



Miranda

The European Bike Fundamentals.

**Sustainability
Report
2020**

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About this Report

CEO Statement



A handwritten signature in black ink, appearing to read "João Miranda".

Miranda CEO, João Miranda

As a bicycle industry company we have responsibilities regarding sustainable mobility promotion. Sustainable mobility contributes to individuals' health and well-being and as positive impacts in the environment, as it doesn't have associated CO₂ emissions and, consequently, improves communities living quality. As a player that is part of the shift to more sustainable mobility options, we feel encouraged to conduct our business in a responsible and sustainable way, throughout our entire value chain.

As this is our first sustainability report, this is the first presentation of our approach to ESG (Environmental, Social and Governance) topics, but we intend to vigorously and continuously improve our performance reporting these topics (and our performance itself), namely through the achievement of our sustainability goals, that we commit to achieve by 2025.

We will continuously search for better ways to deliver our products, with less harmful impacts in the environment and more positive outcomes for people and communities around us.

Miranda at a glance

2020



70
Years in business

27 010 m²
Total area

7,8 M
Components sold



13 935 GJ
Energy Consumption

728 ton CO₂e
Emissions



203
Employees

43%
of woman in the workforce

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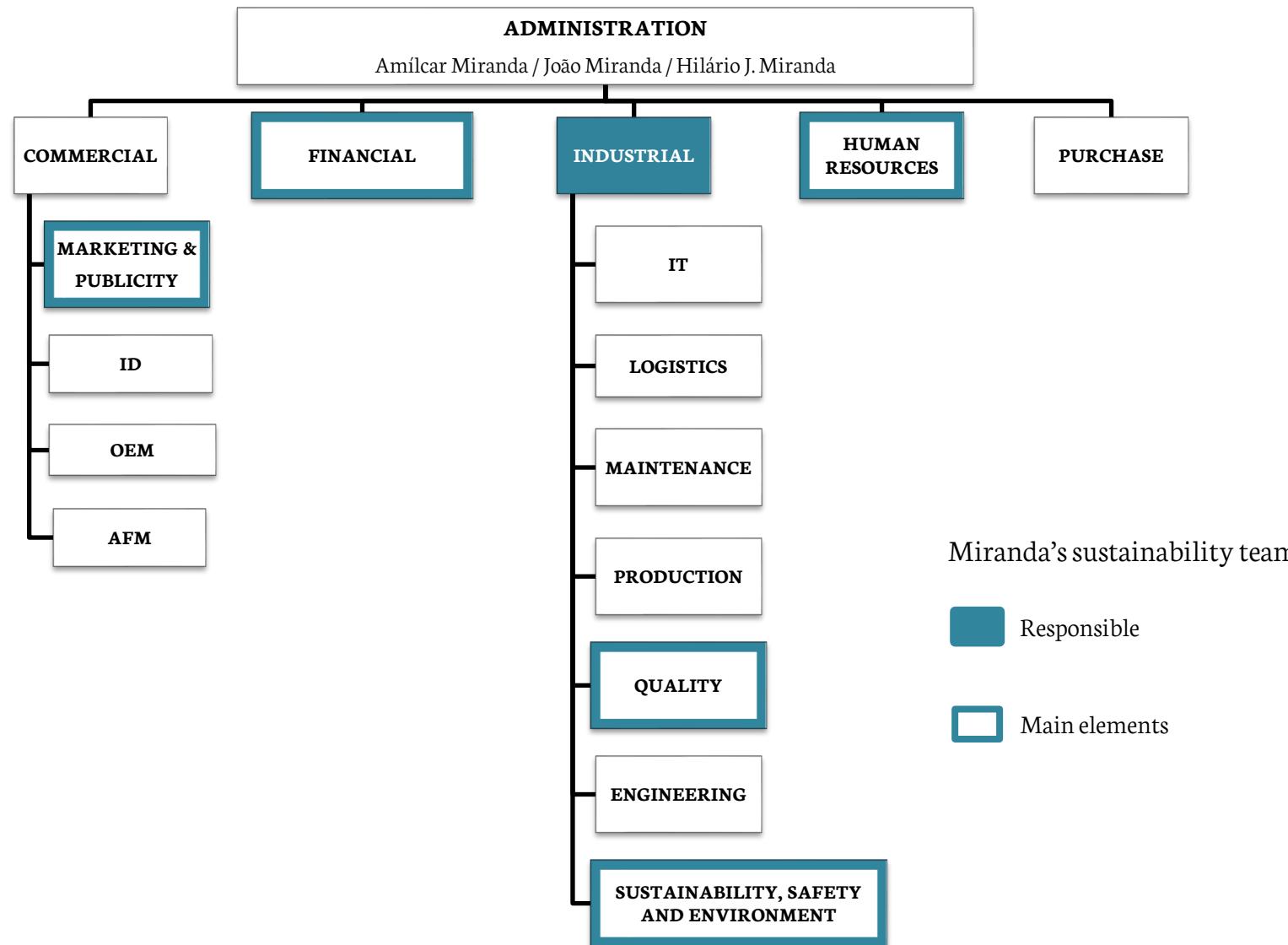


Who we are

A company with 70 years in the production of bike components and other custom solutions.

We are located in Águeda, a city in the center region of Portugal, less than 1h away by car from an airport (Porto) and sea ports (Leixões and Aveiro) and 3h away by plane from any country in Europe;







Our products

XMOD Gravel



Kies



Kappa - Special edition



Miranda is now supplying most of the European top brand bicycles and exporting worldwide, enlarging every year a strong reputation of the quality maker and a reliable industrial partner. With a new approach to the market, with the desire to be a leader within the bicycle family, Miranda are fulfilling the client needs with “tailor-made” solutions, always with production vs sustainability in our minds.

Miranda image are always linked to innovation and quality with an avantgarde position in the drivetrain components development and also other bicycle accessories.



Memberships of Associations



Águeda Business Association

Associação Empresarial de Águeda (AEA)



Aveiro Industrial Association

Associação Industrial do Distrito de Aveiro (AIDA)



Association for treatment of industrial waste Águeda

Associação para tratamento Resíduos Industriais Águeda (ATRIAG)

Founding Partners



Association for Technological Development and Innovation

Associação para o Desenvolvimento e Inovação Tecnológica (ADITEC)



National Association of Two Wheel Industry

Associação Nacional das Indústrias de Duas Rodas (ABIMOTA)

One of Miranda's partners has been Chairman of the Board since September 2016 until the present.

IPQ/TC 103 "Two Wheel"

We are part of the technical committee that sets international standards for 2-wheel vehicles.



Sports Association MBS

Miranda, in December 2017, founded a non-profit association which aims to promote and develop the practice of cycling.

It supports young athletes, creating the ideal conditions to access and compete in international events, promoting its health and well-being.





Vision and Mission

Miranda Vision is to “be the reference in bicycle drivetrain components and to empower the riding experience with its innovations”.

We believe the passion for cycling is what moves the industry forward. By creating better products, delivering solutions to the market and improving the cycling experience, we push the cycling forward and at same time we help the environment.

On this regard, Miranda Mission is “Ignite the passion of cycling with distinctive, inspired and trustworthy bicycle components aligned with a sustainable future for our next generations”.



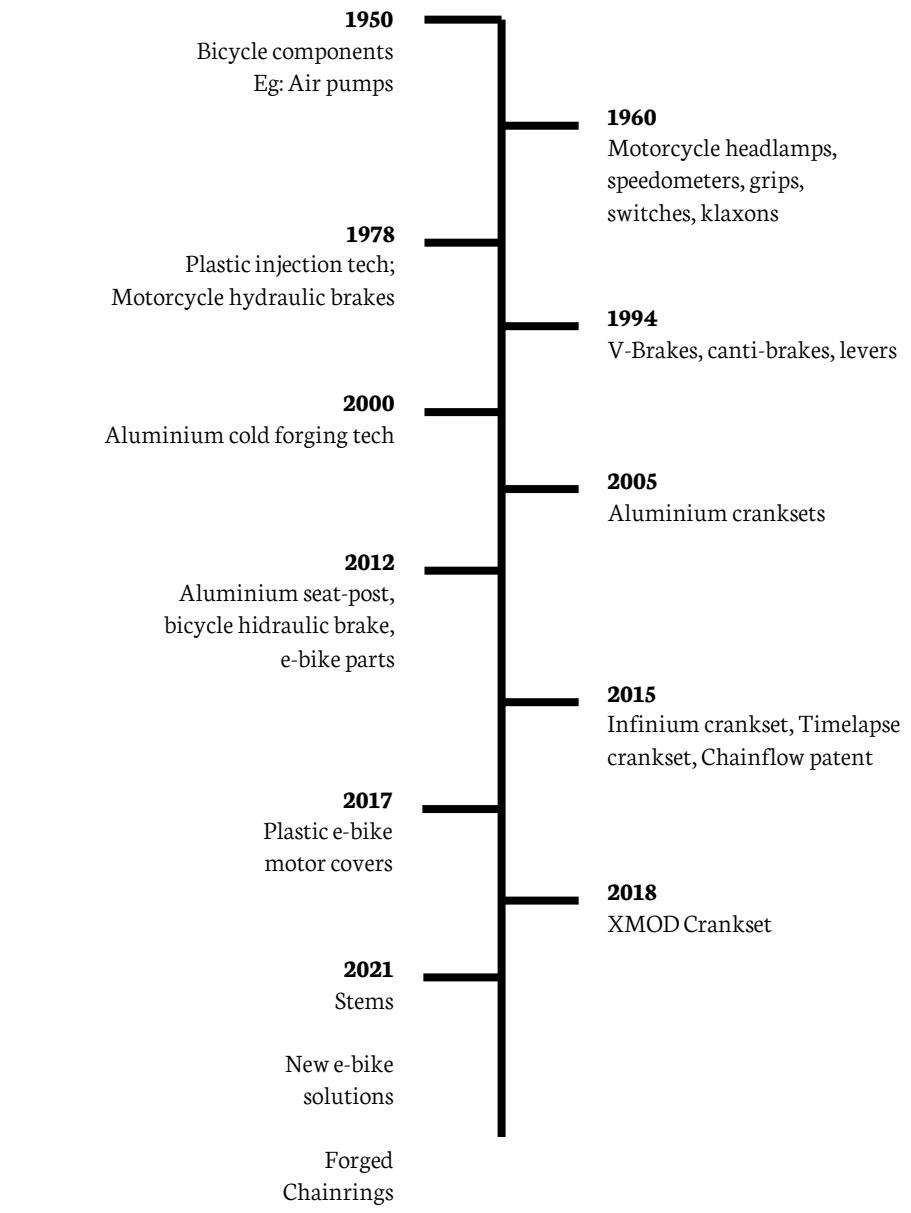


Company evolution

First established as an individual business in 1940 we became a family-owned company by 1950, and our core business was manufacturing headlamps, rear lamps, and air pumps in those years.

