



2016  
ANNUAL REPORT

2016 SUSTAINABILITY  
REPORT



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## I. Prologue

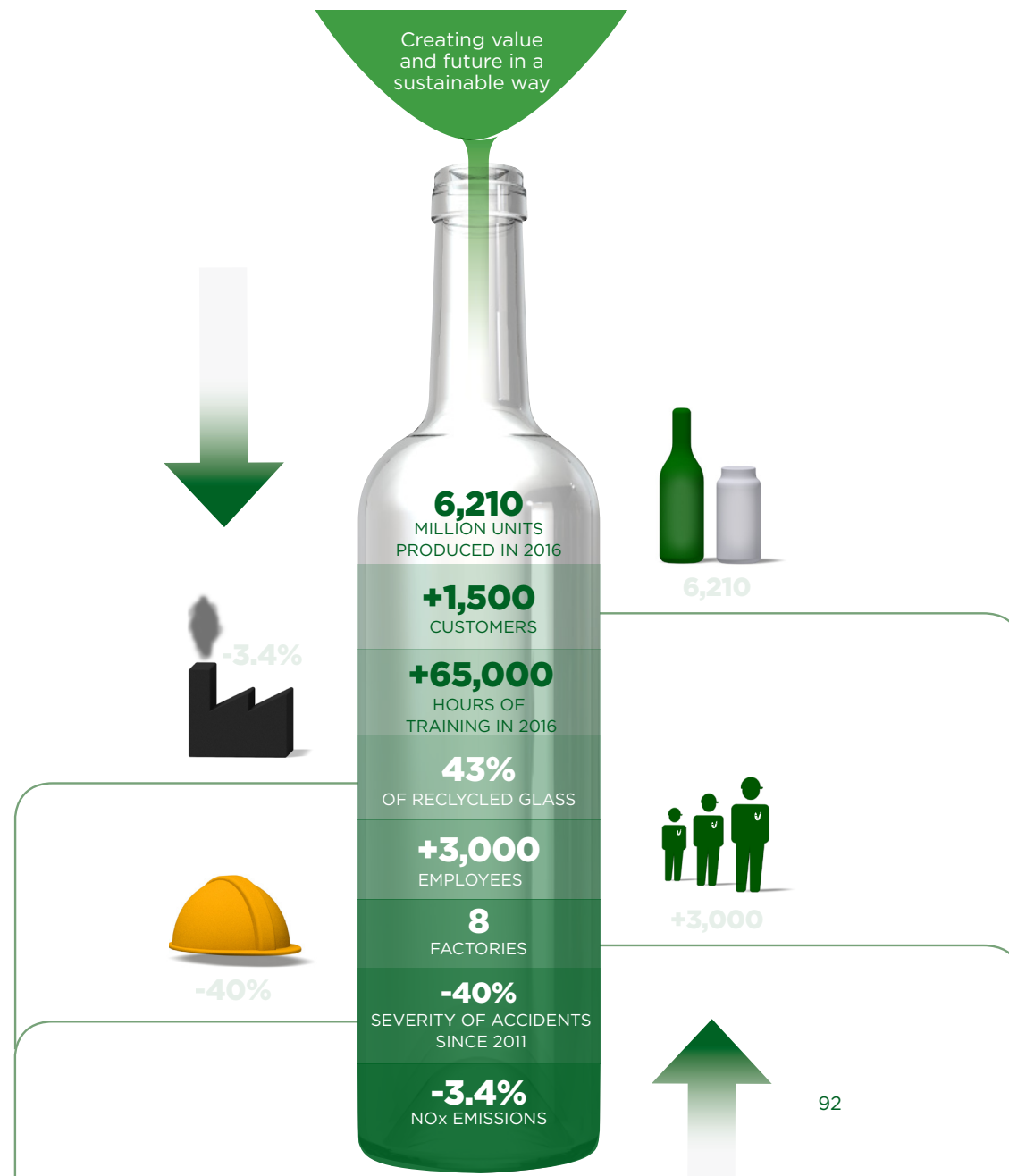
Vidrala presents its sustainability report for 2016, a document that shows the performance of the company in the field of sustainability with facts and figures. Every year, Vidrala commits itself to the parties that make up our value chain, by communicating and transmitting the objectives that have been achieved, the challenges which require a response and the expectations of the organisation.

Since it published its first sustainability report in 2010, Vidrala has undergone great changes. Vidrala has opted for an improvement in production, a change in strategy and a commitment to people, as reflected in the annual reports. Vidrala is changing, evolving. Over more than five decades, it has grown from being a bottle factory to an organisation driving what should be the new way to produce: creating the best product, satisfying its customers, taking care of the environment and being involved with people. These principles govern the daily activities of Vidrala and also structure this report.

Vidrala is proud to be able to work with an exemplary material in terms of the circular economy: glass. The most recent European policies and strategies commit to a cycle closure model as a way to minimise the generation of waste, optimise energy consumption and foster economic growth that is compatible with being environmentally-friendly. For this reason, glass and its production cycle represent the way in which industry, citizens and public bodies can interact to generate profit in all of these areas. Consuming products packaged in glass and depositing them in the green container is a common gesture for the majority of citizens, who trust glass as a preferred material for storing food and beverages. As a result, the glass industry pushes for the material to be returned to the manufacturing cycle of containers, keeping the circular economy alive.

During the past year, therefore, it has been possible to demonstrate the ability of all of the people that make up the Vidrala team to achieve the objectives of every plant and the Vidrala Group as a whole. With this spirit of improvement, we will continue to work so that during 2017 Vidrala remains at the forefront of innovation, sustainability and commitment to its customers.

## II. Magnitudes 2016 del Grupo Vidrala



### III. Sustainability as a fundamental value

Vidrala SA has been manufacturing glass containers for the food and beverage industry since 1965. It is a company that is growing and evolving, an organisation with a clear vision: to put people, customers and suppliers at the centre of all of the actions implemented. This is the only way we could achieve the figures that certify the growth of Vidrala in 2016: more than 17 million glass containers created daily. This effort has allowed Vidrala to position itself as the 4th largest European operator, offering a service that, in addition to the manufacture of glass containers, includes packaging/bottling processes, logistics services and the Vidrala Academy, a new way to create training and expertise in the glass container sector.

The Vidrala Group has always had four strategic pillars that have kept alive the spirit of sustainability of the Group: customers, people, operational excellence and the creation of value through optimum investments. These four axes have been the key to implement policies that structure the work of Vidrala: the satisfaction of its people, operational performance and continuous improvement. For the Vidrala Group, sustainability involves developing its vision in an orderly, stable and safe manner, so that, in the future, Vidrala people integrate environmental sustainability and safe, healthy work into their decisions. This has positioned the organisation as a leading company, which is appreciated and respected by its stakeholders. Values such as environmental and social commitment, continuous collaboration and innovation are now part of the daily work of Vidrala. Working with and for glass is a commitment to sustainability. The Vidrala Group is committed to sustainable development, which creates value for all stakeholders without losing sight of the present and future for its people. A business model that enables the company to ensure a future of healthy people and a healthy environment.

### IV. Vidrala principles

#### a. Creating the best product

Excellence as a work philosophy. After more than five decades of continuous work and thanks to the efforts of many people, the Vidrala Group has managed to position itself solidly in the market, ensuring its independence, providing competitive differentiation and being a profitable company that is committed to growth in the future. The group's results position it as a leader among glass container manufacturers in many areas. To consolidate all of this work, the Vidrala Group is working for operational excellence from the most sincere commitment to service.

The main objective of operational excellence in the Vidrala Group is to promote the formalisation of an industrial management system that optimises processes by increasing their efficiency and effectiveness and improving the service level at a competitive cost. The full potential for improvement associated to the operational differences between plants is captured in this way and further integration and growth is facilitated through the deployment of the system.

All of this is achieved thanks to promoting a systematic approach to improving operations, which is capable of responding to the challenges posed by an increasingly global, volatile and complex market.

