

Executive Summary **2024–2025**





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Introduction

This document is an executive summary of Tupy's Sustainability Report 2024–2025. It contains our main governance, social, financial and environmental highlights for the period from January 1 to December 31, 2024.

The content covers activities in all the countries in which we operate. Detailed information can be found in the Sustainability Report, which was prepared based on 2021 Standards from the Global Reporting Initiative (GRI) and the principles established by the International Sustainability Standards Board (ISSB), which guide Integrated Reporting. The report also includes disclosure topics and metrics from the Sustainability Accounting Standards Board (SASB) for the metals and mining and machinery and industrial goods sectors, as well as recommendations from the Task Force on Climate-related Financial Disclosures (TCFD).

Questions, suggestions and more information can be sent to sustentabilidade@tupy.com.



[Click here](#) to access the full report.



Message from CEO

[GRI 2-22]

Thinking about future generations is essential for sustainable development. In business, this means acting responsibly, seeking out not only business continuity but also building a positive legacy for society.

The company we plan to be in the future is being built every day. We have become a global company and dedicate our activities to products and services related to cargo transport, infrastructure, and food production. These are fundamental and essential items for a dignified life. Additionally, we have continuously introduced technological advances that seek to generate economic efficiency for society.

Decarbonization remains one of the key priorities under our solutions. For many years, we have been committed to technologies and services associated with a viable energy transition that, in addition to reducing our carbon footprint, promotes economic efficiency. Whether

in the development of structural materials and components, biofuels, compatible engines and equipment, or in the adoption of cleaner industrial processes, we remain committed to innovation, competitiveness, and environmental responsibility.

Everything we deliver to our customers is the result of investments in research carried out since the 1970s. Throughout Tupy's history, in addition to a passion for knowledge built through collaboration, the consistency of our actions has also been a key highlight at our company. Ever since Tupy's founders started our Company, we have been guided by a history of devotion to technical knowledge, innovation, and research, as well as a concern for the company in a dimension beyond business, thinking about its impact on society.

Our portfolio has also grown in terms of quantity, variety, and potential of the solutions offered. We have expanded

our operations through new contracts with customers and the expansion of services offered, such as machining, assembly, vehicle transformation, and Bioplants. These advances reflect the strength of our business model, which is detailed throughout this Report.

Furthermore, in order to nurture long-term relationships with employees, customers, suppliers, technology partners, and the communities in which we operate, we need to continuously generate value.

Reducing the accident frequency rate to the lowest level in Tupy's history, for example, is an achievement celebrated on a daily basis by our employees and, especially, by their families. Although we have not yet achieved our goal of zero accidents, this result reinforces that our efforts to promote safer and healthier environments are having an effect. Only with a committed team, working in a safe and respectful environment, and placing value in merit, is it possible to achieve the transformations that are taking place at Tupy.

Ever since Tupy's founders started our Company, we have been guided by a legacy of devotion to technical knowledge, innovation, and research, as well as a commitment to viewing the Company beyond just business—considering its impact on society.

Another indicator where we have made progress is the representation of women in executive positions, 27% of whom were promoted or hired in 2024, as a result of initiatives aimed at diversity and, above all, the inclusion of people from all walks of life.

Looking at the financial results, operational efficiency and management discipline have led to our achieving new records. In 2024, we achieved the highest cash generation ever recorded by the Company at a total of R\$ 1.4 billion, and the highest Adjusted EBITDA at R\$ 1.3 billion. Tupy continues to be the largest contributor to Brazil's auto parts trade balance.

Our more than 7,000 suppliers are also part of this generation of value and we have supported suppliers in developing policies and processes that help them implement social and environmental practices. Our network of partners also includes universities, technological institutes, and startups, which allow us to remain at the forefront of technology and anticipate market solutions.

The knowledge generated by Tupy is translated into the products and services we deliver to more than 40 countries. But what drives us beyond our business vision is the transformation we promote in essential sectors, which provide for a better quality of life, especially for our nearly 19,000 employees, their families, and the communities in which we operate.

These achievements are the result of the commitment and dedication of our entire team. I wish to extend my sincere thanks to each of you for being part of this journey and contributing to Tupy's success. I am ending an important cycle. Together with you, over these 33 years, I have sought to build a legacy based on purposes that motivate us and honor the history of this Company. Thank you for the immense honor of serving this exceptional team. Serving as CEO of Tupy has been a central achievement in my professional life.

To future generations, we leave the desire that innovation will continue to be a method for creating increasingly sustainable solutions. I leave with the certainty that everything we have planned has been given the fertile ground to bear fruit.

I invite you to learn more about this journey of transformation, challenges, and achievements in the following pages of this Report.

I wish Tupy a glorious and bright future.

But what drives us beyond our business vision is the transformation we promote in essential sectors—providing for a better quality of life, especially for our nearly 19,000 employees, their families, and the communities in which we operate.