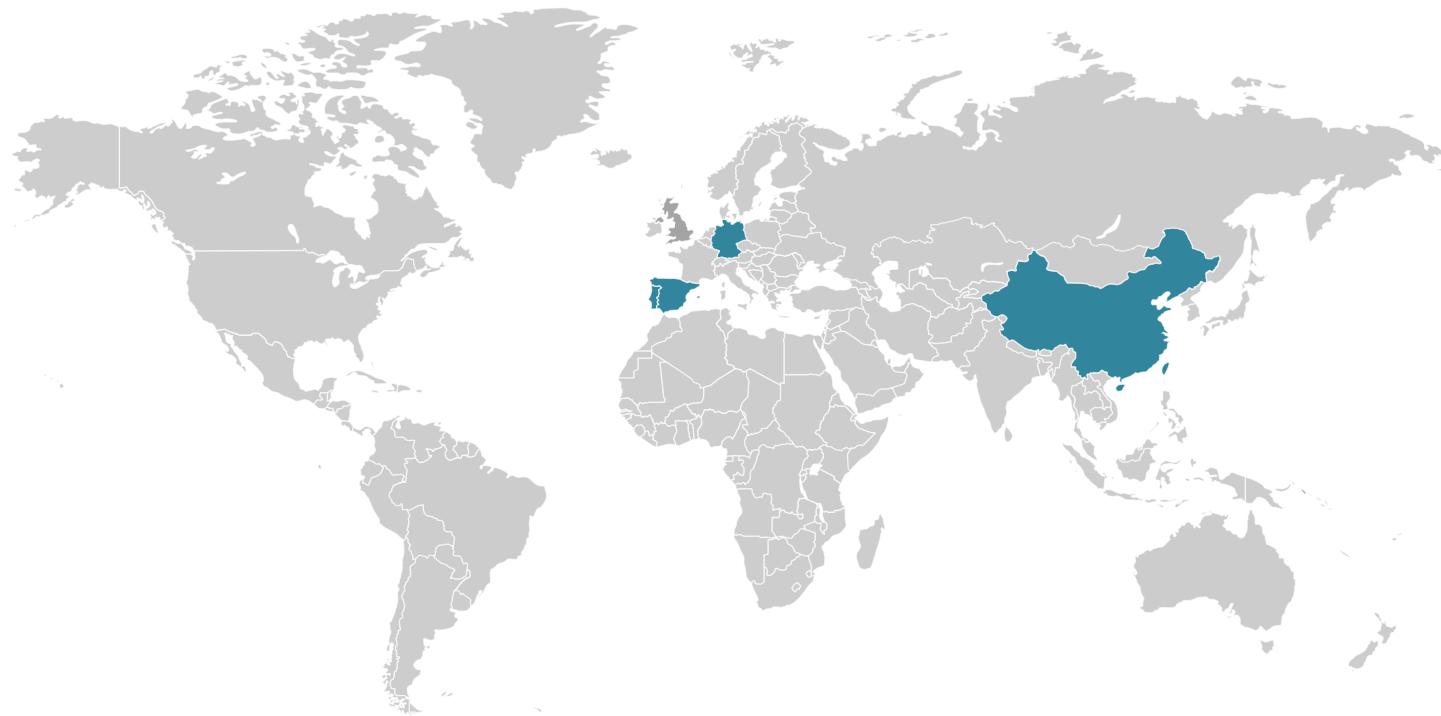
At the present, Miranda has been progressively going into the medium and high-end market of bicycle components.

Nowadays Miranda supply most of top bicycle brands at the market, with solutions with an high degree of innovation and customized to blend seamlessly with the bicycles, produced by sustainable materials and in a sustainable way.





| Supply chain



 **Portugal** 68,9 %

 **Asia** 18,6 %

 **Germany** 3,7 %

 **Spain** 3,5 %

At Miranda, we privilege local suppliers because, by doing so, we not only help the local economy but also avoid significant CO₂ emissions that come from transportation. In 2020, 79,95% of all the supplies were originated from EU.



National | European Union | Other

% of spending in purchasing, by supply category

Raw materials

21,7% | 4,4% | 18,3%

Services

20,4% | 2,8% | 0,6%

Investments

26,7% | 3,9% | 1,1%



I&D

Miranda has guided its performance by innovation and differentiation from the competition through innovative products and high added value that introduces to the market.

The recognition as one of the Portuguese entities with one of the highest number of registered EU patents attests its maturity regarding innovation promotion.

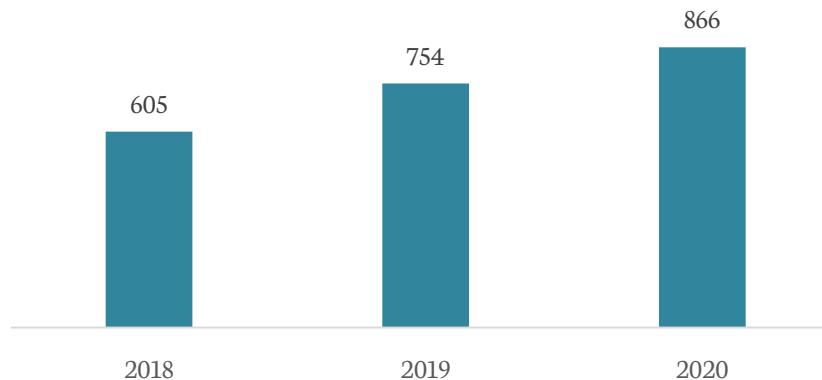


"Portugal Bike Value" Project

Miranda is part of the bicycle production cluster in Águeda, taking advantage of the synergies and complementarities of the business.

Miranda benefits from the process of dragging out the best market practices, as well as from healthy competitiveness and common alignment with the principles of sustainability.

I&D investment (k €)





At 2019 Miranda started an investment of 12M€ in the increase of industrial facilities and more efficient equipment, such as:

- new Waste Water Treatment Plant (WWTP) (144 K€);
- photovoltaic panels (193 K€);
- Datacenter Infrastructure and Network assets targeting industry 4.0 (320 K€).

Resulting in:

- more production with less consumption;
- Layout reorganization to increase productivity;

The future will involve strengthening industrial capacity, promoting a culture of innovation across the entire organization and accepting the challenges of globalization and sustainability, in a context of strong instability, with the adoption of a position open to all markets.



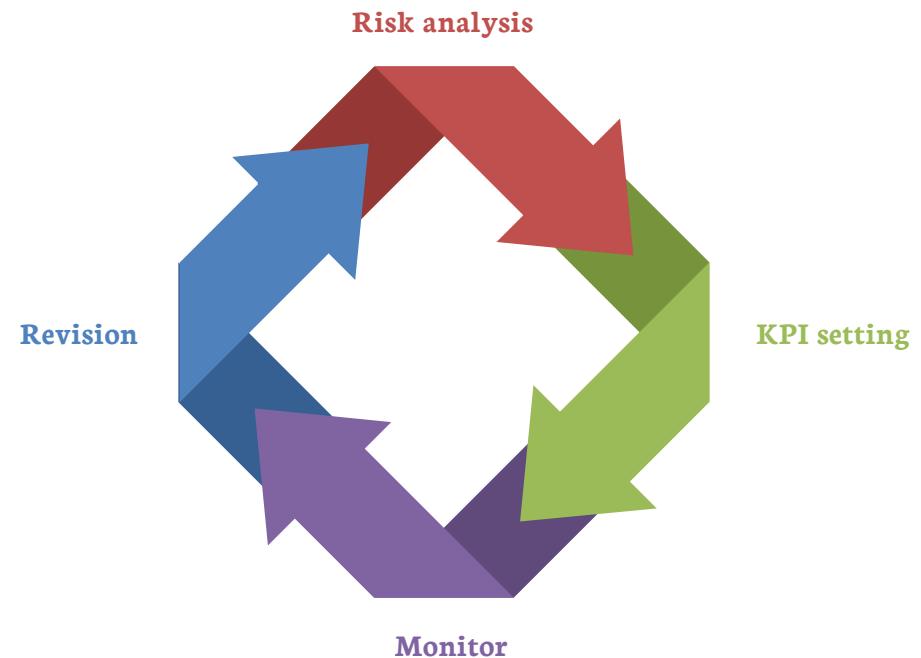


Risk management

Miranda has an internal risk analysis procedure that establishes how risk should be handled in the organization.

The risk analysis follows the PDCA cycle.

After the identification of the main risks and opportunities to Miranda, several actions and KPI are placed in action in order to eliminate or mitigate the identified risks.





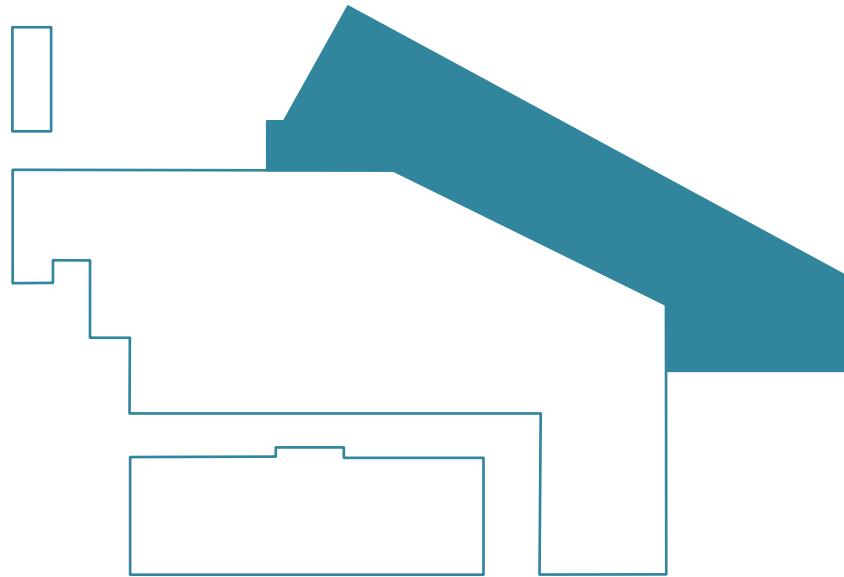
| How have we evolved?

At Miranda, innovation and quality are top priorities, therefore, the continuous improvement of how work is performed is encouraged. Throughout the last years there has been an investment in bigger and improved facilities.

- Multi-route painting facilities for liquid and powder;
- Balanced improvements of capacity in all sections;
- Incorporate more processes internally to have better time to market;
- Improved product flows and optimizations in quality checkpoints.



New pavilion



- █ Old installations
- █ New pavilion



1 Forging	10 CNC centers
2 Tool building and maintenence	11 Threading machine center
3 Warehouse	12 Assemblies
4 Broaching	13 Decals / Printing / Tampo
5 Press	14 Painting facilities
6 Heat treatment	15 Plastic injection
7 Polishing	16 Ultrasonic welding
8 Abrasing and cleaning	17 Alu - vacuum coating
9 Lathe centers	18 Laser cutting and marking

How do we ensure our products quality?

Quality Control

- Quality checkpoints during product flows and self-control measures;
- Internal test and lab capacities;
- Strict control measures on sourced materials as for exemple the raw materials used;
- Quality control certifications, as the IATF for the automobile industry.



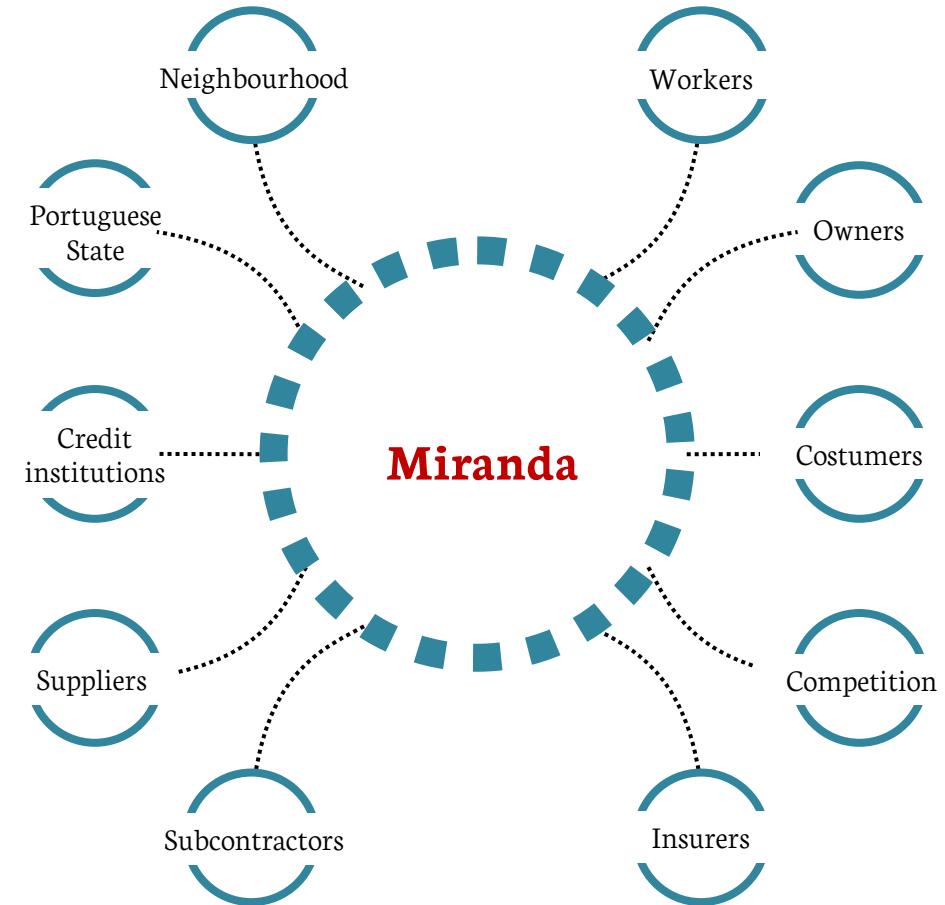
How are we pursuing sustainability?