## Customer satisfaction

One of the cornerstones of the Vidrala Group's commitment to operational excellence is working to achieve maximum customer satisfaction. This is one of the basic principles: creating the best product to exceed the expectations of all those who rely on Vidrala as their supplier of glass containers. A close, continuous relationship with customers is the best way for the Vidrala Group to understand their needs, analyse their interests and thus be able to offer current and future solutions.

Trust is a fundamental value in the relationship with customers. For years, the Vidrala Group has assessed satisfaction by means of surveys. Knowing customers' perception is key to Vidrala, as it is the most direct channel for assessing the most strategic aspects and being able to evolve and continue to improve in those areas that are considered to be the least satisfactory.

In 2016, following in the footsteps of previous years, a new edition of the survey was prepared, which most customers were invited to take part in. The results were the best obtained since assessments started through this survey in 2005. Customers provided a positive assessment of the Vidrala Group, with a score of more than 8 out of 10 and there was high confidence in the brand, demonstrated by the fact that the vast majority (85%) of people surveyed would recommend the Vidrala Group as a leading supplier. The survey allowed the Vidrala Group to highlight other elements that are key to it, such as food safety. In this sense, good manufacturing and hygiene practices and the degree of depth of risk analyses are two of the most valued attributes for those who responded to the survey. In 2016, it is noteworthy how, out of all of the attributes assessed, the organisation's attitude in terms of friendliness and courtesy was valued very highly. It is no coincidence that, in times like these, it is the human quality of the manufacturers that is valued, as well as the quality of the product. The Vidrala Group continues to work daily to achieve maximum customer satisfaction.

As a result of this close relationship with its customers, in 2016 the Vidrala Group released a video detailing the success story developed with Acesur.

The relation of cooperation and association that both share stands out, the oldest oil company in the world with commercial presence in 110 countries. It is a strategic collaboration, in which the international vision, quality of the products and consumer focus of both companies to anticipate their needs is highlighted.

Thanks to this relationship policy, the Vidrala Group has been able to count on customers like the Diageo Group, the owner of the Smirnoff vodka brand, for more than 10 years. Last year, the Vidrala Italy plant made the symbolic billionth bottle of Smirnoff vodka, which it bottled at its plant in Santa Vittoria d'Alba. To celebrate the event, the representatives of Diageo went to the Vidrala Italy facilities in Corsico (Milan), where they received the bottle with a special engraving to highlight this symbolic milestone. This recognition reinforced and displayed the commitment to building stable, long-lasting relationships of trust, like the one that has linked the Vidrala Group and Diageo for more than 10 years.

**“One billion bottles represents the road that we have come along together, though our focus is on what is still to come.”**

*Giovanni Cussino*

Another way to highlight ongoing dialogue and joint work with customers is new product launches. In 2016, a number of collaboration projects were launched: with La Casera to develop the El Vermúdez container, the new Mahou Maestra, García Carrión Premium nectar, Alhambra Roja beer, the spirit Thunder Bitch, Maniva water, Veterano brandy and the redesign of Marqués de la Concordia wines, among others.

## Vidrala Group and its customers: Trust generates innovation

The new bottle for Mahou Maestra beer, a distinctive product model of high quality

The new García Carrión nectars are presented in a container developed by Vidrala

Alhambra Roja beer is presented by spotlighting the glass bottle as a differentiating element

Veterano brandy, from Bodegas Osborne, is another brand that has redesigned its bottle thanks to the Vidrala team

Marqués de la Concordia is a vineyard which bottles its wines and cavas in bottles produced by Vidrala

Thunder Bitch is a Canadian whisky which has burst onto the Spanish market, presented in Vidrala Group bottles

Maniva is a premium bottled water that comes from the Alps and is sold in Vidrala bottles

Smirnoff, one billion bottles manufactured by Vidrala for the Diageo Group brand

## A safe product

The Vidrala Group is aware that the containers that it puts on the market play a vital role in the preservation of the safety and quality of food products. Therefore, the Vidrala Group is a key link in the value chain of the food industry. As a result, it is proud to be able to say that Vidrala makes glass the only material which has received the GRAS (generally recognized as safe) rating by the Food and Drug Administration in the United States. The Vidrala Group goes beyond and puts food safety and defence as a paradigm in its daily management and activity. As a result of this commitment, the Food Safety & Defence Department of the Vidrala Group has gained momentum towards transforming and developing the organisation in the interests of food safety and defence. To the benefit, therefore, of its customers and end consumers.

The main objective of the organisation in this field is the production of food containers which are safe against both potential accidental (food safety) and voluntary (food defence) contamination. The current challenge is to move from a theoretical and reactive approach to a realistic, critical and proactive approach.



## Vidrala at the forefront of food glass packaging

Once again, the Vidrala Group is at the forefront of food glass packaging. Food quality, safety and defence are the bastion and guarantee of a safe product for customers, ensuring food safety and defence in their containers throughout the supply chain.

Throughout 2016, the Vidrala Group continued to work on the continuous improvement of the food safety and defence system. The Crisnova Vidrio and Gallo Vidro plants have achieved AA grade BRC Global Standard for Packaging & Packaging Materials certification, the highest possible rating, and Aiala Vidrio has an A grade, the second highest possible rating. At the same time, the Food Defence pilot project at Gallo Vidro, which was started last year, is still in the development phase, with the phase of analysing food defence vulnerabilities also extending to the Aiala, Crisnova and Castellar Vidrio plants.

It is important to know the context to understand the scale of the achievement, given that, at the beginning of 2017, the BRC public directory ([www.globalstandards.com](http://www.globalstandards.com)) is showing more than 3,000 companies globally certified in food packaging, with less than 40 being in glass food containers. Of these, only 20 are rated with an AA grade and 12 with an A grade, 22 and 13 respectively if the qualifications obtained by Vidrala are included. In addition, work is continuing to gradually implement the standard at the Castellar plant.

The Vidrala Group is aiming to continue to promote continuous improvement through the creation of a new Supplier Quality and Development Department in the quality area. The main objective is to generate a cultural change in the management of the quality and development of suppliers throughout the supply chain, to improve the level of service provided by suppliers. In this way, the action plans required to make it possible to create value and promote improvement in the management and quality of the service will be generated and promoted.

## b. Caring for the environment<sup>1</sup>

### Commitment to the circular economy

Having fully integrated glass recycling into the industrial processes for decades and by promoting the selective glass waste collection system in Europe, the glass container manufacturing sector is a pioneer in promoting the circular economy. In this regard, the Vidrala Group is part of the Spanish Association of Glass Container Manufacturers (ANFEVI), which, in turn, is part of the European Federation of Glass Container Manufacturers (FEVE). Similarly, the Vidrala Group is also part of the respective national associations for the sector in those countries in which it is present. A group like Vidrala contributes actively in these organisations to promote technical knowledge in the sector, so that there is active progress in terms of sustainability. In recent years, the development of the circular economy has been of utmost interest to the sector, as it represents a unique opportunity to position itself as a leader on the subject. Only a material such as glass represents the purest essence of the circular economy: being able to be recycled endless times without losing its properties and creating a new container.

Through its eight plants, the Vidrala Group is able to close the cycle of a valuable material, which is commonly accepted as being the most eco-friendly to its contents. This concept of protection is put into practice using the principles based on the circular economy model, which is promoted at a Community level. This strategy, which is endorsed by the Vidrala Group, recognises the importance of selective waste collection as a mechanism to prevent materials from leaving the recycling chain. In other words, the end of the glass cycle and its recycling can only be made to happen as a result of the commitment of industry, public administrations and citizens. Without the appropriate recycling mechanisms, the circular economy would not make much sense. Moreover, the quality and sustainability of glass containers are directly linked to it.

This is especially important in countries with an unfavourable balance of glass collection, such as Spain or Italy, where more glass container products are exported than imported. Promoting quality selective waste glass collection and raising public awareness regarding glass recycling are key elements, that Vidrala supports at a sectoral level to implement the circular economy.

