

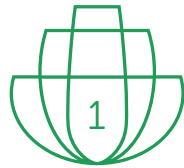
THE ECOLOGICAL TRANSFORMATION OF ARC FRANCE

PRESS KIT

September 2023



Innovative glass for a better world



A Successful Transformation

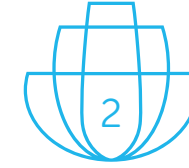
Arc, the world leader in tableware, began the process to reduce its environmental impact many years ago. The most emblematic examples are the development of new, more sustainable materials, the creation of product ranges adapted to new consumption patterns, and recycling waste from production.

In 2020, the Arc Group took another important step in the process by launching the Arc Responsible program. It is an authentic in vivo testing laboratory that matches Arc France's scale. The plan is to test major developments in product design, production, supply chain, energy, water, reuse and recycling in real conditions.

2020

Launch of
Arc Responsible
- a Europe-wide program





Developing new, more sustainable materials

Arc is innovating to design new, increasingly resistant materials to make more durable products. Culinary opal, created by Arc researchers in 2018, is three times more resistant to impact than conventional materials designed for oven use. This innovation resulted in the creation of the Smart Cuisine culinary collection which was voted Product of the Year in France in 2019.

The Group's laboratories have also developed solid colour opal dishes that are produced by adding the dye directly to the raw material. It has remarkable properties, including excellent resistance to mechanical impacts, chipping, and dishwasher use which significantly improves its lifespan.

Krysta is another example of a material with unique properties. It was specially designed for the catering, wine, and hospitality sectors.

It is 30% stronger than conventional crystalline glass and maintains its brilliance, shine, and transparency despite intensive use.

Finally, with Euramaterials, Arc signed a partnership with the Béthune U.I.T. (University Institute of Technology) in 2022 to develop bio-resins for decorative objects.

The project, entitled BioBaR, is among winners of the STIMule1 Hauts-de-France Region scheme.



x3

Culinary opal is three times
more robust than conventional materials
Colored opal is three times more resistant
to mechanical impact and chipping

+30%

Krysta is 30% stronger
than conventional
crystalline glass



Eco-designed products

Launched in 2020 with the implementation of the Arc Responsible program, eco-design involves integrating the environmental impact of a product from the early stages, starting from design. The R&D, design, marketing, production, and sustainable development teams work together to minimize the environmental impact throughout the product's life cycle from the development phase.

The first products resulting from eco-design in 2021 were released in 2023, such as the black box designed with 70% internal scrap glass. An achievement made possible by the development of Arc's eco-design approach with fundamental and ongoing cultural and organizational transformation.

This is reflected in an eco-design charter for design, product development, and Arc France sales teams to raise their awareness and guide them when choosing solutions.

The eco-design charter also helps Arc to dialog with customers about their needs to co-construct pertinent specifications in line with Arc's eco-design principles. From 2025, new products developed for the group's brands will follow eco-design principles resulting from this first project. The pilot project is supported by the French Ecological Transition Agency (ADEME).

2021

First workshops
for eco-design
products

2023

Distribution of our
first eco-designed
products





New consumption patterns

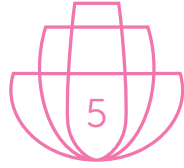
Several notable changes in consumption patterns have emerged in recent years. The first example is the increase in sales of unpackaged products. Legislation in many countries has followed and amplified this new development, such as the obligation for supermarkets to sell unpackaged products. Arc has anticipated and supported this new way of consuming and storing products by creating special ranges of glass containers, such as the Pure Jar collection in the Luminarc® brand. The group contributes to reducing the volume of disposable packaging by providing a healthy, practical, and attractive solution.

Another example is the comeback of deposit-refund glass containers. By offering reusable solutions, Arc helps to promote these changes in consumer behavior.

50%
of household
waste are packaging
(Zerowaste France)

63%
of the French population
buy unpackaged
products and
1 in 5 do so weekly
(OpinionWay)

85%
reduction in the global
environmental impact of
packaging thanks to the
deposit-refund system
(ADEME)



Glass: an alternative to disposable

Single-use plastic containers will soon be banned in many countries (Egalim law in France). To support this change, the Arc group's marketing and R&D teams have developed the So Urban (Arcoroc®) range which encourages more rational consumption. It offers durable, reusable, and deposit-refund glass containers, specifically designed for the catering sector, takeaway and delivery.