Stakeholder engagement

Miranda promotes continuous stakeholder engagement in order to ensure that its needs and expectations are met.

This engagement and communication is ensured through:

- Miranda's newsletter
- Miranda's social media pages
- E-mails
- Meetings
- Exhibitions





Sustainability pillars

Economic Development

People Engagement

Environmental Protection

Material topics

- Ethics and transparency
- Sustainable Procurement

- Diversity and Equal opportunities
- Community support

- Water
- Production
- Packaging
- Emissions
- Energy management



Sustainability Goals - Until 2025

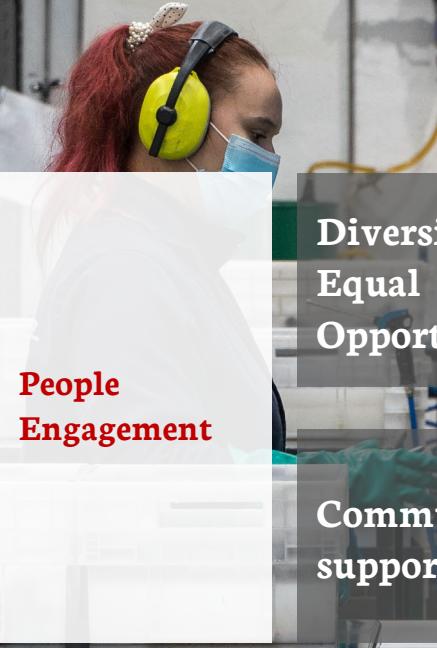
Economic
Development

Ethics and
transparency

Sustainable
Procurement

Communicate the code of conduct and ethics to 100% of employees.

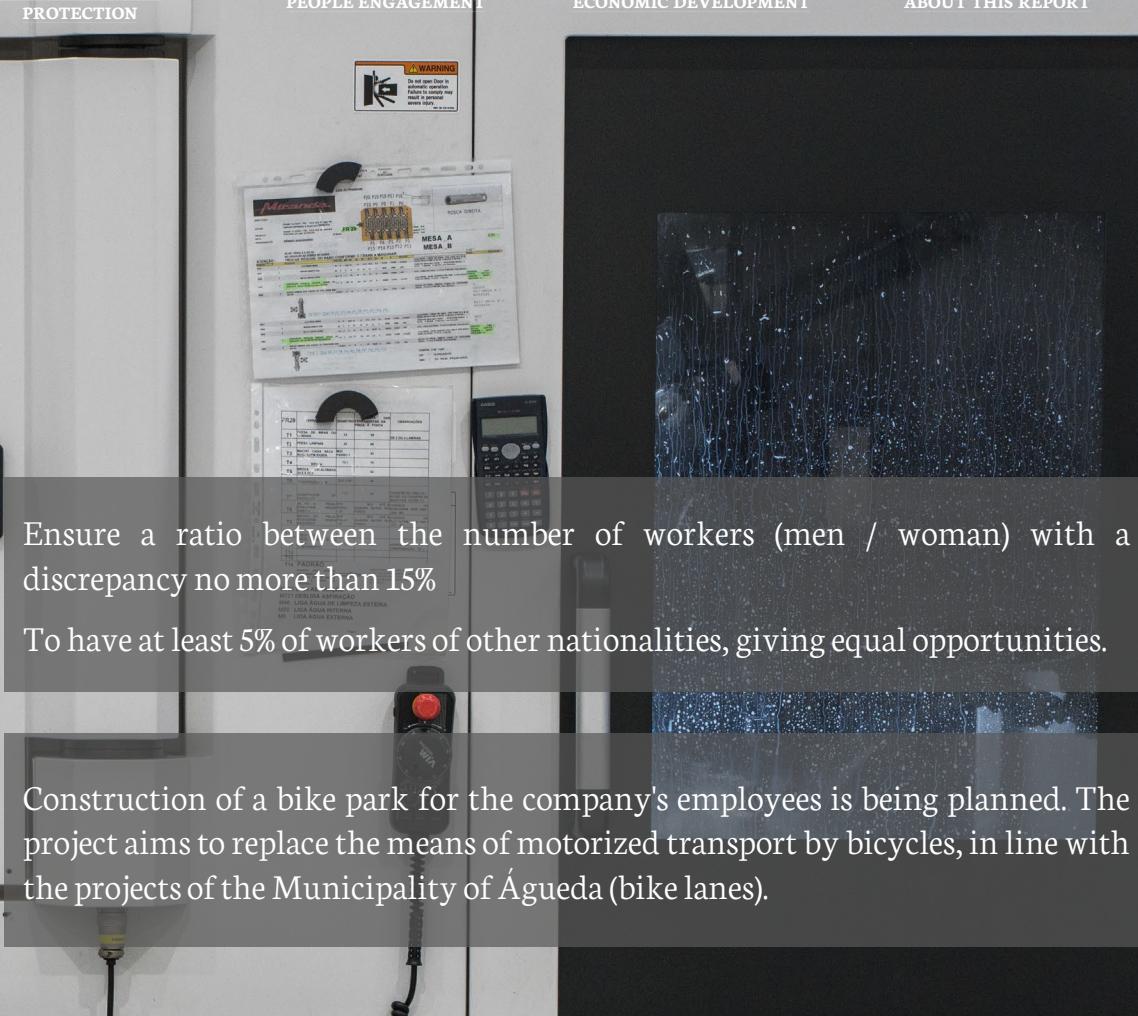
Ensure that 85% of supplies are originated from EU.



**People
Engagement**

**Diversity and
Equal
Opportunities**

**Community
support**



Ensure a ratio between the number of workers (men / woman) with a discrepancy no more than 15%

To have at least 5% of workers of other nationalities, giving equal opportunities.

Construction of a bike park for the company's employees is being planned. The project aims to replace the means of motorized transport by bicycles, in line with the projects of the Municipality of Águeda (bike lanes).



Environmental Protection

Water

Increase the capacity of the wastewater treatment plant by 30%.

Production

Increase the use of recycled and recyclable materials.

Optimize the production process to reduce gas consumption at paint shop.

Packaging

Reduce plastic packaging by 20% (replace it for card and/or paper).

Cardboard in our packaging with FSC Certification: ensure that comes from responsibly managed forests.

Emissions

Internal and external digitalization of all paper processes and communications.

Energy management

Duplication of the photovoltaic installation to increase the energy self-sufficiency.



Certifications

We believe that external validation is a way to build trust in our stakeholders. Therefore, Miranda is certified according to the following standards:

- ✓ **ISO 14001:2015** - Environmental management systems;
- ✓ **ISO 9001:2015** - Quality management systems;
- ✓ **IATF 16949:2016** - Automotive quality management systems.

We developed a management system policy for all the activities of Design and Production of Accessories and Components for Vehicles of Two and Four wheels [ISO9001/ISO14001] and Production and assembly of reflectors and technical parts in plastic [IATF16949].

The management system policy is available at mirandabikeparts.com.





Awards & Recognition

Miranda is awarded with the highest recognitions in the industry, national and internationally. Our certificates, awards and recognition state why Miranda is recognized in the industry and seen as an example to follow.



Since December 2020, Miranda only purchases energy from renewable sources, contributing to a decrease on its ecological footprint.



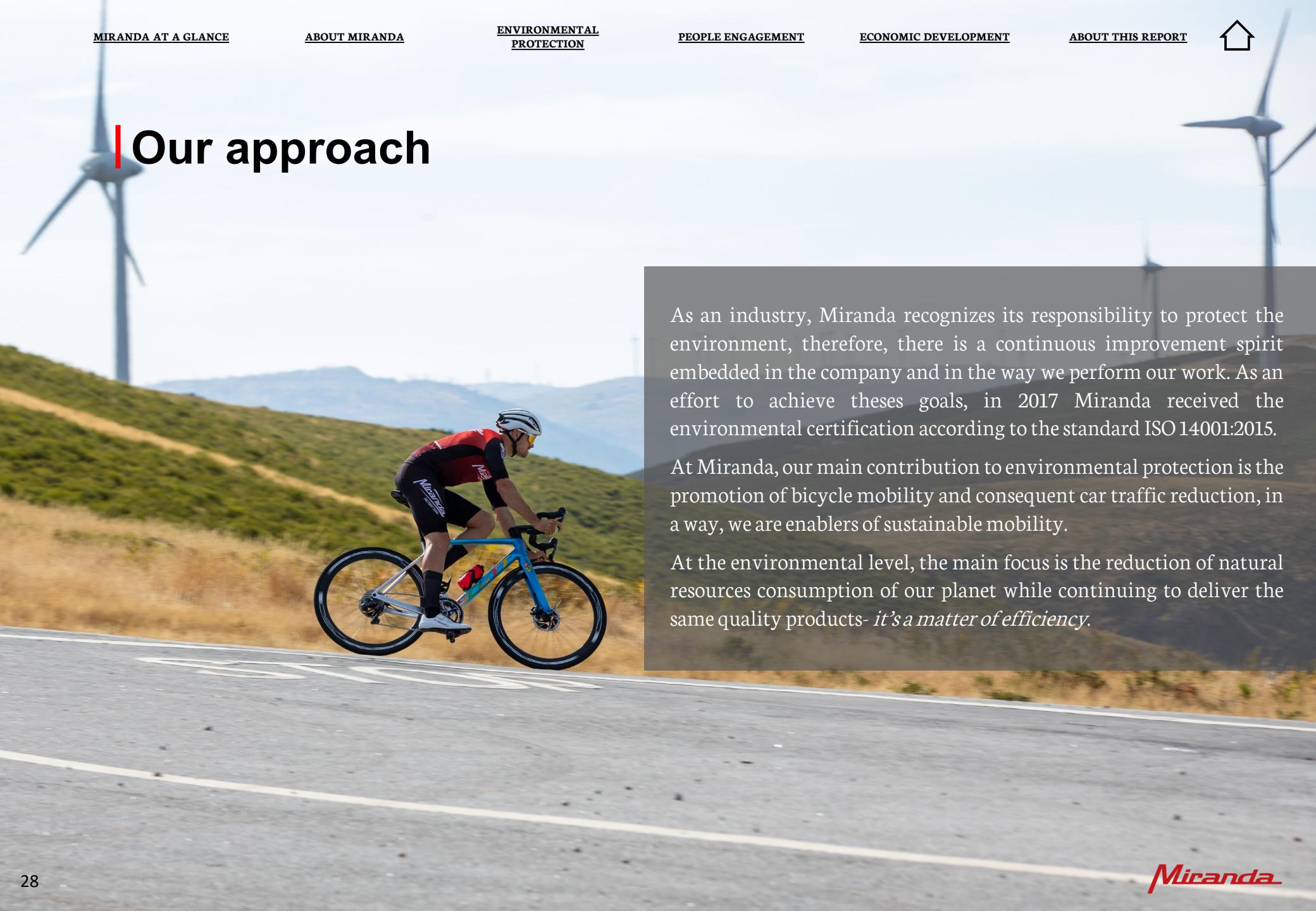


Environmental Protection

- Our approach
- Energy efficiency
- Emissions
- Water management
- Waste
- Transport
- Circular Economy



Our approach



As an industry, Miranda recognizes its responsibility to protect the environment, therefore, there is a continuous improvement spirit embedded in the company and in the way we perform our work. As an effort to achieve these goals, in 2017 Miranda received the environmental certification according to the standard ISO 14001:2015.

