GROWING STRONGER, BUILDING VALUE TOGETHER

Vitro®

2021 Integrated Annual Report

VITRO 2021 INTEGRATED ANNUAL REPORT

Growing stronger, building value together

The losses caused by the COVID-19 pandemic more than 24 months after it was declared are incalculable. Above all, there is the human factor, with millions of lives lost, the erosion of health, emotional instability and the uncertainty over how long it will be until we can neutralize it. In parallel, trade and marketing strategies have changed dramatically, forcing us to refocus our way of doing business in some cases, and reinforce it in others, to respond to market conditions as best we can and maintain our operating excellence.

Going forward, the outlook remains challenging. But at Vitro, we have everything we need to grow stronger together as a company, and to continue building value for all of our stakeholders.

CONTENTS

WE ARE VITRO

Vitro is one of the leading glass manufacturers in North America and one of the largest in the world, with more than 110 years of experience in the industry.

OUR STORY

1883

The company Pittsburgh Plate Glass (PPG) opened the first glass factory in the United States.

1909

Vidriera Monterrey, the first glass container plant, starts up operations in Monterrey, Nuevo León

1920

PPG becomes one of the first companies to successfully mass produce glass with a patented process.

1929

Vitro opens its first flat glass plant in Nuevo León.

1934

PPG creates Solex, the first tinted, heat-absorbing environmental glass

1960

Vitro begins making automotive glass.

1963

PPG becomes the first glass producer in the US to use the float glass process.

1968

The first float glass line starts up operation in Mexico.

OUR STORY

1991

The Glass Museum opens its doors, with the aim of recording, preserving and promoting the history of glass.

1996

Vitro Colombia is created to produce and distribute automotive and architectural glass.

2007

One of the largest glass container plants in the world begins serving the needs of the CFT market.

2008

Vitro obtains "Socially Responsible Enterprise" distinction for the first time

2016

Vitro, S.A.B. de C.V. acquires PPG Flat Glass, retaining the products, plants, people and proven processes that made the company an industry leader.

2017

Vitro completes the purchase of Pittsburgh Glass Works from LKQ Corporation, strengthening the company's automotive glass portfolio with cutting-edge technology and an automotive float glass plant in Meadville, Pennsylvania.

2019

Vitro celebrates 110 years as leader in the glass industry through its state-of-the-art products and processes, always striving for sustainable development for itself as a company, for its people and the communities where it operates.

OUR COMPANY

GRI: 102-1, 102-3, 102-5, 102-11, 102-16.

14,598 Employees

Vitro is one of the largest glass manufacturing companies in North America and one of the largest in the world, with more than 110 years of experience in this industry. Founded in 1909 in the city of Monterrey, Mexico, the company has subsidiaries around the world, through which it offers quality products and reliable services to serve two segments of the market: glass containers and flat glass. Vitro's companies produce, process, distribute and market a wide range of glass articles that are part of the daily lives of thousands of people. Vitro offers solutions to multiple markets like cosmetics, fragrances and pharmaceuticals, as well as architectural and automotive glass. It also supplies chemicals and raw materials, machinery and equipment for industrial use. As a socially responsible company, Vitro works on various initiatives within the framework of its Sustainability Model, in order to positively influence economic, social and environmental aspects that affect or involve its stakeholders, through responsible corporate management.

OUR MISSION:

We redefine the power of collaboration to generate value and bring innovative glass solutions to our clients and communities.

OUR VISION:

Together we will discover the full potential of glass to improve how we will move, build and live in the future.

OUR VALUES:

Focus on the customer: Our customers are at the heart of everything we do.

Operating excellence: Always going beyond what is expected of us, with greater efficiency, confidence and quality.

Innovation: Bringing new ideas to processes and operations in order to continuously improve our results.

Our people: Joining our talents to grow and work together as a single entity.

Integrity: Always acting honestly and in keeping with our principles.

Sustainability: Creating the conditions to operate and grow in harmony with our environment and communities we serve.

