



Innovative glass  
for a better world



# Arc 2023 Sustainability Report

# Dear partners



It is my pleasure to present our new 2023 Sustainability Report.

This year has proved to be a period of significant macroeconomic challenges, characterized by high energy prices, worrying inflation resulting in a decline in overall consumption, and an uncertain geopolitical landscape.

Amid this complex environment, our Group has demonstrated its resilience and commitment to sustainability by pursuing its sustainable development strategy and initiatives.

Over the past two decades, our participation in the United Nations Global Compact has strengthened our commitment to the fundamental principles of human rights, labor, the environment and the fight against corruption. These values continue to guide our actions and define our approach to sustainability. You can find our declaration of continued support for the Global Compact [here](#).

The signature of an ecological transition agreement in 2023 with the French government is a practical expression of our active contribution to the fight against climate change. The recent flooding at our French site reminds us of the imperative need to take immediate, concrete steps to mitigate our impact on the environment and adapt to new circumstances.

We are also continuing to consolidate our low-carbon roadmap and pursue our commitment to sustainable development via the practical initiatives and actions that you can read about in this report.

We are proud of the progress we've made, but we are also aware of the challenges that remain. Through our vision of "Innovative glass for a better world," we aim to inspire change and shape a world in which tableware and sustainability go hand in hand.

Happy reading!

**Nicholas Hodler**  
Chair & CEO.







# Group Corporate background

## HISTORY

World leader in tableware, the Arc Group creates everyday innovative and sustainable glass solutions to enjoy eating, drinking and home experiences

Through its Luminarc®, Arcoroc®, Cristal d'Arques® Paris and Chef&Sommelier® brands, Arc is aimed at both individuals and professionals.

The Group is present in many markets, including mass retail, hotels, restaurants, bars and cafes, wine merchants, and collective catering (schools, hospitals, retirement homes, and company canteens). It also provides tailor-made solutions for manufacturers and promotional items.

With production sites in France (Arc France - AF), the United States (Arc Americas - ANA), China (Arc Glassware China - AGC) and the United Arab Emirates (Arc Middle East - AME), the Group produces more than 4 million items every day. Arc employs more than 6,700 people worldwide, including 4,000 in France, and generated sales of €736 million in 2023.

## 3 DISTRIBUTION CHAINS

to cover all sectors

### Consumer Goods - 41% of total sales

Tableware for the general public.

Main brands: Luminarc®, Arcoroc®, Cristal d'Arques® Paris, private labels.

### Food Service - 27% of total sales

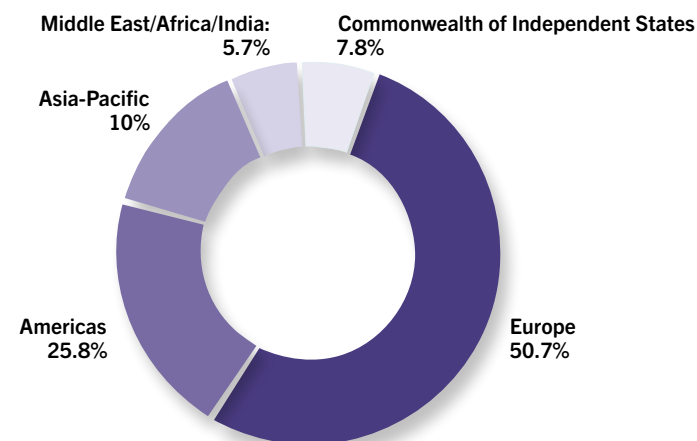
Tableware for hotel, restaurant and catering professionals.

Main brands: Arcoroc®, Chef&Sommelier®.

### Arc Customised Glass - 32% of total sales

Tailor-made solutions for professionals in industry, advertising, incentives and loyalty.

## SALES BY REGION:







## KEY FIGURES



**6,700**

PERMANENT  
EMPLOYEES



OVER **4M**

ITEMS PRODUCED  
EVERY DAY

**4**

PRODUCTION  
SITES



**€736M**

OF SALES  
IN 2023



**€54M**

OF INVESTMENTS  
IN 2023



**4**

BRANDS



**3**

DISTRIBUTION CHANNELS  
Consumer Goods  
Food Service  
Arc Customised Glass

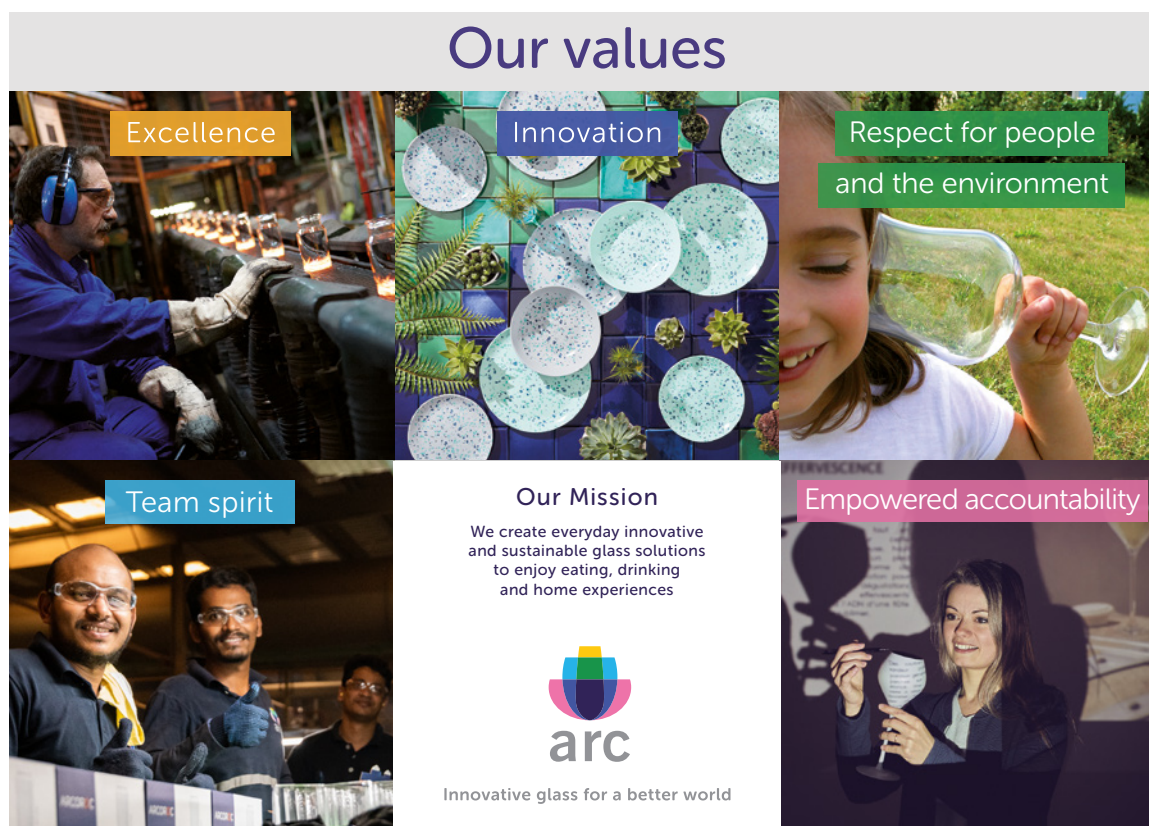




## Values and Vision

Our vision for the future “Innovative glass for a better world”, first introduced in 2021, gives meaning to the daily commitment of Arc’s 6,700 employees, whatever their role and position in the company. We also share common values: Excellence, Innovation, Respect for people and the environment, Team spirit and Empowered accountability.

These values unite and guide each of us in our work with a common state of mind.



The Group's strategy is based on 4 priorities:

These 4 strategic priorities form the basis of our day-to-day work. They guide us and bring meaning to our daily mission. Everyone contributes to the success of the company.

We also develop solutions that actively contribute to the transition to a new circular economy model.

Our innovative, long-lasting glass containers, which represent an excellent alternative to single use, illustrate our commitment to helping to build a more sustainable world.

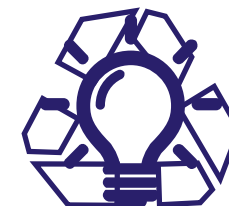


**Be safe**



**Deliver operational  
performance  
and profit**

**Empower  
our People**



**Innovate  
sustainably**





## MANAGEMENT SYSTEM

Together, the vision, mission, values and strategic priorities form the governance of our arcWAY integrated management system.



ArcWAY defines and implements practices and standards across all

Group entities to improve our overall performance and deliver satisfaction to our customers, partners and employees. It is based on guidelines covering each of the key processes, and on standards or practices that address local requirements or specific characteristics. We define our policies and standards in terms of safety, quality, the environment and corporate social responsibility, along with other considerations. These elements are drawn from our lessons learned, benchmarks, and ISO and other standards.

ArcWAY forms part of a strategy of continuous improvement and involvement of all stakeholders, whether in quality, performance management, CSR or safety, enabling every manager and employee to play an active role in his or her own safety and that of others.

Last but not least, arcWAY is implemented by sharing our expertise, lessons learned and best practices between entities, and also between employees as part of the skills transfer process.

## ETHICS

Integrity, reliability and accountability are central to what we do, and embody the core values of the Arc Group.

This commitment is reflected in a growing culture of ethics, compliance and responsible purchasing, and in the initiatives that result from them.

As part of our management system, we are committed to regularly reviewing our policies in order to adapt them to regulatory and/or societal developments and to continue promoting an ethical culture within the Arc Group.

The Code of Ethics is a key element in the management of Arc's activities, internally and in commercial relations, and both upstream and downstream of Arc's value chain.

It is the core element of our strategic compliance and ethics framework, and a key component of the arcWAY Management System. The Code of Ethics applies to all Group subsidiaries worldwide. It describes the behavior expected internally from all Arc teams, and also from our external stakeholders, to comply with legal obligations and prevent any non-compliant practices that may potentially have a negative impact on Arc's business, results and reputation.



The Code of Ethics covers the following aspects:



**Respect for people:**  
in terms of health, safety at work,  
preventing harassment



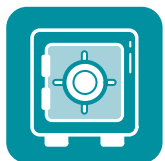
**Equal opportunities**  
in employment and  
non-discrimination



**Respect**  
for the law



**Respecting**  
the environment



**Protecting**  
our company  
and our assets



**Respect for confidentiality**  
of information and  
intellectual property



**Anti-corruption**  
and respect for  
anti-trust laws

Updated, published and easily accessible procedures provide details of the contents of the Code of Ethics.

For example, the whistleblowing procedure specifies how it is to be managed, from an examination of its purpose through the investigation process leading to the implementation of corrective measures or potential disciplinary sanctions.

A specific email address has been set up for reporting breaches of the Code of Ethics ([ethics@arc-intl.com](mailto:ethics@arc-intl.com)).

Strict confidentiality of the identities of the whistleblower and the individuals named in the alert is guaranteed. Internal Control teams monitor forwarded alerts on a monthly basis.

There are regular communication initiatives to publicize the Code of Ethics and related procedures. A Code of Ethics training program has been in place since 2018 for all Group employees with access to the Arc University internal digital training platform.

All new employees joining the company are informed of the existence of this Code, and must sign a document certifying that they have read it. The Code is available on the Group intranet at all times.





## SUPPORT

### Global Compact

Launched in July 2000, the Global Compact is the starting point for all organizations that support and contribute to the achievement of the United Nations' 17 Sustainable Development Goals. It is the world's largest initiative for voluntary commitment to sustainable development.

Arc was one of the first 100 French companies to join the United Nations Global Compact in 2003.

We are particularly involved in the Global Compact France network, which enables us to exchange views with our French peers on a wide range of issues, from diversity and inclusion to reducing our greenhouse gas emissions.

Today, the France network represents over 1,800 companies of all sizes, creating peer-to-peer communities for discussions on specific topics, and providing a very practical approach to the implementation of a CSR policy and the ten principles of the Global Compact.



## EVALUATION

### by SMETA-4P

The SEDEX network, of which Arc is a member, is recognized worldwide. It hosts the world's largest collaborative platform for promoting and strengthening responsible supply chains.

It is used by over 85,000 members to audit their performance in terms of labor rights, health and safety, environmental protection and business ethics.

Every two years, Arc Group subsidiaries carry out a SMETA-4P (Sedex Members Ethical Trade Audit) on social, safety, ethical and environmental criteria.

These audits provide input for our research and action plans, enabling us to make progress on the various criteria that are fully in line with Arc's values.



## Our contribution to the SDGs

The 17 Sustainable Development Goals (SDGs or Agenda 2030) adopted in September 2015 by 193 countries at the United Nations, following on from the Millennium Development Goals (MDGs), constitute an action plan for peace, humanity, the planet and prosperity, calling for the implementation of multi-stakeholder partnerships.

Amid an uncertain worldwide landscape, and with only seven years left to achieve the SDGs, we need to clarify our impacts and ambitions as we seek to re-establish our core focus on the sustainability adventure, while accelerating and intensifying progress towards global goals.



## Sustainable Development Goals correspondence table

	We improve the efficiency of resource use in terms of consumption and production.	27-39, 52-54, 62-63, 65, 74-75
	We are modernizing our infrastructure and adapting our industry to make it sustainable.	30-34, 52-55, 63-65, 74-75
	We are improving our energy efficiency.	27-28, 30-32, 54, 62- 64, 74
	We are striving to introduce sustainable management of our consumption and production, focusing on how our supply chain works, involving our suppliers, customers and employees.	28-39, 52-55, 65, 74-75
	We are careful to preserve water resources, minimize the use of chemicals and invest in the recovery, treatment and reuse of wastewater.	33-34, 65, 74-75
	We train our employees and pass on our know-how.	41-43, 56, 66-69, 76
	We promote partnerships.	38-39, 44-47, 52, 57, 69, 76
	We improve resilience and adaptability in the face of climatic hazards and natural disasters.	40
	We promote gender equality and empower women at all levels.	44-45, 68

# Group Sustainable Development



## Message from the CSR Director

Our world is moving from crisis to crisis, and we cannot remain indifferent. Our frailties and dependencies are being increasingly exposed. The consequences of climate change, which we once considered distant in terms of both time and space, are now being felt, directly and in full, here where we live. The collapse of biodiversity is threatening the

food we eat and the health we enjoy. Inequalities – all too often concealed from us in the past, but exposed by the pandemic of a few years ago – are on the rise.

Our environment is increasingly uncertain and complex. It is challenging to run a company according to the rules we've devised, which have made it so successful. A change of direction seems essential. But we can't ignore economic facts. A transformation, no matter how desirable, cannot be sustainable if the organization is not able to support it. A company that fails to transform runs the risk of being disrupted from one crisis to the next.

The transitions announced by governments and companies give us hope and a glimpse of a sustainable future. These are often based on technological drivers, some of which are still immature, but give rise to a great deal of hope. France's much-needed ecological planning exercise has prompted us, along with the major industrial companies that emit the most greenhouse gasses, to describe our decarbonization approach in detail.

This relies heavily on the electrification of our energy uses, and through the development of low-carbon melting technologies in particular.

While technical change in our production methods is centrally important in our transition, it cannot be seen as a single, all-sufficient solution.

- It must not overshadow the intrinsic characteristics of our products, which are designed to last and be reused many times on our tables. It would never occur to anyone to dispose of them after each use: reuse is a key part of the company's DNA.
- It must not overshadow the cultural change that is an indispensable precursor to the advent of a desirable future. We have developed training and awareness-raising programs for our employees, to ensure our collective commitment to making this change.
- It must not overshadow other necessary social and environmental transitions.

Our customers, employees, investors and all our stakeholders expect us to be increasingly transparent and committed. In this sustainability report, we highlight our progress, our successes and our difficulties, while emphasizing the urgent need to engage in collective transformation.

We hope you find it informative and inspiring.

**François Merriaux**

CSR Director



At Arc, we are committed to transforming our business every day. Our sustainable development strategy is based on four key principles, integrated into the Group's arcWAY management system and based on compliance with applicable regulations, integrity and responsibility in everything we do.