European recycling targets are ambitious: obtaining 75% and 85% of glass recovered by 2025 and 2030 respectively. In 2015, citizens in 28 European countries contributed to recycling 74% of the packaging put on the market. These figures highlight how the glass packaging manufacturing sector is ready to take on a leading role in support of the European circular economy strategy. The Vidrala Group, as an organisation with a presence in five European countries, prides itself on working daily to make statistics a roadmap that makes it possible to achieve increasingly environmentally-friendly performance.

<sup>1</sup> \*Methodological note: in this report, the Vidrala Group's environmental performance figures include the historical data for the period 2010-2014 at the plants located in Spain, Portugal, Italy and Belgium and the central services of the group. The 2015 and 2016 data also include the plants in Northern Ireland and the United Kingdom.



## Sustainable management

The Vidrala Group is an organisation which is strongly committed to protecting the environment. This objective is used to implement specific action programmes on various environmental aspects focused on reducing emissions into the atmosphere, the generation of discharges and waste and the consumption of raw materials, energy and water.

Glass manufacturing is, by its very nature, intensive in terms of energy consumption (glass melting furnaces operate continuously, 24 hours a day, 365 days a year). Therefore, reducing the environmental impact associated with this stage is a priority objective in the management of each plant. Aspects such as increasing energy efficiency or incorporating cullet from recycling have a global effect on business, by reducing consumption, improving costs and minimising the environmental impact. Specifically, when dealing with a material such as glass, intensifying the use of recycled materials has a double positive effect on environmental efficiency: it reduces the consumption of natural raw materials and helps reduce fossil energy consumption (thus significantly reducing the volume of polluting emissions).

Vidrala's strategy has always prioritised the implementation of management systems that are consistent with the sustainability policy. An example of this commitment is that all of the group's production facilities are certified under standards ISO14001: 2004 and verified externally.

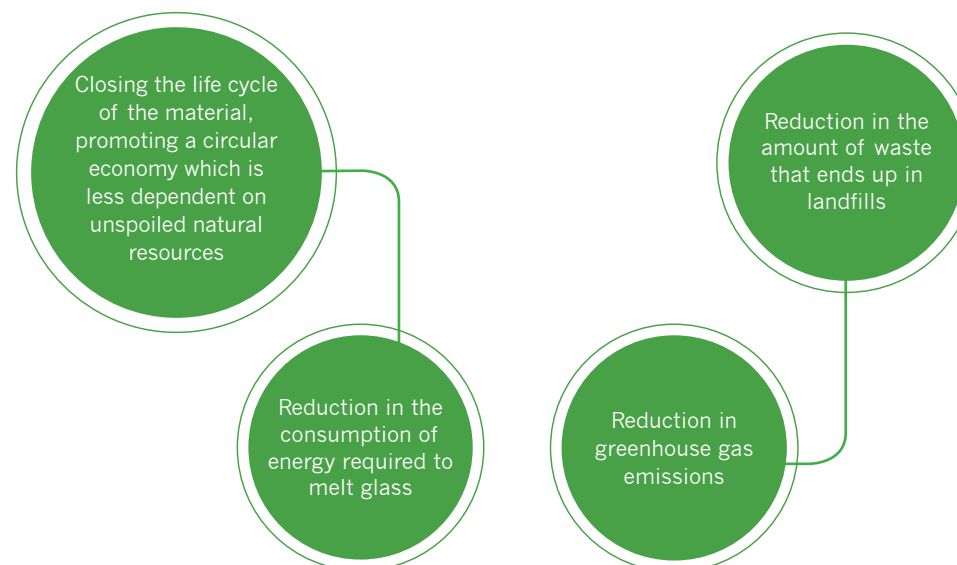
To complement this, there are processes for implementing and certifying standards of an environmental nature, such as ISO14064: 2012 (focused on the voluntary declaration of CO<sub>2</sub>) and ISO 50001: 2011 (associated with the implementation of energy management systems). The choice of these two certification schemes is no coincidence. Both aspects, CO<sub>2</sub> emissions and energy, have a significant impact on Vidrala's industrial process, as they are the environmental vectors with the greatest impact coming out of production plants. A significant amount of resources are allocated to improving behavior and performance in each of these vectors, as detailed in each of the sections of this sustainability report.

“Glass is a fully recyclable material and the cycle of production and recycling can be repeated in perpetuity without changes to the material or its properties”

*Department of Glass of the Institute of Ceramics and Glass, Spanish National Research Council*

The Vidrala Group is committed to sustainable development based on the new production model, closer to the principles of the circular economy. Whenever the availability of materials and technical characteristics allow it, Vidrala includes a high percentage of recycled glass in the formulation of the containers it makes. This represents a considerable saving of natural resources and a reduction in the energy intensity of the process. It should be noted that there are factors outside the group's activities that affect the supply of cullet. In cases such as Spain, Portugal or Italy, they are net exporters of cullet. This means that part of the production will not re-enter the glass recycling loop. Together with the customer's container requirements, this determines the final amount of recycled cullet incorporated.

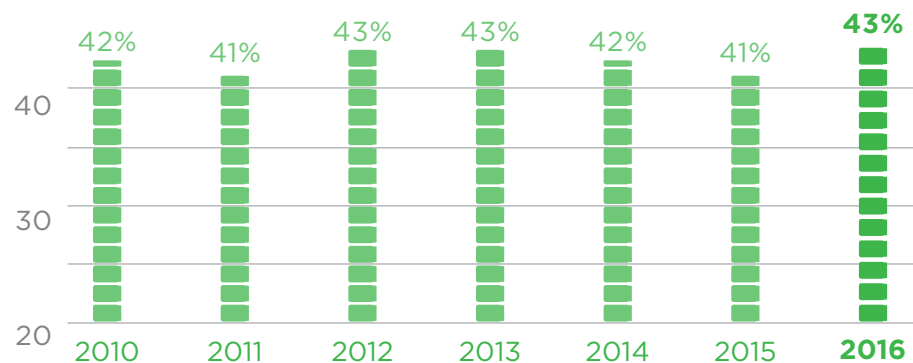
## Why recycle glass containers?



Although located in an environment of low cullet availability, Vidrala has managed to increase the percentage of cullet incorporated into its furnaces, which demonstrates its willingness to further advance the sustainability of glass containers.

### EVOLUTION OF THE INCORPORATION OF CULLET 2010-2016

RATE OF CULLET (%)

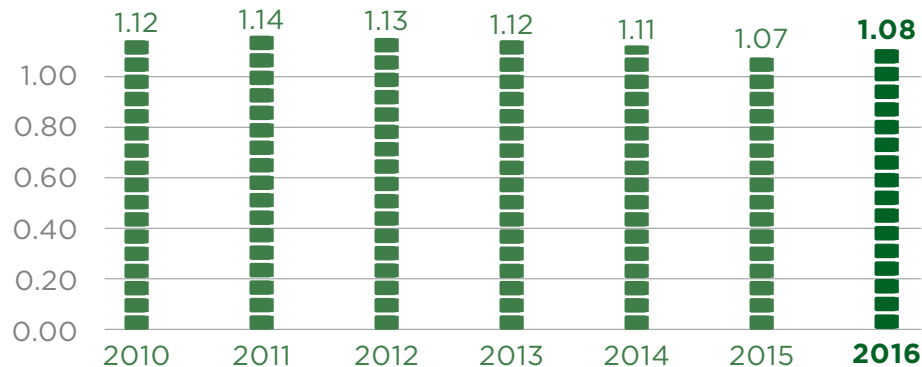


During 2016, the Vidrala Group increased the overall amount of containers that it put on the market, as well as the tonnage of molten glass extracted from its furnaces.

