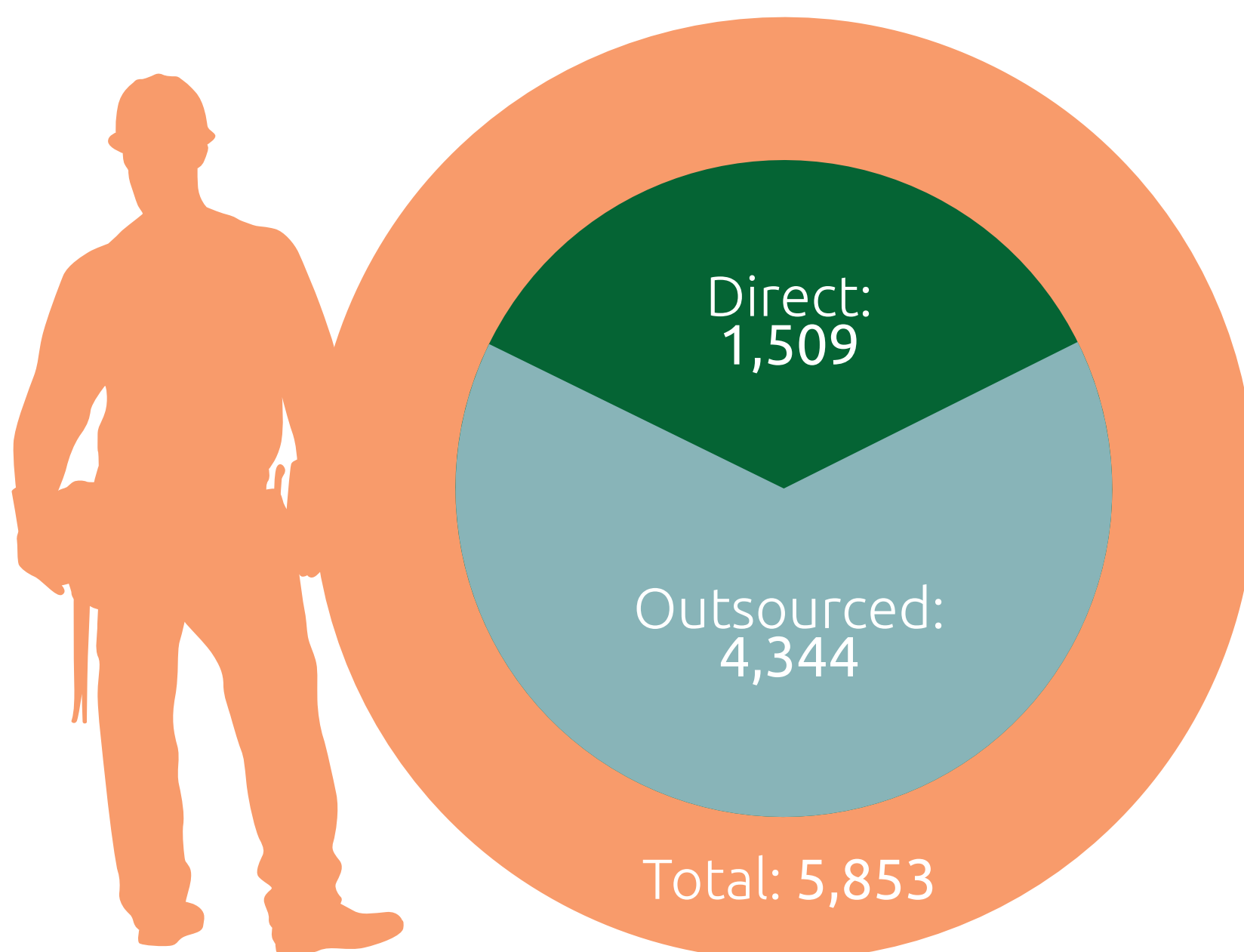
Another process that the company's Human Resources area establishes is the Continued Education actions to provide employees with the development of the competencies required to perform their activities by initiatives by the company or in partnership with educational institutions from all over Brazil. Furthermore, an online platform was launched for employees to invest in their professional development. This platform provides categorized courses on relevant themes such as Innovation, Diversity, Leadership, New Skills, which can be accessed in Web (Desktop and Notebook) and Mobile versions.

The Leadership, Successor and Trainee Development programs featured strategic roundtables, skills development training, lectures, language improvement, assessments, access to a self-oriented learning platform, mentoring, and many other solutions.

There were 705 classes offered at the GHD through the Annual Safety Training Calendar. These classes were attended by 2,713 MRN employees and 9,937 contractors.

In 2021, the company surpassed 20 thousand participations in training, out of which 12,852 in Safety and Qualification Training and 7,413 in Behavioral Training (YouKnow Platform).

HR X-Ray - Jobs:



Note:

Direct jobs: MRN headcount without Young Apprentice -Dec/2021. Outsourced: Permanent + Works - Dec./2021.

Local Labor - More than **82%** of MRN's employees are from Pará. Out of this total, **74%** are from Oriximiná, Terra Santa, Faro, Óbidos, Alenquer, Juruti and Santarém, municipalities in the Western region of Pará. These data reflect MRN's commitment with the appreciation of local labor.

Collective Agreement - **100%** of employees are covered by the Collective Bargaining Agreement, except the Young Apprentices.

Equality - The Career and Salary Policy secures equal pay for both genders. None of the company's positions has restrictions for hiring professionals by gender.

Productivity - **9,193** tons of bauxite per employee were produced, slightly higher than in 2020, when the company reached **8,973** tons per employee.

Total number of workers by type of employment, employment contract and region, broken down by gender:

Workforce / total headcount	2021		2020		2019	
	Men	Women	Men	Women	Men	Women
Total employees (including Young Apprentice)	1,393	173	1,460	122	1,398	110
Contracted employees Permanent + Works	3,206	571	3,757	460	3,187	368
Total Workforce	4,599	744	5,217	582	4,585	478

Workforce / total headcount	2021		2020		2019	
	Men	Women	Men	Women	Men	Women
Fixed term*	27	30	15	9	35	14
Indefinite period	1,366	143	1,445	113	1,363	96
Total by gender	1,393	173	1,460	122	1,398	110
Total	1,566		1,582		1,508	

Number of employees (per type of employment contract)	2021		2020		2019	
	Men	Women	Men	Women	Men	Women
Porto Trombetas (PA)	1,364	159	1,454	112	1,397	108
Belém (PA)	2	4	2	4	1	2
Other regions	27	10	4	6	0	0
Total by gender	1,566	173	1,460	122	1,398	110
Total	1,739		1,582		1,508	

*2021 - 41 People working from home (29 men, 12 women).

Total number and rate of new hires, discharges and turnover by age and region

Number of contractors by region	2021		2020		2019	
	Men	Women	Men	Women	Men	Women
Porto Trombetas (PA)	3,206	571	3,757	460	3,187	368
Total	3,777		4,277		3,555	

Workforce / total headcount	2021		2020		2019	
	Men	Women	Men	Women	Men	Women
Number of new hires	135	37	218	31	247	28
New hires rate	14.52%	19.62%	13.80%	24.22%	16.51%	25.45%
Number of discharges	274	11	135	15	133	14
Discharges rate	8.99%	9.49%	8.54%	11.72%	8.89%	12.73%
Turnover rate	11.76%	14.56%	11.17%	17.97%	12.70%	19.09%

Return to work and retention rate after maternity/paternity leave by gender:

		2021	2020	2019
Total number of employees taking maternity/paternity leave	Men	135	218	247
	Women	9	11	39
Total number of employees returning to work after maternity/paternity leave	Men	135	218	247
	Women	9	11	39
Total number of employees who did not return to work after maternity/paternity leave	Men	0	0	0
	Women	0	0	0
Total number of employees who returned to work after maternity/paternity leave and were still employed 12 months after returning to work	Men	9	11	39
	Women	2	2	8
Return to work rate	Men	100%	100%	100%
	Women	100%	100%	100%
Retention rate	Men	100%	100%	100%
	Women	100%	100%	100%



The pride of being part of one of the best companies to work for.

MRN was elected for the first time one of the best companies to work for in Brazil under the Great Place to Work – Industry ranking, and it ranked 38th place in the “Large Size” category. In addition, it ranked 4th in the regional category, up four positions if compared to the 2020 ranking, and is among the best companies to work for in the North region. This recognition signals that the company is on the right path: to take the bauxite Pará exports to the world with development and sustainability for this producing region. And all that is conducted with respect for people and the environment.



Investing in People Management is one of MRN’s differentials. And it was a fundamental factor in overcoming the challenges in 2021, when the Covid-19 pandemic was still a difficult reality. The company adapted to a new work model by leveraging digital resources. Several strategies were redesigned to strengthen the culture, the challenges and the purpose of MRN.

Since 2020, the company has been strengthening its engagement actions in an even broader and more sustained manner. And this can be verified on a yearly basis, as it engages more than 50 employees to take part in Cultural Practices that build an environment of trust for everyone. Leaders are developed to support MRN’s engagement strategy and to assess the positive results of this progress every year. It is also part of the Engagement Program to measure the climate of the areas on a weekly basis by providing all leaders with personalized information to act in the construction of a better place to work.

MRN's two achievements in the GPTW 2021 are the result of this broad engagement work with all employees. Engagement has always been an essential agenda for MRN. Employees became the core focus of the process and the best solutions to create a great place to work arose therefrom. The understanding is that everything only makes sense if it is done by everyone and for everyone.

“

I've never known an organization with a similar culture, which allows employees to contribute ideas and to grow professionally based on their efforts and skills. Being recognized in the GPTW ranking is the merit of each employee, who does his/her best every day to continue evolving and adapting to the new changes taking place in the world. We've been through challenging times, but in all of them the MRN team showed synergy, thus overcoming obstacles to achieve the best results

Ney Portilho Demétrio, Technical Manager at MRN's Power Generation Plant, in the company for 32 years now.

”

“

It's a great honor to be part of the history of the company and of Porto Trombetas. I am grateful to the company for having provided me with many opportunities. Here I raised my children. My oldest son was 5 years old when we arrived here and my oldest daughter was born here and is now 22 years old. Porto Trombetas has been my home for 23 years now, 10 of which I have dedicated to MRN. I am proud to be part of this wonderful team

Edinalva Adelardo, Infrastructure services Analyst.