Involving our stakeholders in our sustainability roadmap is, in Arc's view, a key factor in ensuring our success. There are many issues at stake, and it is vitally important to prioritize and share them.

As was the case for our French entity, we will be working with each subsidiary to conduct a materiality analysis – a pragmatic and structured approach that will enable us to better understand the sustainable development expectations of all our stakeholders.

All subsidiaries share a common vision. This vision is part of a system and tools for continuous improvement. It is deployed in each entity, according to its specific characteristics, and relies on all the Group's teams, who enrich it and work to define multi-year objectives in order to make progress on the most important sustainability issues.

Following on from 2022, 2023 saw the continued roll-out of this vision with:

- The expansion of our online training program dedicated to sustainable development on our Arc University platform. 3 new modules have been developed and made available to raise awareness among Arc Group employees.
- The creation of an internal newsletter to facilitate the sharing of best practices between all Group entities.
- The development of a decarbonization roadmap within Arc France.
- Regular public communications introducing our real-world sustainable development initiatives and the training of "Responsible" Ambassadors whose role is to prevent the publication of any material that could be considered "greenwashing".

[Our regular reports](#)





Initiating a circular economy model by promoting the reuse of materials and recycling throughout the company's value chain.

By producing Arc collections in the closest proximity to our markets, we can minimize logistics flows, particularly by sea. That's what we are focusing on, thanks to our four production sites around the world.

Because of the natural benefits it provides, glass is a perfect alternative to single-use products in response to environmental challenges. We support and encourage projects with a focus on reuse. We are also committed to working with local political, economic and academic players to devise sustainable responses to societal and environmental challenges.

We are working to integrate the impact of our products throughout their value chain, including end-of-life disposal. To this end, we are helping to set up collection mechanisms for glassware and crockery from the tableware sector, and are industrializing the incorporation of recycled glass into our factories' production processes.



[Our CSR commitments](#)

Reducing our environmental footprint by addressing our energy and water consumption and decarbonizing our production processes.

We strive to take into account the environmental impact of our products (over their entire life cycle) in our decisions, projects and activities.

In 2023, €4 million of investment was earmarked for the development of new melting technologies, the modernization of more energy-efficient heat exchange facilities, and the treatment of fumes leaving the plant.

We incorporate the relevant eco-design drivers into the development processes for our glass products and packaging. By 2030, we will have reduced our CO2 emissions at the Arc France site by more than a third, and our water consumption by 40% compared with 2019.

At each of our sites, we are committed to a process of continuous improvement and ensuring the sustainability of our practices as part of our integrated management system. Energy is one of our major challenges, and two of our sites have ISO 50001 certification for their energy management systems.

We have implemented a comparable approach to managing our water consumption by measuring and reducing our water withdrawals and drinking water consumption through action plans.



## Building a safe and inclusive working environment at all levels

Ensuring the health and safety of our employees, visitors and contractors is a priority for the Arc Group.

All our subsidiaries are voluntarily committed to preventing and controlling the risks generated by their activities, and to continuous improvement in order to make everyone's jobs, equipment and facilities safer.

Taking technical, managerial, organizational and behavioral aspects into account, we strive to deploy prevention and awareness action plans. In this way, we develop a shared perception of risk. We contribute to strengthening our safety culture based on the commitment, exemplary attitudes and individual and collective accountability shown by managers and all employees.

Drawing on the talent of its teams, the Arc Group invests in training employees throughout their careers, passing on its know-how through work-study programs.

We are convinced that diversity is a source of value for all, and thus encourage all employees to participate and contribute, knowing that they will be respected, heard and recognized.

## Contributing to the development of ecosystems

Our nearly 200-year history reflects our strong local roots. Our significant presence as an employer and the large scale of our facilities enable us to contribute to the vitality of the regions in which we operate.

We are also committed to working with local subcontractors in order to preserve the local economic fabric and encourage local purchases.

We invest in local communities by developing partnerships wherever we operate, and by engaging in constructive dialogue with our local stakeholders.







Background

Circular Economy

Teams

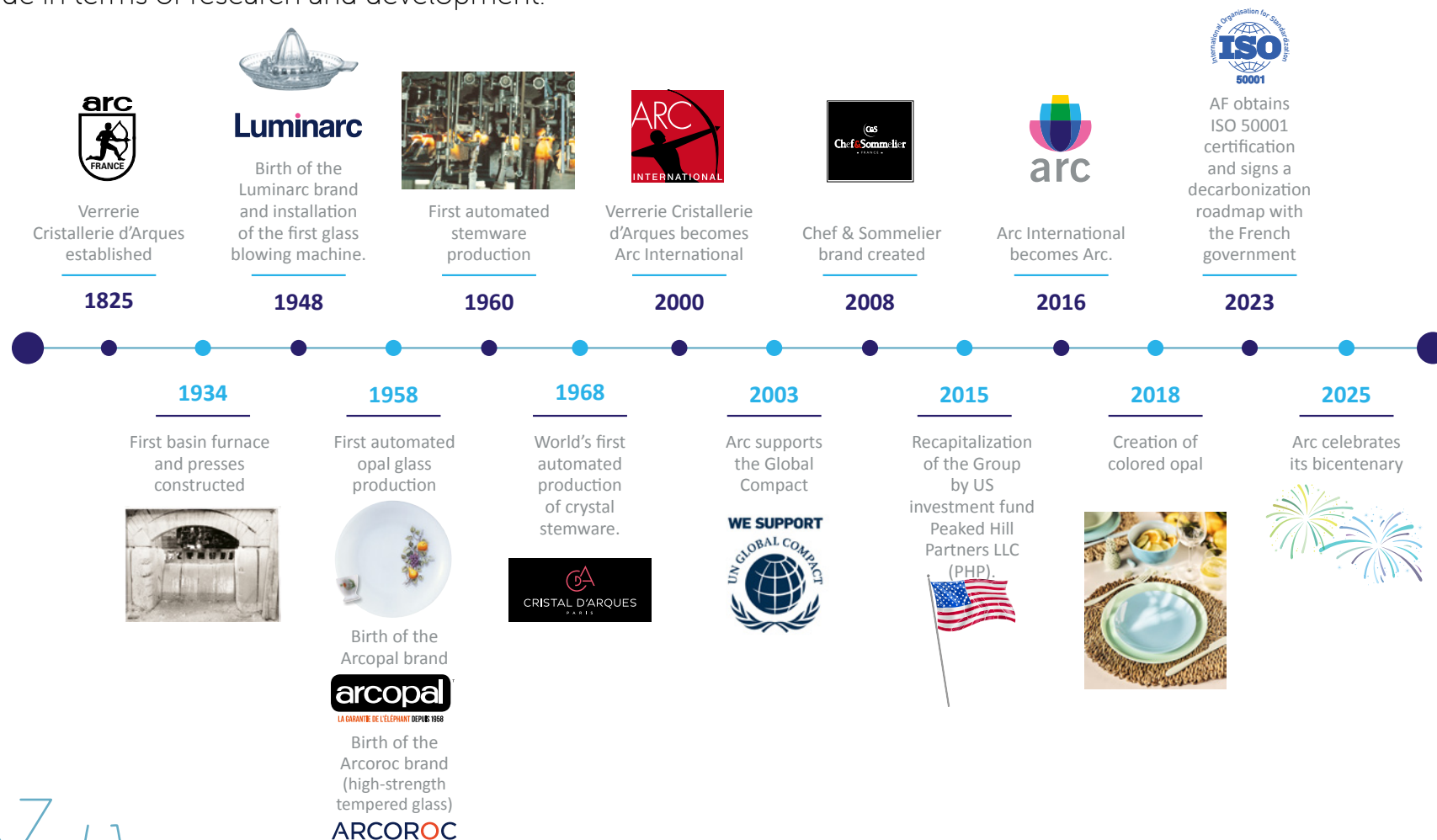


# Arc France Background

## HISTORY

Arc France is the group's historic headquarters.

Based in Arques, the site employs 4,000 people and has 8 furnaces, with a glass production capacity of 220,000 tonnes per year. Arc France's history is closely linked to the Group's own history: the French site is where strategic decisions are made in terms of research and development.





## KEY FIGURES



**4,000**

PERMANENT  
EMPLOYEES



**1.7M**

ITEMS PRODUCED  
EVERY DAY

**8**

FURNACES



AFNOR Cert. 85184



**€422M**

OF SALES  
IN 2023



BRANDS



DISTRIBUTION CHANNELS  
Consumer Goods  
Food Service  
Arc Customised Glass



Arc France's Executive Committee is responsible for performance in relation to the objectives of the Sustainable Development strategy.

Each year, the Committee reviews and challenges Arc France's sustainable development strategy and its progress on all its components. It validates the targets and objectives, along with the associated commitments. Progress and bottlenecks are discussed, and decisions are made on the resources to be allocated. Key among the topics discussed in 2023 was the decarbonization roadmap.

As part of our Integrated Management System, a Sustainable Development Committee is formed from representatives of all relevant departments and processes.

This committee is chaired on at least a quarterly basis by the Sustainable Development department, in order to:

- Share information on our impact (positive and negative) and benchmark ourselves against other companies in the same professional sector or geographical area.
- Share progress and milestones in the CSR roadmap.
- Identify actions to be taken as part of our CSR strategy.



This committee proposes objectives and trajectories for each roadmap, discusses projects and initiatives (either already under way or to be implemented later) which feed into the roadmaps and enable the identified objectives to be achieved, and ensures that these issues are included in the Sustainable Development strategy.

The participants' diversity of functions and skills enables them to share experiences on the issues that fall within the company's corporate social responsibility remit.

Finally, in addition to this committee, and where deemed necessary by the participants, specific programs are implemented within the organization to closely monitor key issues such as the decarbonization roadmap, the eco-design of our packaging and our investment in reuse as a response to single-use approaches.

Arc France's dedicated Sustainable Development team works in coordination with the participants to respond to specific requests from customers, employees, suppliers or investors.

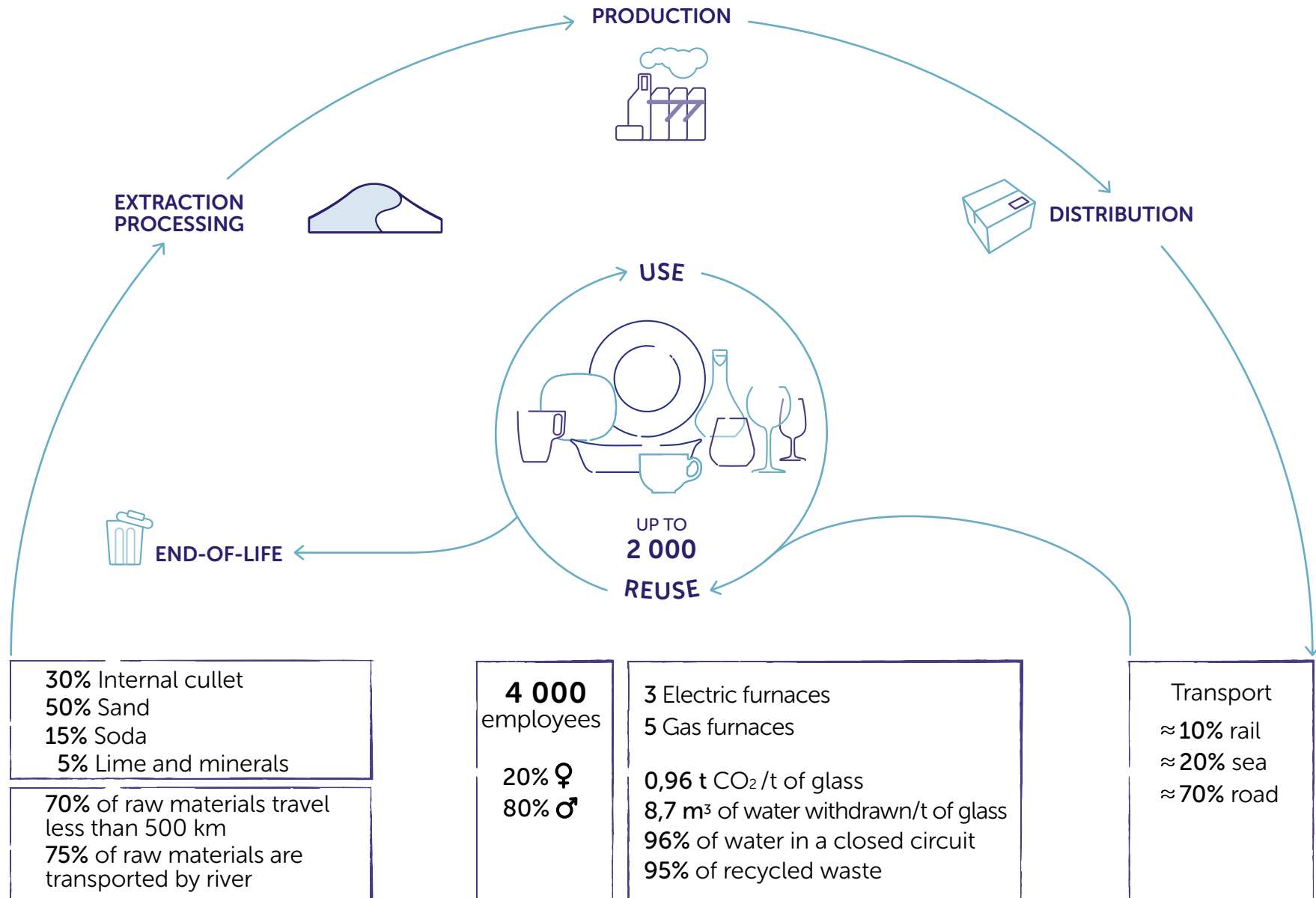
To assess the maturity of its CSR management system, Arc France uses an annual Ecovadis assessment.

Ecovadis is a collaborative platform that has set up a world-renowned CSR certification used in 160 countries by 65,000 companies. This certification is a central element of Arc France's CSR commitment.

Following its silver medal in May 2022 with a score of 56/100, Arc France – despite an improvement in its score (58/100) – was awarded the Ecovadis bronze medal in May 2023 for its Corporate Social Responsibility (CSR) actions in the following areas: Environment, Human Resources, Ethics and Sustainable Purchasing.



OUR VALUE CHAIN





As part of its CSR strategy, Arc has previously produced internal materiality matrices for its Arc France and Arc Americas entities.

This year, Arc France has updated its 2020 materiality matrix, giving a voice to its stakeholders in order to make it more “robust”. This exercise enabled our entity to assess the level of priority of CSR and sustainable development issues by consulting its stakeholders (Y axis) and internal experts (X axis).

With this update, Arc France has been able to verify the alignment of its CSR strategy for its current and future projects with the issues perceived as important by its stakeholders and internal experts.

Arc France accounts for more than 50% of production sold by the Group. Its materiality matrix is therefore very significant for the Arc Group from a strategic point of view, but it cannot be extrapolated to other entities due to their different situations.

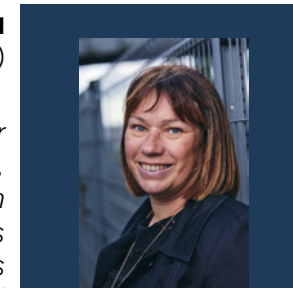
If you wish to learn more about the Arc France materiality matrix, you can find it at this [link](#).