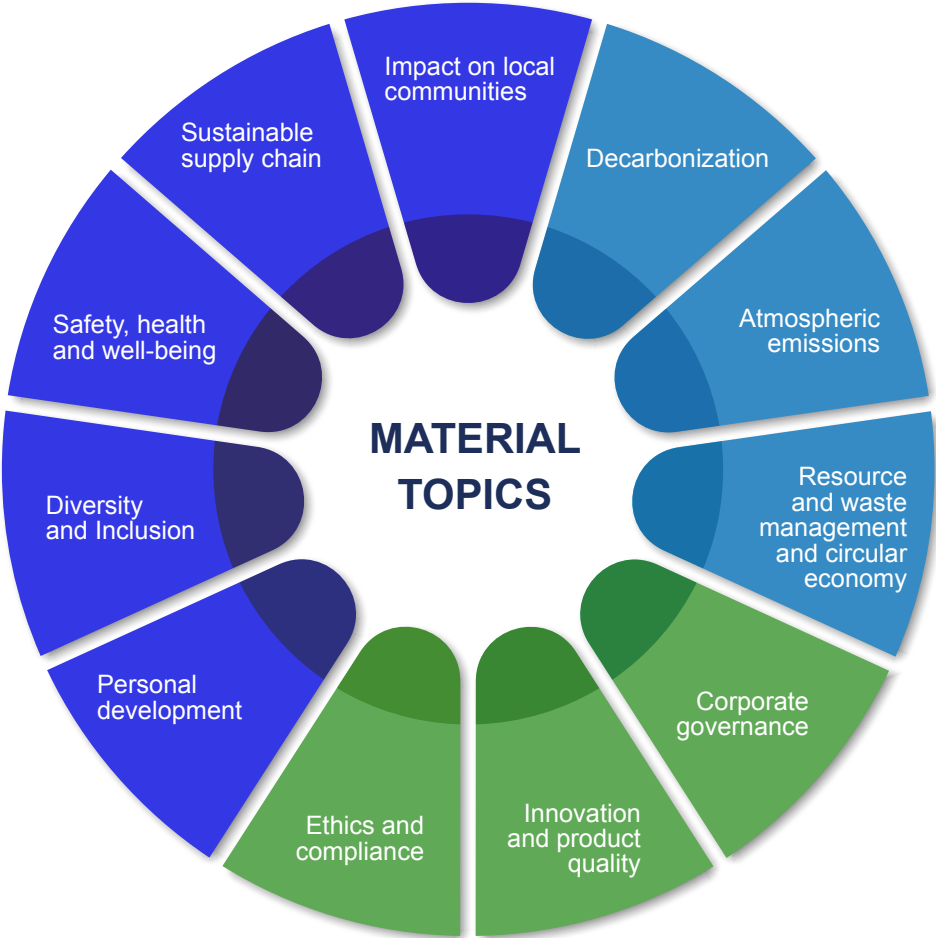
**Fernando
Cestari de Rizzo**
CEO



Materiality

The topics considered material for Tupy’s sustainability management were reviewed in 2023 in order to connect the content of subsequent reports with the priorities of the business and the perceptions of our main stakeholders. As a result of this study, we decided to maintain the topics from the materiality process carried out previously and to expand the Waste Management and Circular Economy topic to include Resource Management. As a result, three environmental, five social and three governance topics were maintained.

- Environmental
- Social
- Governance



Sustainability strategy

In 2024, the Vice-Chairpersonship of Institutional Relations and Sustainability was created, with the task of acting as a sponsor in a multidisciplinary and overarching work and strengthening economic, environmental and social development, as well as business competitiveness and having a positive impact on the communities in which Tupy operates.

Tupy’s commitment to this issue permeates our business activities. From among our governance bodies, the Strategy, Innovation and Sustainability Committee (CEISus) has assumed the role of advising the Board of Directors in choosing the company’s guidelines; assessing research and innovation initiatives and best sustainable practices; and controlling the risks related to our scope of action. This structure contributes to the evolution of

Tupy’s sustainability strategy and the engagement of the company’s entire value chain. Tupy is attentive to changes in the market in relation to this issue, such as the definition of the Carbon Border Adjustment Mechanism (CBAM) in the European Union, S1 and S2 standards under International Financial Reporting Standards (IFRS), as well as regulation of the carbon market in Brazil. For these purposes, a specific working group was set up and comprises up of the Risk Management, Controllershship, Corporate Communication and Sustainability areas. From a commercial point of view, we work continuously to develop products and services that enable clients to remain competitive and aligned with sustainable development practices.

Key indicators

Environmental

Social

Governance

Indicator	Unit	2022	2023	2024
Greenhouse Gases (GHG) emissions intensity —scopes 1 and 2— in tonne of CO ₂ equivalent per tonne of product ¹	tCO ₂ /tonne produced	1,08	1,17	1,18
Greenhouse Gases (GHG) – Scope 1	tCO ₂ e	560,102	560,113	493,331
Greenhouse Gases (GHG) – Scope 2	tCO ₂ e	196,159	187,596	168,070
Particulate matter	kg MPT/tonne produced	0.00114	0.00093	0.00085
Percentage of metallic material from recycled sources used in the process	%	94	95	96
Percentage of water reuse in the process	%	93	83	86

Indicator	Unit	2022	2023	2024
Number of employees	Number	19,155	21,112	18,747
Percentage of women in the company	%	8.0	9.6	10.0
Health and safety rate index (frequency rate)	Number	13.96	9.89	8.95
Average number of hours of training per employee	Number	20.6	20.9	14.0
Number of people benefited by social investments	Number	19,200	18,676	57,219
Social investment	R\$	2,119,199	2,888,720	3,589,816
Volunteer hours	Number	970	2,123	2,480
Value added to the economy	R\$ billion	9.8	11.2	10.6
Recall incidents	Number	0	0	0

Indicator	Unit	2022	2023	2024
Percentage of women in the Board of Directors	%	33.3	22.2	22.2
Percentage of independent members	%	33.3	100	100
Taxes and contributions	R\$ million	698.5	633.5	808.7
Investments in research & development	R\$ million	36.0	84.4	58.5

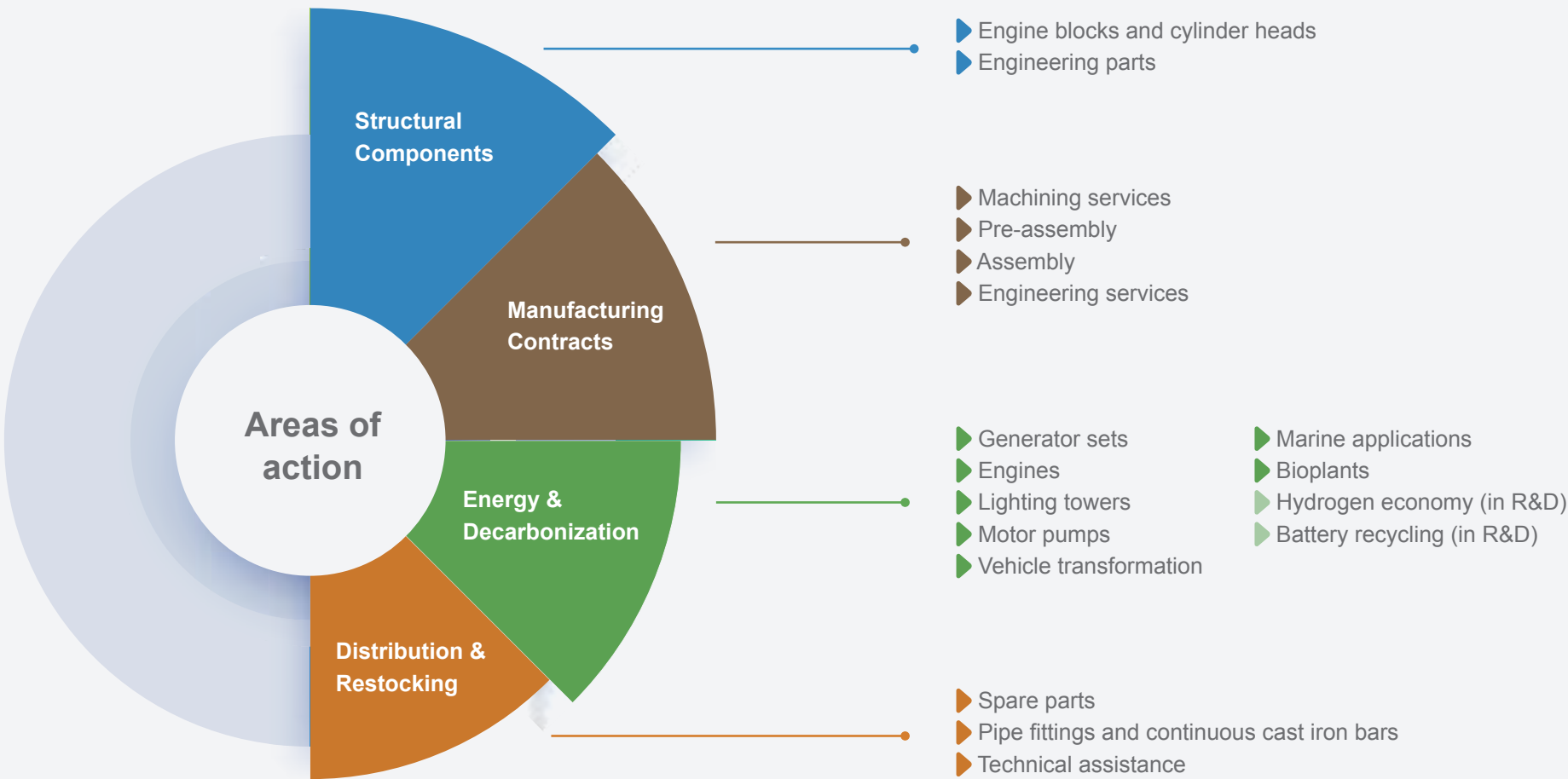
1. The São Paulo subsidiary, MWM do Brasil, was not included in the calculation, since it does not have a common denominator in place regarding unit of measure of production.