At Miranda, our main contribution to environmental protection is the promotion of bicycle mobility and consequent car traffic reduction, in a way, we are enablers of sustainable mobility.

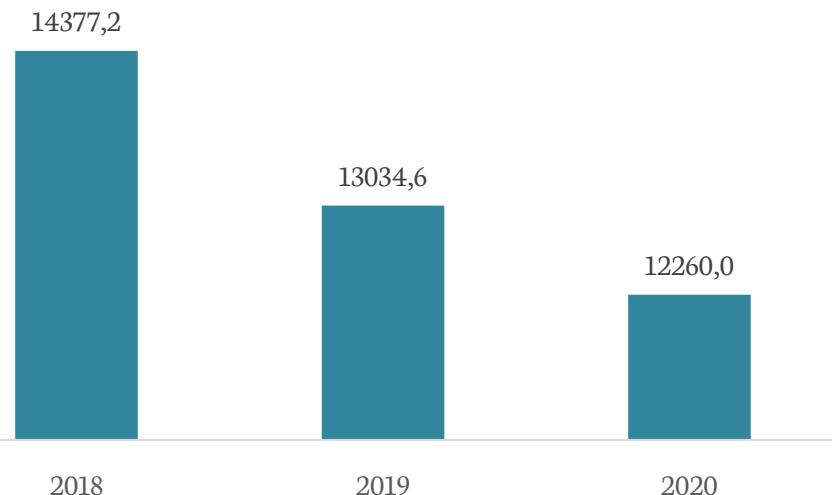
At the environmental level, the main focus is the reduction of natural resources consumption of our planet while continuing to deliver the same quality products- *it's a matter of efficiency*.



Energy efficiency

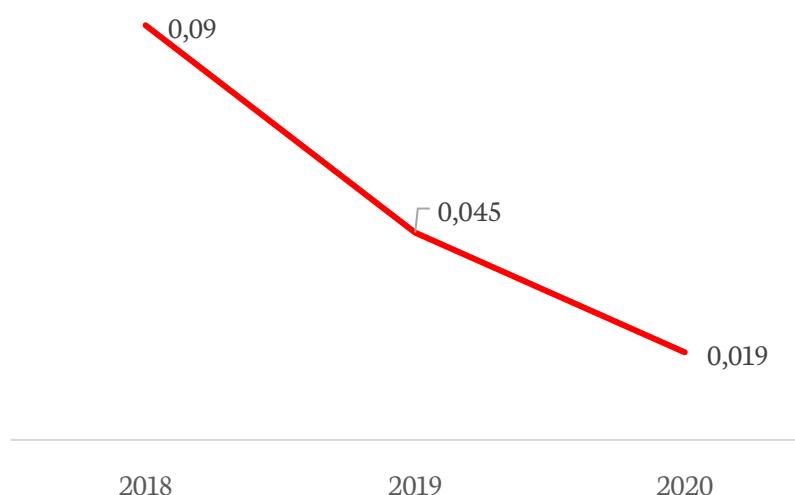
Since 2018 that Miranda has been reducing energy consumption and improving its energy intensity (which corresponds to the ratio between energy consumption per unit sold), which reveals a considerable increase of Miranda's energy efficiency.

Energy Consumption (GJ)



Energy consumption values includes fossil fuels, gas and electricity consumption.

Energy intensity *



* Energy intensity = energy consumption/unit sold



Energy consumption was responsible for the most significant part of CO₂ emissions in our factory, therefore, we took some actions to reduce it significantly throughout the years.

2018

Production of photovoltaic energy in self-consumption regime

Energy audit

2019

Energy consumption rationalization plan

2020

Replacement of indoor lighting with full LED lighting

Installation of translucent surfaces in the facilities, providing efficient use of natural light throughout the day

Increased production of photovoltaic energy in self-consumption regime

2021

100% renewable electricity

Replacement of equipments with more energy efficient ones



Renewable energy

Miranda has 1282 panels in the photovoltaic installation.

Over the years we have been adding more panels, resulting in the increase of energy production:

2018: 120 000 kwh

2019: 127 000 kwh

2020: 245 000 kwh

Miranda is now able to ensure 25 % of its energy consumption needs.

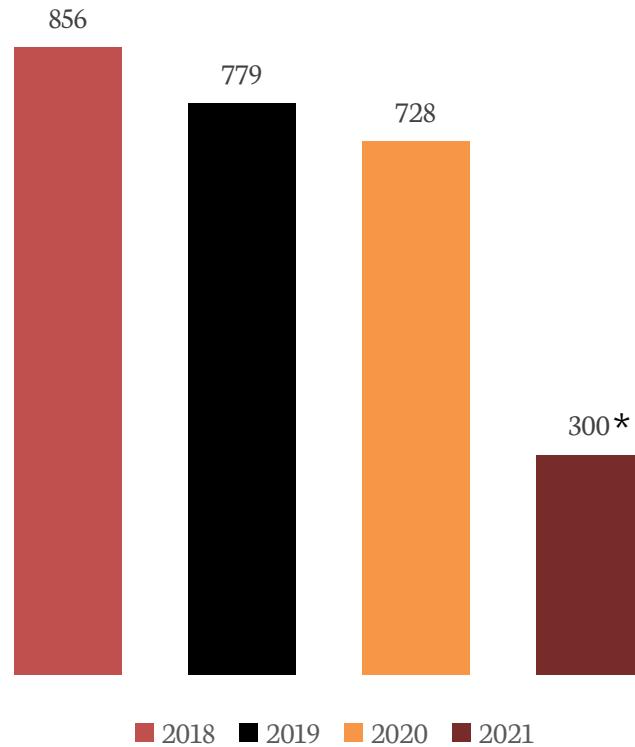


Emissions

At Miranda we are committed with emissions reduction, therefore we have been optimizing our internal processes, such as use of low cure paints, in order to reduce oven temperatures and consequently reduce energy consumption.

There has been a decrease in our emissions since 2018 and there is estimated an even more significant reduction for 2021, in result of the change to 100% of electricity purchased from renewable sources.

CO₂ Emissions (Kg)



* The values considered in 2021 are a forecast.



XMOD crankset

XMOD is a completely modular, very flexible, mid and high range, crankset, where the parts are completely interchangeable.

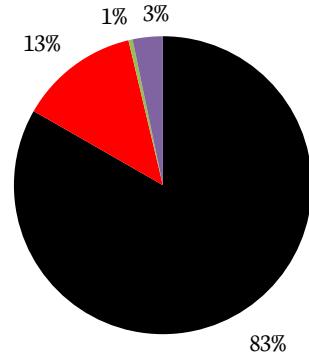
The advantages of this product are notorious both in terms of CO₂ emissions reduction and in terms of transport (a pallet that takes 180 conventional cranksets can carry 360 XMOD cranksets). Since the crankset is transported in separate parts the space is organized more easily, the same applies to the warehouse space.



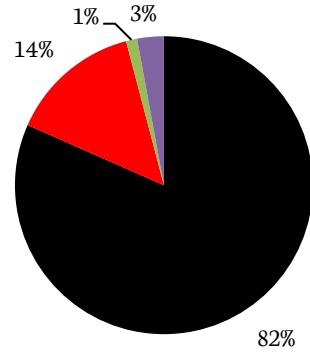


More than 80% of our total emissions are from electricity. Our fossil fuel consumption only represents 16% of our CO₂ emissions.

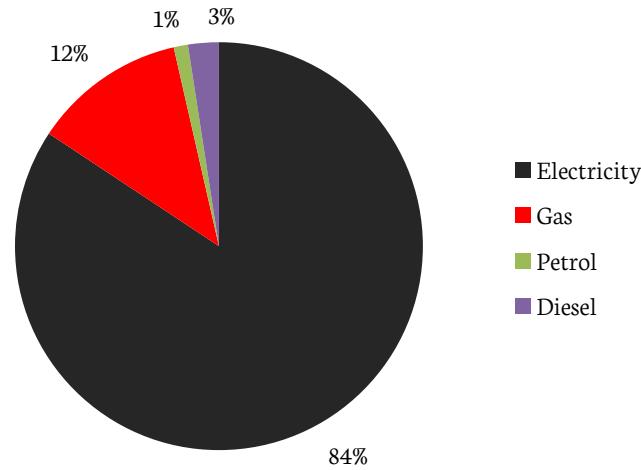
CO₂ Emissions by source
(2018)



CO₂ Emissions by source
(2019)



CO₂ Emissions by source (2020)



- Electricity
- Gas
- Petrol
- Diesel

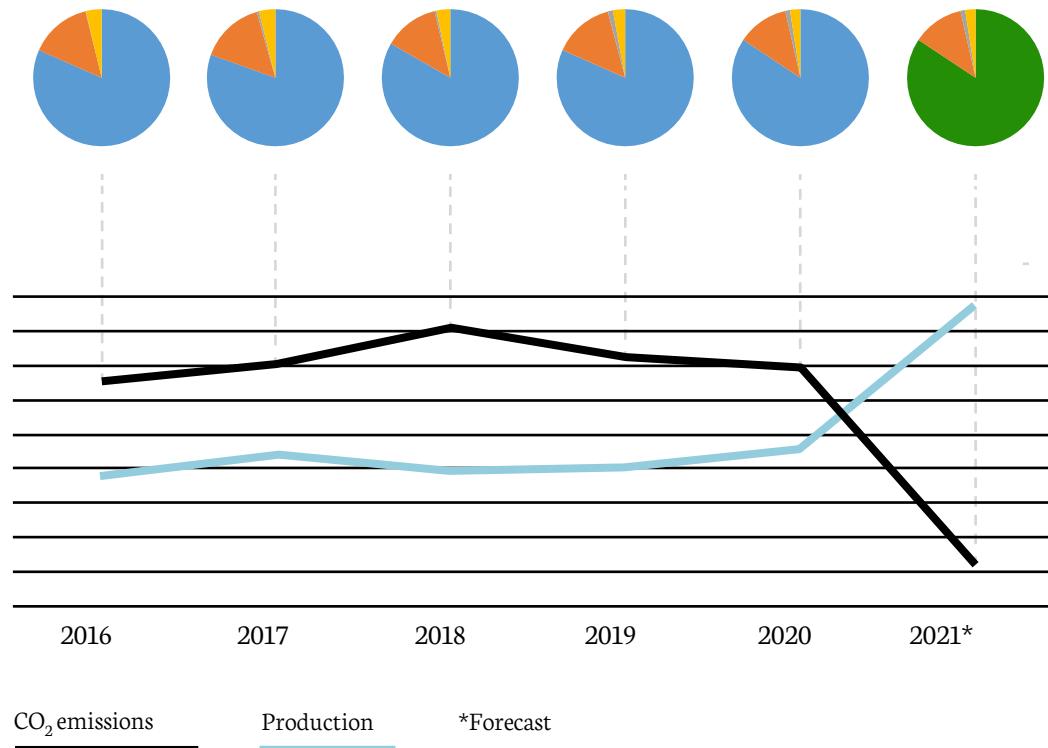
RECYCLED ALUMINUM

At Miranda we use recycled aluminum produced with green energy (which is recycled by Hydro, a company widely recognized for ensuring high levels of quality). By using this recycled material, CO₂ emissions are greatly reduced, since it is not necessary to extract additional bauxite to re-produce the alloy.