### EVOLUTION OF THE CONSUMPTION OF MATERIALS 2010-2016

TOTAL RAW MATERIALS CONSUMED

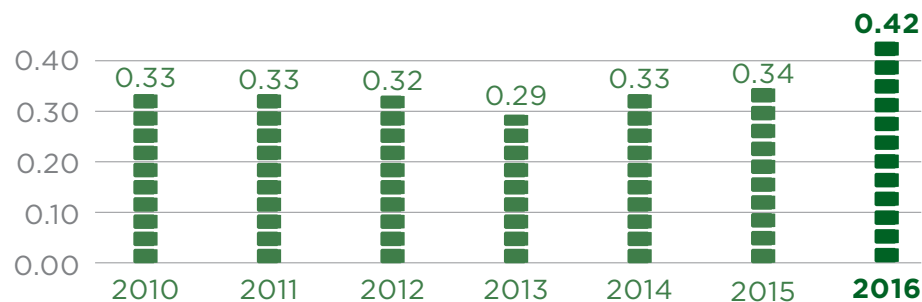
(t/t.m.g)\* \*tonne/tonne of molten glass



Consumption of materials by the Vidrala Group (t/t.m.g.<sup>2</sup>)

AUXILIARY MATERIALS CONSUMED

(kg/t.m.g)\* \*kg/tonne of molten glass



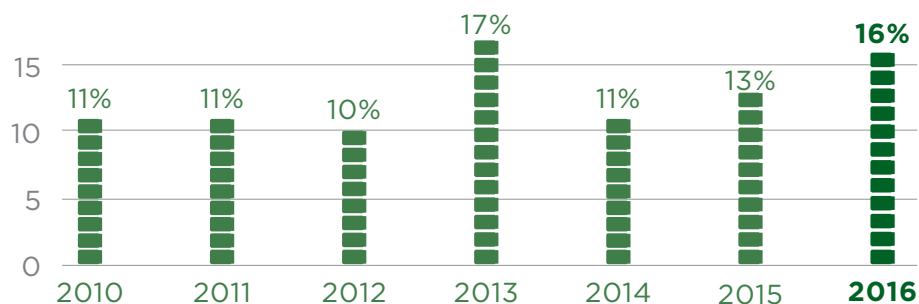
Consumption of materials by the Vidrala Group (t/t.m.g.<sup>2</sup>)

2. The tonnage of molten glass (t.m.g.) has been implemented as a unit of reference throughout the report. Thanks to this approach, improvement can be assessed over the years and compared to the performance of other companies in the same sector.

The Vidrala Group is working constantly to develop more advanced measures to improve the indicators of raw material consumption. The greater number of containers produced means that the relative weight of auxiliary materials increases more than the weight of raw materials, as a greater amount of additional materials is required in the production process to form each container. In this regard, Vidrala is working to minimise the consumption of these types of materials and to prioritise recycling, provided that technology allows these to come from their own production process. An example of the recovery of materials is sulphate. Like cullet, the Vidrala Group recovers sulphate from the purification systems of gases generated by various sources, mainly the melting furnaces. The increase experienced in 2016 in the percentage of powders recovered from the gas purification systems is remarkable, continuing the upward trend of the last three years.

### SULPHATE RECOVERY 2010-2016

SULPHATE RECOVERED (%)



During 2016, the Vidrala Group made a special effort to increase efficiency in sulphate recovery. Specifically, investments were made to install electrostatic precipitators or electrofilters in all production centres. These are special air emission purification systems aimed at reducing particulate emissions, recognised as the best technology available for these purposes by European legislation. Specifically, the electrofilters installed act by retaining the particles generated in the melting process by attracting them through electric fields, reducing the usual emissions from glass melting furnaces by more than 90%. In total, these facilities have received an accumulated investment throughout the group of more than 20 million euros in the last eight years.

### Water and glass

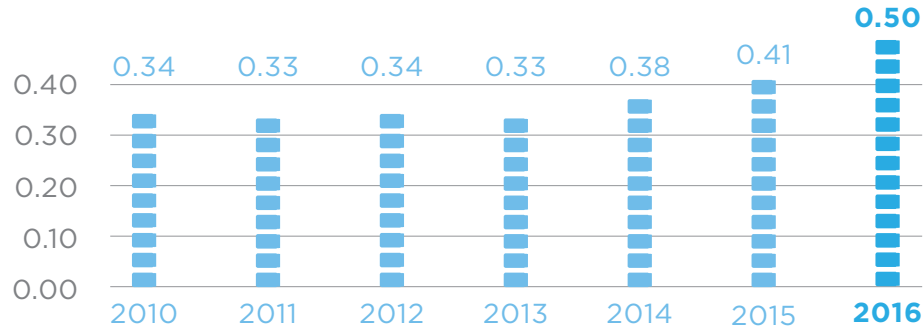
When manufacturing glass containers, the use of water is associated with the processes to cool the different circuits and rejected hot glass. Moreover, the main discharges come from the processes of purging these cooling systems operating on a closed circuit and those coming from services and showers. In any case, the Vidrala Group is authorised to capture this resource, complying in all cases with the stipulations of the competent authorities. The origins may vary depending on the geographic location of each plant, although it is always water collected through the supply network, channel or supplied by private wells. The new plants incorporated into the group in United Kingdom and Ireland include packaging as well as manufacturing processes. These processes are more intensive in terms of water consumption due to their characteristics, resulting in an increased consumption ratio of this resource.



## EVOLUTION OF THE CONSUMPTION OF WATER 2010-2016

### TOTAL WATER CONSUMPTION

(m<sup>3</sup>/t.m.g.)\* \*m<sup>3</sup>/tonne of molten glass



Encirc continues to set the standard with water usage on its sites. The Derrylin site is working towards a completely closed loop recycling system.

In Elton 2016 saw the introduction of a new aerobic water system. This has dramatically improved the quality of water, once it has been used by the site and goes back into natural habitats. The quality of water leaving the site is now actually better than the quality the site receives from the near-by River Mersey.

## Energy and glass

For Vidrala, harmonising glass container manufacture with environmental protection is a key objective. One of the most significant impacts is that relating to energy consumption, both direct and indirect. Therefore, the Vidrala Group focuses much of its efforts on improving this aspect. This is not only an issue linked to a direct economic benefit from lower consumption, but it also reduces emissions associated to this, with a consequent improvement of the air quality in the immediate environment. Glass container manufacturing is energy intensive, so this aspect is critical in assessing the environmental performance of the sector.

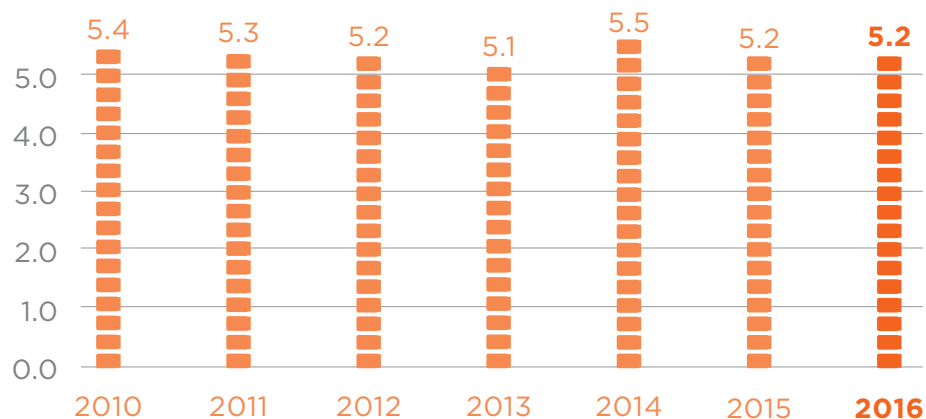
An example of the commitment to optimising energy processes is that the Group is implementing an energy-efficient management model, based on the international standard ISO 50001:2011 on Energy Management Systems. For an organisation like Vidrala, this system becomes part of the other standards already implemented in the Group, continuing the policy of continuous improvement in the environmental performance of all glass container manufacturing plants. As a result of the efforts made at each production centre, the Vidrala Group has managed to increase container production while maintaining the same rate of energy consumption per ton of molten glass as in the preceding year.