Discover Tupy

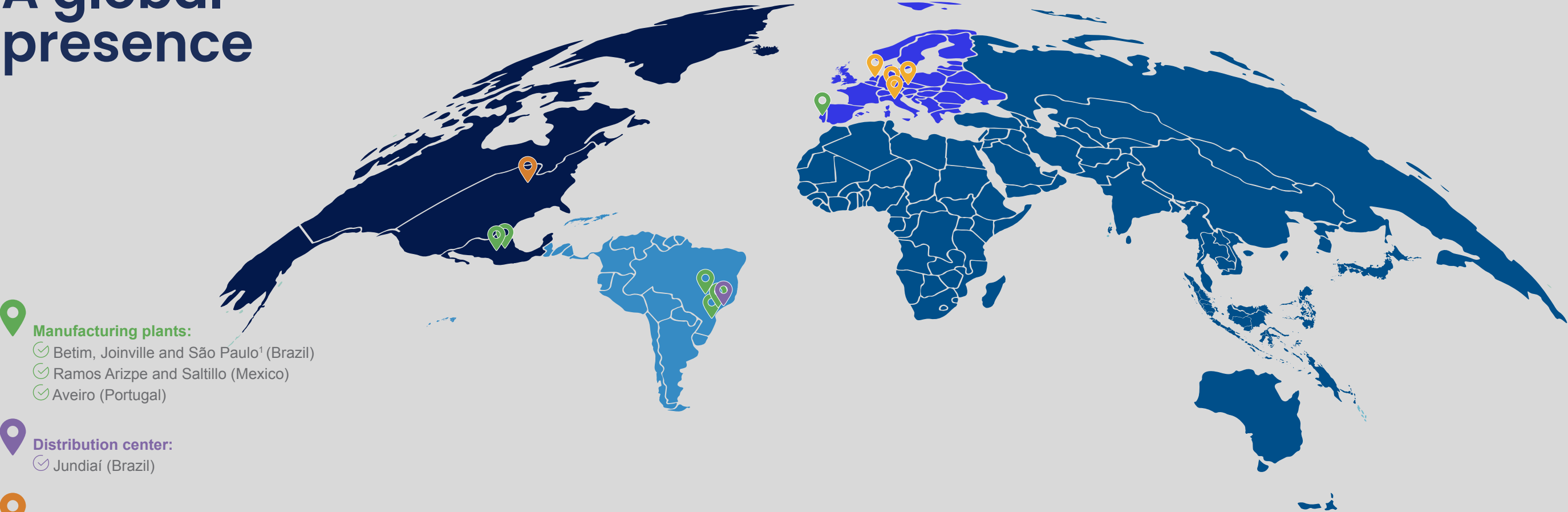
We are a Brazilian multinational company with nearly nine decades of history and operations in more than 40 countries. We have been publicly listed on the Brazilian stock exchange (B3 S.A. – Brasil, Bolsa, Balcão) since 1966, and in 2013 we joined the Novo Mercado. The company develops and produces cast iron structural components of high geometric and metallurgical complexity to offer viable solutions in a range of sectors, such as cargo transport (multimodal) infrastructure, agriculture and power generation. Technological innovation and the technical knowledge of our employees are our competitive edge. We have more than 18,000 employees committed to the mission of providing high-value products and solutions, following the principles of valuing individuals; a customer-oriented approach; integrity; commitment; transparency; health and safety; communication; learning and innovation; economic excellence; care for the environment; and a positive impact on the community.

With a strategy connected to society’s challenges, our solutions meet essential needs that contribute to a better quality of life for all, such as basic sanitation, drinking water, food, housing and mobility. Our goal is to be the leading partner for capital goods, which is why we have structured our business model on four fronts: Structural Components, Manufacturing Contracts, Energy & Decarbonization, Distribution & Replacement. Our strategic drivers include capturing synergies and achieve cost savings; adding value to our base through machining and assembly; taking advantage of viable and available energy sources; and increasing the energy efficiency of the products we supply.