**Marc Ourdouillie**  
(Sales Manager)

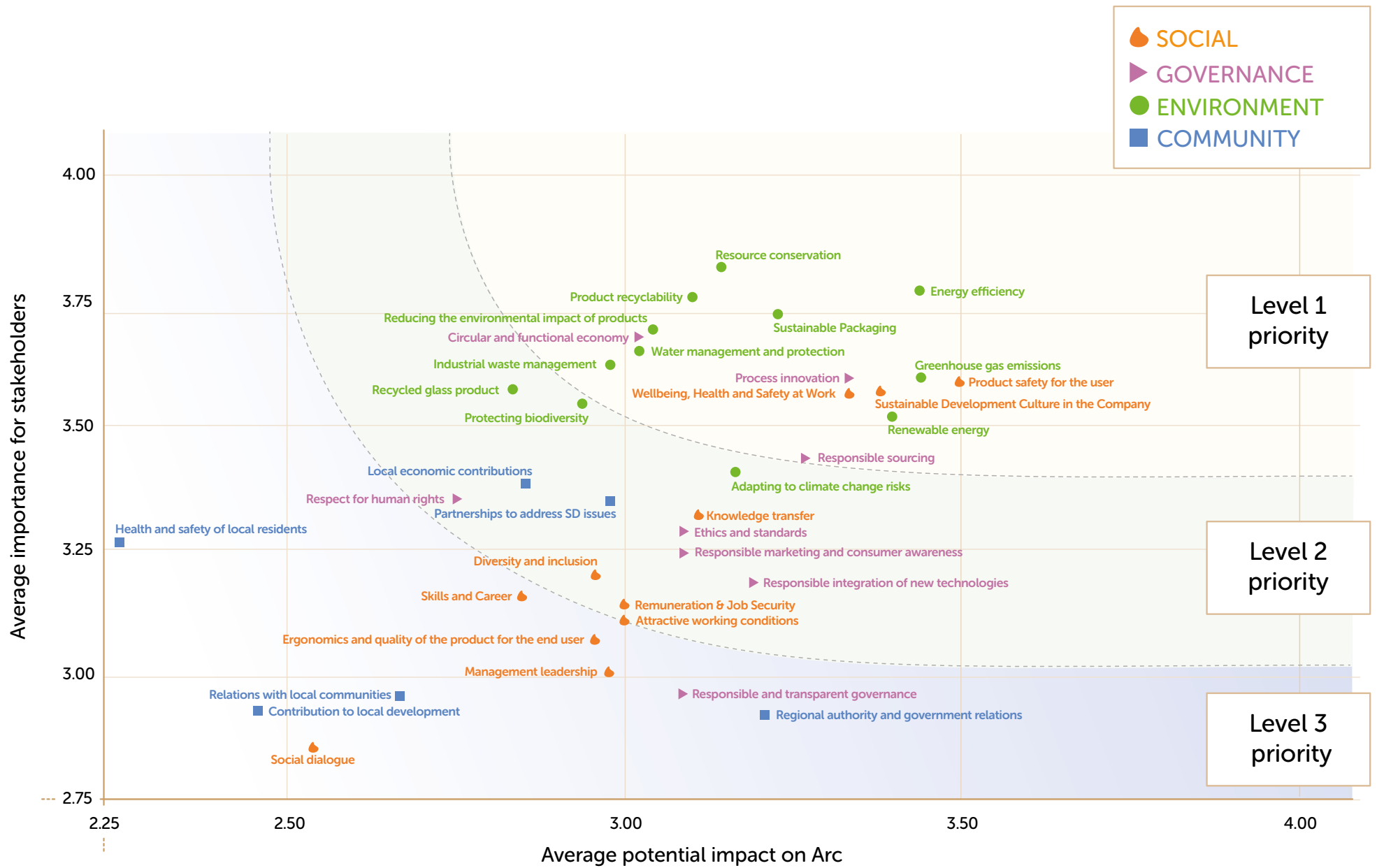
*“Sustainable development, Arc’s impact on the environment and on people, CO2 emissions, the use of recycled materials... these are all subjects we discuss with our customers on a daily basis. These issues are increasingly high on our customers’ agendas, and it’s essential for us to be able to align what’s important to Arc with what’s important to our customers. Our work on the materiality matrix makes such an alignment possible. The challenge is to ensure not only that our priorities in terms of Sustainable Development match those of our customers, but also that our objectives are clearly identified with action plans to address them.”*

**Sandrine Leleu**  
(Arc France CSR Project Manager)



*“Our CSR strategy also involves working with our stakeholders. In producing the materiality matrix, we were able to obtain a result based on a much broader and more accurate vision of CSR. This tool enables us to check that our CSR projects and strategy are in line with our stakeholders’ expectations in terms of sustainable development issues. The interviews with our staff were particularly informative. Many of them consider sustainable development issues to be important, and they are sensitive to them both in their work and in their personal lives. By prioritizing issues, we can step up our efforts on less well-addressed topics.”*





# Circular Economy & Climate

## Our roadmap

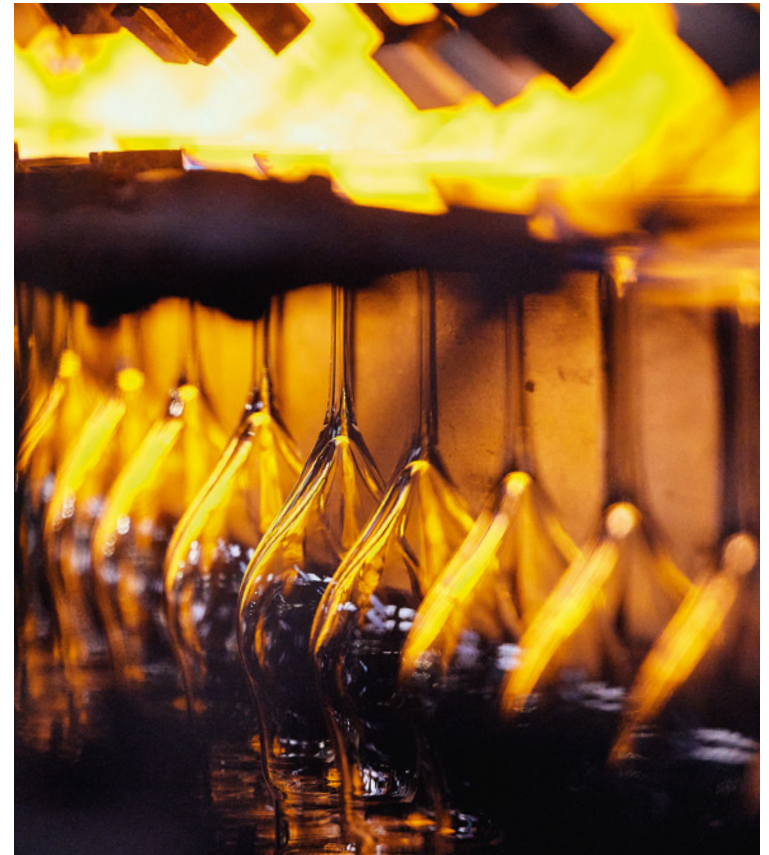
The Arc Group's CSR strategy focuses on two key areas: implementing a circular economy model and reducing our impact on the environment.

A 360° approach to direct and indirect activities has been established: this is our climate and circular economy roadmap (Responsible program).

For this reason, starting in 2020, Arc France has adopted this approach and brought together experts from all stages of the product life cycle, from design to end-of-life, to work together to create the Responsible program.

Each project in the program aims to minimize the negative impact of our products and services on the Earth and its limited resources, and maximize their positive impact.

Each of these is led by a dedicated team, with allocated objectives and resources, and the overall program is periodically reviewed by the Arc France Management Committee.





[More responsible  
manufacturing](#)

**7.** Launch a new glass material made from post-consumer glass waste.

**6.** Access existing waste glass collection systems, or build partnerships with other stakeholders to launch a new system.

**5.** Develop circular economy solutions with our customers and end-users.



**1.** Develop an eco-design culture throughout the company.

**2.** To be a global leader that sources locally, ethically and in an environmentally responsible manner.

**3.** Setting and achieving targets for CO<sub>2</sub> emissions, energy and water consumption, waste reduction, etc.

**4.** Develop more responsible packaging and reduce the impact of our supply chain





Companies are under increasing pressure to reduce their fossil fuel consumption and, in a broader sense, their environmental impact. Today, French industry accounts for 18% of France's greenhouse gas (GHG) emissions.

The glass industry is one of the most energy-intensive industries in the world, with a significant environmental footprint. On November 8, 2022, with reference to the 50 industrial sites with the highest emissions, the French President set a target of halving French industrial emissions over the next decade. To achieve this, unprecedented resources will be devoted to decarbonizing industry.

This partnership between government and industry underlines the need for close cooperation to achieve climate objectives. Arc France has put forward an [ecological transition roadmap](#) that would enable it to reduce its GHG emissions by a third by 2030 compared with 2019.

At Arc, this major challenge forms an integral part of our CSR strategy. We defined an environmental and energy policy in 2019 that was made available to all our teams in order to make a significant impact on this reduction, through precise measurements of our impacts and specific actions. We can only take successful action in areas we can understand, objectively define and measure.

Arc France has set up measurement and metering systems in support of continuous improvement. Through this initiative, we measure energy and water consumption, waste and atmospheric emissions.

The site is subject to the European Union Emissions Trading Scheme (EU ETS), and as such, its Scope 1 carbon emissions are verified by an independent third party every year. The measurements, which are published at regular intervals, enable us to identify deviations and take action for improvement as part of our integrated management system.

In order to fully understand a product's impact, we initiated life cycle analyses (LCAs) in 2020. A critical review of our first comparative LCAs lent credibility to this approach, and ensured that it was constructed in line with ISO 14044 rules. We now carry out our own glass analyses.



## Making eco-design our development standard

After mobility, food and housing, the consumption of private goods and services accounts for around 15.7% of the average French person's carbon footprint (source: Carbone 4 - 2023).

Every product generates an impact, and over 80% of a product's environmental impact is determined during the design phase. Eco-design is an approach that aims to incorporate environmental considerations into the design and development of products (goods and services). This approach considers the entire value chain and product life cycle.

Product eco-design is based on two key factors: reducing environmental impact without affecting functionality, and increasing the services delivered for the same environmental impact.

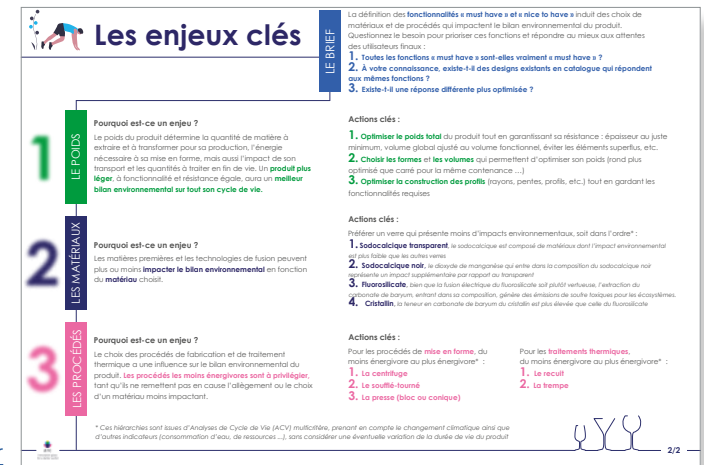
In 2021, we launched a pilot project with the aim of developing a culture of eco-design and design thinking in all new developments. This project involved the design, marketing, sales, industrial operations and CSR teams.

Using SimaPro life cycle analysis software, we identified the highest-impact phases in our glass manufacturing process for each of the types of glass we produce.

Based on this pilot, we drew up an eco-design charter for our design, product development and sales teams in order to raise awareness and guide them in their choice of a solution. Thanks to this charter, we can also raise our customers' awareness and discuss their needs with them, making it possible to co-construct relevant specifications that adhere to the eco-design principles Arc wishes to apply.

From 2025 onward, new products developed for the Group's brands will follow the eco-design principles derived from this first project.

Ecodesign charter



## Reducing the environmental impact of our value chain

There is an environmental impact from sourcing the raw materials and accessories needed to produce our products, and also from the logistical flows generated by our activity – not only on the climate, but also on biodiversity and resource extraction.

Our commitment to reducing these impacts is reflected in a responsible purchasing policy and a supplier code of conduct. Our suppliers are given copies of this code of conduct, which contains environmental, ethical and social commitments.

They are invited to sign it to demonstrate their compliance. In addition, as part of its responsible purchasing initiative, Arc France has completed a CSR risk analysis of its supply chain. This enables us to initiate specific discussions with our suppliers and identify areas for collaboration on CSR issues.

Because the purchasing function is central to the company's business, all buyers and principals are made aware of the concepts of responsible purchasing, linking the concept of sustainability with the three traditional key pillars of purchasing (cost, lead time and quality).

As part of our responsible purchasing policy, opting for alternative modes of transport, such as rail or river transport, in preference to road transport, and reducing the distances covered by materials are key elements in reducing the negative impacts of our value chain.



Almost all our raw materials suppliers are European, and nearly 70% of them travel less than 500 kilometers to deliver to us. For products manufactured in France, our commitment to geographical proximity is reflected in the Origine France Garantie certification obtained by Group brands. This certification provides consumers with a clear, objective indication of a product's origin.

To obtain certification, at least half of the product's value must come from work carried out in France (design, origin of raw materials and production).

The process is transparent, and is assessed by a certification body. In addition to favoring local production, we support alternatives to road transportation. For example, over 75% of raw materials are transported by river in France.

In France, the majority of the carbon impact from our logistics is linked to transportation to our customers, most of which is by road. For many years, our transport teams have been implementing rail transport solutions on existing lines.



# Taking action on our energy consumption and CO<sub>2</sub> emissions

Improving energy performance is a major challenge for Arc, both economically and ecologically, as 75% of the energy used is of fossil origin: gas.

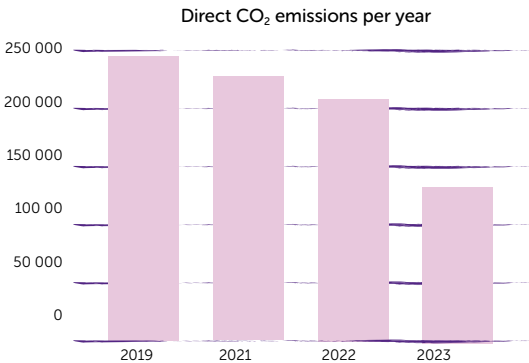
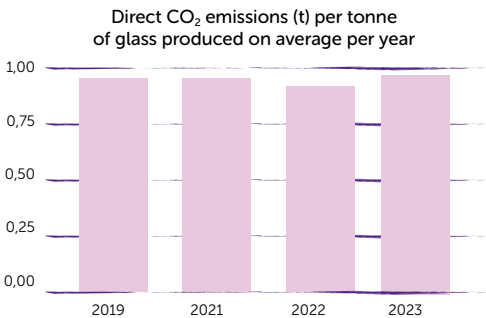
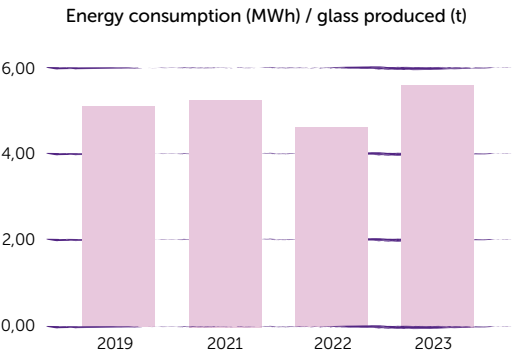
The energy crisis in 2022 following the war in Ukraine has given us an even greater incentive to move in this direction in Europe.

Energy consumption is sensitive to site activity. The new inflationary crisis in 2023 forced us to operate our furnaces at reduced capacity, resulting in a drop in their energy performance (particularly our soda-lime furnaces, which are gas-fired) and an increase in our energy consumption per tonne of glass produced. As a result, 2023 saw an increase in consumption per tonne of glass produced.

Greenhouse gas emissions are the result of the high demand for heat generated by the combustion of natural gas in melting furnaces, as well as the outgassing of certain raw materials during melting.

Improving energy efficiency therefore has the twofold advantage of not only reducing the impact on the climate, but also improving the Group's profitability, since energy accounts for around 30% of the product price.