”



MRN for Everyone: diversity and inclusion in practice.

Implemented in March 2021, **MRN para Todos** (MRN for Everyone) is the program that is paving the way toward a more diversified, inclusive and equitable MRN. This program embraces professionals from various areas to secure greater representation, encouraging and appreciating the participation of diversified talents, such as women, blacks, people with disabilities and LGBTQIA+ in the company.

After being launched, MRN now has a Work Plan involving Diagnosis, Training, Governance and Strategic Planning, which will support affirmative actions over the next few years. In the same year, the Guide for the Prevention of Moral and Sexual Harassment, Bullying, Gender Discrimination and Prejudice was launched, reinforcing MRN's commitment to the topic.

The program includes actions integrated to the eight strategies of the Letter of Commitment of the Brazilian Mining Institute (IBRAM), which guides the issue of diversity and inclusion of women in the mining sector.

The themes addressed thereby include:

Career opportunities.

Development of talents for the future.

Investing in community women.

Supplier diversity - retain companies led by women.





Over the past two years, the participation of women in all the areas of the Company **increased to 9.2%, up from 6.6%**. Also, campaigns and training were provided for employees, leaders and program team.

2.6% more women



MRN believes that, based on a fresh look, we do have the potential to build an inclusive, collaborative, diversified environment, thus strengthening diversified, inclusive culture.



I arrived here in 2012 through a lecture and CV analysis especially for PwD. MRN provided me with training over one year and I gained experience and qualification and soon I will graduate as a Production Engineer. It was essential to have this opportunity to get here. I realized this progress when I started to have space to talk, to express myself and my needs, to show my competence. Today, I realize that the company is increasingly open to all PwDs

Erivane Santos, Administrative Assistant, has hearing impairment.



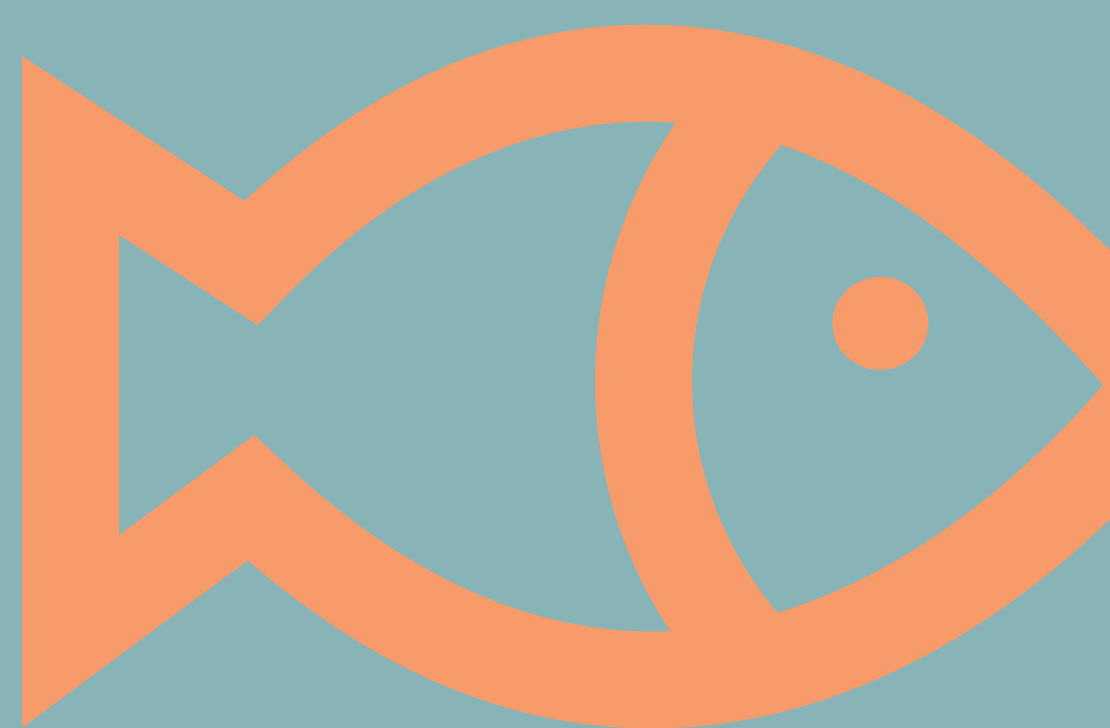
I have been part of the MRN staff for ten years. I have already participated in lectures on diversity and I believe that it is important for the company to have well-defined inclusion criteria in various processes, so that we can really see people of different ethnicities in our daily lives. In these lectures, I get to know more about the topic and realize that it is important to review some actions and attitudes. And the program is one more step and, as a black man and a Quilombola, I see an open path and a space to speak out

Lenilton de Jesus, Environmental Analyst.





Communities



Community Relations.

Dialog, strengthening partnerships, constant learning, joint progress.



MRN believes that the relationship built with the surrounding communities needs to be based on mutual respect. To this end, the company encourages a meaningful engagement that involves constant dialog and respect for the traditional ways of life of the community. This position of the company is clearly identified by hiring community residents to guide the reforestation formats. This allows traditional and sustainable practices to be used, thus contributing to the efficiency of forest reclamation. In addition, the company seeks to develop projects that promote economic opportunities for the locals. These are just two examples of a sustainable way of thinking.

All decisions, which may generate any impacts for Quilombola and riverside communities, are discussed in advance with leaders and community members. It is always necessary to secure the Free, Preliminary and Informed Consent (FPIC) by the community members in relation to the licensing of the enterprise. MRN understands that it operates in a Quilombola Territory protected by the Saracá-Taquera National Forest. So, the loss of the social license is one of the company's top 5 risks. To this end, the progress of processes and new steps are shared with the communities, always prioritizing sustainability.

Through the Community Relations team, MRN connects the operation to riverside dwellers and Quilombolas along the Trombetas River. Hearing the voice of communities means respecting their leadership. Acting with transparency strengthens the bonds of trust built over 40 years.

Social license to operate:





As a reflection of the importance attributed by MRN to the sustainable development of the communities it has an interface with, the company incorporated the concept of Social License to Operate (LSO) with regard to the relations with these communities. Emerged in the 90s, in the mining industry, the LSO reflects the advance in the understanding of the contributions and responsibilities that companies have with the population in the locations where they are installed.

In general, the LSO can be understood as a political tool that correlates the company with its multiple stakeholders: communities it has an interface with, government, civil society organizations, among others. It is a multiple license that involves the engagement of different groups seeking to mitigate impacts and risks generated by the company's operations aiming at the consolidation of a relationship based on trust and respect.

Unlike the Environmental License, issued by an agency authorized by specific legislation to grant a company the right to operate a certain economic activity that involves socioenvironmental impacts, the LSO is more fluid and requires a permanent engagement of the company with its stakeholders.

LSO assumes the recognition, by the stakeholders, that the company is acting responsibly and generating value beyond its shareholders and employees. As such recognition is built permanently, and not through the issuance of a specific document, it requires coordinated and concrete actions by the Company to maintain this relationship, which is aimed at securing its operation under conditions accepted and recognized by the stakeholders.

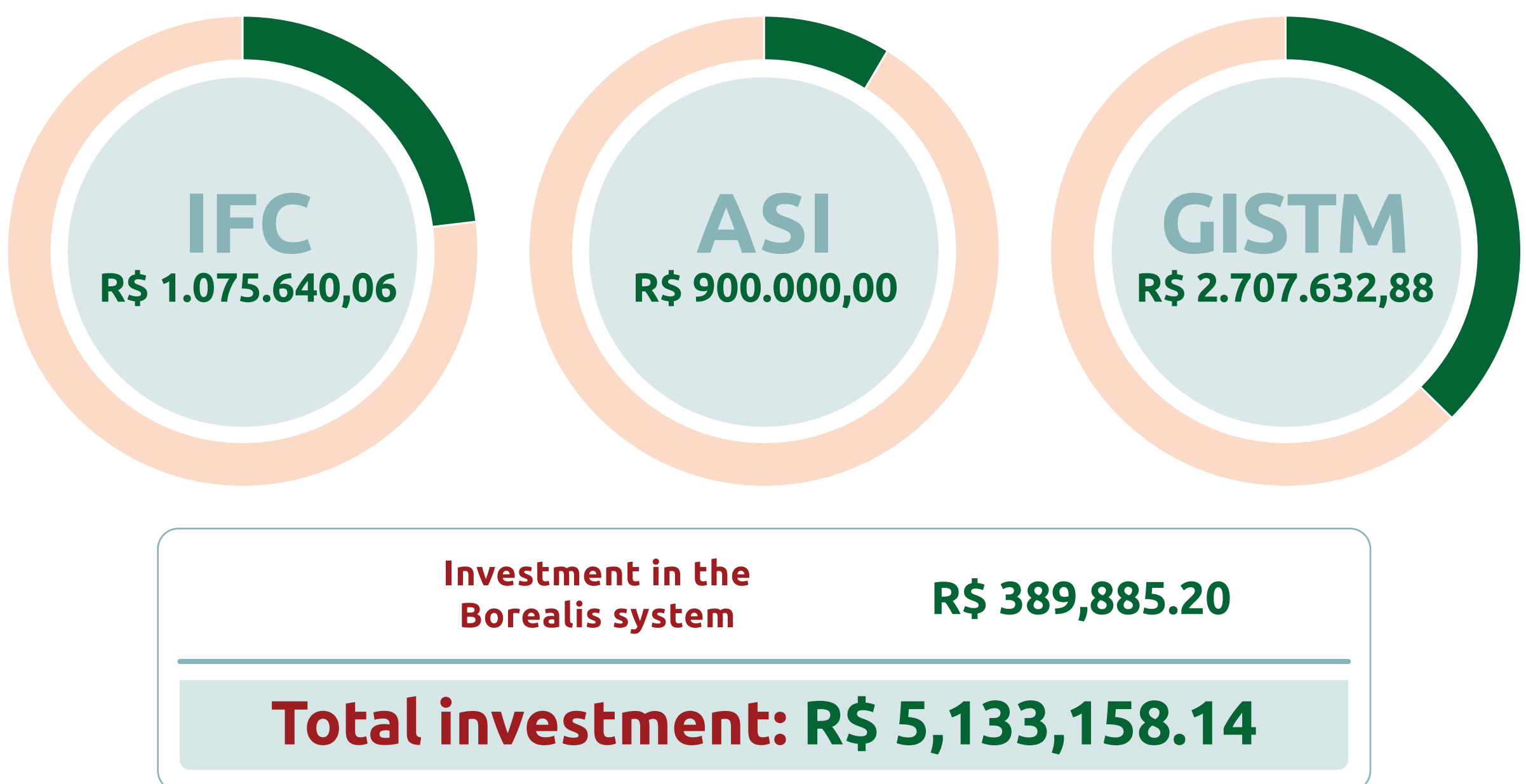
The LSO is also a consequence of the improvement of the media and the awareness of the communities about their rights, thus requiring robust and participative Social Responsibility actions on the part of the companies.