Products and solutions portfolio



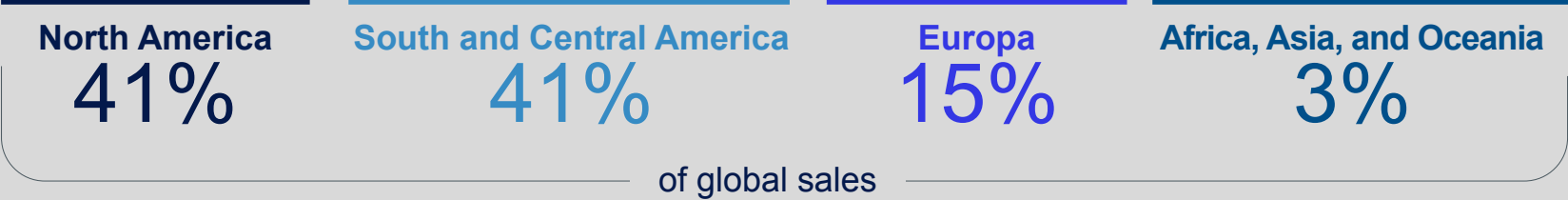
A global presence



- Manufacturing plants:**
- ✓ Betim, Joinville and São Paulo¹ (Brazil)
 - ✓ Ramos Arizpe and Saltillo (Mexico)
 - ✓ Aveiro (Portugal)


- Distribution center:**
- ✓ Jundiaí (Brazil)

- Offices:**
- ✓ Arnhem¹ (Netherlands)
 - ✓ Detroit (EUA)
 - ✓ Luxembourg¹ (Luxembourg)
 - ✓ Munich (Germany)
 - ✓ Turim (Italy)




1. Subsidiary.


Awards and recognition




Ranking EXAME Best and Biggest 2024




Valor Inovação 10 anos Award




Valor 1000




Ranking 2024 100 Open Startups




Prêmio Ser Humano SC 2024




500 Maiores do Sul Award




Best in Exame ESG Award



Ranking 360° Época Negócios



Magneto de Ouro Bosch Award



Destaque Educação SESI SENAI 2024 Award





ESG scores and commitments

We are evaluated by agencies that analyze risks regarding environmental, social and governance (ESG) aspects and create ratings for companies. This evaluation is of great importance for us to understand the market's perception of our ESG strategy and practices, contributing to the process of continuous improvement in our management practices.

We reassert our position by taking on external commitments with other organizations, which enhances our efforts towards achieving sustainable development. In 2024, Tupy joined the Cooperation Agreement for Low Carbon Mobility in Brazil (MBCB), with the aim of promoting the transition in the country's transport sector, respecting technological neutrality and stimulating neo-industrialization. Another important initiative

was the participation of our chief executive officer (CEO), Fernando Cestari de Rizzo, in the 2nd National Seminar on Industrial Policy - Green Industry: Innovation and Sustainability, where he presented Tupy's decarbonization

journey on the panel Success Stories in the Development of Green Solutions, Energy Transition and Decarbonization, demonstrating our commitment to a low-carbon economy.

	2022	2023	2024	Performance
	C	C	C	↔
	B	BB	BBB	↑
	31	38	42	↑
	18.8	16.9	20.3	↓

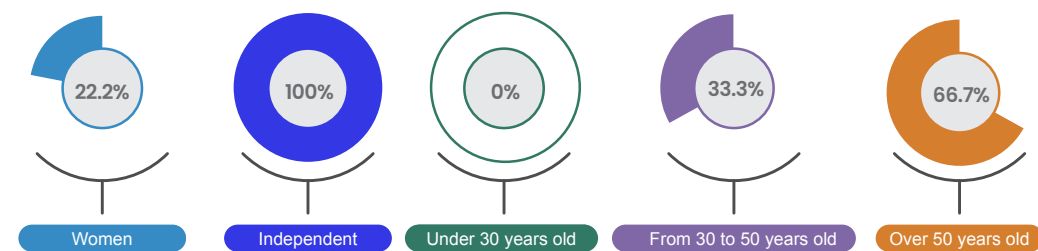
Corporate governance

Our governance structure is made up of the following decision-making, advisory and supervisory bodies: General Shareholders' Meeting, Board of Directors (CA), Fiscal Council (CC), Advisory Committees – Strategy, Innovation and Sustainability (CEISus); Audit and Statutory Risks (CAE); People, Culture and Governance (CPCG); and Finance and Investments (CFI) – and Statutory Executive Board.

The nomination and election of directors and members of the Advisory Committees are carried out in accordance with specific

rules established in Tupy's Nomination Policy, as well as in compliance with the provisions of the Bylaws, Internal Regulations of the Board of Directors and applicable legislation. As part of its sustainability governance practices, Tupy ties executives' short-term variable remuneration to the achievement of environmental, social and governance (ESG) performance targets. It is up to the Board of Directors to validate the individual goals of the chief executive officer (CEO) and other vice-presidents, and these are rolled out to other levels of the organization.

Board composition



Tupy's main policies :

- ✓ Code of Ethics and Conduct
- ✓ General Purchasing Conditions
- ✓ Corporate Bylaws
- ✓ Human Rights Policy
- ✓ Anti-Corruption and Anti-Bribery Policy
- ✓ Crisis Management Policy
- ✓ Risk Management and Internal Controls Policy
- ✓ Integrated Management Policy: Safety, Environment, Quality, and Social Responsibility
- ✓ Board of Directors and Advisory Committees Member Nomination Policy
- ✓ Integrity Policy
- ✓ Securities Disclosure and Trading Policy
- ✓ Donations and Sponsorships Policy
- ✓ Regulations



[Learn more](#) about our policies and commitments.

Risk management

The Board of Directors, which receives advising from the CAE, evaluates our exposure and approves guidelines for the integrated risk and control management process, including strategic risks, prioritizing the respective response and contingency plans. The most relevant risk measures are updated every three months by the Company's managers and previously reported to the CAE.

The Statutory Board is responsible for ensuring the implementation of risk management practices and internal controls, aligning these activities with Tupy's strategy. For these purposes, we have established an Executive Committee for Risk Management and Internal Controls, linked to the Executive Board, which monitors and evaluates the effectiveness of mitigating actions and key indicators (KPIs).

In 2024, we implemented the Archer tool to integrate processes at all units in order to improving risk management, internal controls and internal auditing. With regards to managing risks related to climate change, Tupy carries out an annual assessment based on the Carbon Disclosure Project (CDP) and the Task Force on Climate-Related Financial Disclosures (TCFD), classifies them as physical or transitional and lists the three main areas for formalization in a matrix. We also have a Crisis Management Policy in place to guide the adoption of appropriate and urgent responses in situations of this nature.

Ethics, integrity, and compliance

Tupy's solidity and credibility in the market are due to the ethics and integrity with which it conducts its business and relations with stakeholders. Our Code of Ethics and Conduct applies to all employees, representatives, suppliers and partners. We carry out periodic actions aimed at communicating and raising awareness of the importance of ethical behavior, as well as campaigns against harassment and conflicts of interest. All employees are made aware of and receiving training in anti-corruption procedures and policies.