Made of glass which is a healthy material that guarantees organoleptic quality and health safety, the containers have many advantages and features designed for catering professionals, being durable, light weight, and stackable.

2022

At least 50%
of durable containers
in collective catering

2023

The AGEC law requires fast food
outlets to use reusable dishes
for food and drinks served on site





Optimization of the entire supply chain

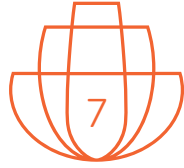
The entire supply chain has been reviewed to achieve more responsible production. Priority is given to local producers and low-impact transport to limit the carbon footprint of deliveries. As a result, Arc France buys 70% of merchandise from suppliers located within 500 km of its production site and 75% of the raw materials used are transported by river.

For packaging, the most sustainable solutions are given priority: 100% of the cartons used for packaging come from sustainably managed forest resources with the FSC label (Forest Stewardship Council®).

70%
of purchases within
500 km of the French
production site

75%
of raw materials
transported
by river

100%
cardboard
packaging with
the FSC® label



The immense energy challenge

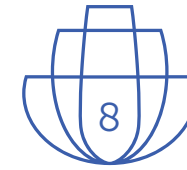
The energy needs of the world leader in tableware are considerable given the quantity of glass production. At the original production site based in Arques, in the north of France, the furnaces are heated to 1,600°C and operate 24/7. Equipped with regenerators, the furnaces recover part of the calories created by gas combustion, but the energy issue is key to reducing the environmental impact.

Arc has been using electric fusion for the production of fluosilicate (opal) glass for many years. It is now the subject of intense research for applications such as melting soda-lime (transparent) glass, which proves to be much more complex. The long-term ambition is to switch to electric power for the majority of the furnaces on the French site. The switch to electric smelting furnaces aims for a 37% reduction in emissions compared to 2019 for the whole site by 2030.

37%

emission reduction
by 2030





Recycling

Glass is one of the only recyclable materials with practical zero waste. It can be recast many times without altering its qualities.

Waste cullet from our production went to landfill over 30 years ago. These days, almost all glass waste from production and control phases is recovered in the form of what we call "internal cullet", then automatically returned to the manufacturing process at a rate of 30% per item. The reuse of internal cullet reduces CO₂ emissions by reducing energy consumption.

Glass is recyclable, but is it "recycled"? Quite absurdly, unlike «packaging» glass such as bottles and jars, glass from tableware such as glass plates and drinking glasses is not accepted in existing recycling selection, especially in Europe.

Throughout 2022 we worked with professional organizations, customers and partners to ensure that our soda-lime glass products can be collected for recycling to increase the amount of cullet available for reuse. This program continued through 2023.

100%

recycled scrap
of which 92% for
new glass production



Water - a precious resource

Water is essential to ensure the alchemy of glass manufacturing, mainly for cooling equipment, but also because life on site involves 4,500 people with water consumption for everyday use.

The Arques site takes water from two sources with different qualities. Surface water, the majority of our water resource, is extracted at 3 meters. This water, which is not safe for drinking, is sufficient for production. Deep water is extracted at more than 100 meters. Until 2020, this water was used for both production and sanitary use for people on site.

Arc has set up a water management system to monitor and analyze consumption. Action plans and investments are deployed to optimize water use.

As a result, in 2020, a program to check and repair sanitary water systems was implemented on the Arc France site. With the installation of new and more economical equipment, a total of 18,000 m³ of sanitary water is saved every year.

In 2021, Arc implemented a new surface water circulation and pumping system. As a result, Arc has reduced the use of drinking water for production by over 100,000 m³ per year.

These actions reduced water consumption by 5.6% per tonne of glass produced in 2022.