VITRO BRANDS

Vitro Architectural Glass → **Vitromart** Distribuidor Vidriero LAN → **Lumax®** → **SOLARBAN®** Solar Control Low-E Glass

Solarban ™
Solarban ™ 60
Solarban ™ 67
XL Solarban ™ 70
Solarban ™ 72
Solarban ™ 90
Solarban ™ R100
Solarban ™ z50
Solarban ™ z75
Solarban ™
Solarban ™ Pacifica
Solarban ™ Solarblue
Solarban ™ Azuria

Solarcool ™ Solargray
Solarcool ™ Solarbronze
Vistacool ™
Vistacool ™ Pacifica
Vistacool ™ Azuria

CLEAR
Klare ™
Aquity ™
Starphire ™
Filtrasol ™
Filtraplus ™
Tintex ™

Tintex Plus ™
Solarblue ™
Vitrosol ™
Optigray ™
Azuria ™
Pacifica ™
Optiblue ™
Platia ™
Reflectasol ™
Blindex ™
Pyrosol ™
Pavia ™
Kolore ™

Vitro Automotive Glass → **Vitrocar** → **VDM** → **vit** VITEMCO S.A. → **CRINAMEX** S.A. DE C.V. Seguridad

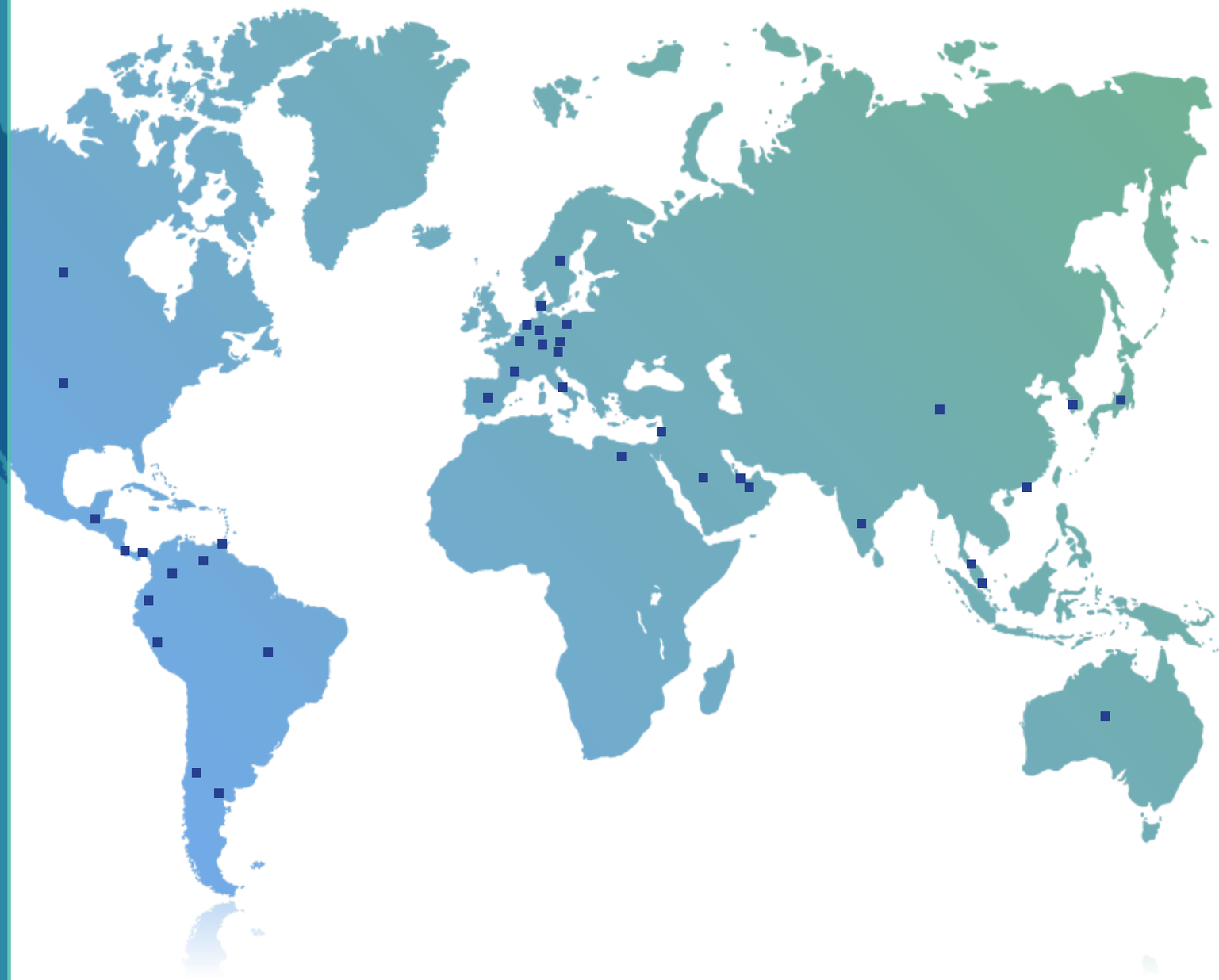
Vitro Containers

VARIOUS INDUSTRIES → **FAMA** by Vitro → **ALCALI** → **Sal Hada** Desde 1965

GLOBAL PRESENCE

SALES BY DESTINATION 2021

- Argentina
- Australia
- Austria
- Belgium
- Brazil
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Dominican Republic
- Ecuador
- Egypt
- France
- Germany
- Guatemala
- Hong Kong
- Hungary
- India
- Israel
- Italy
- Japan
- Malaysia
- Netherlands
- Panama
- Peru
- Poland
- Puerto Rico
- Saudi Arabia
- Singapore
- Slovakia
- South Korea
- Spain
- Switzerland
- United Arab Emirates
- United Kingdom
- United States



OUR FACILITIES