In 2024, we approved our Human Rights Standard, which are aimed at at establishing the guidelines and general principles for Tupy's actions to ensure respect for these rights in our activities and in our relationships with stakeholders. We repudiate any practice of exploiting people, such as human trafficking, child labor, forced labor or labor analogous to slavery, and we demand the same attitude from our business partners.

Also last year, we completed yet another integrity risk assessment, conducted by a third-party company specializing in the area, which covered 100% of Tupy's business units.

To strengthen the company's commitment to this issue, we have been a signatory since 2022 to the Business Pact for Integrity and Against Corruption, promoted by the Ethos Institute. Every year, we update the information on our Integrity Program with the entity to ensure that we renew our adherence to the pact.

Ethics channels

We maintain ethics channels managed by an independent third-party company and accessible to all audiences 24 hours a day, 7 days a week. Complaints can be made anonymously, in accordance with each country's data processing legislation. The cases registered through these channels are forwarded for investigation and, once this stage has been completed, are presented to the Ethics and Conduct Committee, which deliberates on the complaints and indicates appropriate disciplinary measures and corrective actions.

Numbers for 2024

742 complaints received and addressed.

680 complaints resolved.

290 complaints registered before 2024 and resolved during the year.

Measures taken in 2024

The following measures were taken in cases that were well-founded or partially well-founded:

Internal public:

✓ 83 guidelines

✓ 23 warnings

✓ 9 suspensions

✓ 31 dismissals

Suppliers:

✓ 7 notifications



Ethics channels

Site: www.tupy.com.br/etica
E-mail: etica@tupy.com

Phones

Brazil: 0800 721 7895
Mexico: 800 288 0150
Portugal: 800 180 431

In addition to Tupy's ethics channels, the e-mail address compliance@tupy.com is available for questions or advice.

Occupational health and safety

Health and safety are immeasurable values and two of Tupy's main commitments. In 2024, we achieved the lowest accident frequency rate in the company's history, with an 10% reduction, as well as a 17% reduction in high-potential events compared to the previous year. The significant results achieved last year area due to the initiatives, programs and investments made in 2023 and this year. From among the areas in which we have invested in, we wish to highlight: machine and equipment protection, process improvements and fire protection systems and electrical installations, reducing the risk of accidents that can impact operations and, above all, jeopardize lives.

Viva+ Program

Created in 2022, Viva+ is a reflection of our commitment to the integral health of our employees and includes safety, well-being, physical and mental health initiatives. In addition to raising managers' awareness of preventive action in this area, helping to observe and identify behaviors that require attention, the program receives support from a medical team, psychologists and social workers, as well as a 24-hour communication channel where nursing professionals receive and direct employees internal or external assistance.

Results achieved in 2024:

4,913
multidisciplinary care.

Support for individuals with substance,
dependence, including referrals for external treatment.



Employee profile



Over the course of 87 years Tupy has celebrated a successful career built around people, our most valuable asset. In 2024, 4,167 employees were hired, bringing the total to 18,460 across all company units. The company is committed to diversity and inclusive actions that provide equal opportunities and fair treatment for all. The main diversity and inclusion initiatives carried out in 2024 include: three new face-to-face training modules in the Inclusive Culture development pathway, with the expansion of dialogue circles and the participation of women, mothers, men, members of the black and LGBTQIAPN+ community, young people and persons with disabilities (PWDs), as well as an online course in Brazilian Sign Language (Libras) for all employees and their families; training focused on anti-harassment and anti-discrimination practices; implementation of the diversity and inclusion (D&I) module in the onboarding of new employees; and campaigns to raise awareness and appreciation of Black culture.

18,460
employees

23
nationalities

1,706
women

16,754
men

We highlight some of our figures:

27% of women
in executive positions were promoted or hired in 2024.

41% of leadership
opportunities generated in 2024 were occupied by women and PWDs.

6,000 hours of D&I training
for all levels of leadership.

45% increase in
participation in dialog circles.

57% female representation
in apprenticeship and internship programs.

People management

Tupy's approach is based on valuing talent, operational excellence and strengthening our organizational culture. One of the People Management area's medium and long-term strategic objectives involves establishing Tupy as an employer brand that everyone wants, which drives the constant review of our human resources management policies and processes.

We prioritize initiatives aimed at attracting and retaining talent, developing skills, promoting diversity and inclusion and the digital transformation of human resources processes.

We are a global company, present in different countries and made up of people with diverse backgrounds, experiences, and perspectives.

In 2024, we carried out various initiatives focused on professional training, inclusion, leadership development and health and safety at work. We intensified the use of our online teaching platform, GoTupy, an integrated tool that increases targeted training, self-development and employee engagement with the Company. We invest in training our employees through continuous training programs that reinforce both technical competencies and essential skills for the evolution of our business. Over the past year, 258 thousand hours of training were conducted across all locations.

We maintain programs aimed at attracting and including young talent. In 2024, the Young Apprentice program received 271 participants. There were 148 participants in the internship program. There are also programs dedicated to young people in situations of economic, social and family vulnerability, such as Formare and the Crescer project.

We have implemented Leadership Development Programs (LDPs) for managers. There were around 8,700 hours of training provided on topics such as integral health; anxiety and stress management; the role of humanized leadership; and the pillars of mental health. Through the Talent program, we carried out 150 new analyses of professionals, identifying potential and promoting career guidance and support for individual development plans.





R&D, innovation and digital transformation

Tupy uses research and development (R&D) as a competitive edge in the market, by improving production capacity, prioritizing the efficiency of products and services and launching technological solutions. In seeking to meet society's challenges, we employ innovation as our method and value generation as our goal. Tupy relies on 55 in-house laboratories and around 4 thousand technicians and engineers. In 2024, we invested R\$58.5 million in R&D. Of this total, 74% was earmarked for sustainability projects and solutions.

Main ongoing R&D projects

TRL is a term that stands for Technology Readiness Level.

- ▶ **Ultra Light Iron technology** (TRL 8).

▶ **Reuse of batteries – 2nd life** (TRL 6).

▶ **Hydrogen engine technologies** (TRL 6).

▶ **Material resynthesis** (TRL 6).

▶ **Biomass briquette** (TRL 7).

▶ **Hydrogen tanks** (TRL 4).

▶ **Battery recycling** (TRL 7).

▶ **Ethanol engines** (TRL 9).

▶ **Technologies for hydrogen engines**
High-efficiency engine – TRL 6;
Cylinder head supply – TRL 9.

Innovation

Our Open Innovation Portal connects the company's strategy to the innovation ecosystem. On this platform, we publish challenges that are important to the business and collaboratively seek to access new skills. The portal has already received 212 solution proposals. A major highlight is the project for an innovative coating applied to sand cores, a solution that boosts efficiency in painting processes for these items. There are currently challenges open on our collaborative network, which can be viewed on our [website](#).