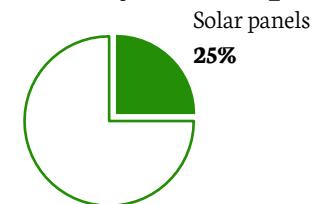


CO₂ emissions per year 2016-2021

Electricity ■
Gas ■
Petrol ■
Diesel ■
Electricity with ■
100% renewable
sources ■



Electricity consumption*



Electricity purchased - from
renewable sources
75%

100% Green

In 2021, we were able to ensure an average of 25% of our electricity needs from our solar panels.

Also, we wanted to ensure that 100% of our electricity comes from renewable sources, so we changed our electricity contract.



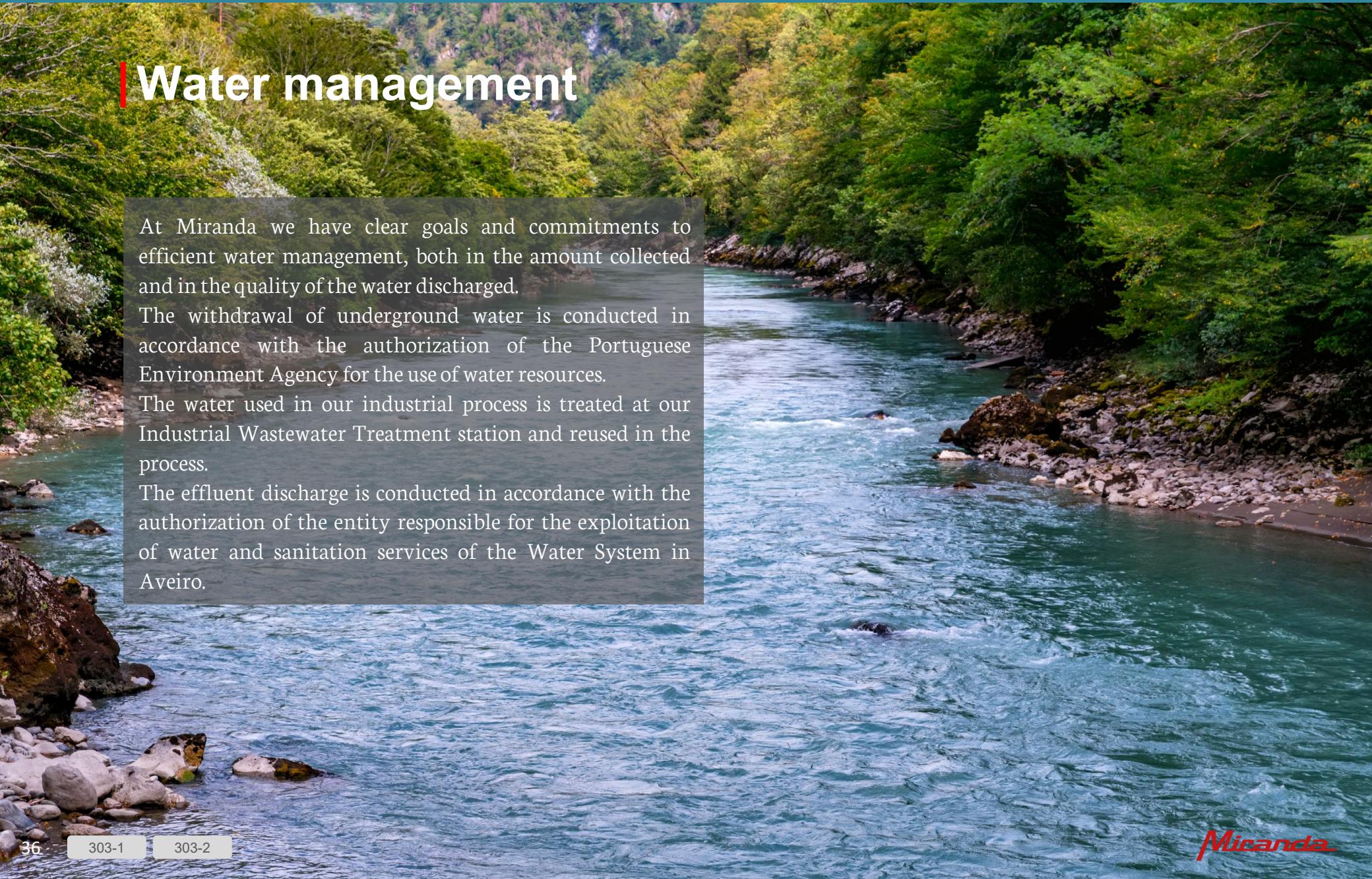
Water management

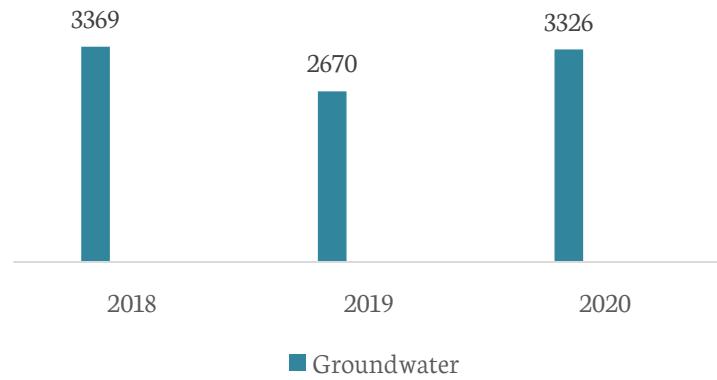
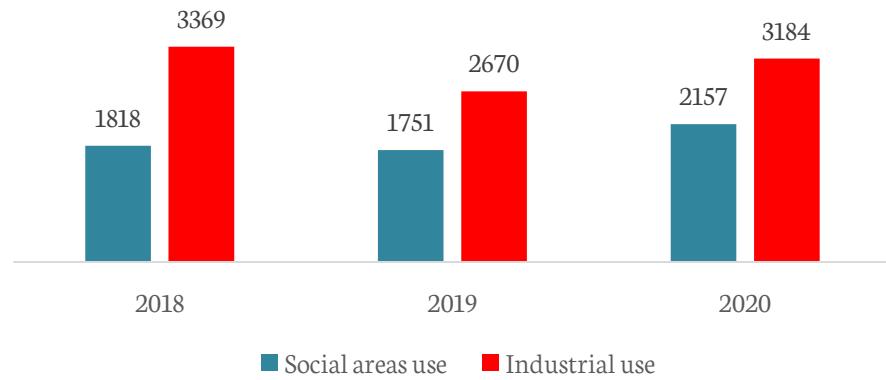
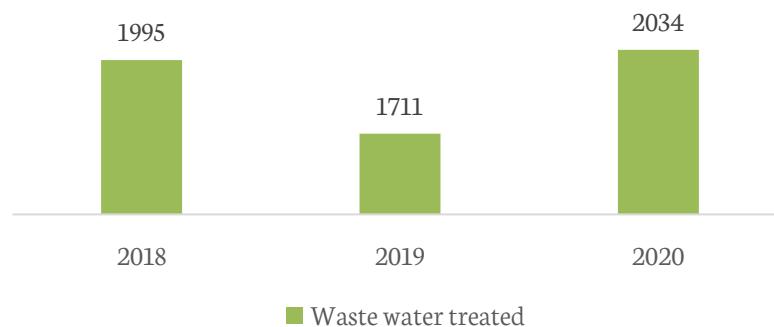
At Miranda we have clear goals and commitments to efficient water management, both in the amount collected and in the quality of the water discharged.

The withdrawal of underground water is conducted in accordance with the authorization of the Portuguese Environment Agency for the use of water resources.

The water used in our industrial process is treated at our Industrial Wastewater Treatment station and reused in the process.

The effluent discharge is conducted in accordance with the authorization of the entity responsible for the exploitation of water and sanitation services of the Water System in Aveiro.



Water withdrawal (m³)Water consumption (m³)Wasterwater treated (m³)



Waste

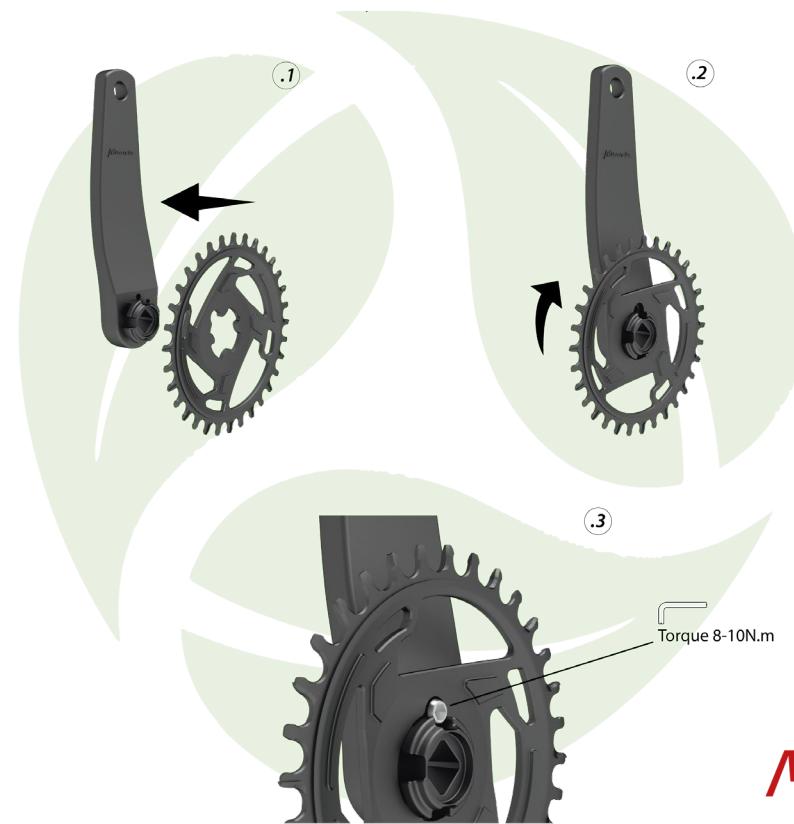
One of our main goals is the sustainable management of materials, to ensure the preservation of natural resources and reduce pressure on ecosystems.

All our waste is treated and disposed of in accordance with the specifications established by law for each type.

MGREEN ®

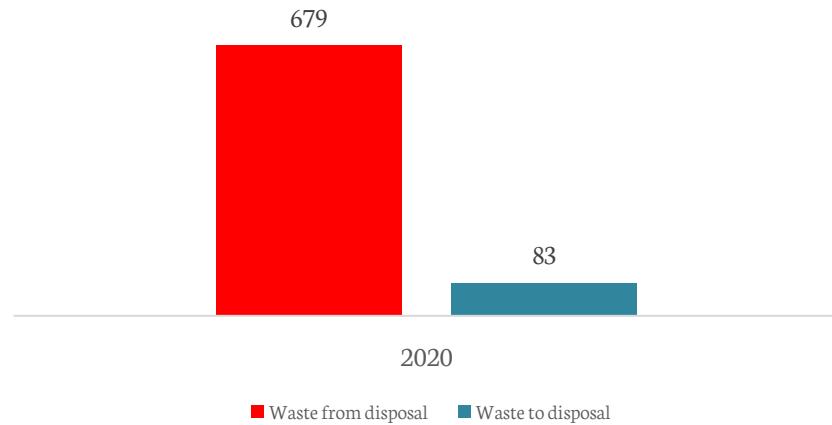
MGreen aims to replace the entry level cranksets that are currently on the market, these are all nailed (chainring and crank) and steel chainrings and aluminum cranks are used. At the end of the product's life cycle the components cannot be separated for recycling.