In addition to demonstrating MRN's commitment to the development of the communities it relates to, the LSO contributes to risk assessment, especially the social risk.

The pursuit for obtaining the LSO is related, among others, to compliance with the precepts of the Convention 169 of the International Labor Organization (ILO). According to the convention, the installation of a new project or significant changes in an ongoing project can only occur after obtaining the free, preliminary and informed consent (FPIC) of the traditional peoples that inhabit the areas of direct or indirect influence of the project. In the case of MRN, due to the fact that its operations have influence on Quilombola territories, the company follows the licensing procedure whereby, through the government intervening agency, the communities have the opportunity to participate in the process and present the CLPI. Thus, the LSO and the CLPI are complementary instruments that enhance the socially responsible actions of companies.

Other references are added to support MRN's positive social insertion, such as the United Nations (UN) Guiding Principles on Business and Human Rights and certifications from the Aluminium Stewardship Initiative (ASI), the International Finance Corporation (IFC) and the International Council on Minings and Metals (ICMM).

Investment in international certifications:



MRN invests in international certifications that not only improve the quality of bauxite, but also contributes with actions that enhance its internal and external relations. Thinking about communities, MRN has purchased the Borealis System, which is an internal tool for integrated social management that can be used to create reports, strategic plans and records. This means that the relationship with communities takes on a place of paramount importance for the company. At the end of each engagement, a PDCA is done to evaluate the performance of the engagement process itself. This allows for a refreshment of ideas and continuous improvement.

Investments by territory:

MRN values the sustainable growth of the region where it operates, as well as local development. Therefore, besides developing programs linked to the licensing conditions, the company acts in social responsibility programs, which include: incentive to culture and cultural festivities through the Fund for Children and Teenagers, the Sports Incentive Law and the Rouanet Act in addition to local development programs.

The company also believes in the institutional strengthening of the Quilombola Associations by supporting them with resources for their growth and greater coverage and representativeness, in addition to the most varied donations to the municipalities of Terra Santa, Faro, Oriximiná, and Santarém, either in the form of financial or material transfers.

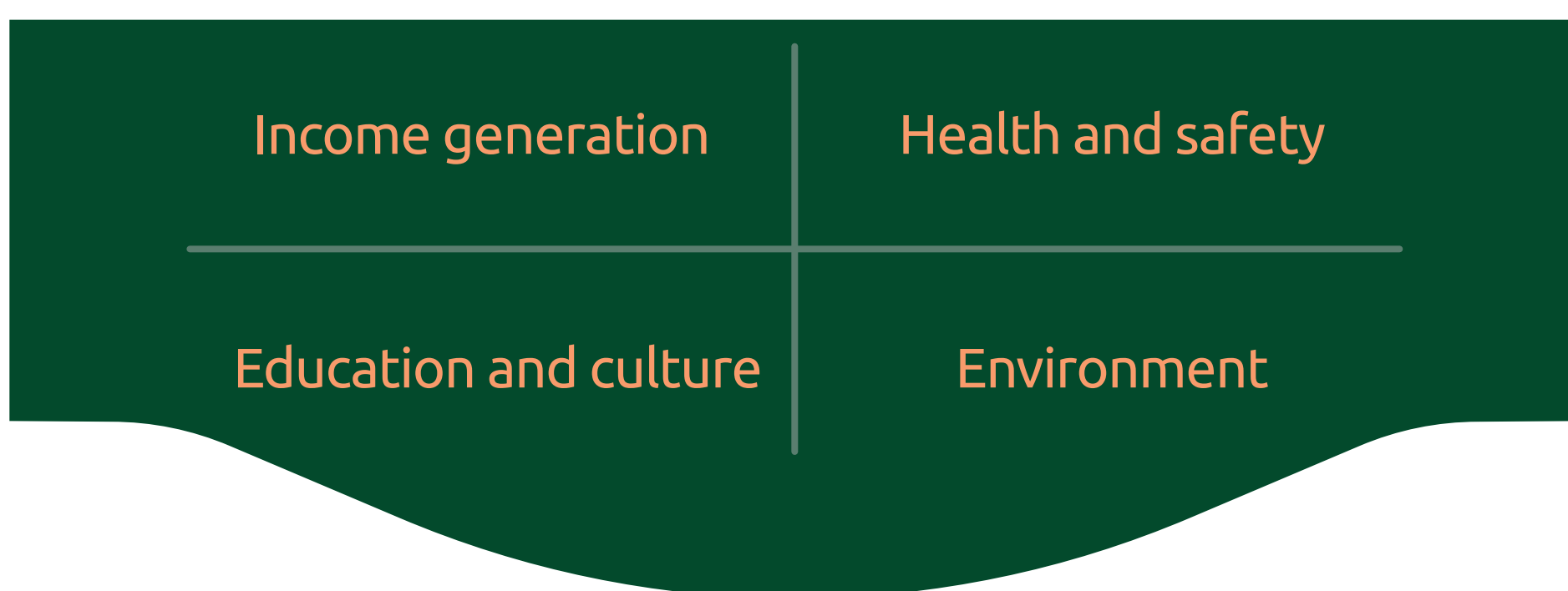
As for the constraints, see below some of the related projects:

Socioenvironmental Education Program (PES)

The action encourages environmental sustainability in the regions where MRN operates, thus promoting improvements in the daily lives of communities by meeting the requirements of the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA).

The Socioenvironmental Education Program (PES) unfolds into 11 initiatives based on the pillars of MRN's activities with the communities, namely: income generation; health and safety; education and culture; and environment.

Quadrants that underlie the company's performance:



The actions being developed include the use of communication materials such as the **environmental education booklets**, which are important instruments to raise the awareness of the communities about the protection of the environment and about the risks and care to be taken in the forest.





1.

Meliponiculture Support Project.

More than just the sweet taste, the honey produced from this project allows for 20 families from the Jauaruna, Alema, and Urubutinga communities in the municipality of Terra Santa, in western Pará, to generate income. The management of the native bee also favors the pollination of plants, thus securing the reproduction of flora species and balancing the ecosystem.

The project has been in place since 2010, and currently relies on the partnership of the Municipal Secretary of Agriculture (Semagri) and the Rural Workers Union of Terra Santa.

MRN encourages the sustainable economic autonomy of the social groups involved. The assistance occurs through lectures, training, technical visits to the beekeepers, delivery of equipment and materials.

Actions performed:

- The activities were conducted observing the health and safety guidelines to contain the Covid-19 pandemic;
- 05 Environmental Education Workshops for each family center - 12 participants from 03 communities;
- 21 colonies, of 7 beekeepers, divided to generate new colonies - 7 families involved;
- 162 honeybees colonies reviewed - 12 families assisted in 03 communities;
- 30 swarms delivered for the expansion of the bee colonies - 05 families benefited.





2.

Agroforestry Systems (SAFs) Support Project.

The harmony between plant species for income generation and ecosystem preservation guides the project. Since 2007, the initiative provides technical assistance to 29 families from the Boa Nova, Casinha, Saracá, Camixá and Bom Jesus communities, in the municipality of Oriximiná.

Initially focused on growing citrus fruit (orange, lemon and tangerine), the project advanced and today implements the cultivation of 15 other species that help preserve the soil and biodiversity.

The consortia of different crops are produced based on techniques, courses, and workshops. All that being aligned with traditional knowledge for the continuous improvement of the management and consequent generation of income and maintenance of the standing forest.

In addition to the agro-ecological methodologies, MRN promotes trainings on entrepreneurship, in order to leverage production sales and ensure the accounting and financial health of the community businesses.



Actions performed:

- The project was resumed in August/2021 observing the health and safety guidelines to contain the Covid-19 pandemic;
- 03 Free-Range Chicken Raising and Feed Production Courses - 101 participants from 05 riverside communities;
- 02 Entrepreneurship and Cooperativism Courses - 35 participants from 03 riverside communities;
- 02 Courses on Good Planting Practices - 77 participants from 04 riverside communities;
- 03 Courses on Agrochemicals - 50 participants from 04 riverside communities;
- 145 Technical Visits to 29 families taking part in the Project in 2021 – in 05 communities.



3.

Family Farming Support Project.

The project operates with the cassava production chain aiming at food security, income generation and environmental sustainability of the production units, besides encouraging the planting of fruit and forest products in the existing crops. It provides support to 18 families in the Ascensão community, in Oriximiná's rural zone.

To promote income generation in a sustainable way, the initiative offers technical qualification to farmers and inputs for the diversification of crops and agricultural activities. The project has addressed the diversification of the properties and one of the actions chosen by the participants is the raising of free-range chicken. Another good alternative has been the growing of native species and fruit trees. The seedlings provided to the community include: andiroba, cumaru, ipê, açaí, cocoa, cupuaçu, banana, pupunha, lemon, orange, acerola, and pineapple.

Actions performed:

- The project was resumed in August/2021 observing the health and safety guidelines to contain the Covid-19 pandemic;
- 02 Free-Range Chicken Raising and Feed Production Courses - 36 participants;
- 01 Cooperativism Course - 16 participants;
- 02 Courses and Practice on Good Cassava Growing Practices - 17 participants;
- 01 Course on Good Food Handling Practices - 10 participants;
- 01 Course on Integrated Management of Fire in Agriculture – 09 participants;
- 90 Technical Visits to 18 families taking part in the Project in 2021.





4.

Fish Farming Support Project.

When science, people, and organizations join hands, the whole planet benefits. The irregular disposal of PET (polyethylene terephthalate) bottles is one of the biggest offenders to the environment.

But, inside the Amazon forest, these items have been reused in new ways that not only reduce the production of waste, but also strengthen fish farming in the Tarumã, Bacabal, Jacuraru and Acapuzinho communities, along the Trombetas river, in Oriximiná.