- Brazil
- Canada
- China
- Colombia
- Ecuador
- Germany
- Luxembourg
- Mexico
- Panama
- Peru
- Poland
- Spain
- United States

OUR COMPANIES

VITRO, S.A.B. DE C.V.

Business	Location
Arch USA CA	Carlisle, Pennsylvania
Arch USA CA	Wichita Falls, Texas
Arch USA CA	Meadville, Pennsylvania
Arch USA CA	Fresno, California
Arch USA CA	Salem, Oregon
Arch MX	García, Nuevo León
Arch MX	Mexicali, Baja California
Auto MX	García, Nuevo León
Auto MX	Mexico City
Auto MX	Mexico City
Auto MX	García, Nuevo León
Auto MX	García, Nuevo León
Auto MX	Tepeji del Río, Hidalgo
Auto MX	Aguascalientes, Aguascalientes
Auto USA	Elkin, North Carolina
Auto USA	Crestline, Ohio
Auto USA	Tipton, Pennsylvania
Auto USA	O'Fallon, Illinois
Auto USA	Mid Ohio
Auto USA	Berea, Kentucky
Auto USA	Westland, Michigan
Auto USA	Rochester Hills, Michigan
Auto USAR	Sroda Slaska, Poland
Auto COL	Chía, Colombia
Industrias del Álcali	García, Nuevo León
Containers	Toluca, Mexico State
FAMA	Monterrey, Nuevo León
	Madrid, Spain
	Panama City, Panama
Arch MX	

Glass Containers

- Vitro Packaging, LLC [2]
- Servicios Integrales de Acabados

Machinery and Molds

- Fabricación de Máquinas

Architectural Glass

- Vitro Flat Glass, LLC [2]
- Vitro Flat Glass, Inc. [3]
- Viméxico
- Vidrio Plano de Mexicali
- Vidrio Plano de México
- Vidrio Plano de México LAN
- Vitro Flotado Cubiertas
- Productos de Valor Agregado en Cristal