In 2023, we reduced our emissions by more than 115,000 tonnes of CO<sub>2</sub> compared to 2019, mainly due to reduced activity and the permanent shutdown of one of our furnaces in 2023. The production of one tonne of glass involved the direct emission of 0.96 tonnes of CO<sub>2</sub>, an increase of 2.83% from 2019. This is linked to the high correlation between the energy used on site and CO<sub>2</sub> emissions. As energy performance deteriorates when business activity is reduced, CO<sub>2</sub> emissions per tonne of glass increase.



Although essential, the energy management system is not sufficient to achieve our objective of reducing greenhouse gas emissions by more than a third by 2030.

For this reason, we have consolidated a decarbonization roadmap for 2023, based on the work of the Group's Research & Development teams. This reduction of over a third will be enabled by: electrifying the site's soda-lime furnace and thermal treatments; substituting raw materials that contain carbon; improving energy efficiency; and lastly, using non-fossil fuels.

The goal of the project is to combine electrification of the furnaces, enabling a drastic reduction in the use of fossil fuels on site, with the substitution of carbon-based raw materials. This more than halves the emissions of a soda-lime furnace. The energy efficiency of such a solution is far superior to current flame melting methods. As it is dissipated within the glass, the energy introduced is directly useful for the glass produced, thus avoiding the loss of yield associated with the heat flows of gas furnaces.

Soda-lime furnaces are rebuilt every 9 to 11 years, so the implementation of this plan must be perfectly coordinated with these key milestones.

A transition cannot be sustainable if it is not sustainable for the company, so we need to be cautious about a conversion that will have a major impact on the company's competitiveness, amid a background of international competition. The economic conditions of execution are also of major importance, and will play a part in determining the conversion plan for the soda-lime furnaces.





While glass melting and distribution is the most energy-intensive stage of the process, there are many other production phases that call for the use of energy.

For example, the stages involving fire-finishing (i.e. polishing the glass with a flame, giving it its final touch) of tumblers and welding of stemware are very energy-intensive components of our manufacturing processes.

The monthly energy performance reviews implemented under our ISO 50001 strategy have highlighted the importance of adjusting our fire-finishers in the energy consumption associated with the production of our products.

To optimize this phase, which is by definition energy-intensive, Arc has installed real-time consumption sensors on its fire-finishers, linked to the production line's control tools. This gives the employee operating the equipment real-time access to their consumption, which they can compare with their standards and historical data.

In addition, in synergy with our in-house training department and our Research and Development department, 15 training sessions have been organized for over 60 employees who have a direct impact on this equipment.

Our training courses cover all the knowledge and awareness needs of our employees, from the theoretical design of the fire-finisher and its burners, through to its operational set-up.

Combined with the information made available via consumption sensors, the practical application of these training courses has a direct, tangible impact on energy consumption and the reduction in the carbon footprint of manufactured products. Over a full year, this resulted in a 10% reduction in gas consumption by the fire-finishers.

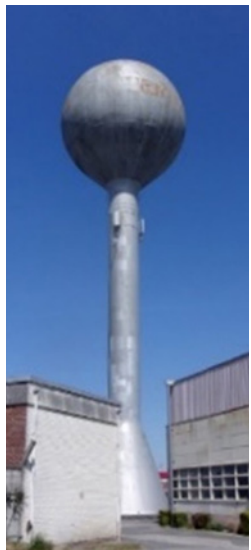
In addition, the eco-design approach, which aims to reduce products' weight without compromising their resistance characteristics, helps to reduce their impact on the climate by reducing the volume of raw materials needed to manufacture them, the energy required to produce them and the energy used to transport them.



## Taking action on our water consumption

Water is essential to our processes, just as it also is to other local users. Glass manufacturing processes involve melting raw materials at temperatures in excess of 1,000°C. Water is an essential part of the cooling and safety arrangements at our facilities.

In 2023, the Arc France site used the same amount of water as 23,000 private individuals. Our concerted efforts and vigilance are essential if we are to reduce our consumption of water, which is a limited resource that is shared for many uses, whether in the home, in agriculture or in industry.



The year 2022 was marked by rainfall levels in the Pas-de-Calais that were 36% below the usual average, preventing the satisfactory recharging of all water tables; as a result, the subject of water, its use and reuse once again placed our Pas-de-Calais region in a state of drought vigilance between April and August 2023.

This first prefectoral measure aims to inform private individuals and professionals to encourage them to save water.

For several years now, Arc France has been implementing an action plan with the aim of reducing our withdrawals:

- Water systems have been restored or added, with an emphasis on closed circuits,
- Water-saving adiabatic cooling towers have replaced older air cooling towers,
- A high-pressure network for glass evacuation chutes has been installed, and some chutes have been overhauled to optimize water use.

Water consumption meter readings by our teams are used to alert points of contact in technical management and operations, to identify the source of anomalies and correct deviations.

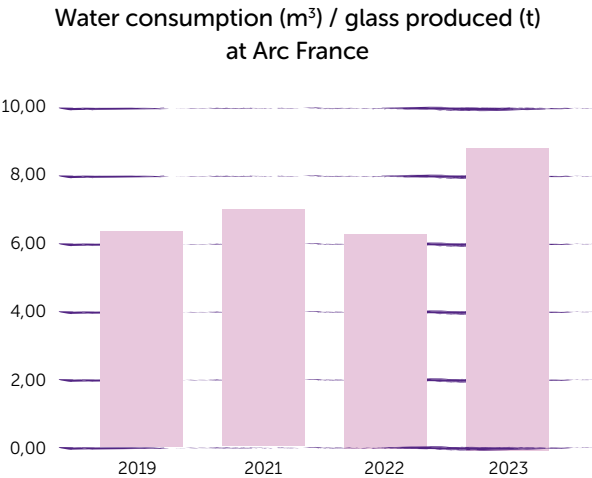
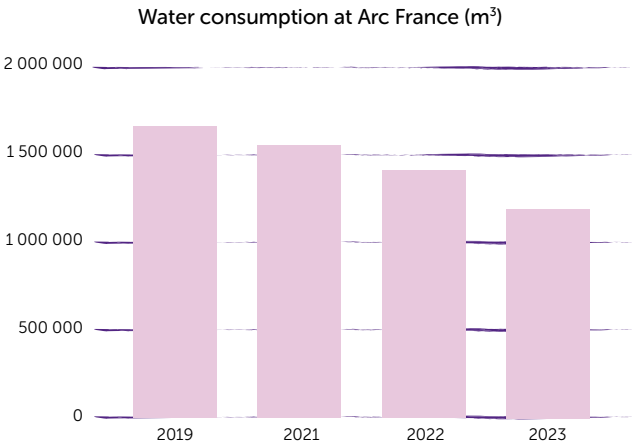


To date, 96% of water flows around a closed circuit, and the equipment at our production sites (decanters, physical-chemical station, evaporators) ensures that the quality of discharged water complies with local regulations.

Between 2019 and 2022, thanks to the efforts of everyone at Arc France, water withdrawals were structurally reduced by 15%. In 2023, an extension to the action plan and the permanent shutdown of one of our furnaces enabled us to reduce water consumption by almost 30% compared with 2019. However, the reduction in activity at the Arques site does not translate into an equivalent reduction in water consumption per tonne of glass, as many requirements – particularly those associated with plant safety – cannot be reduced.

As a result, our water consumption per tonne of glass produced increased by 35% in 2023 compared with 2019, and our water efficiency dropped accordingly. We have also worked on the types of water we draw. Arc France draws two types of water. Fresh surface water, which is unfit for consumption, and groundwater, which is fit for consumption.

Since 2019, we have been drastically reducing our consumption of groundwater in favor of surface water. Between 2019 and 2023, we reduced our annual consumption of drinking water by more than 50%, and the proportion of groundwater we drew fell from 32% to 24%.



## Promoting the recycling of materials throughout the company's value chain.

Glass is one of the few materials that can be recycled virtually without loss. This means it can be re-melted many times without altering its qualities.

But is it "recycled?" To date, and rather counter-intuitively, glass from "tableware" (glass plates, drinking glasses), unlike glass "containers" (bottles, jars), is not accepted in existing selective glass collections, particularly in Europe.

Over the past two years, we have been working with trade associations, customers and partners to ensure that our soda-lime glass products can be collected for recycling. This would increase the volume of cullet available for remelting. In particular, we are carrying out studies into the potential impact of lead content in post-consumer cullet in the event of the inclusion of tableware (and in particular the old lead crystal still kept in households).

In-house tests have been carried out to incorporate this glass from waste collection into our glass furnaces. The supply of post-consumer cullet (which is well below demand) is absorbed mainly by glass bottle production, with sorting centers located as close as possible to the plants. This requires work with the relevant stakeholders to increase its supply.

Conversely, almost all the glass rejected during the production and inspection phases is recovered in the form of so-called "internal" cullet, and then automatically incorporated into the manufacturing process. Arc reuses this cullet to minimize waste production, and to reduce the extraction of raw materials and the consumption linked to their melting. For example, around 35% of the materials used in soda-lime glass come from reused internal cullet, while around 10% is used in fluorosilicate glass.

More than 30 years ago, the surplus cullet from our production went into landfill. Currently, internal cullet that cannot be used for the production of clear glass is reused in a special type of glass, black glass. Produced exclusively in France, it contains up to 75% internally recycled cullet, of which 25% comes from black glass production and 75% comes from colored or decorated cullet from other production processes.





1,650 kg every day: That's the quantity of mixed – unsorted – waste generated at the Arques site in 2023. These 600 tonnes of waste per year have a significant environmental impact (transportation by truck and incineration).

2023 was a year marked by the introduction of new waste management processes, enabling a significant improvement in the recovery percentage. This work has been accompanied by closer monitoring of our main waste management service provider, with more rigorous follow-up of any anomalies found during collection. Improvements in waste sorting in the plant's break rooms and cafeterias are currently being rolled out. 86% of the waste generated by Arc France is recycled.





## Using more responsible packaging

At our Arques site, we manufacture glassware and much of the packaging used for our products.

Most of this packaging is made from corrugated cardboard, a material that can be recycled up to seven times, to produce new paper, packaging and even insulation products for buildings. In this way, carbon emission cycles and the consumption of water, energy and raw materials can be avoided.

All Arc France packaging is FSC® certified.

This environmental label, audited by an external body, certifies that the raw material for our packaging comes from responsibly and sustainably-managed forests. In addition, we work exclusively with FSC®-certified packaging suppliers. This enables us to guarantee our customers that our packaging is sustainably, responsibly and ethically produced.

With regard to printing on our packaging, we make use where possible of technologies that use fewer resources (inks, paper).

Other than cardboard, less than 5% of consumer packaging contains plastic. This is mainly polyethylene, an industrially recyclable and reusable plastic. The pallets are protected by a plastic film, which is also made of polyethylene.

For several months now, a working group comprised of Arc France members from different divisions (purchasing, packaging, marketing, sales, sustainable development, etc.) has been studying alternative solutions that could be adopted to reduce our packaging or its impact.

This work has already led to the identification of areas of potential savings, notably for shrink-wrapping films and adhesives. This initial approach is currently being deployed. Numerous tests are currently under way, and should enable us to make decisions in 2024 on the implementation of more responsible packaging practices.



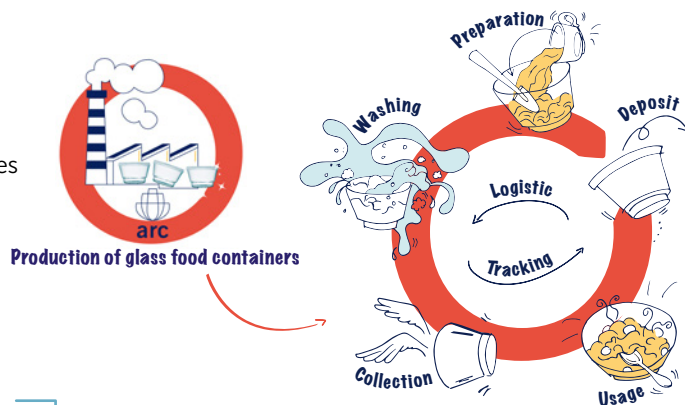
## Promoting re-use

According to the French Environmental Code, reuse refers to “any operation in which substances, materials or products that are not waste are reused for a purpose identical to that for which they were originally conceived”.

For almost 200 years, Arc has been manufacturing and marketing collections of plates, cups and other containers designed for reuse and capable of withstanding a high number of use cycles (up to 2,000 cycles in catering). As part of the vital drive to reduce waste, particularly of the kind associated with single-use containers, reuse is a virtuous solution that is gaining ground.

The takeaway food market has grown considerably in recent years. Communal, corporate and university restaurants are no exception to this trend. Changes in lifestyles, with the rise of telecommuting in particular, are accentuating this increase. Assuming three to four disposable packaging items for each meal delivered, the volume of waste generated is considerable. In addition, supermarkets, which also use many single-use containers in their delicatessen departments, are experimenting with reuse.

The reemployment loop and its challenges in 2023



The French law of February 10, 2020 on the fight against waste and in support of the circular economy (the AGEC law) sets a target for reducing this waste in France. From 2019, the European legislative framework, with the “Single-Use Plastic” (SUP) directive, has been promoting a circular approach and is causing many single-use plastic objects to disappear from our daily lives.

The promotion of reuse is therefore an important part of our Responsible program. It is in line with the Arc Group’s commitments to the UN’s 2030 Agenda.

The container is a central element in the reuse loop. It must be appropriate for all stages of the cycle to ensure a smooth transition. Choosing the container is therefore the initial step towards reuse. Containers made from glass – a packaging material with a long history – offer a recognized, sustainable solution that we have been promoting with a number of players such as the Réseau Vrac et Réemploi (Bulk and Reuse Network) and the Fédération Professionnelle du Verre (Glass Trade Federation).

Recommendations for use ([find out more here](#)) and brochures ([find out more here](#)) that are specific to reuse have been created to accompany our offer tailored to these needs.

[Glass as an alternative](#)



At Arc, we believe that promoting players that wish to engage in reuse is a key factor in the successful growth of this virtuous practice. Retailers' interest in these new models is undeniable, and rising.

More than 15 partnership projects have been developed to equip commercial catering services, supermarkets, cafeterias and home delivery services.



Our experiments have led us to identify four key success factors driving the widespread growth of reuse in catering:

- There are currently a multitude of local players, many of whom we have listed in our guide to reuse. The stages involved in reuse in catering are equally diverse, and each individual player is in control of one or more of them. **Coordination** of these different stages is essential to ensure successful scaling-up.
- **Standardization** will simplify each of these steps, as will the user experience (a limited number of containers that can be used everywhere, dropped off anywhere, and reused by anyone).
- **Simplifying** each stage of the reuse process wherever possible will help to build a sustainable model and win over users.
- For public players, cities and regions (Paris - Munster - Monaco - Quebec, etc.), and private players alike, reuse is increasing thanks to the impetus being given and the **publicity** created on the implementation of the circular mechanism.



The impacts of climate change are becoming increasingly visible, and affect all corporate value chains.

Raw materials are transported via waterways, which may face traffic restrictions if water levels are too low.

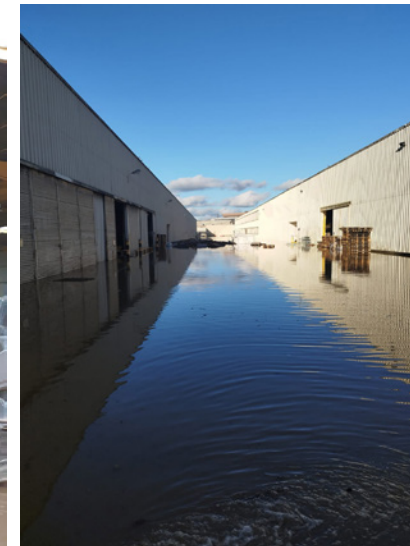
These periods of drought, which have been particularly severe over the last two years, remind us of the urgent need to be able to reduce our water consumption, both in response to temporary situations and in the long term. Heatwaves can affect working conditions, especially in an environment already subject to high temperatures, and put a strain on facilities.

The Arc France site is located in the Aa river delta, a polder that was reclaimed from the sea many years ago. Heavy rainfall causes flooding, which affects our teams and equipment.