ShiftT, Tupy's accelerator, has been in operation for three years and has connected more than 350 startups. In 2024, three startups were selected for the acceleration program from among 128 applicants from across Brazil: Amachains, Mip Wise, and Geeco.

Digital transformation

Moving forward on the digital transformation journey requires consistent action, allied with strategy and the employee experience. On this path, we are focused on establishing clear foundations that enable us to implement our strategy, moving from data to intelligence. Although there are different levels of maturity between our business units, they all made significant progress in 2024.

In the production environment, we have continually evolved in the implementation of the MES (Manufacturing Execution System), which is coded by Tupy itself. This solution has expanded our management capacity, adding greater control and data collection from lines of operations.

In addition to the industry 4.0 initiatives and advances made in our operations, Tupy is also digitizing the management environment through the digital office concept. From among the digital applications developed and implemented in 2024, the use of RPA (Robotic Process Automation) in manual, repetitive and labor-intensive administrative processes can be highlighted. Through the use of this tool, we have gained more than 3,000 hours of productivity in the last year, considering around 20 automations carried out.

Another important front was the actions developed in the information technology environment, especially the Systemic Standardization Program, which ensures the use of the same software in all units, unifying administrative processes.

Decarbonization solutions

To achieve energy transition, we believe that we need to decarbonize in a viable and inclusive manner. For Tupy, there is no single solution to resolve this issue, which is why we develop solutions for a multi-fuel world that takes into account each geography’s ability to access energy generation sources and technologies. We are working harder and harder to position ourselves strategically and be able to meet the increase in demand for energy of every variety. In our 2025–2029 strategic plan, we present our main pathways towards decarbonization:

- ✓ **Focus on energy efficiency**, scaling up existing solutions by renewing equipment;
- ✓ **Use of wasted energy**, especially in waste recovery, reducing emissions and renewing the energy matrix;
- ✓ **Replacement of carbon-intensive fossil fuels**, following a rational economic and technological path, even if through other less intensive fossil fuels or blends with biofuels; and
- ✓ **Investment in viable decarbonization opportunities** through R&D, accelerating the maturity of technologies that remain uncompetitive.

Bioplants

A circular economy service that offers clean energy, renewable fuel and organo-mineral fertilizer through organic waste generated in the city and countryside. We ended 2024 with three Bioplants projects in Brazil that create a new value chain for clients, as they start to collect and treat waste – ceasing to emit methane into the atmosphere - as well as generating direct and indirect jobs. The most recent is a partnership with Seara, a leading food producer and part of the JBS Group, a project that involves a herd of around 200,000 pigs and 1.7 million poultry. The other projects are with agricultural cooperative Primato, which had its bioplant contract extended last year, and with Rancho da Lua Farm, which will process poultry waste to generate electricity on the property, as well as producing and selling fertilizer to third parties.

Vehicle transformation

This solution aims to replace the engines of diesel-powered vehicles in circulation with 100% biomethane or natural gas engines. With this change, it is possible to keep 85% of the original engine’s components and maintain a similar maintenance cost. In 2024, MWM, a subsidiary of Tupy, entered into a partnership with Copergás, the leading gas distributor in Pernambuco, to carry out the vehicular transformation of Rodotril’s road transport trucks, reducing fuel costs by up to 40%. So far, 12 trucks from Rodotril’s fleet have undergone the process.

Agricultural pumps

Another solution connected to the biomethane chain, agricultural pumps involve an integrated telemetry system and an intelligent mechanism for changing the gas cylinder platform, which does not interrupt operations and allows for a significant reduction in operating costs. A diesel version is offered wherever biomethane is not available. Benefits of the technology including fertigation, with a reduction of up to 95% in greenhouse gas (GHG) emissions, and self-sufficiency in the production of biomethane fuel at the ethanol and sugar plant.

Maritime sector

Tupy has been contributing to more sustainable leisure and commercial vessels by offering onboard engines, power generators, and diesel marine propulsion systems. When compared to gasoline engines, advantages include: greater power and safety; 65% longer range; 42% lower fuel consumption; lower operating costs; and a 35% reduction in GHG emissions.

- ✓ Greater power and safety.
- ✓ 65% longer range.
- ✓ 42% lower fuel consumption.
- ✓ Lower operating costs.
- ✓ 35% reduction in GHG emissions.

Suppliers

Tupy consistently seeks to preserve long-term relationships with our suppliers, with resilience and collaboration. We rely on 7,189 active suppliers, 88% of whom come from the countries in which we operate (Brazil, Mexico and Portugal). Additionally, 25% come from the same states where our operations are located. In 2024, R\$6.9 billion was spent on the supply chain, 29% of which was allocated to local suppliers, an expense that has an indirect economic impact on localities through the generation of jobs and income.

Supplier management is guided by policies and guidelines that are aligned with our principles and values and must be complied with by contracted companies. The procedure for selecting

and approving new suppliers includes stages for assessing aspects such as economic, social and environmental impact and verifying risks related to supply, quality and technical capacity.

Our suppliers must comply with the Code of Ethics and Conduct in order to continue with the process. By 2024, 100% of suppliers had undergone environmental and social analysis, according to the nature of the product supplied. We analyze environmental aspects more rigorously for suppliers who treat waste generated in operations.



Click here to access our [Supplier Manual](#).

Sustainable supply chain

By working with qualified suppliers that are committed to responsible practices, sustainable development of Tupy's value chain is part of our strategy. Last year, we held workshops highlighting environmental, social and governance (ESG) issues. These meetings resulted in the creation of environmental and human rights policies and codes of ethics by the suppliers themselves for subsequent application in their companies. We also hold the Supplier Awards, an event to honor suppliers who have stood out based on their results over the last year. The initiative recognizes alignment with Tupy's policies and the supplier's performance, valuing and encouraging good practices.



Clients

Trust, respect and transparency are key aspects of our relationships with customers, as well as offering innovative, viable and cost-effective solutions. We are a global supplier of structural components for manufacturers of capital goods used in transportation, construction and agriculture.

Iron fittings and profiles are sold by approximately 1,519 dealers, who serve end users in industries, construction companies, installers etc., both domestically and abroad. In the spare parts market, we rely on a distribution network with more than 1,300 points of sale globally and 518 authorized MWM brand services serving different sectors. In 2024, we announced the expansion of our Parts Distribution Center (CDP) in Jundiaí, São Paulo, with an increase of 28% in its current size. The expansion results from

the projected growth of Tupy's spare parts portfolio for 2025. We have closed new deals in structural components and manufacturing contracts that contribute to gains in efficiency for our customers and reflect our strategy of offering higher value-added products. Production will begin in 2025 and is expected to generate additional revenue of R\$200 million per year once the full contracted potential has been achieved.