## EVOLUTION OF THE DIRECT CONSUMPTION OF ENERGY 2010-2016

### DIRECT ENERGY CONSUMED

(GJ/t.m.g.)\* \*Gigajoules/tonne of molten glass

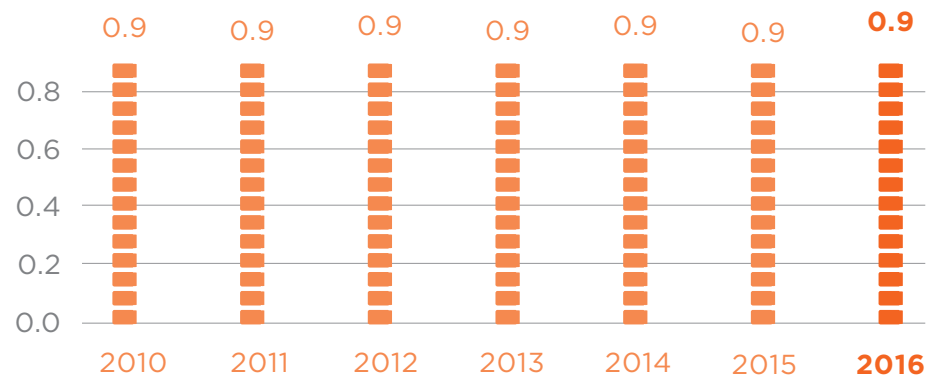


Direct energy consumption is linked to fossil fuels, mainly natural gas and fuel, used in glass furnaces. In a lesser extent, other glass container manufacturing processes require fossil fuels input such as feeders, annealing boxes, heating elements, etc. In this case, consumption is basically of electricity. Indirect energy consumption is related to electricity. In this case, main consumers are boosting in furnaces, compress air generation and other uses. In both cases, the Vidrala Group carries out an exhaustive control of both direct (fossil fuels) and indirect (electricity) energy consumption. By optimizing the electricity consumption linked to the post-fusion steps<sup>3</sup>, Vidrala has also managed to keep indirect energy consumption stable.

3. The post-fusion stages are those applied to the containers once moulded.

## INDIRECT ENERGY CONSUMED

(GJ/t.m.g.)\* \*Gigajoules/tonne of molten glass



Gallo Vidro and the new Vidrala Group furnaces. Taking advantage of the modernisation of one of the Gallo Vidro furnaces, during the definition phase of the project, along with plant equipment, a detailed study was carried out to identify all of the actions that needed to be implemented in order to bring the ex-fusion consumption<sup>4</sup> of this production plant to the “Best of Class” levels of the group. The highest gas consumption takes place in the annealing boxes of the bottles. After the start-up of the new furnace, a management system of the annealing process was implemented which reduced gas consumption by 60%, bringing this equipment to the levels of least consumption in our group.

4. Ex-fusion refers to all of the different energy used in the process for melting and preparing glass (furnaces and channels)

## Emissions to the atmosphere

“Climate change affects all countries on all continents. It has a negative impact on the national economy and on the lives of individuals, communities and countries.

In the future, the consequences will be even worse.”

Objective of Sustainable Development No. 13:

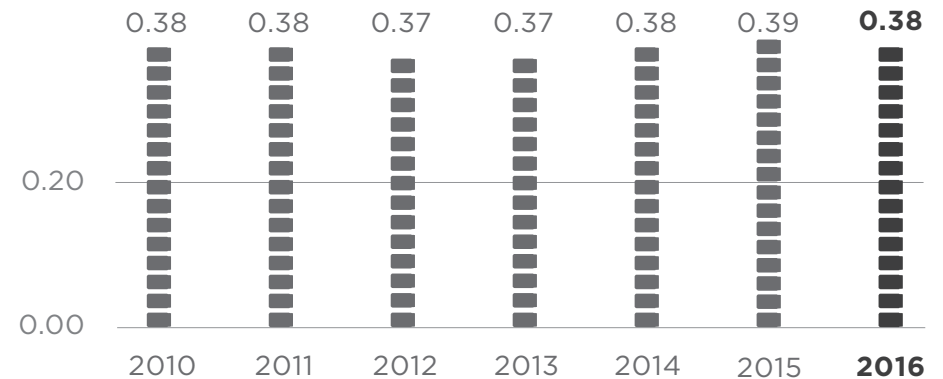
Adopt urgent measures to combat climate change and its effects. United Nations, 2017.

Mitigating the effects of climate change requires actions by all social stakeholders. The Vidrala Group is aware of this and, as a result, actively works on applying measures that allow it to combine the production of glass containers while reducing greenhouse gas emissions. This commitment is linked to the availability of best available techniques and the dependence on fossil fuels.

In 2016, the Vidrala Group continued to work on mobilising its human, technical and financial resources to reduce the impact of emissions from the main source: the melting furnaces. In view of the correlation between the increase in production figures and maintenance of emission rates, this confirms that Vidrala has managed to reduce the total emissions of one of the main gases that contributes to global warming.

## EVOLUTION OF GHG EMISSIONS 2010-2016 GREENHOUSE GAS EMISSIONS

(t/t.m.g.)\* \*tonne/tonne of molten glass



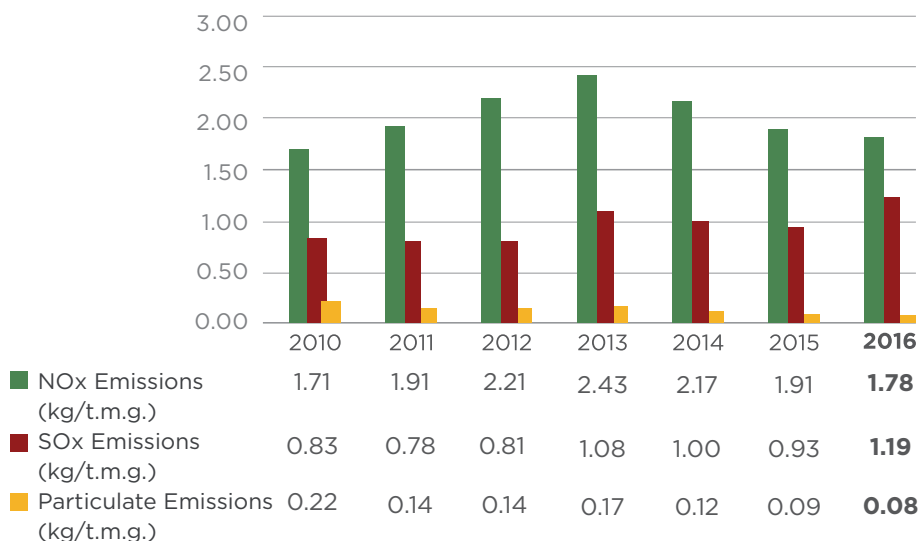
Each production centre, including those located in the UK and Northern Ireland, follows the regulations of the Directive on Emission Allowances to reduce Greenhouse Gases in the atmosphere. The work to implement the group’s commitment to the environment has been applied throughout the life cycle of glass containers: from the design of the containers, where it has been possible to keep the qualities of the containers with a reduced need for material, through the addition of cullet, the strict control of fuel consumption and emissions of molten glass, up to the final stages, where more efficient methods are applied in post-fusion processes.

To maintain air quality and reduce the impact on the environment in which the production plants are located, the Vidrala Group is working on controlling not only CO<sub>2</sub> emissions, but also NO<sub>x</sub>, SO<sub>x</sub> and particulate emissions. These are the three main parameters that are benefiting from implementing the technologies that Vidrala uses. As a result, all of the Vidrala Group container production plants meet the legal requirements for emission limits.