While it's important to continue striving to reduce our greenhouse gas emissions, it's equally important to adapt to the consequences of climate change. We are already feeling the consequences, and they will become even more pronounced in the future. The two approaches need to be employed in parallel.

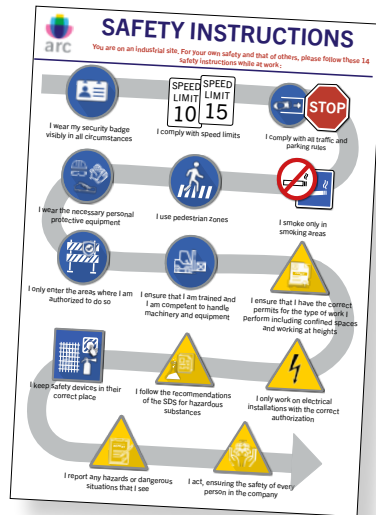
For many years, work breaks during times of heatwaves have been extended at the site, and when possible, schedules have been adjusted. Last winter's historic floods prompted us to take action and rethink our emergency procedures to enable us to respond to unprecedented events. Dikes were erected, and pumping equipment installed.

In 2023, we initiated a more universal approach to anticipate the consequences of climate change. We are gradually integrating all the site's internal activities into this approach. We will be holding discussions with experts to qualify and quantify these risks in terms of their frequency and intensity. This will enable us to consolidate an adaptation plan that will make us more resilient at such times.





# Developing a safety culture



Our industry generates risks that we need to control. Our aim is to protect the health and safety of all our employees, visitors and contractors, in line with regulations. To achieve this, we are implementing an organizational structure and procedures backed by financial, human and technical resources, based on the principles of continuous improvement. Our goal is to involve all our teams, social partners and service providers in this preventive approach. We make sure that everyone

factors safety considerations into their decisions, and adopts exemplary, responsible behavior on a daily basis.

To cement this safety culture, the Group's entire management team has been made aware of its responsibilities.

Internal support and working groups are in place to facilitate the application of the golden rules. These describe the rules that all employees must know and apply, and aim to reinforce the preventive approach by encouraging all participants to analyze risks and implement appropriate measures – and to stop work if the risk is not under control. They are based on real-world situations encountered in our units, and the expert experience of our teams.

These Golden Rules apply on two levels: firstly, to all members of the company; and secondly, to service providers and outside contractors, which are also entitled to invoke them to explain refusals to work in dangerous situations.

Lastly, these rules are explicitly stated in the company's internal documents. They are intended to be taught as part of the training process for all involved parties, including employees of outside companies.

Our goal is to develop a shared perception of risk and thus contribute to the growth of individual and collective responsibility. Employee commitment is essential, which is why our awareness-raising and training initiatives take various behavioral, managerial and technical aspects into consideration.





All new Arc France employees receive general safety training. It gives them an understanding of safety culture and requirements. In addition, all employees have access to more comprehensive training that is specific to their activity.

Our commitment to safety is accompanied by routines at all levels of management. These enable us to strengthen the commitment of managers and teams, identify risks, introduce a progress-based approach and maintain a constant dialogue on the issue of safety. A "safety briefing" is held at the start of each meeting with the operational teams. All Operations and Engineering managers are also invited to take part in regular "Gemba Walks" focusing on safety.

The "Gemba Walk" is an approach that involves visiting workshops to identify good practices and safety risks, and engaging in discussion with operators to find the root causes of malfunctions and propose solutions. In addition, the Engineering and Innovation departments are ISO 45001-certified, as is the AGC site.

## PROVIDING TRAINING AND SUPPORT

With almost 200 years of history and experience, Arc's employees possess invaluable know-how that must be maintained and developed at all costs.

In 2023, Arc France was awarded the Entreprise du Patrimoine Vivant (EPV) heritage label by the French government, following the Origine France Garantie certification obtained in 2019 for our brands manufactured in Arques. The entire Arques site has just been awarded the EPV label for a 5-year period.

This label promotes French companies with excellent industrial or craft skills, and a strong commitment to innovation.

Since its creation in 2005, the EPV label has spotlighted unique companies that reconcile innovation and tradition, know-how and creation, work and passion, heritage and future, local and international.

Training our employees throughout their careers and passing on knowledge through apprenticeships has always been part of Arc's DNA.

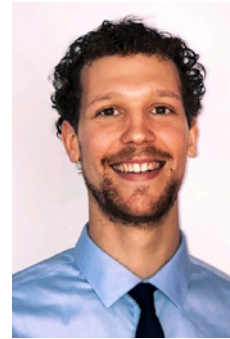
This year, this was reflected in a number of ways:

- 44,243 hours of training provided despite the unfavorable economic climate.
- A work-study program enabling masters of apprentices to pass on their knowledge and passion for glass to their students.



After two years marked by the impact of crises (health, energy and climate), with the aim of making the company's Sustainable Development commitments accessible to as many people as possible, and of popularizing its concepts, the CSR teams – in conjunction with the operational departments – set up a number of awareness-raising initiatives throughout Arc France.

- Between 2021 and 2023, no fewer than 7 digital training modules have been created in-house to spread the culture of sustainable development within Arc. These training courses cover concepts such as the circular economy, responsible purchasing and climate change, providing general expert knowledge and information specifically tailored to our business sector and our site.
- The implementation of employee engagement programs to encourage employees to reduce their own impact. Arc France has encouraged its employees to carpool and cycle, with repair and purchasing workshops for European Mobility Week, and the creation of a cycling group to organize bike outings.



**Ludovic Bidet**

(Sustainable Development Project Manager)

*"When I came to work at Arc, I chose to live in St Omer for ecological reasons, so I wouldn't need to have a car. I hadn't been used to it before, but I've discovered "nature" side, which is very pleasant, with the birds singing in the morning, and also the fact that I arrive at work in good shape."*

**Anne-Bénédicte Delozière**

(Head of Customer Service)

*"Having a physical activity every day is quite enjoyable... I find it hard to do without. And the thing that really won me over when I switched to a bike was the way it wakes you up in the morning."*



**1,100+**  
employees took  
at least  
one CSR course

**7**  
scheduled CSR  
training modules



Increased female representation in our historically male-dominated industrial professions is a major challenge for Arc France.

The proportion of women in the workforce has risen by more than 5 points, and indeed by more than 6 points in the production workforce between 2019 and 2023, now accounting for almost 20% of Arc France's total workforce. Nearly 900 women have chosen industry and Arc. Although they are more numerous in the technical and managerial professions, they also play an active, committed role in production, maintenance, logistics and R&D.

In 2024, as with every year, Arc France complied with regulations by calculating and publishing its professional equality index on its website, achieving a score of 89/100.

Arc France also promotes parity through its professional equality action plan. For pregnant women, this includes the option of flexible working hours, paid leave to attend medical examinations, and modified working conditions. This support continues into parenthood, both for women wishing to breastfeed their child – by granting specific break times or support from the occupational health department – and by allowing paid time off in the event of the child's illness.

On the French site, gender diversity and professional equality is also promoted by a collective of volunteers created in 2017: the Verr'Elles network.

It runs activities in support of diversity and gender equality within the company, and raises the profile of industrial professions among young girls, particularly in the region's secondary schools. They are committed to supporting young girls as part of the Capital Filles program (which links female mentors from the professional world with female mentees in their final year of high school to help them make the right career choices).



Through work-study programs or internal career development, women are now choosing to work in professions such as industrial line operators or maintenance technicians, and it's important to continue promoting greater professional representation of women. Verr'Elles gave several women the opportunity to introduce their jobs and their experience in the industrial sector.

### Juliette Avocat

(Logistics manager in the technical department)



*"I'm in charge of all the spare parts stores for maintenance and production at Arc France (stock management, inventory, etc.). I'm passionate about my job; I love a challenge and when things get busy! Maintenance can seem a scary choice for women, but I found I didn't have to prove myself, apart from demonstrating my skills, and I was warmly welcomed. Do a job that's meaningful to you, because it represents a large part of your life, and surround yourself with the right people."*



In 2023, Verr'Elles and Arc renewed their commitment to Pink October by launching an action campaign that began with the "Pink Day" initiative and ended with the sale of 400 glasses designed, manufactured and decorated at Arc.

A check for €3,000 was presented to the local AudomaRose association. All proceeds will be donated to the Oscar Lambret Center, in support of the research teams working every day to find treatments for breast cancer.

These events provided an opportunity for nurses from Arc France's occupational health department and volunteers to provide information about the disease and raise awareness among women about breast cancer screening and appropriate ways to act.



Arc has also committed to hosting a Global Compact Hauts-de-France group meeting on the theme of diversity and inclusion at its site in 2024. This will provide an opportunity to share our best practices and the commitment of our Verr'Elles network with other members of the circle. The inclusion of people with disabilities, or those who may be affected by disability issues, is of paramount importance within the company.





Arc France has implemented practical measures to:

- Support its employees affected by disability issues in their families (flexible working hours, paid leaves of absence, etc.)
- Help employees with disabled worker status (extra breaks, reorganization of working hours, exemption from paid work before retirement date)
- Support our members of disability-related associations (paid leaves of absence to volunteer in disability-related associations).

To facilitate the circulation of this agreement and enable employees to share their needs on these subjects, disability officers operate in all sectors of the Arc France site, and we provide all our employees with a practical guide.



**Florence Delattre**

(Key Accounts Assistant)

*"Arc has an excellent disability policy. The 'Handicap' agreement permits association members to take time off work for association events or to accompany their disabled child. This spirit of support is invaluable. I'm lucky that I've always had the support of my managers and colleagues. Without this support, I wouldn't have been able to invest so much in the Papillons Blancs association in Hazebrouck and the surrounding area."*

[Full interview with Florence Delattre](#)



The Arc Group has been a member of the Global Compact since 2003. Arc is committed to adhering to the 10 principles of the Global Compact, the sixth of which is to contribute to the elimination of all discrimination in respect of employment and occupation.

An internal procedure is in place to combat all forms of discrimination and harassment in the workplace. As soon as an employee makes a report, an entire neutral, objective investigation process is set in motion. This can lead to the implementation of support measures and proposals for people in situations of difficulty.



From the outset, Arc France has always been committed to its local community. Established almost 200 years ago in the Audomarois region, the Cristallerie (as it is still called) has contributed, and continues to contribute, to its influence.

As a member of the region's Strategic Committee, the company contributes to local eco-efficiency efforts.

It is also involved with local industrial associations whose aim is to promote and share CSR initiatives in the Saint-Omer area (Association Inter-Utilisateurs du Bassin de l'Aa), and in the Dunkirk area (Collectif DKarbonation). Our participation enables us to weave an effective network through which we can identify and implement relevant synergies.

Another example of Arc's integration into the local business fabric is its partnership with EuraMaterials, of which Arc has been a member from the outset. EuraMaterials is an industrial cluster that serves the materials processing industries, based in Tourcoing, and holding the "Pôle de Compétitivité" label.

The end of 2023 was marked by historic floods that affected many employees in their homes. Arc France has taken the decision to support employees affected by the disaster in whatever way it can.

We support a number of associations via product donations, particularly in the wake of the floods. A toy collection drive was also organized. As a result, three box pallets of toys were handed over for the benefit of the company's disaster victims and the Emmaüs community.

At the end of 2023, the "Boules de Noël" social partnership between the Terre de Verre association, Cartonnerie Gondardennes and Arc was renewed for the third year running.

On Wednesday March 6, UNICEF received the €1,600 proceeds from this operation.

The number of Christmas ornaments was reduced this year due to flooding.

This donation represents 4,700 food sachets for children, 45 first-aid kits and 2,285 doses of antibiotics.

Arc France also supports the commitment of several of its employees to local associations, in order to promote their involvement.







arc  
Americas

# Dear friends,



2023 presented itself as a year filled with challenges. Yet, ultimately served as a catalyst for a transformative shift within Arc Americas, signifying the conclusion of the tumultuous journey driven by the COVID pandemic.

Transitioning from a state of oversaturation in 2021, to by the close of 2022, implementing significant alterations in our inventory and production strategies for 2023. This was prompted by shifts in the business strategies of key customer partners adapting to evolving market dynamics.

Upon review of our operations, we recognized the need for substantial changes. Thus, seizing the moment, we opted to enact strategic adjustments in our business plan, aligning our workforce and capabilities with projects where our talents shine brightest. We made the decision to temporarily shut down one of our furnaces to better match production with demand until May 2023.

As a result, we successfully decreased our inventories by 45% compared to April 2022! This enabled us to completely eliminate the need for external warehousing. Not only did this improve our operational efficiency as a company, but it also led to a reduction in CO<sub>2</sub> emissions by 37,856 pounds annually related to transportation between warehouses!

Throughout this period of transformation, our steadfast commitment to Environmental, Social, and Governance (ESG) principles endured, nurturing an ambitious endeavor named "Circularc".

The notable project, which was initiated in mid-2023, is now beginning to materialize. This initiative focuses on implementing an on-site recycling process for glass products. This effectively creates a circular economy by closing the loop from initial production through end consumer use and returning the glass to Arc for recycling and incorporated into the creation of new glass products.

As some may be aware, our current manufacturing process already incorporates internally generated cullet/waste glass. Circularc will allow us to expand this practice by incorporating both internal and external waste glass into our production process. The ultimate outcome of this endeavor is a reduction in waste sent to landfills, as well as decreased energy consumption and virgin raw material usage, marking a significant advancement in our sustainability efforts.

I'm delighted to share that we have achieved significant milestones in the realm of ESG (Environmental, Social, and Governance) initiatives during 2023, and we are continuously exploring fresh and innovative approaches to advance our sustainability objectives in the future.

**Dean Kimber**  
General Manager, Arc Americas





# Arc Americas Background

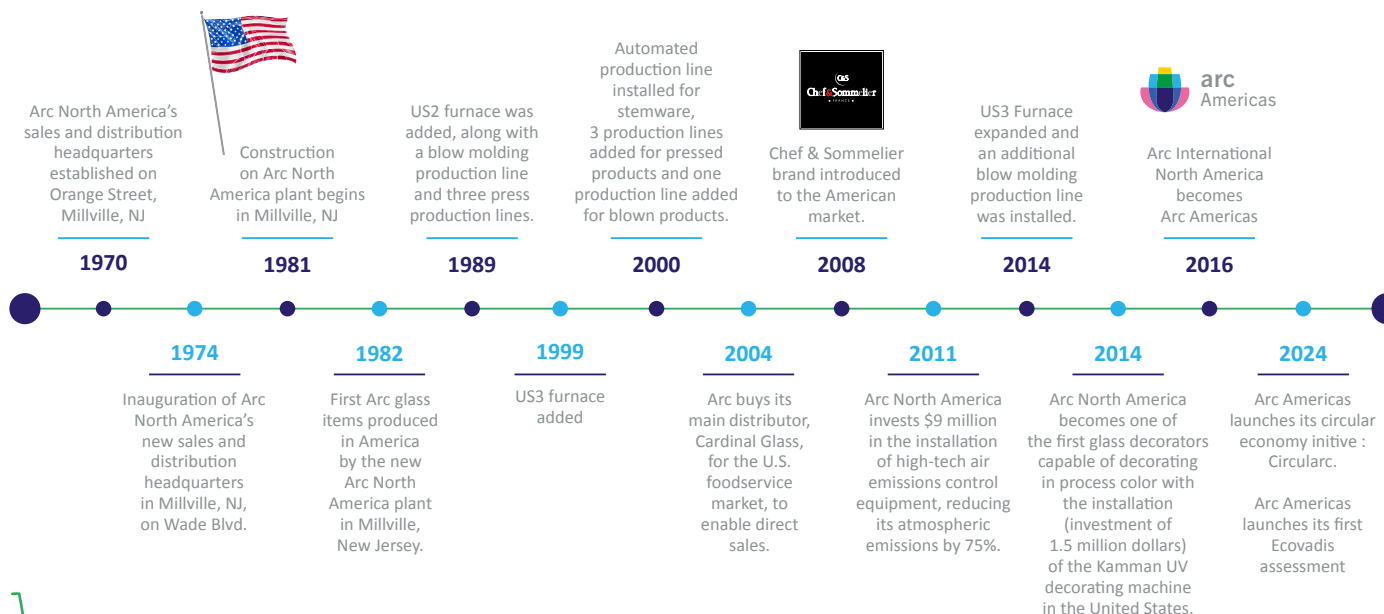
## HISTORY

Arc Americas is the American subsidiary of the Arc Group. It has been in business for over 40 years, and is located in Millville, New Jersey. This entity accounts for around 25% of the Group's total sales, and manufactures around 1 million parts a day.