Automotive Glass

- Vitro Automotive Glass, LLC [2] antes Vitro Flat Glass Holdings
- PGW Holdings, LLC [2]
- Pittsburg Glass Works, LLC [2]
- Pittsburgh Glass Works GmbH [4]
- PGW Technik GmbH [3]
- Pittsburgh Glass Works Hong Kong Limited [5]
- Pittsburgh Glass Works, Sp.z o.o. [6]
- Pittsburgh Glass Works, S.à.r.l [7]
- Shandong PGW Jinjing Automotive Glass Co. [8]
- Vitro Automotriz
- Vitrocar
- Cristales Automotrices
- VVP Autoglass
- Vitro Colombia [1]
- Vitro Do Brasil Industria E Comercio
- Cristal Laminado Templado

Chemicals and Raw Materials

- Distribuidora Álcali
- Industria del Álcali
- Comercializadora Álcali
- Vitro Chemicals [2]

[1] Operating in Colombia.
[2] Operating in USA.
[3] Operating in Canada.
[4] Operating in Germany.
[5] Operating in Hong Kong.
[6] Operating in Poland.
[7] Operating in Luxembourg.
[8] Operating in China.

LETTER TO OUR STAKEHOLDERS

GRI: 102-10, 102-14, 102-15, 102-46,

Our expectations were only partially met: unexpected conditions beyond our projections prevented us from fully meeting our goals, but considering the circumstances prevailing in our markets, we believe 2021 was an acceptable year for Vitro.

Dear stakeholders:

The year 2021 is over; a difficult year in which we continued facing a public health crisis, and in which despite an incipient reactivation in certain sectors of the economy, many challenges remained for our company due to the continuing pandemic and external events, like high inflation in the United States, Mexico and even Canada, which affected the results of some of our business.

Our expectations were not fully met: unexpected conditions that exceeded our projections prevented us from fully meeting our goals, but considering the circumstances prevailing in our markets, we believe 2021 was an acceptable year for Vitro.

The public health crisis and economic stagnation of 2020 eased gradually in 2020. Vitro remains on the right path: the potential and commitment of all of us who make up the human team are what make us strong, and we create value together with you, our stakeholders.

At the close of the period, our facilities were operating as planned. The daily actions of our employees are grounded in the Vitro Operating Excellent Program, which is the model that enables us to exceed clients' expectations and market trends to become the most competitive glass company in the world.

2021 was a year in which we captured value from the recovery of various of the markets where we participate, like architectural glass, chemicals and glass containers. The final results, however, were influenced by rising energy and logistical costs, a scarcity of labor in the United States, and the semiconductor shortage in the automotive industry, among other factors.

Sanitary measures introduced in all of our facilities during the COVID-19 pandemic remained in force, and we have been able to maintain a high level of control and contagion prevention. Our vaccination campaign is making gradual progress despite the risk posed by the emergence of new variants. At Vitro, we will not let down our guard; the safety and well-being of our employees and their families are our highest priority.

In addition to the challenges posed by the pandemic worldwide, other factors caused disruptions in our operations, prompting us to take swift action to mitigate their effects.

Vitro's financial position is stable.

Market conditions

Although the industries we serve returned largely to normal operations and prospects improved, early in the first quarter of the year a mass of arctic air caused severe frosts in the south of the United States and the north of Mexico, prompting supply suspensions and shortages of gas, electricity and water. We were obligated to temporarily seek out alternate sources of energy to keep our operations up and running.

Meanwhile, excess demand for semiconductors, also known as microchips, affected the automotive industry and forcing original equipment automotive manufacturers (OEMs) to sharply curtail production, which in turn results in lower orders tor auto parts, including automotive glass.

The supply of other materials like wood and polymers was also unstable, which added to the uncertainty, while a shortage of labor, due in part to economic incentives promoted by the US government, caused sharp increase in salaries and benefits. There was also a marked rise in the price of energy and shipping, affecting all of our businesses.

The construction market continued to grow at a stable rate. The reopening and recovery of economies in Mexico and the United States encouraged the development and launch of new retail, residential and specialty projects.