## EVOLUTION OF NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT EMISSIONS 2010-2016

### NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT EMISSIONS

(kg/t.m.g.)\* \*kg/tonne of molten glass

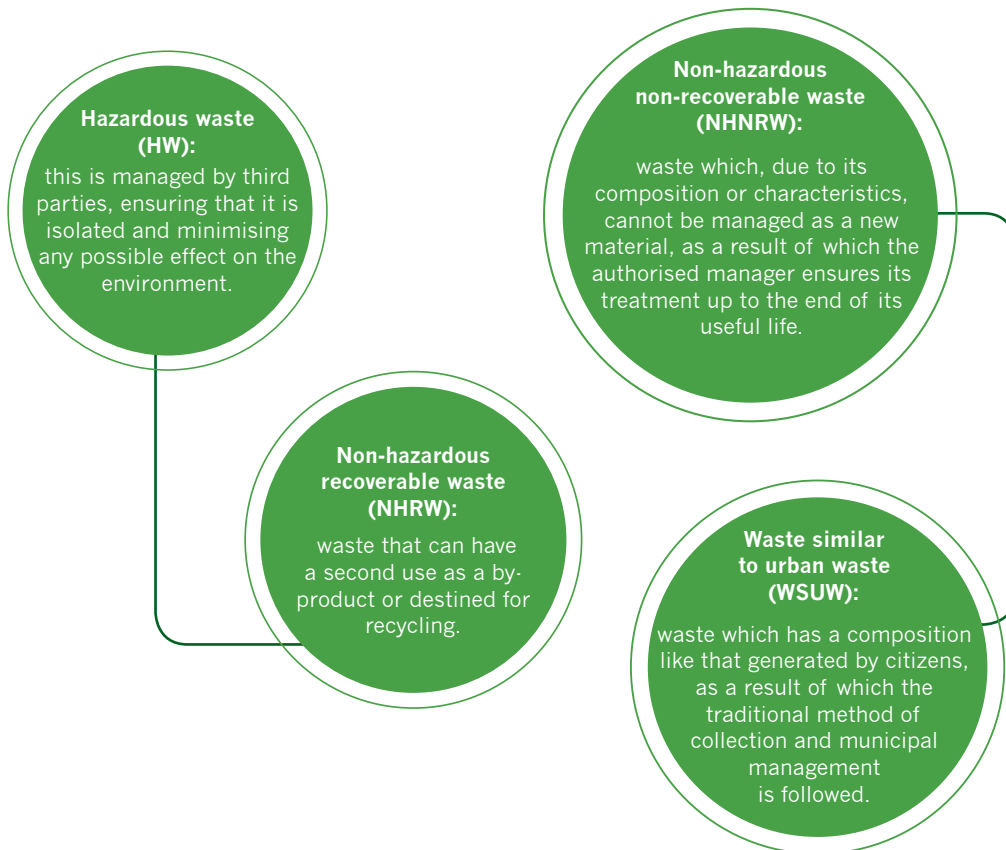


The Vidrala Group uses the latest technology in its glass melting furnaces, which allows it to work towards reducing nitrogen oxide emissions from its facilities. Primary measures, such as the use of burners with low NO<sub>x</sub> emissions, strict combustion control and electrical boosting, meant that 2016 continued the trend of reducing NO<sub>x</sub> emissions at Vidrala plants. The levels reached are at similar levels to those at the beginning of the decade, while production is higher than that recorded at that time. Similarly, the pollutant load emitted linked to particulates continues to decrease, reaching the lowest relative level in the last seven years. Vidrala's environmental policy is therefore effective, achieving measurable results year after year.

Impulso al transporte por ferrocarril. La planta del Grupo Vidrala situada en Elton ha mejorado el desempeño en sostenibilidad de su cadena de valor a través del impulso al transporte por ferrocarril gracias a una nueva terminal inaugurada en 2016. Este nuevo proyecto implica que hasta un 50% de todas las materias primas necesarias pueden ser transportadas a la planta directamente en tren. Esto se traduce en beneficios medioambientales al ahorrar alrededor de 6.000 viajes de camión al año (evitando la emisión de más 800 toneladas de CO<sub>2</sub>) y ahorrando 1 millón de kilómetros en viajes por las carreteras del Reino Unido. Encirc estudia nuevas formas de aprovechamiento de este medio de transporte para el futuro.

## Waste management

Maybe glass is one of the few materials that can position itself as a true example of a circular economy. Only a glass container can be recycled and produce a new one. It is a process that is capable of being carried out an infinite number of times. In line with this vision of sustainability, the Vidrala Group is incorporating measures aimed at complying with the principles of circular economy and hierarchy in waste treatment. Whenever technically feasible, it opts for assessing them for use in other processes, avoiding landfills wherever possible. All of the group's plants minimise, segregate and apply the best possible management system for each type of waste:

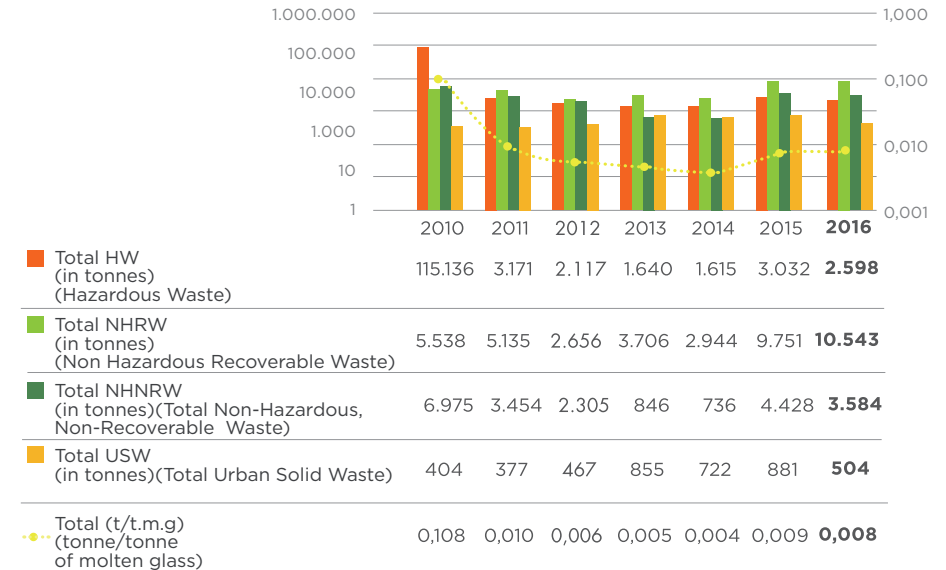


With regard to the figures for waste generation, three of the four categories (HW, NHNRW, WSUW) have seen reductions in the overall volume of waste generated in total amounts. It should be pointed out that the work to repair and/or reconstruct furnaces so that they operate properly has a significant impact on waste generation figures. However, in relative terms, the Vidrala Group has succeeded in reducing the amount of waste generated per ton of molten glass: last year Vidrala was able to manufacture more containers while generating less waste.

## EVOLUTION OF WASTE GENERATION BY TYPE, 2010-2016

### WASTE GENERATION

By waste type and year (tonne)





## Natura range, real commitment to eco-design

Overall, applying the principles to promoting eco-design involves improving the environmental performance of products throughout their life cycle. This means addressing the creation of packaging in its entirety: design, use of raw materials including cullet, manufacturing, transport and distribution and end of life. From an overall point of view, eco-design addresses environmental issues at each stage of the life of the product. For the Vidrala Group, its environmental performance is passed on in each of the containers it puts on the market. The Natura range represents the philosophy of environmentally-friendly work: containers that meet all expectations with minimum impact on the environment. Natura is a range of bottles that are lighter than their equivalent models on the market. On average, these containers incorporate 43% less glass to create the same type of container, resulting in less need for raw materials, water and energy. Sales of these models grew in the last period, thanks to Vidrala's ability to adapt the Natura range models to the specific needs of its customers.

## Environmental investments

In terms of the initiatives to mitigate the environmental impacts of the glass container manufacturing processes, the Vidrala Group is making significant financial investments in the environmental area. During 2016, the Group allocated over 5.3 million euros to items directly related to the sustainability of its plants, including routine and unscheduled expenses and investments. Making repairs to the furnaces, applying new designs, adopting Best Available Techniques (BATs) and implementing actions aimed at improving energy efficiency and other process improvements have involved a significant amount of financial resources and have, ultimately, made it possible to improve the environmental performance of the Vidrala Group. In short, the resources mobilised by the Vidrala Group promote the sustained refurbishment of the manufacturing facilities, seeking to update existing technology to more efficient systems with a reduction in environmental impact.