Arc Americas sells the Arc Group's four brands: Chef&Sommelier®, Arcoroc®, Luminarc® and Cristal d'Arques® Paris, and holds exclusive distribution rights for 8 brands in the foodservice sector: Dudson, Thermos, Alfi, Santa Anita, Chasseur, Sola, Abert and Maria Portugal.

Our subsidiary works with many different partners in the Business to Business, Food Service and Consumer Goods segments.

In each of these distribution channels, our American teams work with a large number of customers, designing custom solutions for their brands that are tailored to their needs. Our teams work closely with customers on issues of design, materials, manufacturing process, decoration, packaging and best distribution options. Each project is managed by Arc Americas, from the definition of specifications to the promotion of the final product. This enables us to offer a complete offering associated with the product.

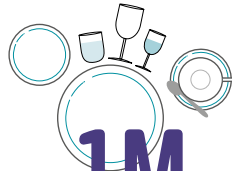


# KEY FIGURES



750

PERMANENT  
EMPLOYEES



1M

ITEMS PRODUCED  
EACH DAY

2

FURNACES



\$194M

OF SALES  
IN 2023



1st FURNACE IN

1981



BRANDS



1970

YEAR ESTABLISHED



# Circular Economy Circulararc & Climate

Glass is a material that can be recycled almost indefinitely, with no loss of quality. And yet, to this day, most of the products we sell (mostly candle containers) are thrown away at the end of their life: when they break or the candle is used up.

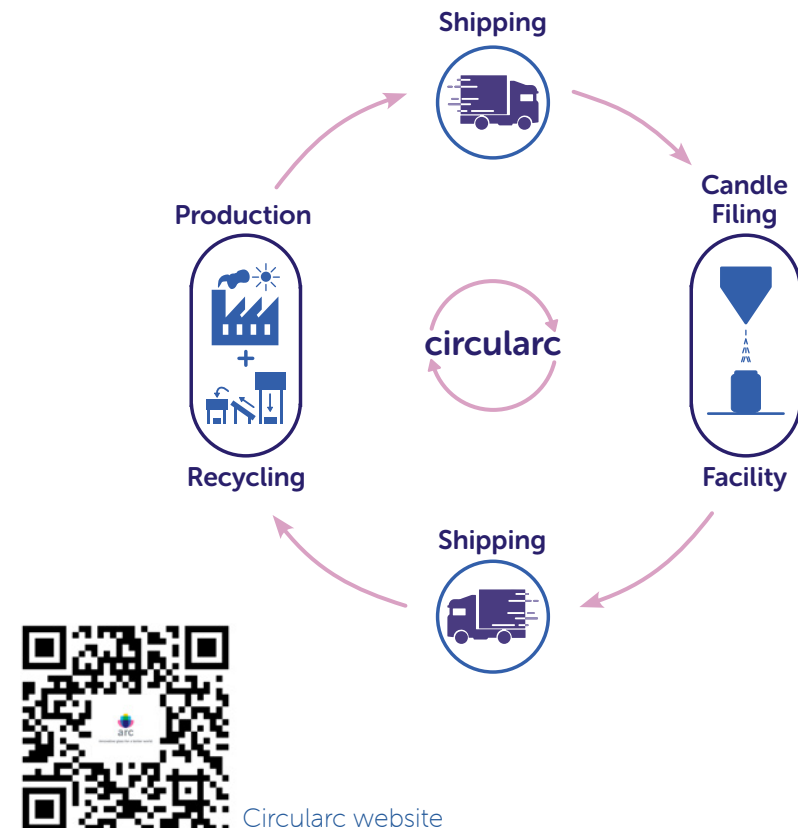
This is why Arc Americas, in partnership with its customers, has chosen to invest in a pioneering and exciting circular economy approach. The collaborative creation of these new circular mechanisms is called Circulararc.

The aim of this project is to incorporate recycled glass into the glass products we manufacture by ensuring steady flows of post-consumer or post-industrial materials. We are growing this initiative through various partnerships:

- We have agreements in place with some of our major customers and candle manufacturing partners to collect and recycle their glass waste from their candle-filling facilities.
- In partnership with our customers, we are also seeking to develop a post-consumer candle glass collection initiative.
- Finally, and once again through partnerships, we wish to gain access to other types of glass product for recycling.

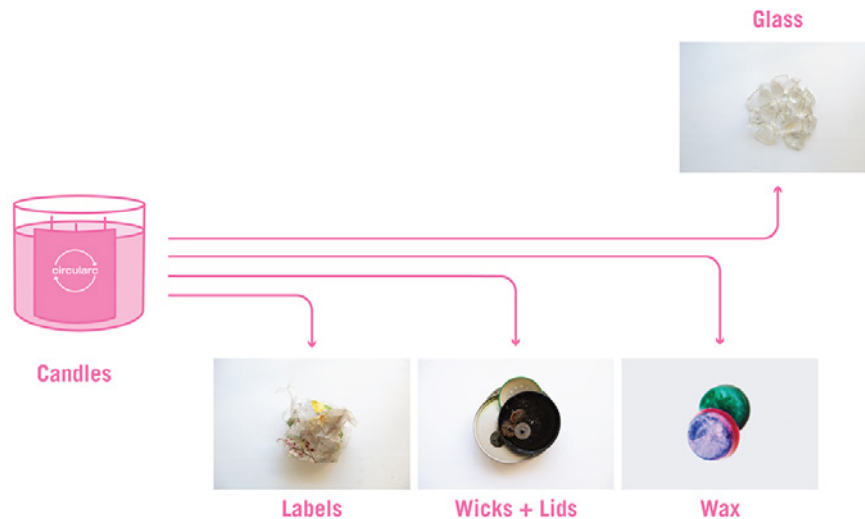
Once collected, we have the ability at our New Jersey site to process and separate the various materials that can be recovered and recycled. The glass will be recycled by Arc to manufacture glass. Other materials will be recycled by Arc's partners.

To manage these new flows, Arc has developed a logistics process that will enable it to streamline its product collections and deliveries with its partners.



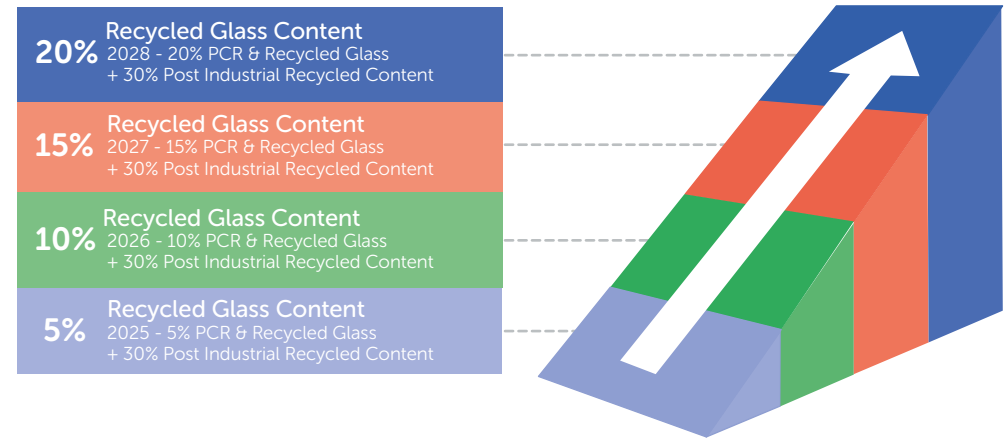
Our processing center separates glass, metal, plastic and wax from candles, and recovers them for recycling. Its effectiveness has been tried and tested. We have also carried out tests to ensure that our target of integrating 30% internal cullet (i.e. from our own production) and 20% external recycled glass was viable for our manufacturing process.

To achieve this goal, we will gradually integrate cullet collected from candle manufacturers and consumers, starting in 2025 with 5% recycled content in addition to the 30% from our own process. As collection circuits are set up, we aim to increase the proportion of cullet collected externally by 5 points a year, reaching 20% by 2028.



## Incorporating recycled glass

Timeline to include PCR & Recycled Glass as part of Arc's Glass Manufacturing Process





## Eco-design and optimization of our production process

Optimizing product weight without impacting strength is one of the key principles of eco-design. This reduces the consumption of energy and raw materials used. We have used this approach to optimize strategic, high-volume products. Applied to 60 million parts, this has resulted in a considerable reduction of more than 4 million pounds of raw materials and 100 trucks of raw materials on the road, covering around 17,000 miles per year.

Operational teams have optimized the production of pulverized articles, reducing the time spent using heat treatments to manufacture the same quantity of parts of the same quality. This generates a 30% reduction in energy consumption!



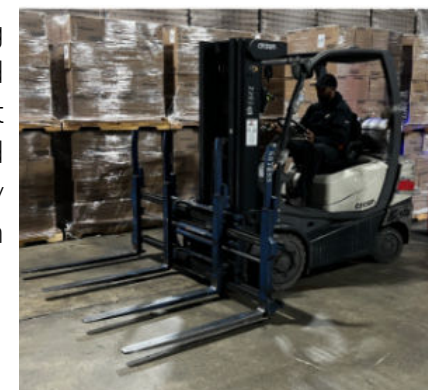
## Optimizing our warehousing and logistics

Internal logistics have a significant impact, as energy is used to move pallets of products around and store them.

We have been able to streamline our stock levels and reorganize our warehousing strategy so that we no longer need to rely on outside warehousing or an ancillary warehouse. Eliminating this ancillary warehouse will save 1,000 miles per year for our molding truck and 2,000 miles per year for our semi-trailer truck. We are also working more specifically on streamlining product storage strategies for our major customers. This will eliminate 900 miles of forklift movements per year in our warehouses!

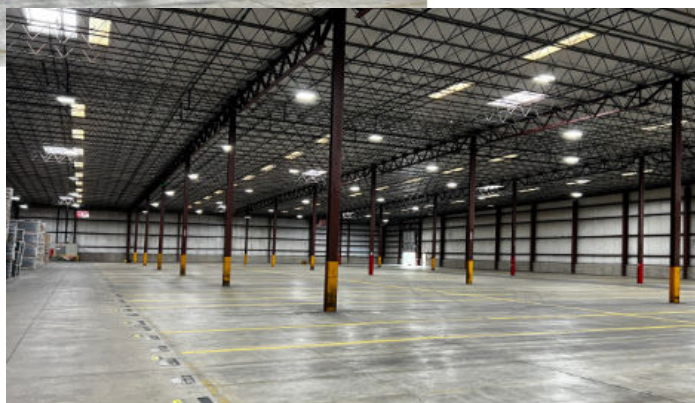
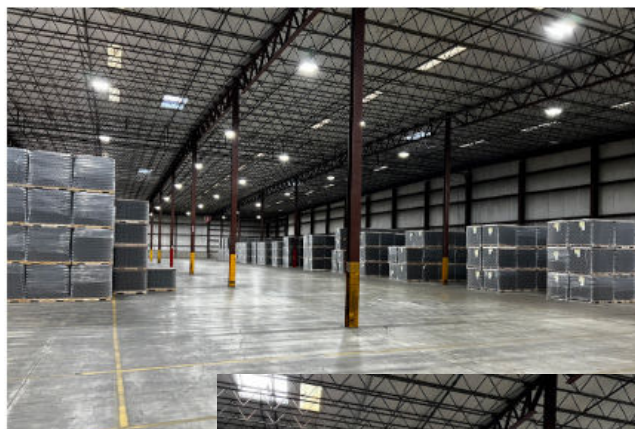
In line with our streamlining strategy, we have reorganized the way we stock high-volume spray-decorated products on our site.

We have achieved astonishing results. We have eliminated 2,600 miles per year of forklift movements and reduced the use of plastic pallet covers by 14,000 units; that is, more than 20,000 pounds of plastic per year.



Arc Americas is also gradually converting its forklift fleet to double-width equipment in certain parts of our warehouse. This will make us much more efficient. Journey lengths will be cut in half.

The end result will be a reduction of almost 6,000 miles in forklift movements in our warehouses, while increasing load safety!



## Giving preference to local suppliers

We are aware of the importance of participating in the development of our region, and strive to source as close as possible to our plant. We have continued our drive to identify local suppliers, particularly for our raw materials and packaging.

For 60% of our raw materials, Arc Americas has reduced distances by more than 821 miles. For raw materials that cannot be sourced locally and have to travel longer distances, Arc Americas uses rail transport where possible. According to the Association of American Railroads, the impact of rail freight is 75% lower than that of road freight.

In 2019, we relocated almost all our retail packaging from China to Canada, enabling us to source more locally and reduce our carbon footprint. From 18 containers a year from China, we're down to less than 2 containers a year.

In 2020, we reduced the number of our bulk packaging suppliers to three main suppliers, located less than 80 miles from Millville, New Jersey.

We buy 30% of our packaging within an 8-mile radius, and 87% within an 80-mile radius.



# Teams

## PROVIDING TRAINING AND SUPPORT

Know-how in the glass industry is invaluable, and it is essential for us to maintain and pass on this know-how, while increasing the skills of our teams throughout their careers.

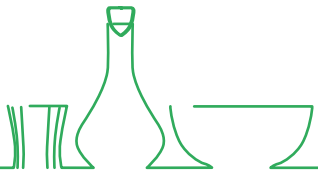
We offer a wide range of training courses to enable our employees to improve their skills in a variety of areas. In 2023, over 14,000 hours of training were provided; equivalent to 18.5 hours of training per person.

Sustainable development issues are becoming increasingly important, and it is important for Arc Americas to help raise awareness of these issues by offering its employees a wide range of educational initiatives.

This year, we organized two waste collection events at our site. These two awareness-raising events enabled us to collect 323 bags of waste.

In addition, since the launch of the online training program on sustainable development topics, 70% of employees with access to these courses have completed at least one of them.

Finally, with a view to supporting our employees in their personal development, we decided to hold an "In-House Job Fair." This enabled our employees to discuss career development opportunities in their current department, or in other departments of our organization.



## PROMOTING WELL-BEING AT WORK

Arc Americas attaches particular importance to the well-being of its employees. For example, we have held several events throughout the year to showcase local suppliers and partners offering a wide range of health and wellness benefits to our employees via a platform of promotional offers.

In addition, a number of events were organized to give our employees a greater sense of belonging and well-being:

- Sporting events (free Millville Night tickets; Philadelphia Eagles Superbowl support party)
- Meals for special occasions (Thanksgiving, Christmas, etc.)

Lastly, Arc Americas has provided all its employees with a free meditation application, enabling them to hold virtual group sessions.



14,448 hrs  
of training



## Involvement in our local community

From the outset, Arc Americas has been committed to its local community. This year is no exception, and the company has shown its commitment via a number of partnerships.

Firstly, we renewed our partnership with the local YMCA association, which is committed to strengthening the community by empowering young people, improving the health and well-being of people of all ages, and inspiring action in and across communities. This commitment resulted in the donation of over 1,000 gifts, 90 bags of household items and numerous glassware items to local families in need during festive events (Halloween; Bless It Forward; Valentine's Day; Healthy Kids Day).

In partnership with Cumberland County Tech, we welcomed more than 40 engineering program students for a tour of the plant, introducing them to the various trades through the shared experiences of several employees.

### Student testimonials

*"I found it particularly interesting to see how people of all backgrounds work together to create a product."*

*"Visiting a facility like this has been the most amazing experience I've had so far in my engineering career."*

Last but not least, we have organized several events to help young people entering the job market. Our HR managers took part in a coaching event and gave students the opportunity to conduct mock interviews.