The cosmetics and fragrances industries performed outstandingly in the United States, Mexico, Colombia, Argentina and Peru. In Brazil the market slowed in the second half of the year, while in Europe a sluggish reactivation and logistical difficulties hampered sales.

Financial position

Despite the adversities in the business climate, Vitro maintains a solid and stable financial situation. Our plan to fully roll over our syndicated debt enabled us to reduce our financial cost and extend the average life of our debt.

As of December 31, 2021, the company had USD 110 million in cash and equivalents; its debt, net of cash, totaled USD 623 million, which meant a net debt/EBITDA ratio of 3.1 times.

On January 27, 2021, Vitro announced the signing of a bilateral loan agreement with BBVA México to refinance part of the outstanding consolidated debt under a syndicated loan, which totals USD 224 million. The bilateral loan was structured for up to USD 150 million, expiring in January 2026.

Later, on February 26, 2021, the company signed another bilateral loan agreement, this one with ING Bank N.V., totaling USD 75 million and expiring in February 2026. The entire proceeds of this loan were used to pay off the existing debt in advance.

With the proceeds of the bilateral loans from BBVA and ING, 2021, Vitro S.A. de C.B. announced on March 1, 2021, that it had completed refinancing of the entire syndicated loan.

Vitro's financial strategy is aligned with its business plan, maintaining short-term lines of credit to ensure operations in the climate of instability we are now seeing across the globe.

This business is betting on high added-value products that not only offer competitive advantages because of their sustainable features but are also aesthetically pleasing and practical.

BUSINESS PERFORMANCE

Architectural glass

Although the world's economies and businesses continued to sag under the effects of the pandemic, market conditions in the architectural sector improved in 2021, with solid growth in the retail, residential and specialty markets in the United States. In Mexico, the construction industry began the year on weak footing, but managed to reactivate and close the year at levels similar to 2020. All of this supported the performance of our Architectural Glass division.

The high-speed tempering line set up in García, Nuevo León, Mexico, serves the residential door glass segment, as well as the refrigeration market niche, which been gradually gathering strength.

This business is betting on high added-value products that not only offer competitive advantages because of their sustainable features but are also aesthetically pleasing and practical. Architects, builders, designers and even installers can be confident of its qualities when planning their projects.

Our wide range of low-emissivity glass saves energy, which has significant economic benefits in terms of return on investment and operating savings in the buildings where they are installed.

In January 2021, the manufacturing line for building integrated photovoltaic glass (BIPV) was installed and began making this type of glass under the Solarvolt™ brand. The line will supply modules with sheets of photovoltaic glass that can replace traditional materials in building facades, ceilings and skylights, generating an economic return for the client while reducing the building's carbon footprint.

Automotive glass

Contrary to expectations, 2021 was full of continuing challenges and disruptions. In late 2020 the horizons were looking brighter for the Automotive business after Vitro won a number of new contracts in the Automotive business during an upturn in the market. But the global semiconductor shortage triggered a collapse of the automotive industry, where chips are crucial components in the entire range of cars made.

Among the obstacles we faced were a severe frost that lashed the southern United States and north of Mexico in February, along with a shortage of labor in the United States and rising costs on transportation, chemicals, inputs and energy, all of which affected the business's results.

Operating performance was acceptable by our standards. We continued the process of optimizing and updating facilities to make our equipment and machinery more efficient and continue our mission of generating value and innovative solutions for clients and communities. Last year we started up a line of next-generation windshields, with features like special coatings that improve vehicles' energy efficiency, including electrical vehicles.

On the commercial end, we stayed in close contact with our clients in the OEM market in order to align our capacity with their needs and demand for our products.

Facing adverse conditions in the original equipment segment, we optimized production and offset the slump through sales of windshields to the spare parts market. We opened a new distribution center in Dallas, Texas, in order to sell directly to installers in the spare parts market, with the advantage of supplying the automotive glass they needed without having to accumulate inventories.