## c. Engaging with the community

For the Vidrala Group, people are the axis on which it drives all of its daily work at its production centres and in their vicinity. In this regard, it pays special attention to dialogue and the needs and expectations of both its professional teams and the social community around its activity. The Vidrala Group ended 2016 with about 3,000 workers on the payroll. It is a team that is strategic for the organisation, with which it meets the needs of its customers satisfactorily. Promoting the health and well-being of all of the people in the various Vidrala teams is a priority in our sector. With the aim of offering a stable, quality work environment, the percentage of permanent contracts in the Vidrala Group is 94.5%, and the average time people have worked there is about 12 years. Also, being concerned about the turnover and intake of young people, the average age of the workforce is about 42. In addition to employment stability, equality and non-discrimination are unquestionable principles across the board at the Vidrala Group in developing people.

## Development and professional growth

Another key aspect in managing people within the Vidrala Group is the training and education of its human capital. It is a priority for the organisation to have a trained workforce that constitutes a group of professional and well-trained individuals. Only in this way will the Vidrala Group be able to meet the increasingly demanding requirements of the food and beverage market. Efforts to identify training needs and programming activities have been extended geographically to all plants, including central services, and from the bottom up in the whole structure of the Vidrala Group. In 2016, a level of compliance of more than 80% was achieved regarding training plans, representing more than 65,000 hours of training and learning.

In 2016, the MD Verre plant in Belgium improved its performance, recovering higher levels of quality and production stability. To do this, the plant added new people to its workforce, while providing the training necessary to meet the requirements of the production, including Quality, Health and Safety and Environment issues.



## MdC: the Vidrala Group model of leadership development

The Vidrala Group is implementing a new concept to promote the personal and professional development of all of the people in the organization. This is an initiative to promote a culture of continuous learning and interdependence of professionals to make the vision of the Vidrala Group a reality. The implementation of this corporate development model received the backing of the management of each plant, along with the respective human resource departments and direct collaboration of managers. During this first stage, this was carried out at in Spain, Portugal, Belgium and Italy for managers and directors. This project has enhanced the role of managers, through a comprehensive training programme with study activities and preliminary preparation and with classroom sessions and after-work activities, training them to achieve strategic objectives and tackle operational challenges in a competitive environment, like the sector in which the Vidrala Group operates.

In 2016, professional development interviews were carried out, as well, with the production team (this year, this was carried out in Spain, Portugal, Belgium and Italy). In this way, it was possible to carry out more than 1,800 interviews, with a high involvement of the people.

These conversations represent a clear commitment to direct communication between people, encouraging personal and professional development.

## Vidrala Open Knowledge

Growing, evolving and advancing in your career are synonymous with continuous improvement in professional training. The Vidrala Group is aware of this and will also commit to applying new technologies to training people within the organisation. The Vidrala Open Knowledge platform, VOK, is being developed as an evolution of the Vidrala Campus by combining simplification and efficiency. The VOK platform will make it possible to manage all training-related aspects more intuitively, offering advantages for internal trainers, organisers and attendees (from the identification of training needs, proposed training activities and evaluation of their effectiveness). Vidrala Open Knowledge is one of the ways in which the group invests resources to get a highly qualified professional team.

## Vidrala Academy

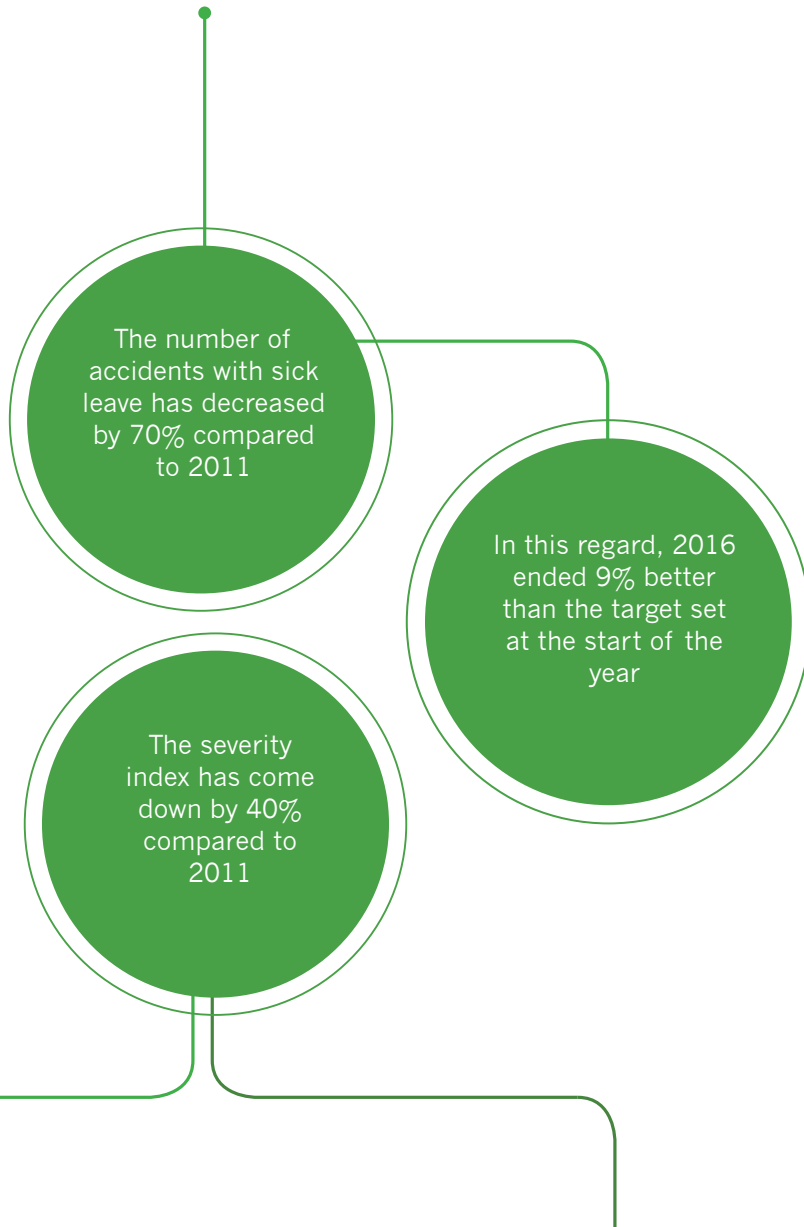
In 2016, the Encirc Academy was incorporated and renamed as the Vidrala Academy. This platform already existed as a business unit linked to activities in the UK, being considered a reference in training and consultancy in the hollow glass industry. In 2016, the Vidrala Academy worked in the sector in countries such as: South Africa, Turkey, Mexico, USA, Thailand, Russia and Brazil. This specialist support responds to the needs of the industry, providing training, support and assistance to organisations outside the UK to help achieve higher levels of productivity in the production processes of the glass container manufacturing sector. In 2016, the platform was recognised for its work on innovation by British Glass.

## Safe, healthy work centres

In its efforts to meet the requirements of its main stakeholders (society, customers, consumers and governments), the Vidrala Group has integrated the need to develop its activities in a healthy and safe working environment into its organisation. To facilitate this integration into the daily lives of all of the people who work for the organisation or on its behalf, all of the plants in Spain, Portugal, Italy and Belgium have implemented and certified an Integrated Environmental and Occupational Health and Safety Management System, in accordance with the ISO 14001 and OHSAS 18000 standards. Using the IMS as a work tool not only ensures compliance with the law (in terms of risk reduction and possible penalties) but also, and more importantly, achieves remarkable improvements in performance, by reducing the accident rate. Similarly, environmental management costs (linked to waste management) have been reduced and greater market competitiveness has been achieved (thanks to the design and development of projects with the support of customers).



The efforts of the Vidrala Group's entire team translate into these figures:



In order to further improve the indicators obtained, during 2016 work was done to accommodate processes and their configuration, so that this information could be incorporated into a computer tool to consolidate the gains achieved and deal with new challenges, ensuring compliance with management processes and facilitating strategic planning of the business approach.