We are also involved with Hope & Liberty, an association that provides information, resources and referrals to victims of domestic violence, the homeless and disadvantaged young people. We offered interviews to anyone who wanted one.







# Dear Partners,



In line with Arc's mission to create sustainable glass, Arc Glassware China is constantly looking for ways to reduce its carbon footprint, meeting both the Group's sustainability strategy and the Chinese government's compliance requirements.

As a responsible company, we not only strive for excellence in product quality and production efficiency, but also attach great importance to environmental and social benefits.

With regard to energy consumption, we have decided to invest in solar power generation using the roofs of our warehouses and other available space, with the aim of reducing our consumption of electricity from the grid.

Our atmospheric emissions are also under control, thanks to the installation of a nitrogen oxide particle filter.

To protect local air quality, we have adopted air emission standards that are stricter than industry norms.

For products and packaging materials, we are constantly looking for ways to optimize design to reduce weight and transport pollution.

Lastly, in our production process, we strive to achieve zero wastewater discharge wherever possible.

We strive to adopt the concept of sustainability at every level of the company's processes: from product design to shop-floor production, from equipment renovation to energy supply, and from personnel development to customer relations.

**Bharat Bhushan**

General Manager, Arc Glassware China



# Arc Glassware China Background

## HISTORY

Located in Nanjing, our Arc China plant is a joint venture owned 98% by the Arc Group and 2% by Nanjing New Type Industry Group.  
Our subsidiary manufactures glassware in China, mainly supplying the APAC region.



Arc Glass  
Nanjing  
established

1999



ISO 9001  
certification

2005



ISO 14001  
certification

2008



ISO 50001  
certification

2014



ISO 28000  
certification  
for Supply  
Chain  
Security

2019



Arc China  
celebrates  
its 20<sup>th</sup>  
anniversary

2023

2003

First furnace  
inaugurated

2006

OHSAS 18001  
certification



2011

A Safe Arc  
Together



2017

Arc Glass  
Nanjing  
becomes  
Arc Glass China  
  
Second furnace  
inaugurated



2020

ISO 45001  
certification  
for Occupational  
Health and Safety,  
replacing  
OHSAS 18 001



## KEY FIGURES



**720**

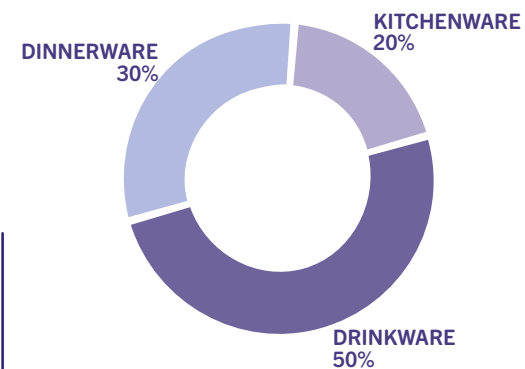
PERMANENT  
EMPLOYEES



**220**

Tons of  
production  
capacity

**2** FURNACES



**¥545M**

OF SALES  
IN 2023



REGIONS  
SERVED  
**APAC**

**20**  
YEARS  
IN BUSINESS



**3**  
DISTRIBUTION CHANNELS  
Consumer Goods  
Food Service  
Arc Customised Glass





# Circular Economy & Climate

## Our roadmap

### MEASURING OUR FOOTPRINT

At Arc Glassware China, in line with the Arc Group's CSR strategy, we are committed to reducing our environmental impact, based on two key pillars: the circular economy, and a reduced environmental footprint throughout the life cycle of our products.

AGC has held ISO 14001 certification for its environmental management system for many years now.

This is based first and foremost on identification, assessment and compliance with regulations. The environmental demands of public authorities, particularly with regard to air and water, have pushed us to improve in recent years.

Continuous improvement projects relating to the environment are monitored on an annual basis. The glass sector is not currently subject to a carbon market in China. However, we are working to reduce our climate footprint through a number of initiatives.



### REDUCING OUR FOOTPRINT

#### Reducing product weight from the design stage onwards

We are engaged in a strategy of applying eco-design principles to reduce the weight of our products. By making our products lighter, AGC helps to reduce the upstream impact of production, while at the same time offering products that are more competitive because they have less environmental impact and cost less. By reducing the use of raw materials and energy during production, we reduce the extraction of raw materials and energy requirements.

In 2023, our product development team redesigned 10 products, accounting for more than 9 million manufactured items, in order to reduce weight by up to 25% in some cases without altering product characteristics and strength. This has enabled us to reduce the weight of these products by an average of 6.4% in 2023; i.e. nearly 200 tonnes of glass saved.



Lightweight Design				
Product	Weight (g)		Production in 2023 (pieces)	Tonnes of glass saved by 2023 thanks to lighter products
	Before	After		
1	180	130	275,424	14
2	212	175	92,640	3
3	260	225	118,128	4
4	330	305	117,819	3
5	340	325	2,603,004	39
6	370	360	1,026,575	10
7	370	360	985,636	10
8	270	240	999,132	30
9	330	300	2,406,430	72
10	400	385	416,125	6
Total				192

This lightweighting approach will continue over the coming years, in partnership with our customers. We also plan to apply these principles to the design of new products.

## Improving energy efficiency

Glass production is an energy-intensive industry that consumes a lot of electricity and natural gas.

With furnaces running all year round, it is vital for us to be able control our energy consumption as effectively as possible. AGC is aware of this major challenge, and has been running an ISO 50001-certified energy management system since 2014.

As part of this continuous improvement approach, a team that reports directly to the production manager is in charge of the energy management system. The team collects and analyzes data on energy consumption, and identifies ways of improving and optimizing it.

As a result, we were able to make modifications to electrical equipment, reducing consumption by more than a third. In 2024, we plan to study the possibility of introducing this solution at other similar facilities.

In 2023, this team studied the possibility of automatically comparing energy consumption against a standard, and issuing an alert in the event of any discrepancy. This standard is defined according to the article's manufacturing process. This improvement, which will be rolled out in 2024, will enable more precise monitoring of energy consumption, and decisions on actions to be taken.



The installation of a new fan technology for our compressors in one of our workshops has delivered energy savings. This new technology also benefits the working environment by reducing noise levels. In 2024, we plan to examine the benefits of introducing it on other equipment.

While most of our energy consumption is accounted for by our production processes, we have not overlooked the energy consumption of our buildings. LED lighting has been the norm for several years now in all our offices and workshops.

In order to continue reducing our electricity consumption from lighting, we have installed detectors that reduced our energy consumption from lighting by 36,471 KWh in 2023.



## Increasing our share of renewable electricity

Since 2021, AGC has been installing solar panels on the roofs of its warehouses. The first phase of this project saw the installation of 2 MW of solar panels, which have since produced 1,900 MW of electricity per year. The second phase of the solar project, involving the installation of 3.5 MW of solar panels, is currently being assessed, with a 2025 implementation date.

Lastly, the use of “green” electricity is increasing at a significant rate throughout our supply chain, and we want to play a full part in this movement. For this reason, as part of our own growth, we completed an assessment of the purchase of “green” electricity via certificates of origin in 2023. In 2024, all of AGC’s electricity consumption is therefore expected to be “green” electricity.



## Reusing our wastewater

Water is also used extensively in the glass industry, mainly for plant cooling and for safety reasons.

Fluosilicate production molds undergo a special surface treatment to extend their service life. This operation is water-intensive.

The water used in this stage is reused directly after passing through a water treatment plant. This ensures that no wastewater is discharged.



## Reducing the impact of packaging

Our glass products have an impact, and so does the packaging which protects our products.

In 2023, following discussions with our distributors, we were able to establish that we could make changes to the weight and certain specific features of our paper-based packaging.

After these structural adjustments, the packaging passed our distributors' tests. It has also reduced packaging costs by almost 800,000 rmb (€100,000) per year.

Finally, with a view to reducing our consumption and waste, our warehouse has initiated a project to repair and reuse wooden pallets. Specialized personnel replace or repair damaged planks to rebuild pallets that comply with standards for use.

This reduces the number of pallets that are scrapped. In 2023, almost 13,000 pallets were repaired, and the number of scrapped pallets fell by 62% compared with 2021, reducing waste and the use of forest resources.





## SAFETY CULTURE

Our industry generates risks that we need to control. Our aim is to protect the health and safety of all our employees, visitors and contractors, in line with regulations.

AGC has been ISO 45001-certified for its safety management system for several years now. This system is based on identifying hazards and safety risks. Each workstation is subject to an annual workplace safety assessment.

We encourage employees to always report cases of near misses or dangerous situations. They are recorded and analyzed by the Health, Safety and Environment department, which takes corrective action.

Continuous improvement projects are implemented to ensure plant compliance and prevent safety risks. We interact extensively with local public authorities on safety and fire-fighting issues.



## Improving working conditions

Our glass production process is divided into two components: hot glass forming and cold packaging. The high temperatures and noise in the workshop are produced mainly by the "hot" component. At one of our plants, the hot and cold areas had not been isolated.

To improve working conditions in the cold area, partitions were installed. This considerably reduced noise levels for employees in the cold area, who are responsible for packaging, and also limited the number of incidents of heat stroke in the cold section.

Similarly, when designing one of our furnaces, air-conditioned and soundproofed break rooms were installed on three production lines in the hot area and the basement of the furnace.



## Evacuation drill and fire-fighting training

Although it is important to prevent incidents, it is equally important to be able to react as quickly and effectively as possible. To enhance employees' fire-fighting awareness and skills, four evacuation and emergency response drills are held each year, with all staff participating.

In addition, external trainers are called in to provide employees with first-aid and fire-fighting training.



## INCLUSION AND DIVERSITY

Every month, employees celebrating their birthday are invited to a discussion with management. This encourages communication and information sharing.

In addition, a monthly prize is awarded to one employee for their commitment and efforts within the organization. Another annual prize is awarded to a team that has particularly stood out during the year.

These two initiatives strengthen the sense of belonging among all AGC employees.



Lastly, to celebrate AGC's 20th anniversary, a big party was held. This was a reminder of the close collaboration between Arc France and Arc Glassware China that began during this period, to train new AGC employees in glass manufacturing and help them get their facilities up and running. This collaboration was very popular with Arc employees, who were able to forge numerous links and meet up again via videoconference before sitting down to a meal together on their respective sides of the globe. This inter-entity collaboration is pursued through various industrial projects, technical exchanges, commercial relations, etc.; there is no shortage of opportunities.



## Supporting women employees

The glass industry is a male-dominated sector. AGC encourages the integration of women into the company. In addition to the statutory leave granted to women in employment (maternity leave, breastfeeding leave, childcare leave), a supplementary childbirth allowance has been introduced.

Also, to make it easier for nursing mothers to return to work after giving birth, we provide a specially-equipped room.



## Enhancing employee skills for career development

It is vitally important to enable our employees to improve their skills and grow throughout their careers. The company offers a range of training courses to help employees improve their skills and develop their careers.

There are on-the-job, online and offline training courses covering compliance, safety, technical skills, technical training and leadership training. In 2023, an average of over 50 hours of training were provided for each employee.

In April 2023, AGC launched a new multi-skilling program. This enables workshop staff to move their careers forward and improve production performance. By 2023, 37 employees had been certified.

Lastly, to further knowledge in the field of CSR, e-learning courses developed by the Group are available to our employees. Since these training courses were made available, 32 AGC employees have taken at least one of these courses (i.e. 20% of the eligible workforce for this training), including 18 in 2023 (i.e. 12% of the eligible workforce).



When we use contractors, for purposes such as security and catering services, we give priority to local subcontractors in order to support local employment, and require subcontractors to comply in full with social responsibility standards. An annual in-house CSR audit is carried out with these service providers, and areas for improvement are monitored.

In addition, an annual audit, including a social responsibility assessment, is carried out with our main raw materials and packaging subcontractors. It is overseen by the Purchasing department.

AGC is a board member of the China National Association of the Glass Industry (CNAGI), and participates in the development of industry standards such as QB/T 5362-2019 (Norm of Energy Consumption for per Unit Product of Glassware).

In 2023, AGC won the title of "Advanced Organization for Joint Police-Company Prevention". The company participates in joint fraud prevention operations with the police. To raise employee awareness of this issue, AGC invited the police to hold a training session on the subject.







# Dear Partners,



The situation in our region is changing, with more and more initiatives and regulations being implemented by the Emirati authorities for a transition to a more sustainable economy; this is reflected in targets to optimize energy consumption and increase the share of renewable energies in the country.

In 2023, Arc Middle East installed its first continuous energy consumption measurement systems on both of the fluosilicate furnace lines, and on one of the soda-lime glass furnace lines. This has enabled us to implement measures to streamline consumption and measure their impact on the various production runs. Similarly, we have reduced the number of compressors to one on the fluosilicate furnace, and plan to upgrade our cooling equipment and compressors in 2024 to improve their energy efficiency. Finally, we have engaged in the ISO 50001 process, with the aim of obtaining certification in December 2024.

With regard to water management, which has always been a key issue in our region, the water used in production is for the most part closed-circuit or recycled.

In 2023, a drainage system was installed in our basement, enabling us to reduce water wastage while improving the safety of our employees.

We are also continuing with measures to reduce packaging waste, with the repair of used pallets and the systematic reuse of our cardboard components in new packaging.

On the safety front, we are continuing our Safety Star of the Month/Year program, which rewards the most committed and efficient teams in terms of safety, and at the start of the year we established a network of 18 ambassadors to promote a safety culture throughout the site.

Lastly, we are continuing our program of sporting and cultural activities and events for our employees, with a particular focus on the 60% of them who are housed in company accommodation.

**Gwenaëlle L'Hénoret**

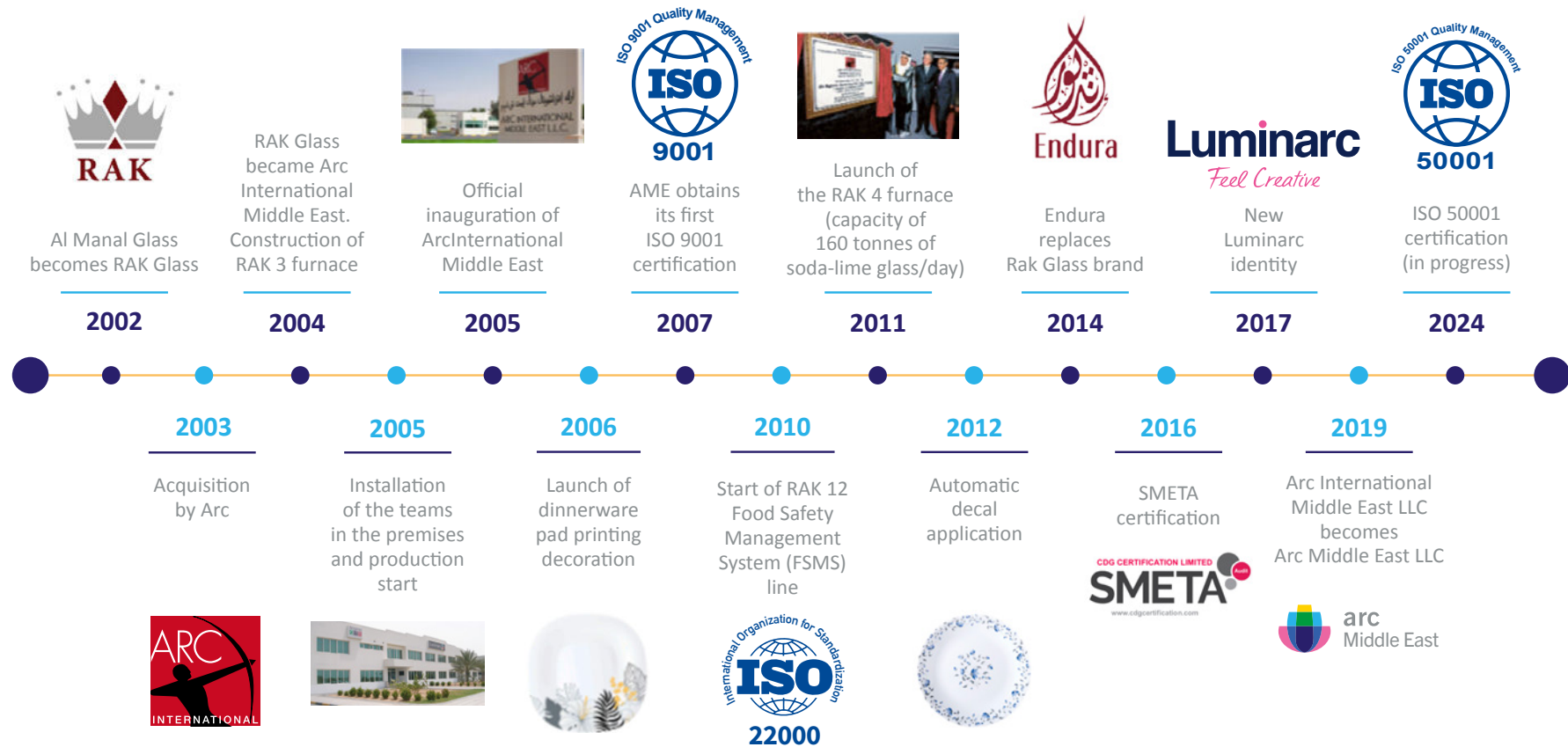
General Manager, Arc Middle East



# Arc Middle East Background

## HISTORY

Located on the Arabian Peninsula, the United Arab Emirates is a desert or semi-desert country. For this reason, we at Arc Middle East were quick to recognize the need to minimize our footprint.