MGreen is a system in which it is possible to use steel chainrings and aluminum cranks and, at the end of the product's life cycle, separate both components for recycling.





Waste from and to disposal (ton)



Waste by type (ton)



89% of our waste is sent to recovery processes.



Transport



At Miranda, we are prioritizing shipments made mostly by land, which represents a much lower CO₂ emissions value, when compared with air shipments (as CO₂ emissions from air shipments are almost 100 times higher).

Since we are less than one day traveling from the center of Europe (for example Águeda - Frankfurt are only 20 hours distance by land), delivery times are not compromised by the shift of transportation method. As the route is also shorter and less susceptible to adversities, we can also improve the packaging namely shift to cardboard packaging, which ends up being a more sustainable solution.

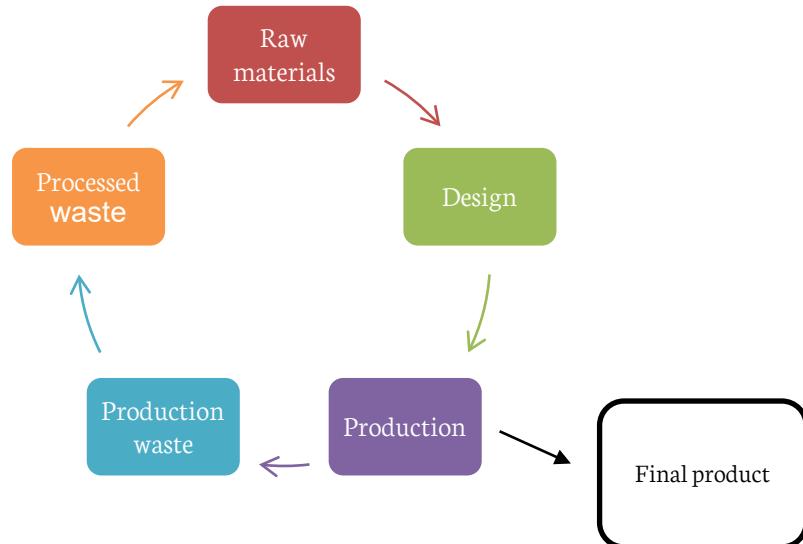
Circular Economy

Plastic Injection

Our approach to waste management promotes the principles of circular economy.

In our plastic injection process, all the waste generated is reused and inserted again into the production process.

Production process of plastic injection

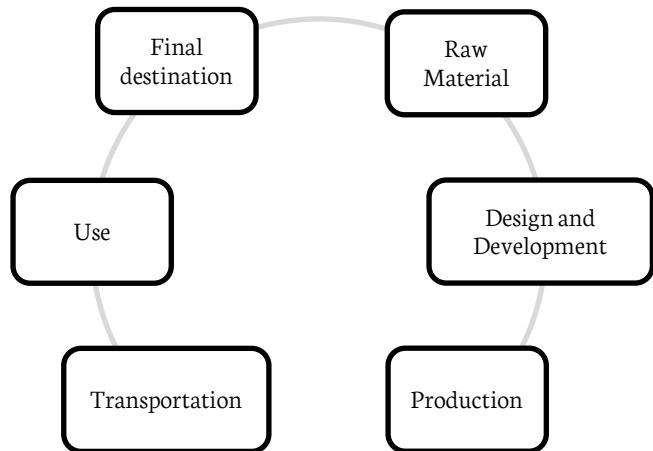


Aluminium process

In the case of our aluminum products, the process is identical to plastic injection, all our aluminum waste generated is sent to be recycled and incorporated into the aluminum.

All this waste is turned into aluminum, and, also, recycling aluminum consumes only 5% of the energy needed to produce the primary metal.

Product lifecycle analysis





People Engagement

- Our approach
- Team Miranda
- Talent Attraction and Retention
- People development
- Health and Well-being
- Community Support



Our approach

At Miranda, continuous people management and engagement, namely employees and local communities, is a vital part of how we think business must be conducted.

We seek to engage our employees in our management and development, ensuring a pleasant, safe and risk-free workplace.

Regarding local communities, we recognize their value and our responsibility to promote their well-being and development, therefore, we seek to continuously contribute to these purposes.





Team Miranda

At Miranda we look at our employees as one of the main pillars, responsible for our success. In a male dominated sector, we strive to promote gender equality, and the integration of the misrepresented gender, in this case, the feminine one.

25% of leadership positions are women.

100% of employees are covered by collective bargaining agreements.

Number of employees *

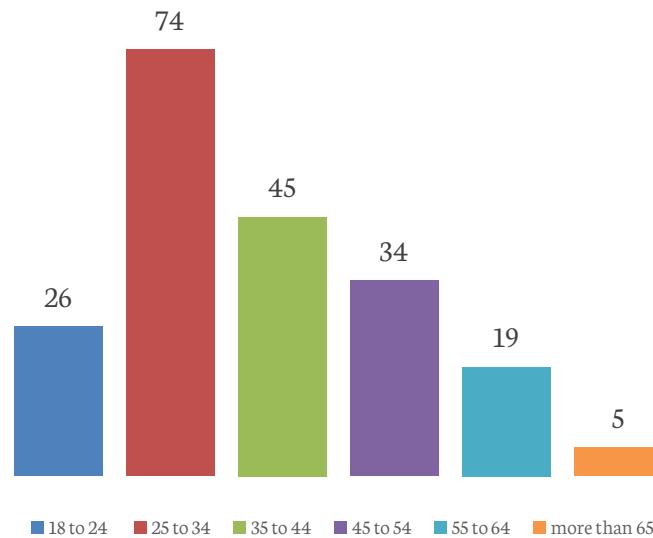


*

1. Data relating to number employees are taken from the annual report, therefore referring to October 31st of the respective years.
2. Of the 5 temporary workers with an active contract in 2018, 4 joined Miranda staff in 2019.



Employees by age group (2020)



Our workforce is composed by more than 50% of people with 35 or less years, which, considering the aging of population somehow reveals Miranda's capability to engage and attract young people.





Miranda has partnerships with several educational institutions and organizations (University of Aveiro, University of Coimbra, Higher Technology and Management School of Águeda, IEFP, Adolfo Portela High School, Marques Castilho High School).

Within the context of these partnerships, Miranda promotes regular internship programs, including curricular and professional ones.

Organization	Internship	Trainees nr.	Trainees who transferred to Miranda's staff
IEFP	Professional Internship	5	3

It is our policy that, most of the interns move to the company's staff after the internship.

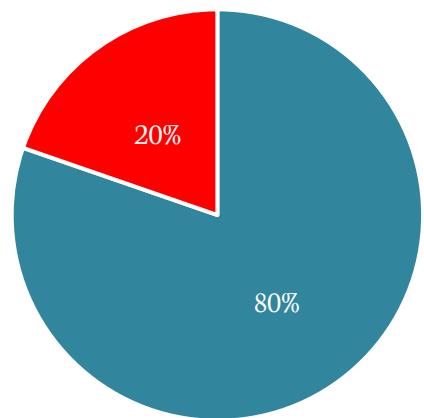
In 2020, the professional internships were maintained, but the curricular internships were suspended due to the pandemic context.

Talent attraction and retention

We work so that our employees enjoy their workplace and perform its tasks joyfully. As an attraction and retention strategy, we favor permanent contracts, to ensure employees' stability and security. All employees regardless of gender, are given same salary opportunities on the same tasks.

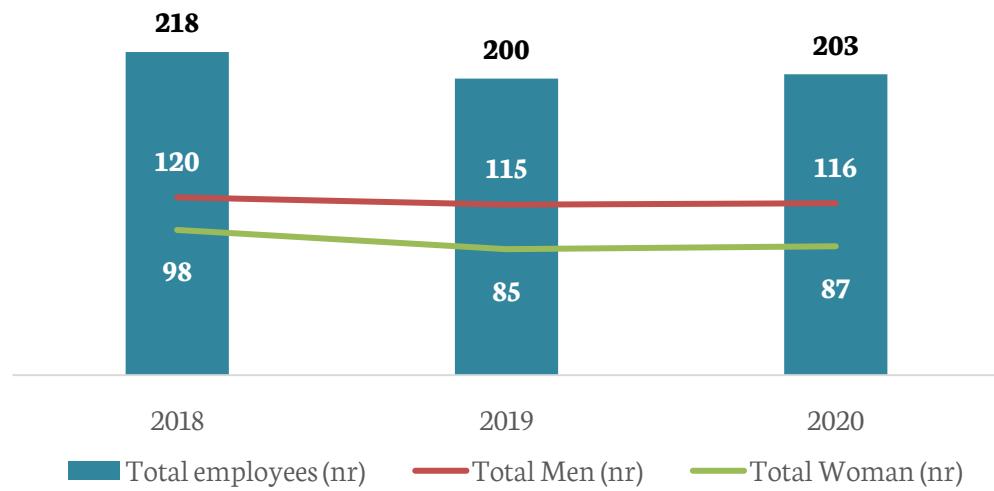
Also the minimum wage in 2020 for all fixed-term workers was at least 10% more than the established national minimum wage.

Employees by employment contract



- Employees under an open-ended contract
- Fixed-term employees

Miranda employees by gender



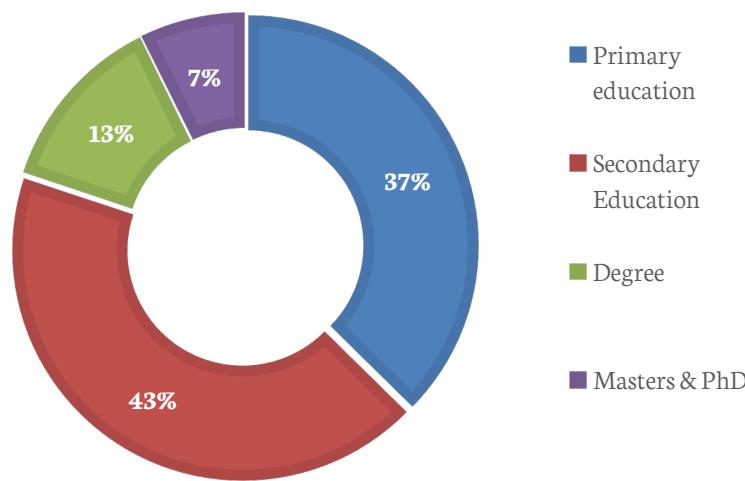
People development

Promote our employees' personal and professional development is a priority for us as we believe that their success as a significant impact on our success.

Academic qualifications

Currently, as shown below, the majority of our employees have at least finished the secondary education level.

Employees academic qualifications



Education and Training

In 2020, we provided to employees a total of 4229,5 hours of training, which represents an average of 20,8 hours of training per year, per employee.

In 2018, there was a more significant volume of training hours (25288,5) because there was a significant number of new employees admissions, which demands for more training, to effectively integrate them.

Health and Well-being

As we strongly believe that we are also responsible for our employees' well being, Miranda promotes several benefits:

- All our employees have a life insurance;
- All employees have access to medical services and preventive medicine at the company's facilities (curative medicine and free prescriptions).





Health and Safety

Miranda is concerned with the health of its employees, both from the point of view of personal protection and from the point of view of preventing health risks at work.

Regarding this last one, periodic examinations are carried out to verify some parameters of employee health. These exams are carried out by professionals and evaluated by the Occupational Doctor, who:

- Carries out general check-ups for each employee,
- Communicates the results of their exams and
- Promotes awareness campaigns for healthy lifestyles, which include healthy eating, encouragement to quit smoking and to practice sports.