With a focus on the farming of tambaqui species, the Fish Farming Support Project developed low-cost tanks by using PET bottles. The innovation has the support of the Environmental Physiology Research Group (GPFA) of the Federal University of Western Pará (Ufopa).

One of the highlights of the project is to create a device made out with bicycle tire tubes and an air pump. This makes it possible to fill the bottles to greater resistance to pressure and the tanks' capacity to float in water.



“

Before, we always had to change the tanks every three to five years, or even less. Besides, the tanks sank and we had to go after material to build new ones. Now, the Company brings the bottles and we put them in the tank, it is sturdier to work with and lasts longer floating in the water, besides being safer

Maria Mota (dona Zuma), fish farmer.

”

Actions performed:

- The activities were performed observing the health and safety guidelines to contain the Covid-19 pandemic;
- 735kg of fish feed delivered in 03 riverside communities;
- 18 thousand Tambaqui fingerlings delivered in 04 riverside communities;
- 07 Fingerling nurseries built in 03 riverside communities;
- 20 Project participants at the Feira do Peixe Vivo (Live Fish Fair) in Oriximiná/PA;
- 49 Technical Visits to the beneficiary families to follow up the development of the fingerlings and grown fish.

All the collection work is performed by MRN’s Urban Waste Treatment Station (CTR), in Porto Trombetas.




9 thousand bottles collected per month



50% oriented for **fish farming**



50% sent to **recycling companies**



5.

Microsystems and Artesian Well Project.

The project addresses the maintenance of microsystems and artesian wells, so as to supply drinking water to the beneficiary families. These systems mostly support the Family Agriculture and Agroforestry Systems projects implemented with MRN's support. The target area of the actions is the communities of Lago Sapucuá (Saracá, Boa Nova) Lago Batata and Alto Trombetas II.

In addition, there are awareness-raising actions about health and the environment, especially regarding the care of water, soil, forests, rivers, garbage, wild animals, among others.

Actions performed:

- The Project was performed observing the health and safety guidelines to contain the Covid-19 pandemic.
- 5 Micro-systems built with power supplied by solar panels.
- 8 Artesian wells with drinking water for the community, according to laboratory analysis for the water quality.



6.

Malaria Control Project.

Malaria affects thousands of people in the Amazon region every year. Transmitted by the female *Anopheles* mosquito, the disease causes headaches, high fever, and chills, and can lead the sick person to death.

MRN promotes malaria prevention with vector control actions, besides raising awareness about the disease through its communication channels, such as the Konduri newspaper, the radio program Estação Konduri, social networks and, mainly, through instant messaging applications. In addition, awareness-raising lectures on the topic and other health-related lectures are held.

The preventive work also encompasses other endemic diseases such as dengue, yellow fever and leishmaniosis in the urban area (Porto Trombetas district) and in riverside communities adjacent to the Trombetas River.

The project is also available to diagnose and treat the patient, through a partnership with the Oriximiná City Health Department. To control vectors, activities are developed in accordance with the Resolution of the Joint steering Committee (RDC) 52, of the Department of Health, such as larval research, thermo-spray, pest control campaign and inspection of homes.



Actions performed:

- The actions performed in 2021 observed the mask mandates and sanitizing of hands and surfaces, and social distancing;
- 23 riverside and Quilombola communities, and indigenous communities visited in the first campaign and 18 in the second campaign;
- 2,424 properties visited for spraying and thermo-spraying;
- 7,258 people benefited by the actions;
- 714 malaria cases identified and referred for treatment.

7.

Quilombo Project.

Based on the Health axis of the PES, the Quilombo Project provides medical and clinical assistance to the riverside and Quilombola populations of the Alto Trombetas I and II territories.

A team of doctors, nurses, and nursing technicians visit the riverside communities of the Trombetas River on a monthly basis.

The focus is on Family Medicine, with consultations, nursing care, dispensing medicines, and referrals for tests with a partner laboratory. In more serious cases, the patients are directed to the Unified Health Care System (SUS), including transportation provided by MRN in emergency situations.

Actions performed:

- The actions performed in 2021 observed the mask mandates and sanitizing of hands and surfaces, and social distancing;
- 12 Campaigns in the year – monthly follow-up of 14 hub communities and population of adjacent communities;
- 2,376 Medical Consultations and 4,458 Nursing Consultations;
- 72 Educational lectures held in 14 communities - 440 participants in the communities assisted.



8.

Management of Copaiba.

The oil-resin of copaiba is an important element of traditional knowledge, used to treat inflammatory conditions in the body, and used in the pharmaceutical and cosmetic industries.

The Copaiba Natural Populations Management Project provides services that allow the conservation of copaiba trees through forest inventory, monitoring of previously catalogued individuals, and management of oil-resin extraction, performed only on trees that are large enough to regenerate.

Thirty-six community members from Alto Trombetas II, mainly from the Curuçá-Mirim and Jamari communities, participate in the project, totaling 100 days of activity a year. The initiative also offers income opportunities to the participants through payment of daily services rendered, in addition to the revenue from the sale of the product.

The capacity-building courses take place throughout the entire process and is developed in the communities and during the actions on the Monte Branco plateau, with themes on environmental education, entrepreneurship, and health.

The planning for the next three years of the project foresees a focus on the construction of a Community Forest Management Plan to strengthen social organization, add value to the product, and promote income generation in the territory.



Actions performed:

- The project was resumed in August/2021 observing the health and safety guidelines to contain the Covid-19 pandemic;
- 100 days of inventory and monitoring of copaiba trees over an area of 167.63ha;
- 1,576 specimens catalogued and monitored in shallows and slopes at the Monte Branco plateau;
- 23 liters of resin oil collected under sustainable management;
- 04 technical visits to the community's nurseries – 36 participants in 02 Quilombola communities;
- 7,403 seedlings produced in the communities;
- 09 Courses and Workshops – 203 participants from 02 Quilombola communities.



9.

Environmental Education Project (PEA).

Developed in 29 communities in Oriximiná and Terra Santa, the Environmental Education Project (PEA) involves about 522 families every year. The conservation of fauna and wildlife, solid waste disposal and the rational use of water are among the themes of lectures and workshops given by environmental multipliers.

In lectures with the community members, several doubts and questions are answered: types of wild animals in the region; the biomes existing in Brazil and what animals are at risk of extinction in the country; care and ways to prevent accidents involving animals; what possible diseases can be transmitted by them, and what steps can be taken to avoid them, and the biggest threats, such as: hunting, pollution, being run over by cars, among others.

To bolster fauna protection and the safety of people in the forest, the PEA has launched a booklet on “**Care of Wild Animals**”. The idea is to disseminate environmental education by talking to and delivering to the community a didactic material, with accessible language that can always be used as a reference to clarify any doubts that may arise.



“ *With the project, I learned a lot about animal care and the laws that protect the wildlife, and I also understood that it is a crime to mistreat and hunt in any way. It is important to know that nature has a flow, and that we must preserve the animals in order to avoid extinction, because if there is extinction, nature becomes unbalanced, and animals are fundamental to the environment.* ”

Edinara de Souza Régis, resident of the Último Quilombo community.

Actions performed

- The project was resumed in October/2021 observing the health and safety guidelines to contain the Covid-19 pandemic;
- 18 Wildlife Care Workshops – 379 participants from 18 riverside and Quilombola communities;
- 10 Wildlife Conservation Workshops – 116 participants from 10 riverside and Quilombola communities



10.

Environmental and Heritage Education Project (PEAP).

Strengthening identity by valuing the artistic and cultural heritage of the region. This is the purpose of the project that holds workshops to improve the production of ceramics and handicrafts using forest products, and entrepreneurship.

Regarding the environmental aspect, the initiative encourages the responsible use of natural resources by means of multipliers that work in the communities being assisted.

In 2021, the project was suspended due to the Covid-19 pandemic, resuming activities in the second half of 2022. In 2021, the project was put on hold due to the Covid-19 pandemic, resuming activities in the second half of 2022.



11.

Chelonian conservation projects.

The preservation of chelonians in the Amazon has two important allies: Pé-de-Pincha Project and the Trombetas River Chelonian Program (PQT), both supported by MRN. In the 2021 season alone, more than 100 thousand hatchlings were returned to nature. Learn more about these important environmental conservation initiatives.

Pé-de-Pincha.

With 23 years of operation, the Community Management of Turtles Project (Pé-de-Pincha Project) has reintroduced more than 6 million individuals of the species Amazon turtle (*P. expansa*), irapuca (*P. erythrocephala*), tracajá (*Podocnemis unifilis*) and pitiú (*P. sextuberculata*) into the wild.

The Pé-de-Pincha Project aims to stimulate the conservation of chelonians through participatory management. It is multi-institutional and multidisciplinary in nature, and works with community members, IBAMA, ICMBio, and municipal governments in 31 riverside communities in the municipalities of Terra Santa and Oriximiná.



Chelonians have a shell and are part of the region's biodiversity. The community members actively participate in the care of the species, including the protection of nests against predators. Environmental education actions are offered in the project's area of operation.

“

I am proud to have contributed to create an initiative like this. For 22 years we have been releasing more than 6 million hatchlings in the Amazon rivers. More than a beautiful example for society, it is the preservation of history for mankind

Estones Machado, businessman and co-founder of the Pé-de-Pincha Project.

”

Actions performed:

- The actions performed in 2021 observed the mask mandates and sanitizing of hands and surfaces, and social distancing;
- 2,187 community members involved in the project;
- 5,003 nests protected in the communities;
- 99,990 eggs hatching 53,193 hatchlings that were released;
- 43 Capacity-Building Meetings held in Oriximiná and Terra Santa – 1,192 participants across the territory being assisted;
- 77,360 turtles released in the Oriximiná and terra Santa communities.





Trombetas River Chelonians Program (PQT).

Considered the largest breeding area of the Amazon turtle (*Podocnemis expansa*), the Trombetas Biological Reserve (Rebio) was a way to safeguard the population of this and other chelonian species, among other purposes.

Coinciding with the creation of the reserve in the 1970s, the Trombetas River Chelonians Program (PQT) is conducted by the Trombetas Integrated Management Center of the Chico Mendes Institute for Biodiversity Conservation (ICMBio), in partnership with Mineração Rio do Norte (MRN) and the Institute for Ecological Research (IPÊ). It has been more than 40 years developing actions for the preservation of chelonians in the Amazon.