MARQUES

**Luminarc**

**arcopal**

**ARCOROC**



PRÉSENT DANS PLUS DE



PAYS

2

FOURS : OPALE et  
SODOCALCIQUE



600 K

ARTICLES  
PRODUITS CHAQUE JOUR



CIRCUITS DE DISTRIBUTION  
Consumer Goods  
Food Service,  
Arc Customised Glass



990

EMPLOYÉS  
PERMANENTS



80 M

USD  
DE CHIFFRE D'AFFAIRES EN 2023



2004

ANNÉE DE CRÉATION





# Circular Economy & Climate

## Our roadmap

### MEASURING OUR FOOTPRINT

Following the publication of the Group's CSR strategy, Arc Middle East integrated it in order to tailor it to its own specific operations and situation. This prompted us to set up measurement and metering systems to provide data for our continuous improvement systems. Through this initiative, we measure energy and water consumption, waste and atmospheric emissions.

Our site, which is directly connected to the EPDA (Environment Protection and Development Authority) in Ras Al Khaimah, regularly measures its water, gas and electricity consumption and emissions. We installed a continuous energy measurement system for one of our furnaces in April 2023, and for a production line in December 2023.

This enables us to quickly identify discrepancies and take action to improve our integrated management system.

### REDUCING OUR FOOTPRINT

#### Reducing our energy and water consumption

A major part of the challenge of achieving our CO<sub>2</sub> emission targets is improving our energy performance.

This involves a wide range of measures. To reduce our electricity consumption, we replaced the light bulbs in our factory with LEDs. We reduced the number of 7-bar compressors in one of our production sectors, leading to a 17% reduction and saving 385,000 KW in one year. We also carried out a campaign to detect and repair air leaks.

In 2023, as part of our CSR roadmap, we set ourselves the target of obtaining certification for our energy management system by December 2024, and also of reducing our CO<sub>2</sub> emissions per tonne of glass produced, in categories 1 and 2, by 6% by 2026.



Our production site is a model site in terms of water management: water in the production process is used mainly to cool machines and glass. The water used in this way is either closed-circuit or recycled using two water treatment plants, ensuring that no wastewater is discharged. The first is a reprocessing station for the site's domestic water, which ensures the quality of the irrigation water.

The second is an industrial wastewater treatment plant. These two facilities recover, treat and reuse wastewater in a variety of ways, from being used in manufacturing processes to watering the site's vegetable garden! In 2023, 70% of the water used in production was being recycled. AME has set up an action plan to identify and correct water leaks.

Finally, a drainage system was created for two of our basements, and a trench was built around our cullet recovery machines to avoid wasting water and increase employee safety.

Taken together, these actions have enabled us to maintain our water consumption per tonne produced in 2023 at 2019 levels – the best performance in the Group.

Without compromising on comfort, we have also managed to achieve savings of 20% by adjusting the pressure of the sanitary water in staff accommodation.

We have set ourselves the target of reducing our water consumption per tonne of glass produced by 5% by 2025 compared with 2023.

## Taking action on our packaging and logistics

As part of its drive to reduce packaging consumption, AME has repaired wooden pallets in every possible case, thereby reducing the use of new pallets by 22%.

All AME's packaging suppliers are based in the United Arab Emirates. AME works with its suppliers to produce packaging as close as possible to demand, and to refurbish it for reuse, thus saving the equivalent of €100,000 in packaging by 2023.



# Teams

## HEALTH & SAFETY

Working in an industrial environment generates risks. In order to reduce these risks, the Safety Star of the month program has been set up to objectively measure the safety commitment and training levels in each of our teams, and to reward the teams that achieve the best safety results.

Similarly, events that encourage employees to take care of their health have been organized, such as walkathons, yoga stress management workshops, free health check-ups and lifestyle improvement awareness campaigns in partnership with the hospital.

Lastly, a blood donation campaign, supported by The Blood Donors Society and the Minister of Health, was organized.



## PROVIDING TRAINING AND SUPPORT

The glass industry is an environment that requires employees to work together in many different areas, and it is important to encourage the sharing of knowledge and know-how.

To this end, AME has created a development program that enables its employees to enhance their skills. This year, our employees completed almost 2,500 hours of training – the equivalent of 2.8 hours of training per person. Since the launch of the CSR training program, almost 90% of employees with access to these online modules have completed at least one training course.



Compared with the Group's other industrial sites, Arc Middle East has one particular characteristic: the vast majority of our employees are expatriate workers from other countries some distance away from the United Arab Emirates.

To this end, we provide several accommodation facilities especially for our employees. Over 60% of our employees live in this accommodation. So it was an obvious choice for Arc Middle East to include the well-being and successful integration of its employees, whatever their cultures, skills or identities, in its strategic priorities.

This resulted in the creation in 2016 of a Well-Being Committee with employees (elected by their peers for a one-year term) dedicated to setting up initiatives to promote well-being and health. In 2023, a number of interdepartmental sporting events were held (volleyball tournament, basketball, indoor games, marathon, and races).

What's more, with employees from 14 different nationalities, many of whom are far away from their families, we offer a wide range of events to celebrate throughout the year. Whether cultural or religious, they all provide opportunities to celebrate and create festive moments between employees.





## INDICATORS

	Reference year		Total 2020	Total 2021	Total 2022	Total 2023
<b>Tonnes produced</b>	463,572	2019	394,128	436,853	387,105	294,016
<b>Sales (€ million)</b>	€811	2019	€641	€741	€899	€736
<b>Total workforce</b>	8,159	2019	8,142	7,789	7,601	6,968
of which Permanent contracts	94%	2019	90%	94%	95%	97%
of which Temporary contracts	6%	2019	10%	6%	5%	3%
<b>Managerial staff</b>	1,795	2019	1,700	1,655	1,481	1,352
of which Men (%)	76.4%	2019	76.3%	73.6%	64.5%	64.5%
of which Women (%)	23.6%	2019	24.7%	26.4%	35.5%	35.5%
<b>Manual workers in workforce</b>	6,364	2019	6,442	6,034	6,119	5,574
of which Men (%)	85.0%	2019	82.4%	85.8%	83.97%	83.53%
of which Women (%)	15.0%	2019	17.6%	14.2%	16.03%	16.47%
<b>Training hours (hrs)</b>	130,806	2019	106,993	151,339	112,821	104,010
<b>Training hours per employee (hrs)</b>	16.42	2019	13.92	20.34	14.84	14.93
<b>Accident frequency rate</b>	9.52	2019	9.46	13.82	13.38	10.26
<b>Severity rate</b>	0.41	2019	0.54	0.59	0.78	1.01
<b>Number of deaths</b>	0	2019	0	0	0	0



	Reference year		Total 2020	Total 2021	Total 2022	Total 2023
<b>Tonnes of waste generated (cullet excluded)</b>	17,123	2019	13,882	18,313	13,992	14,087
of which recycled internally	0	2019	0	0	0	0
of which recycled externally	14,557	2019	10,646	11,605	11,405	11,560
of which non-recycled	2,568	2019	3,088	6,708	2,552	2,533
Percentage of waste recycled (cullet excluded) (%)	85%	2019	77%	63%	82%	82%
Kilograms of waste generated (cullet excluded) / tonne 1st choice glass	37	2019	35	42	36	48
<b>Tonnes of cullet generated</b>	191,669	2019	174,843	208,839	207,871	186,824
of which recycled internally	177,425	2019	171,580	197,458	187,531	176,535
of which recycled externally	12,639	2019	11,874	14,993	11,877	13,581
of which non-recycled	5,336	2019	2,825	2,661	4,719	2,656
<b>Generated cullet recycled (%)</b>	99%	2019	100%	100%	96%	100%
<b>Tonnes of CO<sub>2</sub> (scope 1)</b>	431,022	2019	396,839	419,978	376,617	296,381
<b>Tonnes of CO<sub>2</sub> (scope 1) / Tonne produced</b>	0.93	2019	1.01	0.96	0.97	1.01
<b>Water consumption (m<sup>3</sup>)</b>	2,744,137	2019	2,349,384	2,496,512	2,412,946	2,223,092
of which surface freshwater (m <sup>3</sup> )	1,172,777	2019	1,122,741	1,179,065	1,060,575	926,438
of which groundwater (m <sup>3</sup> )	547,428	2019	487,831	461,039	391,575	287,921
of which running water (industrial - non-drinking m <sup>3</sup> )	338,026	2019	277,333	302,518	326,027	281,125
of which drinking water (m <sup>3</sup> )	482,999	2019	461,479	553,890	635,192	728,327
<b>Water consumption / Tonne produced (m<sup>3</sup>/T)</b>	5.92	2019	5.96	5.71	6.23	7.56



	Reference year		Total 2020	Total 2021	Total 2022	Total 2023
<b>Total energy consumption (MWh)</b>	2,471,734	2019	2,288,061	2,402,986	2,075,238	1,780,508
of which gas consumption (MWh PCI)	1,907,885	2019	1,752,097	1,849,580	1,656,265	1,348,029
of which electricity consumption (MWh)	563,849	2019	535,964	553,405	518,860	432,480
<b>Renewable energy production (MWh)</b>	0	2019	0	761	1,854	1,948
<b>Renewable energy consumption (MWh)</b>	119,616	2019	123,292	122,185	91,730	78,832
<b>Renewable energy purchased (MWh)</b>	56,940	2019	57,096	56,940	11,680	22,800
<b>Total energy consumption (MWh)/Tonne produced</b>	5.33	2019	5.81	5.50	5.36	6.06



Arc has supported the Global Compact since 2003

Arc was quick to understand the importance of sustainable development and was one of the first French companies to sign the United Nations Global Compact in 2003. The Group's values were and remain similar to those of the Global Compact's principles. As such, the company's employees fully understood and integrated the Group's membership.

In the following years, we started to identify and implement improvements and to report on them in a first sustainable development report in 2005.

The 10 principles of the Global Compact are universal and apply to all our businesses and sites. The United Nations Global Compact is recognized around the world and by all our customers, for whom it is a guarantee of good social and environmental practices.

These ten principles are illustrated through the different initiatives presented in this report. For ease of reading, the table below provides a link between good practice and the Global Compact principles.



Categories	Principles	Policies and good practices	References
Human rights	1. Businesses are encouraged to promote and respect the protection of international human rights law	<ul style="list-style-type: none"> <li>• Internal regulations and HR policy</li> <li>• Code of Ethics</li> <li>• Supplier Code of Conduct</li> </ul>	Internal documents; Pages 9 to 11; 29; 44 to 46
	2. Ensure no complicity in human rights abuses		
International Labour Standard	3. Companies are urged to respect freedom of association and recognise the right to collective bargaining	<ul style="list-style-type: none"> <li>• Internal regulations and HR policy</li> </ul>	Internal Documents
	4. Help to eradicate all forms of forced or compulsory labour	<ul style="list-style-type: none"> <li>• Code of Ethics</li> <li>• Supplier Code of Conduct</li> </ul>	Internal documents; Pages 9 to 11; 29
	5. Help to effectively abolish child labour	<ul style="list-style-type: none"> <li>• HR Policy</li> <li>• Code of Ethics</li> <li>• Supplier Code of Conduct</li> </ul>	Internal documents; Pages 9 to 11; 29
	6. Help to eliminate discrimination in employment and occupation	<ul style="list-style-type: none"> <li>• Develop glassmaking talent</li> <li>• Promote diversity</li> <li>• Internal regulations and HR policy</li> <li>• Code of Ethics</li> </ul>	Internal documents; Pages 9 to 11; 44 to 46; 57; 68; 77
Environment	7. Companies are encouraged to take a precautionary approach to environmental issues	<ul style="list-style-type: none"> <li>• Comparative LCA and Eco-design</li> <li>• Reducing the impact of our supply chain</li> <li>• Innovating in our production process</li> <li>• Designing responsible packaging</li> <li>• Promoting re-use</li> </ul>	Pages 27 to 40; 52 to 55; 62 to 65; 74 to 75
	8. Take initiatives to promote greater environmental responsibility		
	9. Promote the development and distribution of environmentally friendly technologies		
Anti corruption	10. Companies are urged to tackle corruption in all its forms, including extortion and bribery	<ul style="list-style-type: none"> <li>• Code of Ethics</li> <li>• Supplier Code of Conduct</li> </ul>	Internal documents; Pages 9 to 11; 29





## Methodological note

This sustainability report, published in June 2024, addresses Arc's need to communicate the 2023 (01.01.2023-31.12.2023) sustainability performance to all its stakeholders, with information and referencing data from prior years as well.

The report considers Arc's performance from an environmental and social perspective. Although Arc's reporting is voluntary, we have been committed to structured non-financial reporting for many years. This enables an increasingly comprehensive and transparent presentation to key stakeholders.

The reporting scope of the sustainable development report includes Arc Holdings S.A.S., headquartered in Arques, as well as its entities Arc France (France), Arc North America (US), Arc Middle-East (United Arab Emirates) and Arc Glass China (China).

This report endeavours to follow the GRI Sustainability Reporting Standards (GRI Standards) published in 2021 by the Global Reporting Initiative, which is the most widely used international benchmark for sustainability reporting.

The core principles of definition and quality provided by the GRI standard followed in this edition are stakeholder inclusion, sustainability context, materiality, completeness, accuracy, balance, clarity, comparability, reliability and current relevance.

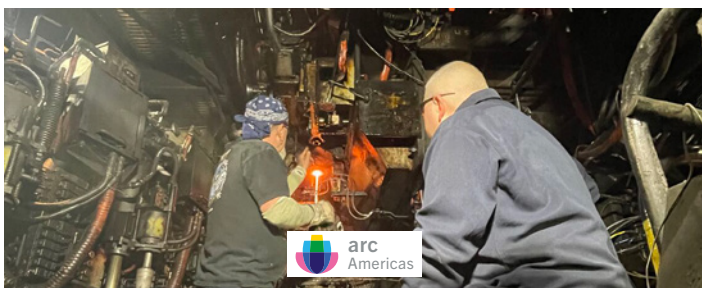
The topics covered in this report are considered relevant because of the environmental and social impacts of Arc's business or because they are likely to influence the decisions of our stakeholders. These substantive themes were identified by conducting a materiality analysis using an organized and coordinated approach.

This report has not been audited by an independent third party.

For more information on this report, please contact:

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