To evaluate our customers' satisfaction, we maintain direct contact with the Sales team and implement surveys and strategic indicators for decision-making. The Commercial team is structured to ensure the level of service and proximity required to maintain our long-lasting relationships.

In our quest for continuous improvement in all our product lines, 100% of our products undergo permanent safety analysis. We have a Recall Policy in place, which establishes activities to mitigate potential risks to the safety and health of consumers or material damage to their assets. In 2024, there were no cases of non-conformity of our products or cases of recall and costs related to the replacement of components and parts on a large scale.

Tupy is a global supplier of structural components for capital goods manufacturers in the West in the areas of transportation, construction and agriculture.



Communities

Tupy prioritizes the establishing of positive relationships and contributing to the communities in which it operates. Our aim is to leave a positive legacy in these regions, providing conditions for growth for all, with initiatives that involve generating jobs and income, infrastructure, professional training and economic development and the use of local services and inputs in our operations.

We strive for constructive dialogue and a relationship of respect, transparency and collaboration, which includes a channel for receiving and responding to demands made by local residents and institutions, applicable to all of the Company’s units.

The Company has implemented a structured social investment program, with clear governance parameters and a standard to guide the alignment of initiatives with our strategic objective, four key focal points

have been defined: education; health and safety; environmental; equity and inclusion. Social initiatives are carried out in the form of donations, sponsorships, volunteering and solidarity campaigns.

We carry out local development programs in areas surrounding our Brazilian and Mexican plants. In 2024, we injected R\$10.6 billion into the economy and directed R\$3.6 million towards social projects, with our own and incentivized resources, benefiting 57,219 individuals.

In addition, employees, family members and the community worked 2,480 hours as volunteers, improving infrastructure and supporting services such as revitalizing schools, putting on theatre performances, organizing solidarity campaigns, clean-up efforts, donating blood and performing recreational activities.



Impact mitigation

Tupy recognizes the real and potential impacts on communities resulting from its operations and distribution and logistics activities. For this reason, we carry out socio-environmental impact assessments, engagement plans and open communication processes with residents at 100% of our units. We have adopted a procedure for controlling incidents, managed by the Communications and Social Responsibility teams, which allows us to respond efficiently to community demands. Complaints registered through the company’s channels are monitored and forwarded to the technical teams responsible for assessment and implementing the necessary measures.

We also act preventively to identify, assess, manage and communicate possible risks that could have a negative impact on the localities. These actions contributed to a 50% drop in the number of total complaints in 2024 compared to the previous year.

Economic performance

Despite facing a challenging year, we achieved the highest operational cash generation in the Company's history in 2024. We recorded R\$10.7 billion in net revenue, a 6% decrease compared to 2023. Adjusted EBITDA increased by 2% compared to the previous year. The margin relative to net revenue totaled 12.1%.

In 2024, the Company continued its strategic move towards new segments that offer greater added value and growth potential, with investments in viable decarbonization solutions such as bioplants, vehicle transformation and battery recycling. We invested R\$469 million in projects, 9.8% less than in 2023, following the Company's strategic guidelines.



To find out more about our Financial Capital, access the full report and the results [release on the Investor Relations website](#).



Environmental management

Tupy is committed to protecting the environment by continuously improving our processes and indicators related to this issue. Our environmental management works closely with other areas to identify the environmental aspects and impacts of projects and activities in advance. Under our internal processes, we seek to enable technologies that make it possible to reduce carbon emissions, reduce water consumption, improve the efficiency of the use of raw materials and waste, reusing them as much as possible, all with the aim of minimizing environmental impacts.

Our management is guided by an Integrated Environmental Policy and an Environmental Management System (EMS), certified since 2001 under the ISO 14001 standard in all our operations. We monitor atmospheric emissions and air quality; groundwater and surface water; noise levels in our operations; the generation and final disposal of waste; and applicable legal and environmental requirements. Tupy carries out annual internal and external audits, and identified issues are broken down into action plans for the units.

Water and effluents

We have developed guidelines to ensure the quality of the water used and disposed of in our processes and we seek to optimize the use of resources through reuse and efficient treatment. We follow the environmental standards applicable to our sectors, as well as the guidelines of regulatory bodies and industry associations. We currently reuse 86.3% of the water in our units. This figure demonstrates our commitment to the conscious use of water in all our operations. We aim to continuously improve this indicator, especially in water-stressed areas such as Mexico.

In 2024, 56% of the water sourced was acquired from local utilities or water trucks, 40% from underground sources, and 4% from surface water.

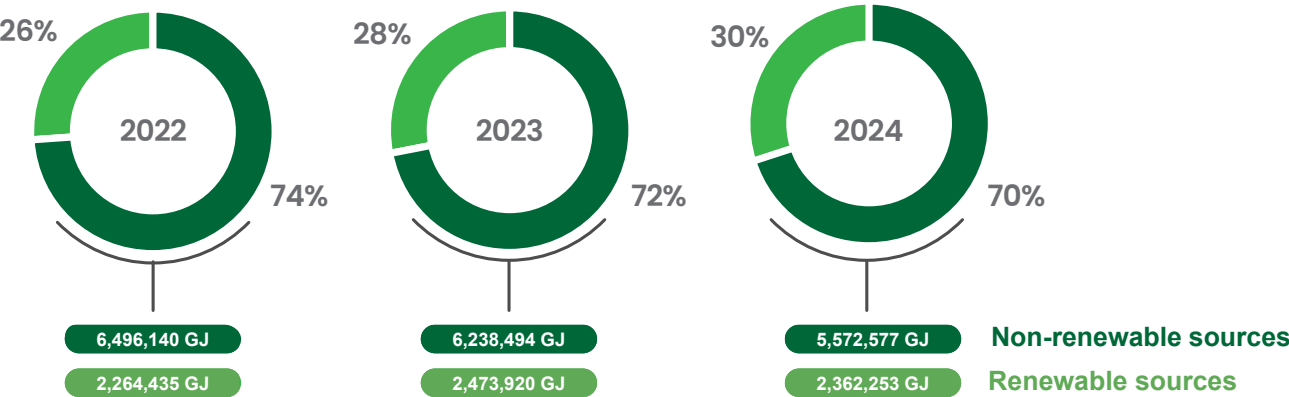


Energy

Tupy's industrial transformation process is energy-intensive, the reason for which we have a management system based on analyzing and mapping consumption and prioritizing efficient energy use. This is an essential condition for increasing competitiveness by reducing operating costs and avoiding greenhouse gas (GHG) emissions in our operations. In

2024, we made progress in the energy efficiency of our industrial processes, which was highlighted by the reduction in coke consumption at the Saltillo plant, where the rate per ton produced fell by approximately 29%. During the last period, we consumed a total of 7,934,829 gigajoules (GJ) of energy, derived from electricity, natural gas and coke, a 9% reduction compared to 2023.