Periodic examination

Within the measures to prevent and control the occupational hazards related to the work developed at Miranda, the following exams are preformed:

Visual screening

Performed to all the employees who perform demanding tasks and/or use screens for long hours of the work day (e.g.: people in support services and workers in the assembly of small components);

Cardiovascular diseases screening

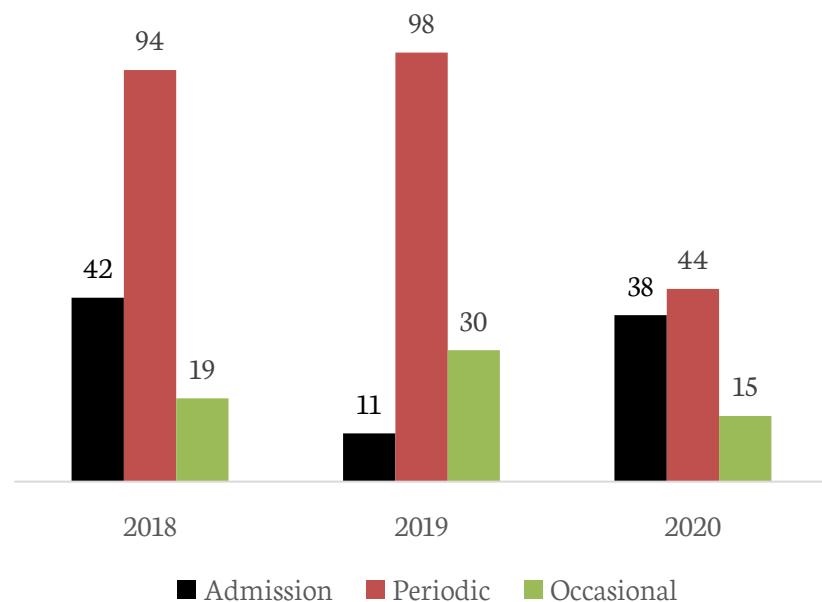
Performed to all the employees, to guarantee their health and as awareness for the importance of maintaining a healthy lifestyle;

Audio screening (audiogram)

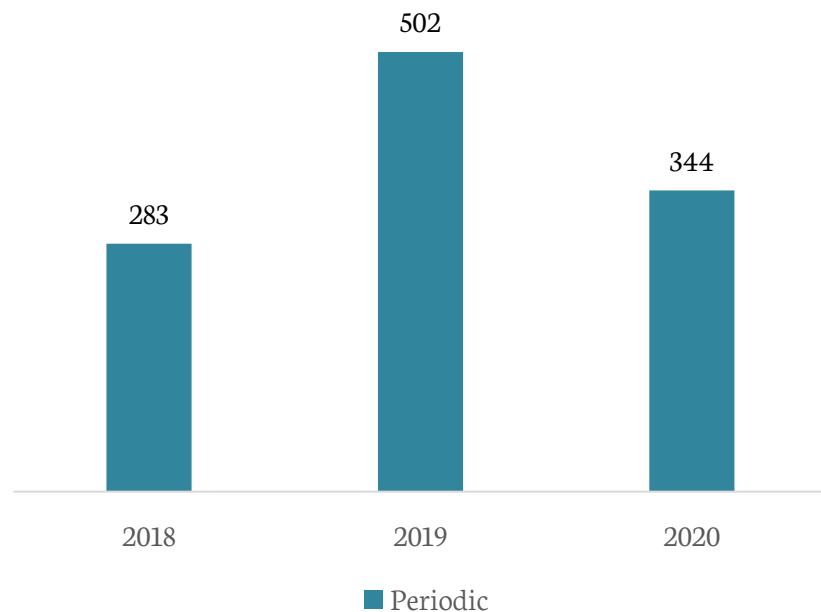
Noise is always present at the industry environment, so there is a risk of hearing loss associated with it. To guarantee the protection and monitoring of all the workers exposed to noise, an audiogram is performed to the employees who are exposed to this risk.



Doctor's appointments-
Occupational Medicine (nr)



Complementary medical exams-
Occupational Medicine (nr)





To ensure the effective management of health and safety within the company, we subcontract an Occupational Health and Safety service, which provides us support in the management of topics of Safety and Occupational Medicine.

Regarding employees safety, periodic assessments (typically annual) are carried out on workstations, risks and inherent dangers, as well as occupational noise.

Less often (every 3 to 5 years) assessments are carried out on illuminance (lighting conditions of workstations) and thermal comfort in factory environment.

Both types of assessment generate a report that is analyzed internally and, in consequence, deviating points are corrected, to always guarantee the best conditions for employees.

This process is based on the continuous improvement of working conditions, whereby the reassessment of workstations is carried out whenever there are significant changes. If there are no changes, the workstations will be re-evaluated at least every 3 years.

At least once a year, Miranda holds a "Employees Consultation and Hearing" meeting, when Top Management meets with all employees to discuss the following topics, among others: events since the last moment of consultation, relevant information about employees functions or work section and presentation of new planned projects.

At this meeting, employees are invited to share their opinions and provide feedback regarding working conditions (general, specific to their job, etc.), social conditions, suggestions for improvement, etc.. There is also "openness" for any employee to expose any problem they may have, which is analyzed directly by the Top Management, which will establish the most appropriate solution.

In addition, we promote a culture of open communication at Miranda, in which, at any time, an employee can communicate with their direct supervisors, representatives of Top Management or request a meeting directly with Senior Management, to present a situation or problem for which they need support or resolution.



In 2020 these meetings were not formally conducted (in a classroom context as it usually happens) due to the pandemic context.

Informal conversations with employees were reinforced, both by middle managers and elements of top management, to consult employees and ensure that, in a context of doubts, difficulties and even some anxiety, employees felt supported and listened to.

For this reason, for the year 2020 it is not possible to determine the number of consultation and hearing actions, only an estimate of the time allocated to the consultation of employees - which includes moments of training and information on the COVID-19 Contingency Plan.

Employees are also invited to give their opinion on the suitability of PPE to the tasks performed, and when there is a need to introduce new equipment, it is first tested by a small group of employees, and their experience is considered in the assessment of the suitability of the PPE to task.



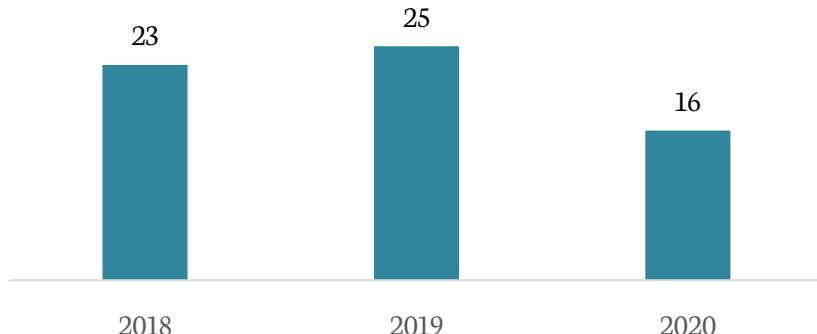


Health and Safety of our employees is one of our top priorities, therefore, as mentioned, we have several initiatives to ensure a safe and healthy workplace, free of accidents. We continuously analyse and implement improvement actions in order to understand the root causes of the accidents and to design proper improvements actions, that most effectively solve the problem.

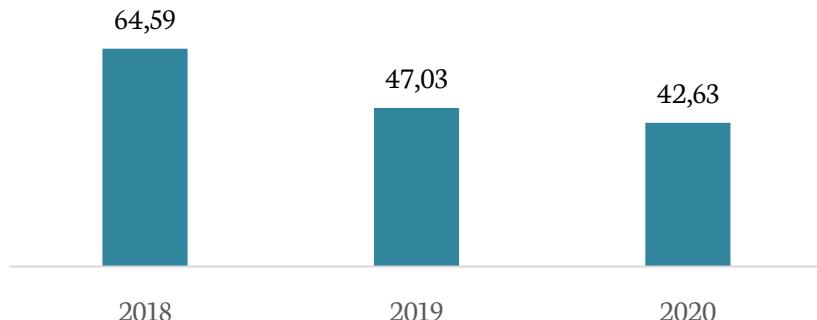
In the reported period, there was no record of deaths resulting from work-related accidents.



Work-related injuries (Nr.)



Work-related injuries rate*



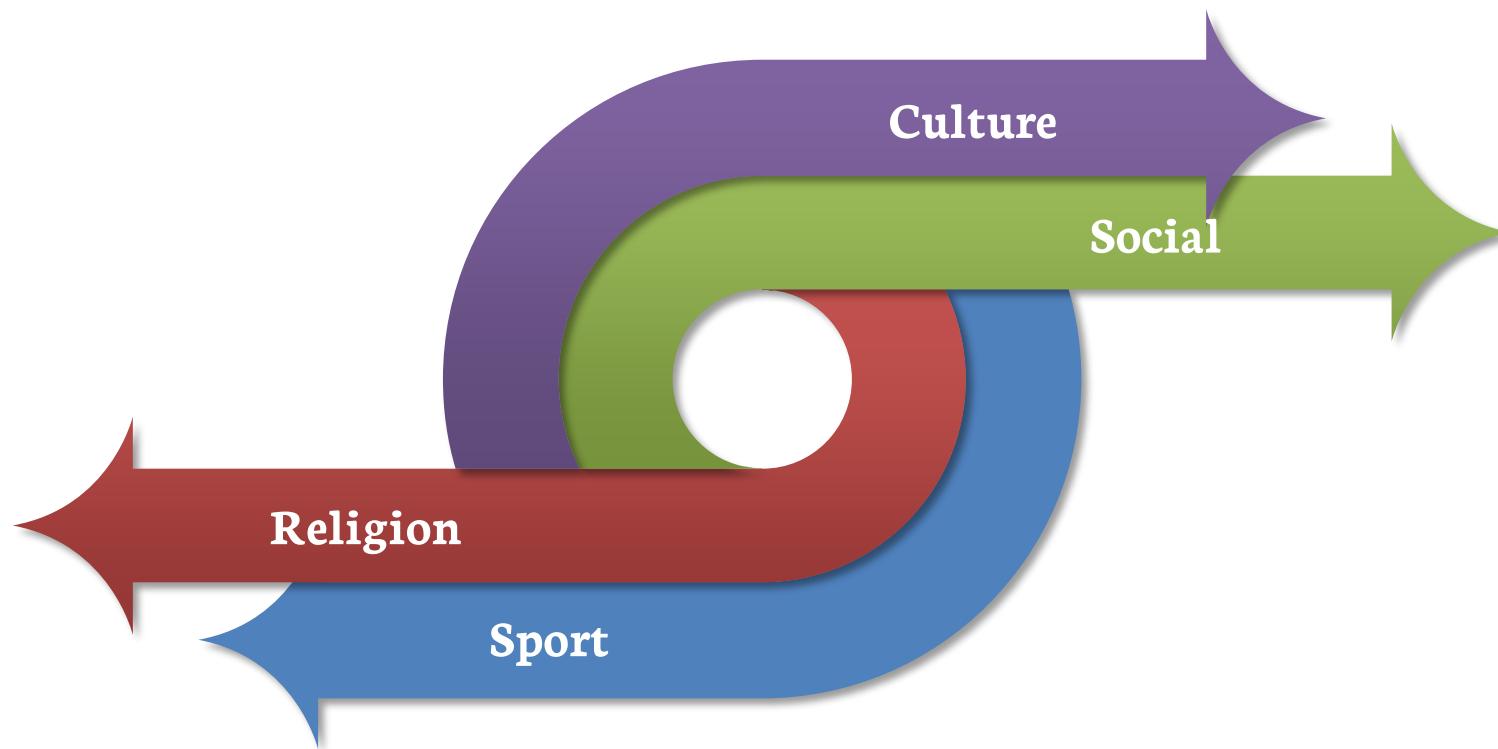
* Work-related injuries rate =

$$\frac{\text{Nr. of work-related injuries}}{\text{Nr. of hours worked}} \times 1000000$$



Community support - donations

At Miranda we believe that we have the responsibility to support the communities where we are based in, not only through the creation of jobs for those who are part of these communities, but also through support and donations to local associations in:





Community support - sponsorships

At Miranda we also sponsor several initiatives that happen locally.