The program's activities involve 33 volunteering families, who receive food baskets, fuel and lubricant oil, as well as the proper materials for managing the nests.

“

If we don't take care of them now, we will miss them later on. I have been understanding and seeing the importance of these animals to nature, and I want my children and grandchildren to see this, too. That is why we help and contribute to their preservation

Noel Pires, resident of the Sagrado Coração community

”

“

For us it is very important to have such a program. If we don't have one, it will take a long time for you to find a tracajá hatchling, and it will be hard. I think it is very important to have the partnership of ICMBio, MRN and other entities that want to help. I hope this partnership continues for many, many years. I have a granddaughter that came to know a tracajá hatchling during this release

Antônio Luiz dos Santos, resident of the Moura community

”



The actions of the program include:

- Monitoring to avoid capturing females at their most vulnerable time, during egg laying.
- Collection and transfer of the tracajás and pitiús eggs to protected beaches (hatcheries) and monitoring of the nesting grounds of the Amazon turtle.
- Inclusion of local quilombola communities in the management, monitoring, and protection actions of aquatic chelonians by the ICMBio's volunteering program.
- Environmental education actions in the Quilombola communities of Rebio Trombetas and Flona Saracá-Taquera.
- Acting of environmental agents in the management, monitoring and protection of aquatic chelonians, and most of the agents of the NGI ICMBio Trombetas are part of the local Quilombola communities.
- Permanent search for partners for technical support and availability of supplies for the MDT actions and for the assistance to community volunteers.

Human Rights Due Diligence.

Every year, MRN performs the Human Rights Due Diligence, an audit that integrates the various relationship groups of the company.

With regard to respect for the environment, the audit revealed extreme care as internalized in the company's culture. The quality of the water in the region is one of the company's priorities, and the reforestation actions as a way to mitigate the impacts of the operation.

The support to traditional communities was perceived in Due Diligence with 85% favorability. Emphasis on energy supply, education, food and health, as well as employment and income generation through integration projects.

Policies and guidelines on human rights are formally documented in the company's manuals and procedures. In 2021, MRN prepared a Human Rights Guidelines document. The manual of conduct and the aforementioned documents assess, prevent and remediate potential impacts on human rights.

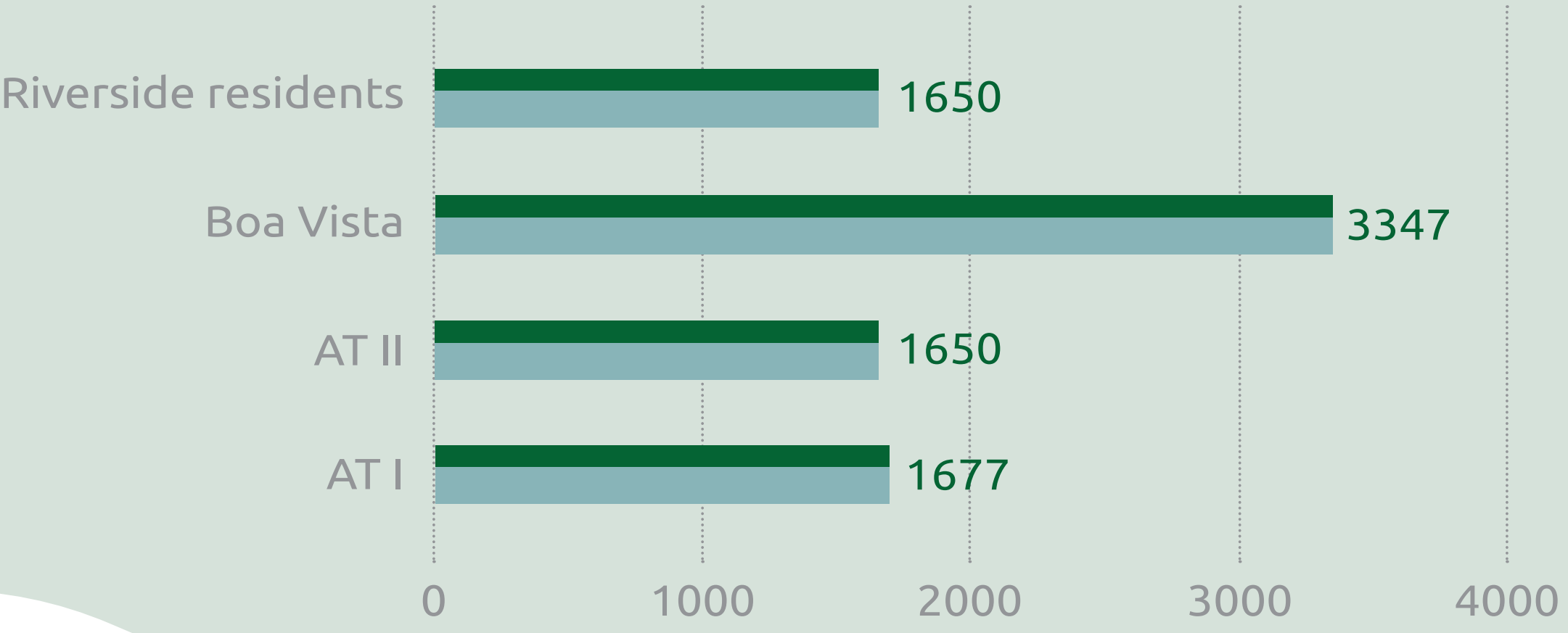


Control and Prevention of Covid-19.

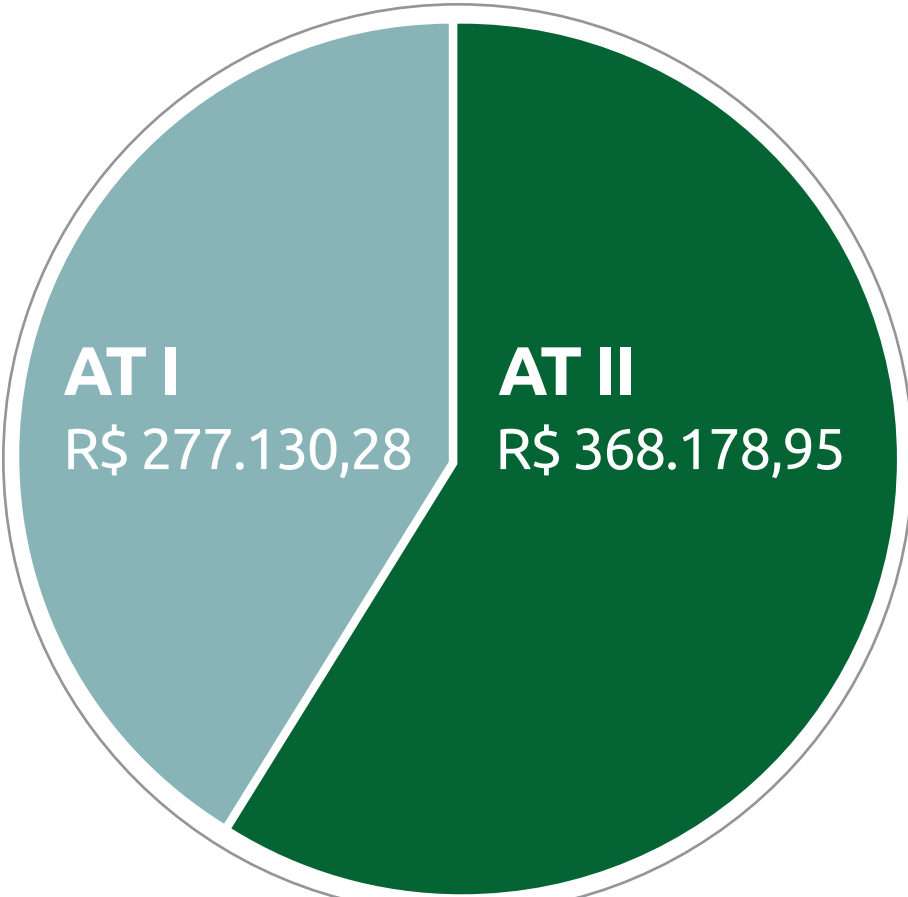
Logistical health support and care for the communities at the Porto Trombetas Hospital (HPTR).



Total medical care by territory:



Expenses on logistical support (gasoline and diesel) for the community members to come to the HPTR for consultation:



The health care reflects on people's quality of life, especially during the pandemic. Since the beginning of the infection by the new corona virus, MRN has established strategies to keep employees, residents of the district of Porto Trombetas and communities protected, acting in a coordinated manner with the public authorities.

In 2021, the pandemic was still affecting many people and the company's support work was intensified to secure the vaccination of employees and residents of Porto Trombetas and neighboring communities.

Information was the main tool to fight the disease, with daily bulletins of new cases, people recovered and eventual deaths, in addition to the dissemination of materials reinforcing prevention and the importance of immunization against Covid. Resources were also provided so that an airborne ICU would be on standby for any need to transfer patients during seven uninterrupted months.

During the first semester of 2021, the Quilombo Project continued with the follow-up, diagnosis and treatment work in the Quilombola communities.

In addition, there were actions and donations to the municipalities of Oriximiná, Santarém, Terra Santa, and Faro in 2021. These donations included hospital supplies, PPE, oxygen cylinders, and equipment for UBS and hospitals. The investment translated into preventive measures for Covid-19, availability of vaccines, and care for hospitalizations and transfers between cities.





Promotion of Cultural Heritage.

The company works for the preservation of the immaterial heritage of the region and, for this purpose, analyzes the risks of impacts in the licensing process of any bauxite mining area in advance.

Our actions and projects are inserted in the axes of Health and Safety, Education and Culture, Environment, and Income Generation, and our mission is to promote the rescue, preservation, and valuation of the environmental, cultural, and archeological heritage, as well as the strengthening of identity and community organization through the recognition of local history, the learning of techniques and practices that reflect the Quilombola and riverside culture, and the generation of an alternative source of income.

In the daily life of communities, the company participates with support to cultural events and traditional festivities of Quilombolas and riverbank dwellers. Among the actions are workshops on entrepreneurship and work with bio-jewelry, ceramics and handicrafts, based on non-timber forest products, also representing opportunities for income generation.



Education that transforms lives and builds up stories.