Energy consumption within the organization [\[GRI 302-1\]](#)



Atmospheric emissions

We are aware that atmospheric emissions directly affect air quality and the surrounding communities. That is why we take responsibility for mitigating this impact by constantly improving our monitoring and control systems, implementing preventive measures, ensuring compliance with environmental regulations and promoting continuous improvements in operational efficiency.

In 2024, we invested more than R\$11 million in projects related to atmospheric emissions. As a result, we achieved an 8% reduction in particulate matter (PM) emissions compared to 2023. There was a 10% reduction in volatile organic compounds (VOC).



Greenhouse gas emissions

We are aware of the impact of industrial operations on GHG emissions; therefore, we prioritize various mitigation and adaptation actions to address climate change and decarbonize our activities. The corporate emissions inventory covers all of Tupy's production units and, for the third consecutive year, the scope 1 and 2 data were verified by a third party according to ISO 14064 and the GHG Protocol, ensuring the accuracy of the data used as a reference for our mitigation actions.

In 2024, we reduced direct emissions (scope 1) by 66.8 thousand tons of carbon dioxide equivalent (tCO₂e), or 12% of absolute emissions compared to the previous year, in line with production trends. The variation was primarily due to the reduction of emissions from stationary combustion sources and processes. We also saw a reduction of 19,525 tCO₂e in scope 2 emissions, a 10% decrease compared to 2023. There was a negative impact on the plants in Brazil due to the increase in the emission factor of the Brazilian energy matrix, which rose by 41% from one year to the next.

The factors that contributed to the reduction in GHG emissions were:

- ▶ Use of recycled coke in ovens, avoiding direct emissions of 4,684 tCO₂e;
- ▶ Replacing coal dust with an alternative material in molding lines, which avoided the direct emission of 5,102 tCO₂e;
- ▶ Introduction into the production environment of a coke with charcoal fines in its composition, which avoided the direct emission of 271 tCO₂e;
- ▶ Renewable energy certificates at the Betim plant, avoiding the emission of 9,498 tCO₂e in the year; and
- ▶ 61% increase in the use of renewable sources in electricity generation in Portugal, reducing the emission factor by 26%.

The GHG intensity increased from 1.17 to 1.18 tCO₂e per ton produced, an increase of 1% compared to 2023, caused mainly by the Mexican electricity matrix, which is dependent on fossil sources, by the variation in production and its respective effects on the efficiency of operations and by the increase in non-renewable sources in the Brazilian electricity matrix. Even so, 1.18 tCO₂e/t (cast iron) is 38.5% lower than the global average for the steel sector, 1.92 tCO₂e/t (steel)¹.

Emissions inventory

2024	
Direct GHG emissions (scope 1)	493,331
Indirect GHG emissions (scope 2)	168,070
Other indirect GHG emissions (scope 3)	618,350

Our stock of CO₂e

Tupy has more than 4,800 hectares of preserved forest area. In 2024, we will store 2.3 million tons of CO₂e by maintaining these areas. This amount is not deducted from our GHG emissions, but reflects the company's commitment to biodiversity and environmental preservation in our surroundings.

1. Source: <https://worldsteel.org/wider-sustainability/sustainability-indicators-2024-report/#co2-emissions-and-energy-intensity>.

Waste management Circular economy

Like any manufacturing plant, Tupy generates a large volume of waste in its operations, which can lead to negative impacts. In order to minimize possible damage, we have implemented solid waste management plans at all our units and initiatives aimed at reducing consumption and the efficient use of materials, recycling, treatment and proper disposal.

Our governance of this issue involves monitoring processes through indicators of waste generation, disposal and compliance with legal requirements. Figures are evaluated periodically by the Environment area and by specific committees. In 2024, an internal target was set to reduce the rate of waste sent to landfill by 8.25% compared to 2023, and we achieved a 13.4% reduction, exceeding the target and strengthening our commitment to the issue.

Last year, we transformed 539,000 tons of ferrous scrap into high value-added products, which contribute to 95.6% of the metallic material used, a figure close to that of the previous year. The use of scrap in our activities reduces the need to extract new mineral resources from nature, reduces emissions of GHG into the atmosphere, prevents the disposing of materials in landfills, generates employment and income, and increases the efficiency of production processes. Every ton of scrap used in the process avoids the emission of 1.2 tons of CO₂e, since it has a 92% lower carbon footprint than pig iron, the metallic raw material that originates from the extraction of iron ore.

With regard recycling other materials, we have been seeking greater efficiency in internal regeneration to return waste that would otherwise be sent to landfill to our processes. We have mapped out opportunities to use materials in other applications, which greatly

benefits external production chains. In 2024, the rate of use of recycled raw materials remained stable compared to 2023, reflecting the continuity of Tupy's efforts to optimize the use of natural resources.

Coproductions

Coproductions are waste generated in Tupy's operations that become raw materials in other production chains, such as the cement, chemical, steel and automotive industries. In addition to reducing environmental impacts, this practice aims to generate value for the waste and revenue for the company from the sale of these materials. In 2024, the Coproductions area was restructured and expanded to all of our units and the appointment of a person responsible in each facility for an improved performance of activities in the industrial plants. Last year, we achieved a 26% increase in turnover compared to 2023. This result reflects the commitment and dedication to the business brought about by strengthening the use of coproductions over the period.

Highlights in waste and coproductions:

- ▶ **1.1 million** tons of recycled waste.
- ▶ **51 thousand tons of residual** sand destined for construction sites, landscape recovery, the cement and ceramics industries.
- ▶ **R\$37 million** in revenue from coproductions.
- ▶ **Over 183,000 tons of coproductions** sent to be used as raw materials for other industries.



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Credits



Credits

Coordination

Investor Relations Department

Materiality, indicator consultancy, writing and editing

TheMediaGroup

Graphic design, layout and infographics

TheMediaGroup and Multi Design

Spelling check and translation

TheMediaGroup

Photography

Rafael Richartz and Tupy

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