Economic Development

- Our approach
- Direct Economic Value
- Sustainable Procurement



Our approach

At Miranda, economic development is key, in order for us to be able to continuously invest in improvements regarding our product innovation, our environmental impacts, the way we manage our people and we support our communities.

To ensure the prosperity of our company we regularly monitor several economic KPI and we also work closely with our suppliers, so that we ensure prosperity in the entire supply chain.

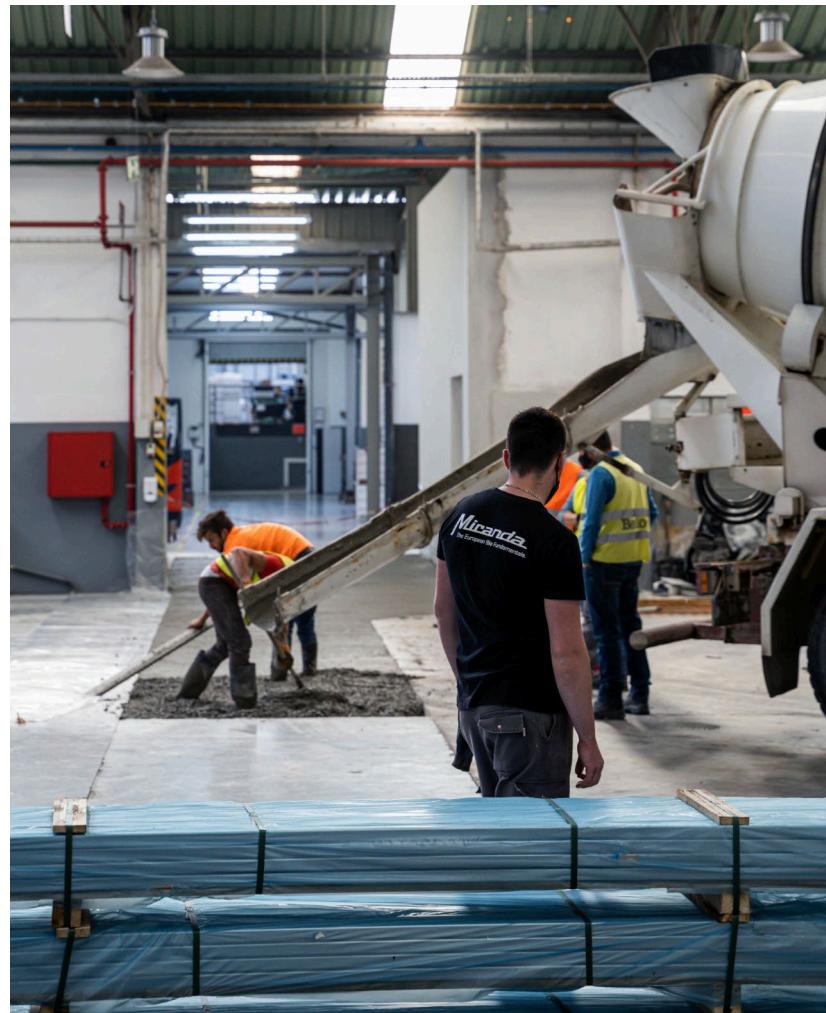


Direct Economic Value

Invoicing suffered an expected reduction due to the changes in the factory layout and with direct impact related to the COVID-19 pandemic, which caused a retraction in orders and disturbances in the fluidity of the production process.

The relocation of numerous production sections and delays in the delivery and commissioning of some important equipment acquired was mainly felt from the 2nd trimester and had a negative impact on activity and results.

However, by the end of the year, Miranda had stabilized its production lines and significantly recovered its orders, as an indirect result of the evolution of the pandemic and the growing awareness of environmental impacts, which are driving demand for bicycles, both traditional and electrical, at unprecedented levels.



Sustainable procurement

At Miranda, we promote a business partnership relation when working with our suppliers, so that they feel allies in the processes and objectives that are set.

Our suppliers are regularly assessed considering the following criteria:

- Delivery deadlines
- Quality
- Claims
- Quality and Environmental Management Systems (SGQA): In accordance with ISO 9001 (Quality) and ISO 14001 (Environment).

Environmental criteria has a weight of 15% in the global evaluation.

The regular monitoring of these aspects, enables Miranda to have a regular global perspective about trends and evolution regarding suppliers' performance.

Number of transports that were contracted by us



204



33



1487

FSC certification

In 2022, we intend to include FSC certification as requirement to our suppliers, so that we ensure that everyone that works with us follows the rules and guidelines established by FSC.



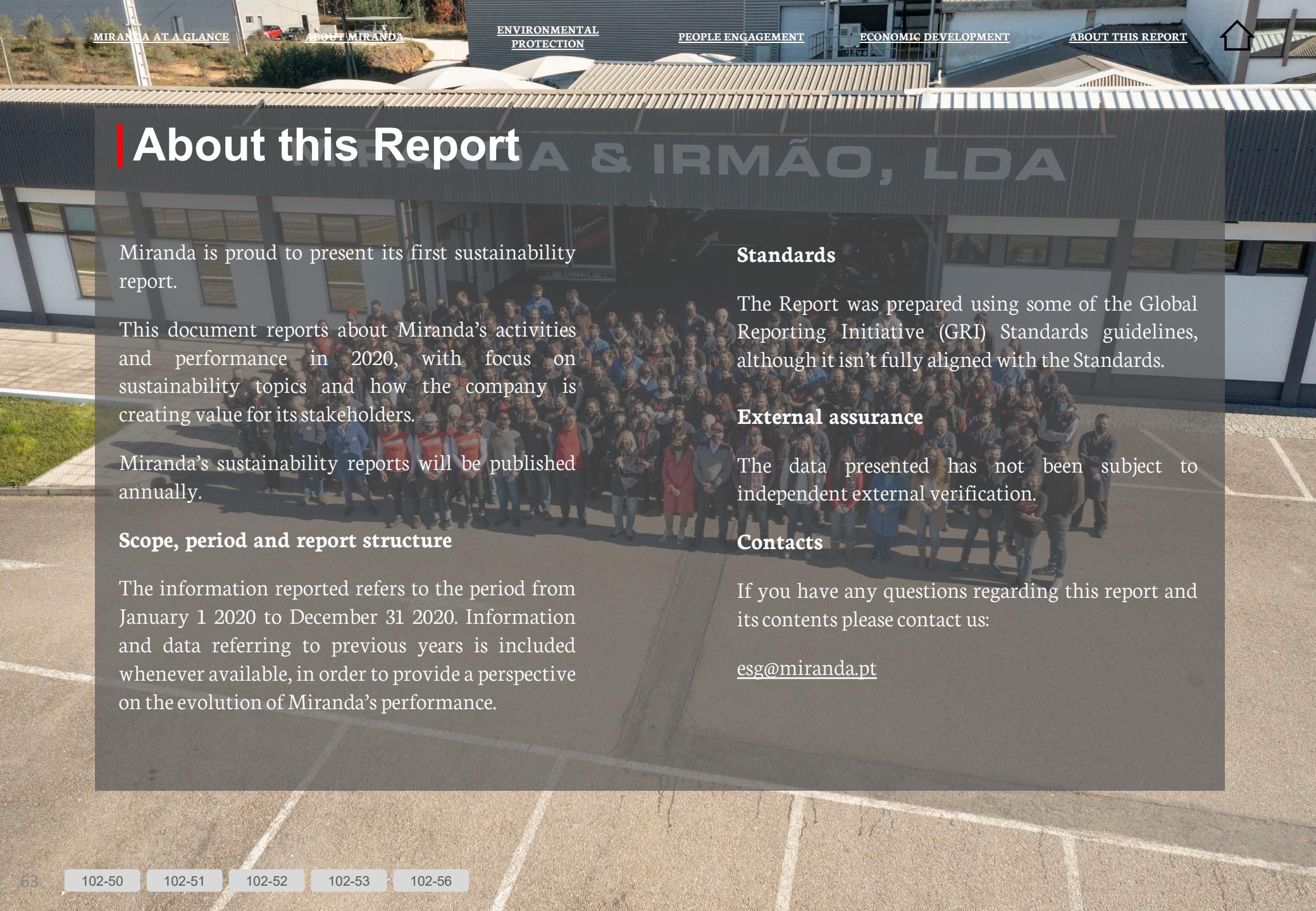
About this Report

- About this Report
- Methodological Notes



About this Report

MIRANDA & IRMÃO, LDA



Miranda is proud to present its first sustainability report.

This document reports about Miranda's activities and performance in 2020, with focus on sustainability topics and how the company is creating value for its stakeholders.

Miranda's sustainability reports will be published annually.

Scope, period and report structure

The information reported refers to the period from January 1 2020 to December 31 2020. Information and data referring to previous years is included whenever available, in order to provide a perspective on the evolution of Miranda's performance.

Standards

The Report was prepared using some of the Global Reporting Initiative (GRI) Standards guidelines, although it isn't fully aligned with the Standards.

External assurance

The data presented has not been subject to independent external verification.

Contacts

If you have any questions regarding this report and its contents please contact us:

esg@miranda.pt



Methodological Notes

Energy

Conversion factors use to calculate the value of energy consumption are presented in the table bellow:

Conversion Factor	2018	2019	2020	Units
Electricity	0,0036	0,0036	0,0036	kWh -> GJ
Diesel - PCI	42,6	42,6	42,6	MJ/kg
Diesel - Density	0,84	0,84	0,84	t/m ³
Fuel - PCI	44	44	44	MJ/kg
Fuel - Density	0,746	0,746	0,746	t/m ³
Gas	46	46	46	MJ/Nm ³

Emissions

The CO₂ emissions values associated with Miranda energy consumption, reported in this report, were calculated based on the values of energy consumption reported, as well as the conversion and emission factors referred to in the following table:

Emission factors - Scope 2	2018	2019	2020	Units
Electricity supplied to Miranda	205.16	205.16	205.16	gCO ₂ /kWh
Location-based	275	213	162	gCO ₂ /kWh
Emission factors - Scope 1	2018	2019	2020	Units
Gas (EF)	63.1	63.1	63.1	kg CO ₂ /GJ
	0.0009	0.0009	0.0009	kg CH ₄ /GJ
	0.0040	0.0040	0.0040	kg N ₂ O/GJ
Diesel (EF)	74.5	74.5	74.5	kg CO ₂ /GJ
	0.0007	0.0007	0.0007	kg CH ₄ /GJ
	0.0004	0.0004	0.0004	kg N ₂ O/GJ
Fuel (EF)	72.4	72.4	72.4	kg CO ₂ /GJ
	0.010	0.010	0.010	kg CH ₄ /GJ
	0.0006	0.0006	0.0006	kg N ₂ O/GJ
	2018	2019	2020	Unidades
Gas (Oxidation factor)	0.995	0.995	0.995	-
Diesel (Oxidation factor)	1.000	1.000	1.000	-
Fuel (Oxidation factor)	1.000	1.000	1.000	-
GWP CO ₂ (Global warming potential for 100 years)	1	1	1	-
GWP CH ₄ (Global warming potential for 100 years)	25	25	25	-
GWP N ₂ O (Global warming potential for 100 years)	298	298	298	-

Micanda
The European Bike Fundamentals.

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Thank
you