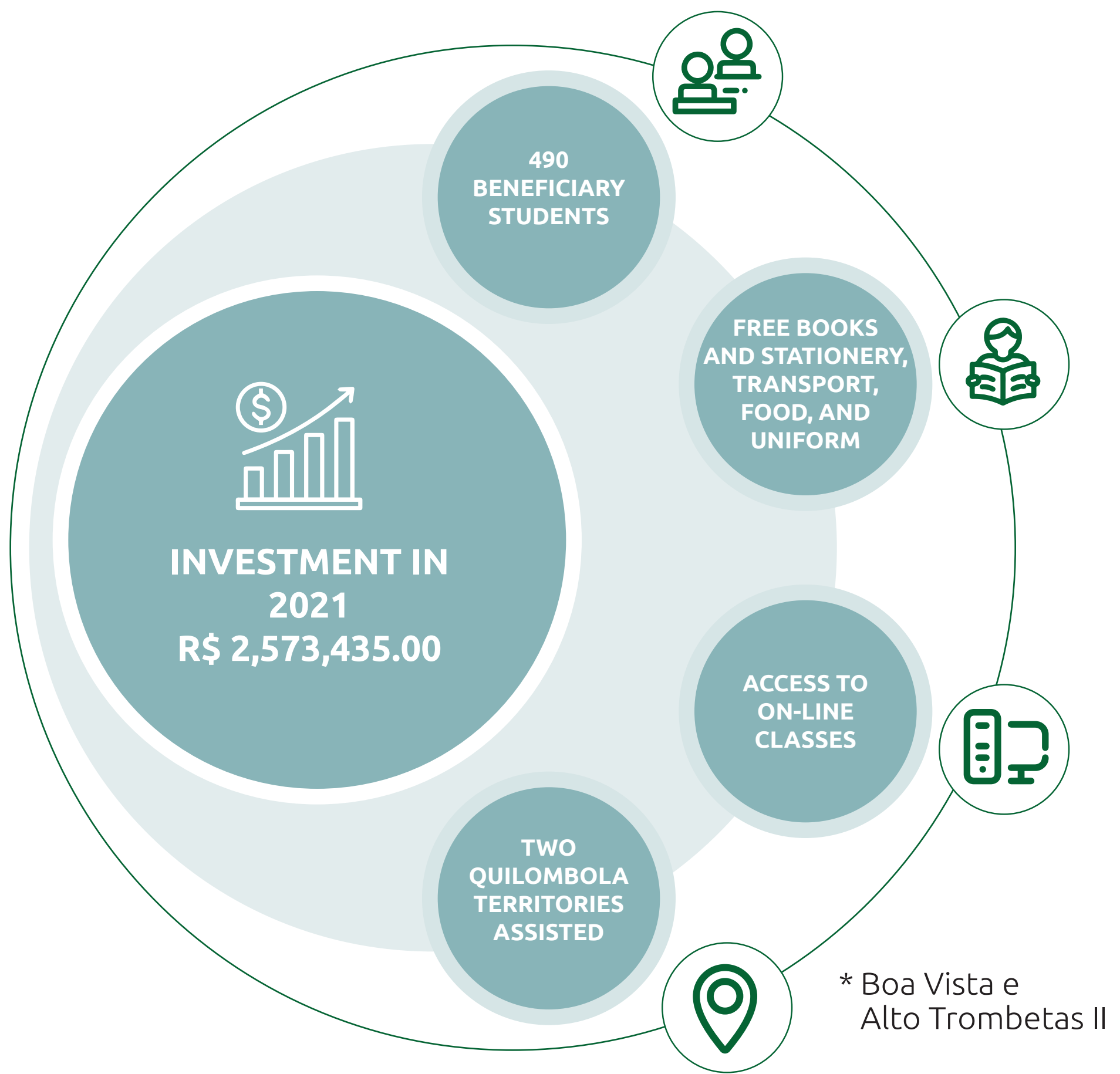
MRN believes that one of the greatest legacies in the life of a human being is the pleasure for studying. Without a doubt, education is the transforming element, which instigates, impels and leads people to challenge all their potential to reach great achievements. In order to contribute to this transformation, the company invests in educational initiatives to provide Quilombola communities with opportunities to access basic, technical, and higher education. **Learn more about these actions:**



Basic Education Support Program (PAEB).

Since 1997, the Basic Education Support Program (PAEB) has guaranteed scholarships at Colégio Equipe, located in Porto Trombetas. Initially, students living in the Boa Vista community were benefited (secondary school and high school). Since 2020, 118 students from Alto Trombetas II, under the Teófilo and Cipó Agreement, are also benefited for high school.

The company provides school supplies (such as backpacks, pens, pencils) and didactic material (books and textbooks), as well as transportation and meals, at no cost to the students or their families. During the pandemic, the students also received laptops temporarily ceded for this purpose.



“

It is fundamental for the school to be that support beyond the transmission of theoretical knowledge, in the curricular subjects, that can contribute to the formation of the student as a citizen and the promotion of a social environment. My oldest son (Raphael) has already entered the Federal University of Western Pará (UFOPA), my middle son (Chrystian) is getting ready to take the entrance examination, and Sthefany will follow the same path. It is gratifying to see that we have the opportunity to create paths with the support of this social program

Andrea Santos, resident of the Boa Vista community and mother of Chrystian, PAEB scholarship holder.

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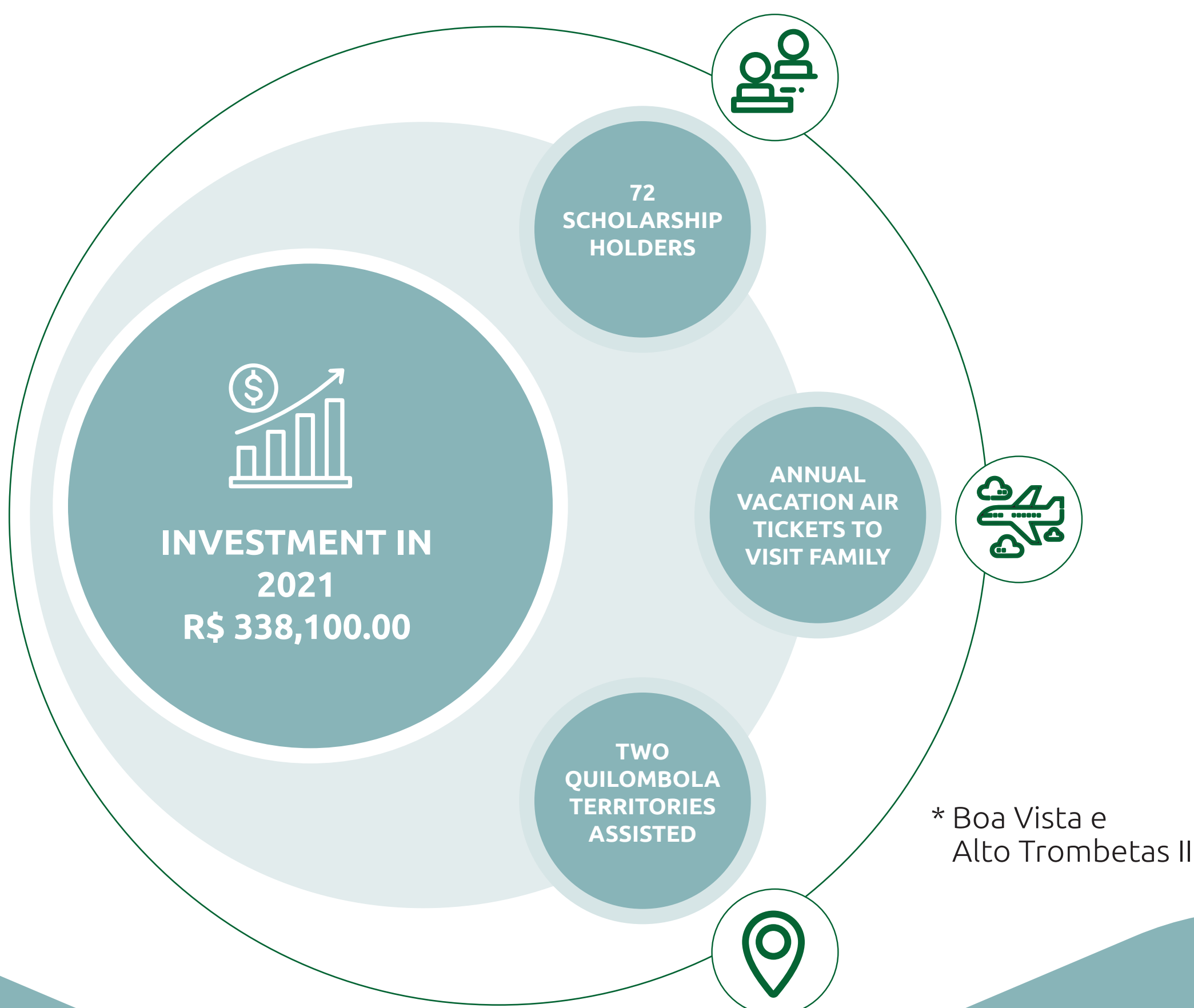


Higher Education Support Program (PAES).

Since 2000, MRN has run the Higher Education Support Program (PAES), as an extension of the support offered in Basic Education, giving support to students from the Boa Vista community entering undergraduate studies.

Starting in 2020, the residents of the communities of Alto Trombetas II were granted scholarships for technical and higher education courses, in on-site and/or distance learning.

The territories currently have 30 scholarships each, with payment of monthly financial aid to support the students in their academic journey. In addition, they receive an annual ticket to return to their locations during the vacation period, since the classes take place away from their homes.





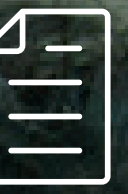
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I always had a passion for school and didn't want to be left behind, so rain or shine, I was there. My mother had to take care of my siblings, which made it difficult for her to take me to school. After I grew up, I learned to go by myself, I sought my independence. Since I was a little girl, I believed that education could give me a better future. After high school, the opportunity arose to go to college to study Forest Engineering, with financial aid. It was worth believing in school, in the scholarship programs and in education because today I am a graduate and fulfilled

Sara Quaresma, a native of the Boa Vista community, benefited by the PAEB and PAES.