As an example of what occupational health and safety means for the Vidrala Group, the effort put into preventive training at the plants in Spain is noteworthy. Specifically, more than 6,000 hours have been invested in preventive resource training at the Llodio and Castellar del Vallés plants and almost 300 hours in training on safety instructions in the hot and cold areas at 3 Spanish plants.

The work of the various Vidrala Group teams on occupational health and safety has also been rewarded externally. In particular, the reduction in accidents experienced by Crisnova Vidrio has been recognised. The plant has become part of a plan to monitor the reduction in accidents promoted by the Junta de Castilla-La Mancha (Regional Government of Castilla-La Mancha). The "Reduce Plan" recognises this Vidrala Group plant as an active collaborator with the regional government, both in the training of technicians from the Regional Government of Castilla-La Mancha and in joint preventive improvement projects.

The Vidrala Group is proud to have a team of people who demonstrate this level of commitment. The work was carried out jointly and the whole Crisnova plant contributed (from operators with their progress in increased awareness and preventive culture, to managers) to the work of integrating prevention into all layers of the organisational structure. Occupational health and safety is inherent in the work carried out in any daily task at the Vidrala Group.

## Social commitment

For the Vidrala Group, social commitment remains an essential pillar on which to articulate its activity. It is a commitment that is embodied in an approach of involvement with the region in which the different plants are located, as well as actively listening to the concerns and needs expressed by different agents.

For Vidrala, social commitment integrates this approach of closeness and unites it to the community of people who make up the group towards a common initiative aimed at local groups. In this regard, the plant in Italy has focused its social project on helping the recovery of areas affected by the earthquake in Central Italy, together with the Italian association Assovetro (Associazione Nazionale degli Industriali in Vetro). For its part, the plant in Portugal has collaborated with Adeser, an organisation that works to promote integration and reduce inequality in Marinha Grande. The other plants have collaborated with Aldeas Infantiles SOS (SOS Children's Villages), in the project to aid the children's community in Haiti, which was hit by hurricane Matthew. In all, Vidrala Group personnel put almost € 25,000 towards the Social Project in 2016.

## The importance of the local factor

When it comes to strengthening ties with the immediate environment and taking part in the local community where each of the Vidrala Group plants carries out its activity, promoting closeness and proximity as added values to social projects is of the utmost importance.

From that perspective, the Vidrala Group has been supporting sports, cultural, educational, health and social initiatives that are carried out in their immediate environment, either under the initiative of the plants themselves, or at the request of one of the organisations that operates in this local environment. The Vidrala Group contributed more than € 20,000 to these local sponsorship initiatives last year.

In an effort to encourage performance and internal participation, the Llodio plant has been working for several years in a collaboration system between the organisation and the workers, to target resources for a social cause. In 2016, it was decided that the beneficiary of this system would be Cruces Hospital, through BioCruces, devoting resources to researching paediatric oncology, adding the corresponding contribution to the suggestions received and the additional contribution of the Vidrala Group.

## Visits to Vidrala Group plants

Another of the forms of approach that the Vidrala Group is committed to is the open door policy. On the one hand, it increases trust, proximity and transparency to the organisation. On the other, it promotes knowledge and raises the awareness of those involved, thanks to a visit, on the ground, in an industrial environment such as the glass industry.

In 2016, all the plants within the Vidrala Group opened their doors to numerous visits, schools, colleges, Insitutions, etc. Specially, the Castellar plant has continued with its educational project in collaboration with the town council of Castellar del Vallés, Ecovidrio and Friends of Glass. In this project, various groups are received at the plant (both educational and non-educational), shown the installation, and informed and educated about issues related to energy consumption and the use and recycling of glass.



## Sectoral participation

Throughout the year, there were a number of meetings which the Vidrala Group attended or was represented at. Attendance at sector-specific events makes it possible to establish synergies and meet the real needs of other organisations which share common interests with the Vidrala Group, either at the request of one of the groups concerned, or in the interests of the group itself in promoting a close relationship with all aspects of the organisation.

As an example of the monitoring work and presence in the technical forums of the sector, in 2016 the Vidrala Group took part in the 90th Technical Glass Conference of the German glass society in order to carry out close technological monitoring.

Specifically, a study entitled “Continuous use of a redox probe to control shrink-fitted glass” was presented. The results and conclusions obtained from installing a redox probe in Castellar Vidrio furnace 1 to monitor dark glass was explained at the conference. Once again, the attendees showed great interest in the results of the test, in many cases proposing their own collaboration to help with future problems. As a result of these actions, the Vidrala Group is strengthening its presence in the European glass community, largely thanks to the eminently practical and industrial focus of the work presented and the quality of the results.

In a sectoral and commercial sense, Vidrala has attended meetings such as the annual meal with the La Rioja Winemakers, the annual dinner with the Cava Brotherhood, and there was a Vidrala presence at the Vinitech Sifel Fair in Bordeaux, where the products and services of the group were put on show.

The Vidrala Group also attended La Noche de la Economía. This is an institutional meeting organised by the financial daily El Economista, which recognises the professionalism, prestige, support and promotion of the economic activity of various organisations in the business sector. At this meeting, Vidrala received the Internationalisation Award, thanks to the incorporation of the United Kingdom and Ireland plants, which has allowed it to become one of the leading glass manufacturers in Europe for the food and beverage sector, with a production of more than 17 million bottles and jars a day.

## Master Glass Design Contest

In 2015, following the 50th anniversary, the “Master Glass Design Contest”, a glass container design contest, was organised. The contest is organised in collaboration with the Faculty of Engineering of the University of Deusto and supported by EIDE (Association of Designers in the Basque Country). It is a contest that seeks to promote innovation, creativity and feasibility in the design of glass containers, always within an environmentally sustainable and efficient process. At the first call for entries in 2016, the prize was awarded to the “4D Wine” project, by students from the University of Mondragón. The projects “IZPI”, also from Mondragón, and “Secret” from ESIDE were equally outstanding projects.

Given the success of the call for entries and the commitment of the group to search for talent and new ideas among the universities and technical schools nationwide, the agreement with the Faculty of Engineering of the University of Deusto has been renewed to organise a second edition of the Master Glass Design Contest nationally during 2017.

## Hau Da Green Challenge

During Christmas 2016, the Vidrala Group collaborated actively with the Hau da Green challenge. Starting on November 30, the challenge had a double role: to recycle as much glass as possible and to help protect the rights of children. The initiative was launched by the newspaper EL CORREO and the Ecovidrio organisation. The target was to reach one thousand tons of recycled glass in the whole of Alava over the Christmas period. Having achieved the challenge, a donation of 5,000 euros was made to the NGO Save the Children for its project to support the education and leisure of children in Vitoria. On this occasion, the Vidrala Group donated 2,200 bottles for the Christmas tree installed in Vitoria-Gasteiz, in aid of the charity campaign.

## Awards in the field of Social Responsibility

In 2016, the British Glass manufacturers association awarded the Encirc plants with the Glass Focus Award for their contribution in terms of Corporate Social Responsibility among the manufacturers of glass bottles in the country. In addition, the involvement of the business with the community was also awarded during the year, in recognition of the development of innovative products that inspire responsible behaviour and promote more sustainable lifestyles. Finally, at the Drinks Business Awards, together with Australian Vintage, the work of improving efficiency in the value chain by reducing the impact of road transport and reducing the consumption of energy at the plant was recognised.

## V. 2017 Challenges

For the Vidrala Group, last year meant the consolidation of a growth model based on sustainability, the human factor and commitment to quality. The work done in the field of the environment and risk prevention helped lay the groundwork for an even more sustainable and innovative way to manufacture glass containers. From this perspective, adopting the right position and incorporating the growing concern about maintaining the environmental and social setting in the best possible condition will be key.

Having started down this route, the future of an international organisation like the Vidrala Group is to consolidate the integration of all environmental and risk prevention systems across the board, keeping the operating performance at the level of the current results. New strategic projects will have to include the new EU recommendations in terms of emissions, waste treatment, recycling and promotion of the circular economy. For the Vidrala Group, these aspects are opportunities to constantly reinvent itself, to evolve towards a new business model which is more responsible towards its environment.



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