100,000 M3

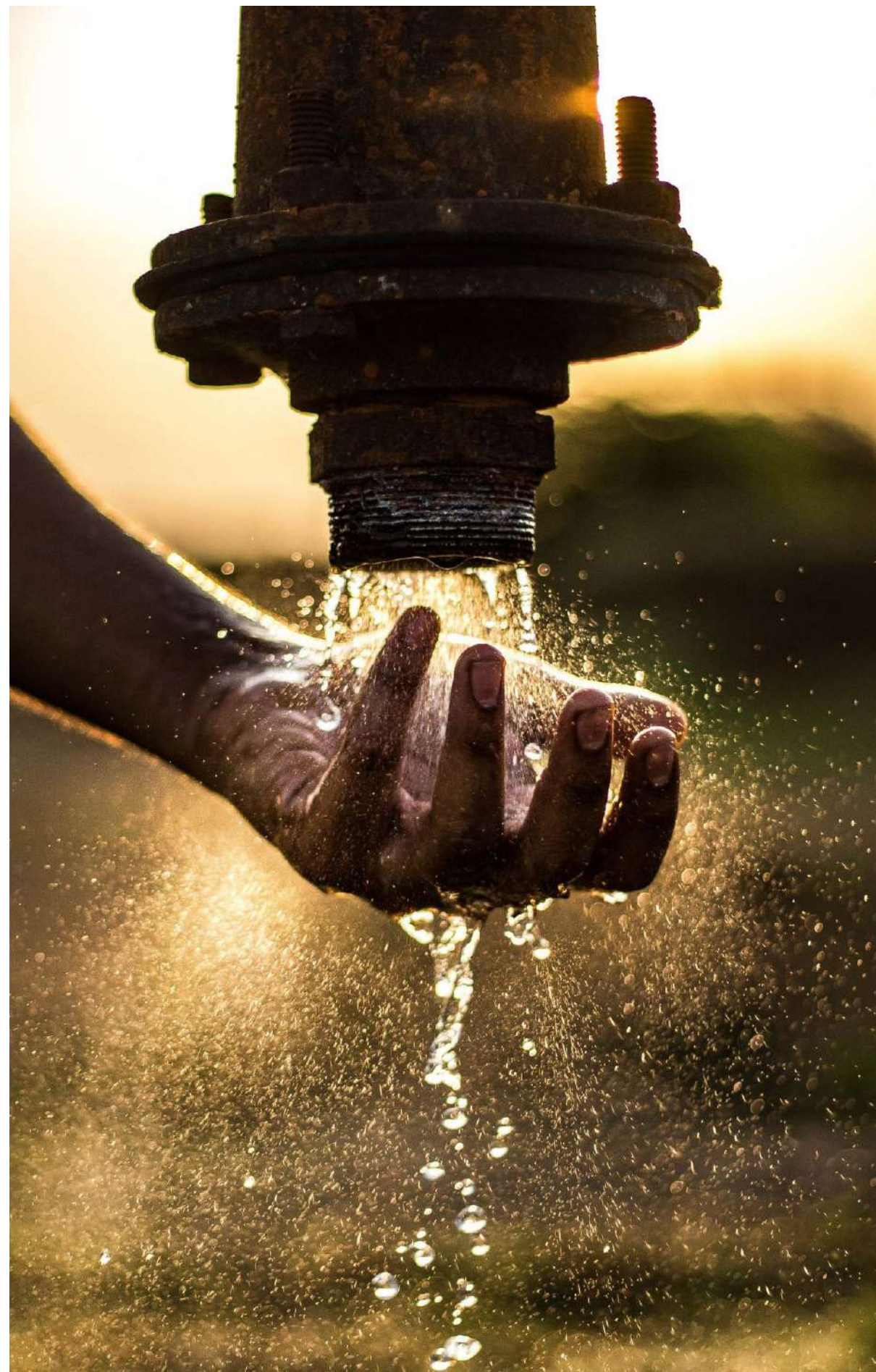
drinking water saved
in 2021

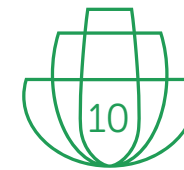
-5,6%

water consumption
per ton of glass
produced in 2022

94%

water from the Arc France site
in a closed circuit





The Arc Group,
world leader in tableware

7,000
employees

4.1 M
items produced
every day

4
production sites
around the world

160
in over
160 countries

12
R&D trademarks
every year

900 M€
of turnover
in 2022

74 M€
of investment
in 2022



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