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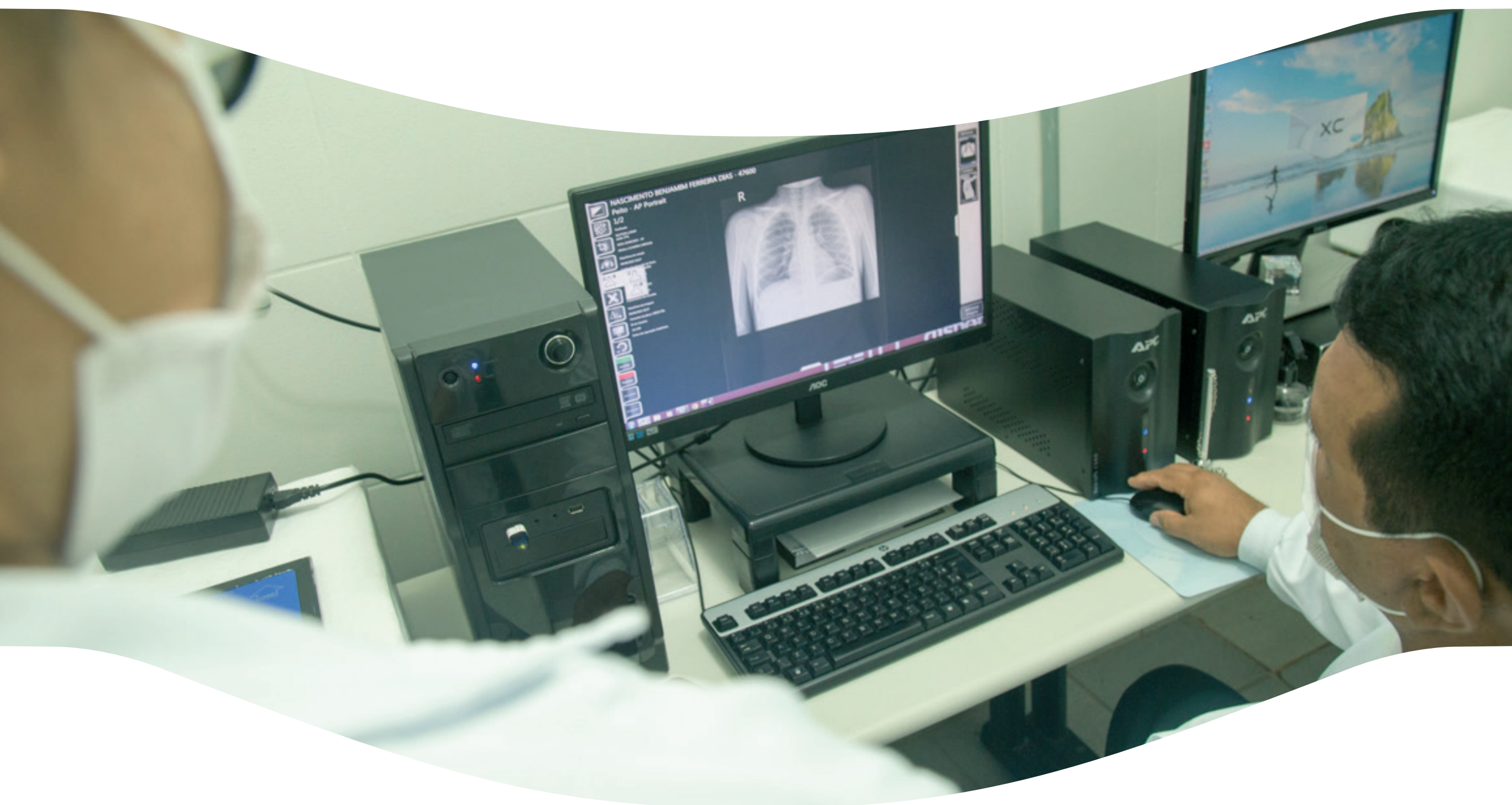


Occupational Health & Safety



Health, well-being and safety all around.

Being well. Physically, mentally capable to operate safely and achieve a better quality of life. At MRN, this thought is present in all areas and at all levels. Practices and initiatives that range from prevention to immediate correction of deviations, always with the same purpose: taking care of people.



Occupational Health & Safety. The culture of well-being.

Beyond legal compliance, the company carries out prevention, stimulates care among people and works the safety culture anchored in the following tripod:

Installation - Constant care of the equipment and assets so that people can interact properly and safely at all times.

Management - Practices, areas, teams and managers aligned to the indicators, seeking to evolve and continuously improve.

People - Concern for people, stimulating mutual care among leaders, subordinates, and among teams, as well as safe behavior in their everyday activities.

Safety is a value that is inherent to all activities from the beginning of planning, execution, finalization, organization and cleaning.

Certification change in 2021:

From the OHSAS 18.001 Standard to the ISO 45.001 Standard.

More modern and up-to-date in occupational health and safety management.

In the analysis of the legal requirements applied, MRN relies on the support of specialized consultants for the mapping of the new legislations applied to health, safety and environment to secure the integrity of the assets, the health and safety of the employees and the compliance with the environmental requirements.

To ensure the quality of the training of both in-house and contracted employees, the integration and training process is carried out by an internal team dedicated exclusively to this purpose.

Training and inspections.

Among the legal and complementary training that the company provides, the Right to Refuse or Stop Card stands out. This is an initiative implemented and signed by the Executive Board reinforcing the practice of active care. Each employee is responsible for their own safety and that of their colleagues based on the motto "If it's not safe, make it SAFE"; and everyone has the right and the duty to stop the activities, if they don't feel safe or notice something that could compromise their safety or that of their colleagues.

The culture of safety is enhanced on a daily basis. It strengthens and is strengthened by safe environments, activities, and employees. This commitment is confirmed with such actions as:

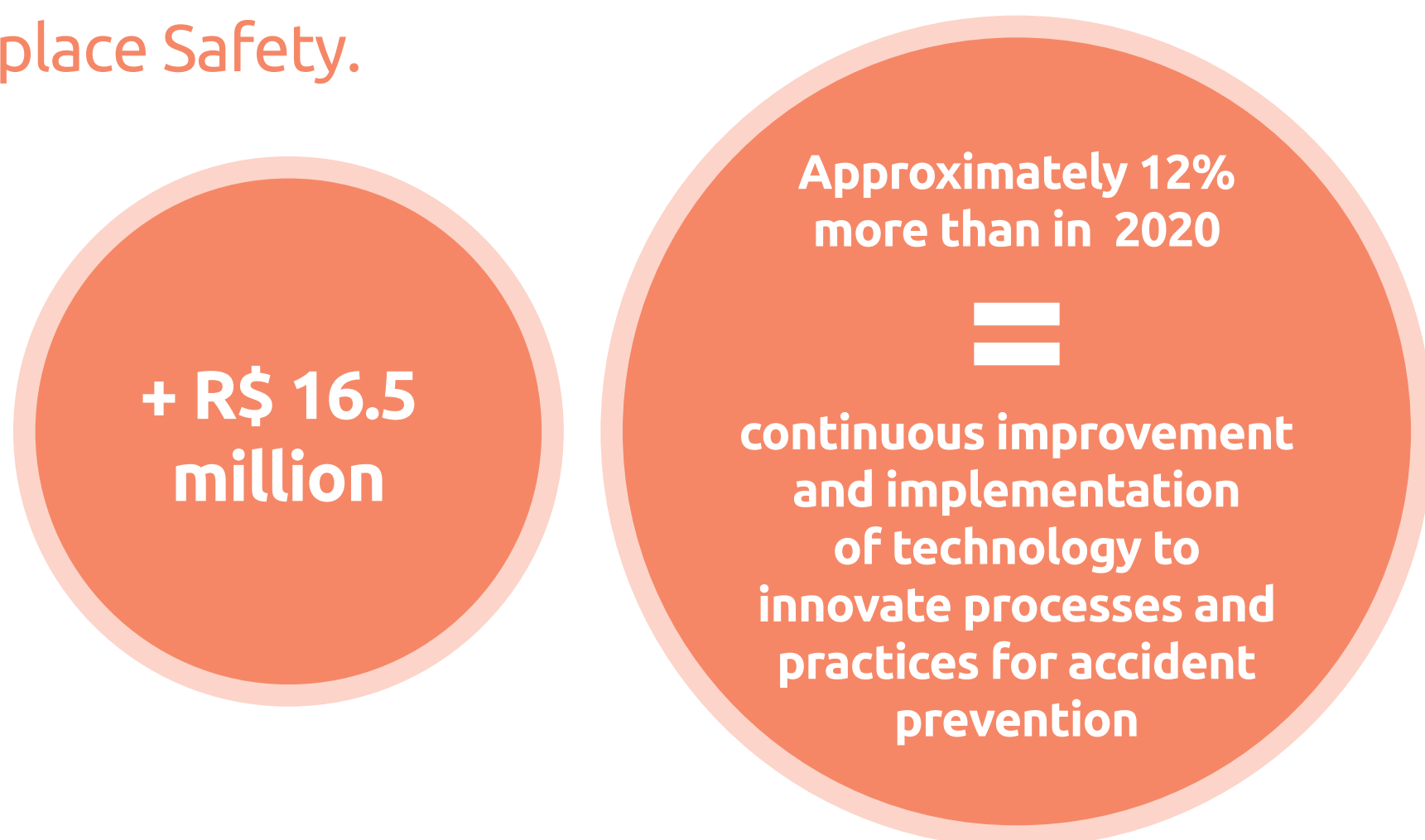
- Employee Training Plan.
- Training center with insertion of practical training.
- Leadership commitment matrix.
- Behavioral Interaction.
- Safety campaigns for positive reinforcement.
- Daily Safety Meetings (Toolbox Meetings) (DDS).
- Safety inspections in the work environment
- Machinery/equipment safety inspection.
- Formation of an Industrial Volunteering Brigade.
- Engineering and safety standards in new projects.
- Safety and operational standard.
- Fatigue Management Plan.
- Emergency Response Plan.
- Emergency drills training.



Routine inspections are conducted daily in the field to certify the working environment conditions and the safe behavior of the employees.

Periodic internal and external audits identify the management system's conformities. Deviations and opportunities for improvement are recorded and analyzed for implementation of continuous improvement actions.

Investment in Workplace Safety.



- Revamping of emergency response resources (6 Fire trucks, 6 Ambulances and 1 Work boat, among others).
- Acquisition of Drones for safety inspection and other activities in operational areas, especially in locations with limited access.
- Applications for inspection of vehicles, machinery/equipment, various registers for addressing with deviations and opportunities for process improvement.
- Acquisition of an information system for occupational health and safety management.
- Acquisition of semi-autonomous crawler tractors.
- Construction of an off-road track for practical training in defensive driving with 9 types of obstacles.

The actions took place through the Integrated Management System (IMS) to meet the health, environmental and safety requirements, at all levels.

Bolstering Internal Accident Prevention Commission (CIPA) performance.

To ensure communication at various levels, the Internal Accident Prevention Commission (CIPA) has expanded its activities. Besides internal campaigns, the members of the Commission receive differentiated training and are the catalysts for actions in their areas. They have active listening in all sectors as well as carrying out consultations, clarifications, and communication.

Men-Hours Trained – HHT	Number of People	HHT
MRN	2,169	7,610.50
Contracted companies	5,427	16,413.00
Projects (Contractors)	2,073	16,056.50
Total	9,669	40,080

Risk Inventory (NR-01) - 5 Workshops (3 MRN + 2 Contractors), training 300 facilitators.

Safety Campaigns Average Value (Roadshow: More than 2,000 people reached by initiative | Road block: 1,281 driver registrations | Safe Traffic: 3,000 registrations for cyclists and drivers | Near Misses: 1,500 people reached in Internal Communications | Hand Care: 2,000 people reached in DDS and in-house actions | SIPATMIN: 4,000 people reached in the face-to-face/online hybrid format);

Emergency Brigade (1,232 responses in emergencies/field; 13 real drills performed; acquisition of AHQ type fire truck (tag: GST 26); 1 boat; 7 ambulances; 6 CCI trucks; 1 pick-up truck).

FREQUENCY RATE	2019	2020	2021
No-Lost Time Accidents	1.32	0.51	0.56
Lost Time Accidents	0.10	0.09	0.36
Global Rate	1.42	0.60	0.87

Safety is a culture rooted in the company.

For MRN, safety and occupational health are seen as values shared with all those who work in the various areas of the company.

“

I try to apply my knowledge in continuous efforts to find improvements in 5S management, incident prevention, procedures and processes that help us in the search for the best operational practices, and for them to go together, maintaining the balance and union of the link of productivity with safety, quality, and respect for the environment. I don't trust in luck, I use prevention to protect myself and my colleagues

Sâmea Cristina Monteiro, Electrician at MRN.

”

“

I use PPE and tools correctly during each step of the activity. Initially, I perform a detailed risk assessment with the team, filling out all the checklists and documents that are necessary. MRN has been an example company in this process, supplying all the necessary support for us to be safe day by day in our work environment. I have in mind that if we add up all the care in the world it is still not enough. We must always ask ourselves if we are doing the right thing and practice safety

Cesar Augusto dos Santos Silva, scaffolding assembler for the company RIP.

”



Occupational health of employees.

As in other aspects, MRN goes beyond the legal requirements to promote the well-being of people. The Health area develops actions aimed at employees' quality of life and future health risks.

In 2021, the company noted the need for increased attention to mental health in light of the Covid-19 pandemic.

The company has structured a specific program and has psychology, psychiatry and social assistance professionals who provide support to employees.

Initiatives in compliance with the legislation.

Occupational Health Medical Control Program.

The Occupational Health Medical Control Program (PCMSO) is a legal requirement established in NR 7 that aims to prevent physical harm to employees from the performance of work activities.

In 2021, more than 5 thousand exams were performed to evaluate the employees' health and referrals for the appropriate conducts.

The entire occupational health structure is developed inside the Porto Trombetas Hospital (HPTR), which has a dedicated wing for workers' health, such as an audiometric booth and an outpatient clinic.

Hearing Conservation Program.

Activities performed in the mineral industry require a careful look at the workers' hearing health. MRN has an individualized hearing care professional monitoring with annual audiometry for each employee.

Any eventual alteration, the Health Care area verifies the existence of a causal link with the work activity or whether it follows the world trend of 1/3 hearing loss in the population.

Voluntary Initiatives.

Ergonomics Program.

MRN carries out on-site evaluations in the work areas observing the physical and ergonomic conditions of each employee to avoid repetitive strain injuries, back problems, among others.

Health Monitoring Program.

Based on the admission and periodic exams, the area observes the risk scale for cardiovascular diseases in the employees. Those with a higher level of predisposition are included in a group with quarterly follow-ups.

Fatigue Control Program.

The lack of sleep and rest can affect the quality of life and the performance of activities that require attention.

Sleep Medicine performs evaluations four times a year. Especially the Operations area and some third-party companies follow-up with tests to identify apnea and bruxism, for example.

Physiotherapy indications and acquisition of devices for the treatment of apnea are supported by MRN, as well as the cases of bruxism, with support from the company's dentistry sector.

Alcohol and Drug Abuse Prevention Program.

MRN has a special care with the consumption of alcohol and drugs among its employees. In partnership with the Human Resources area, two samples of employees are tested daily, one of them being a company employee and the other a contractor. The test is also performed in accidents and incidents and, when necessary, the worker is referred for treatment.





New Mines



New Mines Project (PNM).

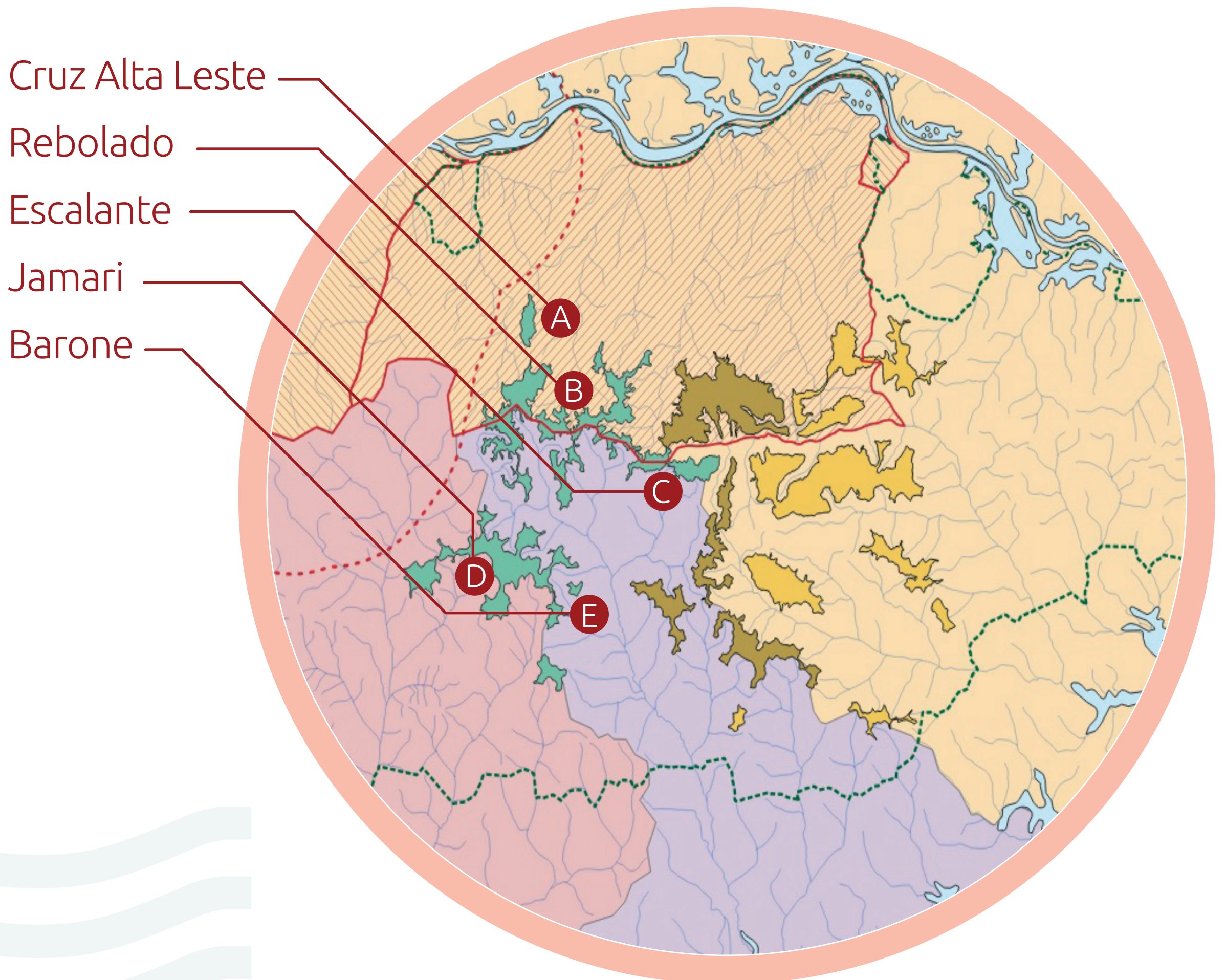
MRN acts today thinking about the future. And the economic viability of bauxite mining only makes sense if we build together a better present for all the people involved in the business, always respecting the environment and people.

With investments of around R\$900 million, the New Mines Project (PNM) is based on this principle, aiming at a chain of benefits and beneficiaries along the entire route. With the PNM, MRN guarantees the maintenance of its operations in western Pará, enabling the creation of new jobs and the continuity of the current ones. Besides, it guarantees the maintenance of tax collection that is reverted in public policies for the municipalities of Oriximiná and Terra Santa. And, with the PNM, the city of Faro will also receive this important resource.

The positive impact will also be reflected in projects and partnerships with local communities in areas of great relevance, such as education, health, culture, entrepreneurship, and income generation.



5 plateaus in the PNM should extend the life of the complex by 15 years:



As it is a continuity project, the PNM will use the existing operational infrastructure, port, railroad, roads, administrative and operational facilities. New structures, such as access, accommodation and workshops, will be necessary to maintain the production level of 12 million tons per year.

The company's vision for the future considers in the project the use of the Method for Disposal of Dried Tailings into Pits, a more sustainable process for the disposal of the tailings which, after being dried, returns to the pit where it was mined. This provides countless benefits, including faster forest restoration in mined areas, reduced need for vegetation suppression, and the reuse of reservoirs for drying the tailings.

The PNM continues with the licensing stages with the intervening agencies.



Management Report – 2021.

After checking MRN's most relevant actions in 2021 in its commitment to the environment and society at large, check out now the Company's consolidated management report.

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