Our Container division reported good results at the close of 2021, with sales and EBITDA both higher than the year before

Containers

Despite the challenges the year posed to our company—high energy costs, shortages of materials, logistical problems and the impact of the pandemic—our Container division reported good results at the close of 2021, with sales and EBITDA both higher than the year before.

These results were sustained by firm discipline in cost and expense control, savings strategies to manage the impact on sales, our employees' unflagging willingness to respond to constantly changing needs, close communication with clients to meet their needs, and our ability to stay current with trends in the industries we serve.

The premium liquor market recovered strongly, and the skincare and cosmetics segments also saw substantial growth in the United States. Fragrances did not do as well, however, and has been slower to reactivate. In Latin America, fragrances and cosmetics improved notably, primarily in the direct sales channel.

Besides making adjustments to various areas of the plant to enhance productivity, we installed two IS machines and made the modifications necessary to expand our liquor bottle production lines.

The new finishing line in Brazil is now in test runs to guarantee the quality of our processes for clients and be sure their products will have excellent containers.

Bringing groundbreaking new ideas to processes and operations and capitalizing on the value of innovation, our Container division is continually proposing new ways to satisfy clients and improve results. During the year we launched 93 moldings and 407 finishes to the market. We also introduced two new products that resulted from our Innova contest.

FAMA sold four IS machines and offered technical support and spare parts services that increased its value proposition to clients.

Machine Manufacturing (FAMA)

Like the rest of our business, FAMA faced some challenges in 2021. Supply issues contributed directly to lower sales and service indicators weakened, but the division actually did better than the year before.

Closely tracking financial indicators, strictly controlling costs and operating expenses to ensure savings, and the support of our employees, helped this division to achieve the goals set.

Through a process of retrofitting, the pursuit of autonomy and broader scopes of action, FAMA bolstered its automation area, became more technologically independent and began offering customized services for parts and maintenance in the IS machine market, giving clients more certainty.

During the year, FAMA sold four IS machines and offered technical support and spare parts services that increased its capacity to offer clients ideal alternatives for extending the useful life of their equipment.

The automation area reported strong progress, incorporating more than 70 key posts to create a robust work team and increase its share in the industry.

Vitro's consolidated net sales closed at USD 1.96 billion, 20.7% higher than in 2020.

Chemicals

The challenges confronting our Inorganic Chemicals division in 2021 were greater than we expected, forcing us to make adjustments to our plants and weakening their share in some of our markets.

The February winter storm caused interruptions in the supply of natural gas in Mexico, which necessitated dramatic production cuts. Our supplier of steam and electrical energy experiences failures in its power plant and forced it to suspend operations. Additionally, higher prices on a number of the inputs we use caused a noticeable rise in the business's expenses.

Among the strategies adopted by the Inorganic Chemicals business to deal with these situations was to ensure all certifications remained current, and to stay in close touch with clients to strengthen commercial ties and build trust in our processes and products. To minimize unexpected impacts, we reinforced preventive maintenance routines and more closely controlled costs and expenses.

Plant performance was limited by sales volume and failures or anomalies in the supply of inputs and energy, although the calcium chloride plant operated at 4% above plan thanks to growing demand in various markets.

The oil and gas industry in the United States and Brazil recovered during the year, so the deicing segment also picked up during the frosts early in the year. Meanwhile, the detergent and food markets regained their pace, and the replacement glass market saw strong growth as the industry reactivated.

Results

In 2021, the company and its businesses faced enormous challenges. There was a series of disruptions in its supply chains due to the COVID-19 pandemic, a semiconductor shortage that occurred just as the year was beginning, a temporary restriction in the supply of natural gas from the United States to Mexico due to winter storms in February, high energy costs and inflation at levels unseen in recent decades. All of this took a heavy toll on Vitro's results.

Consolidated net sales for Vitro closed the year at USD 1.96 billion, 10.7% higher than in 2020, driven primarily by total sales in our Architectural Glass and Container divisions.

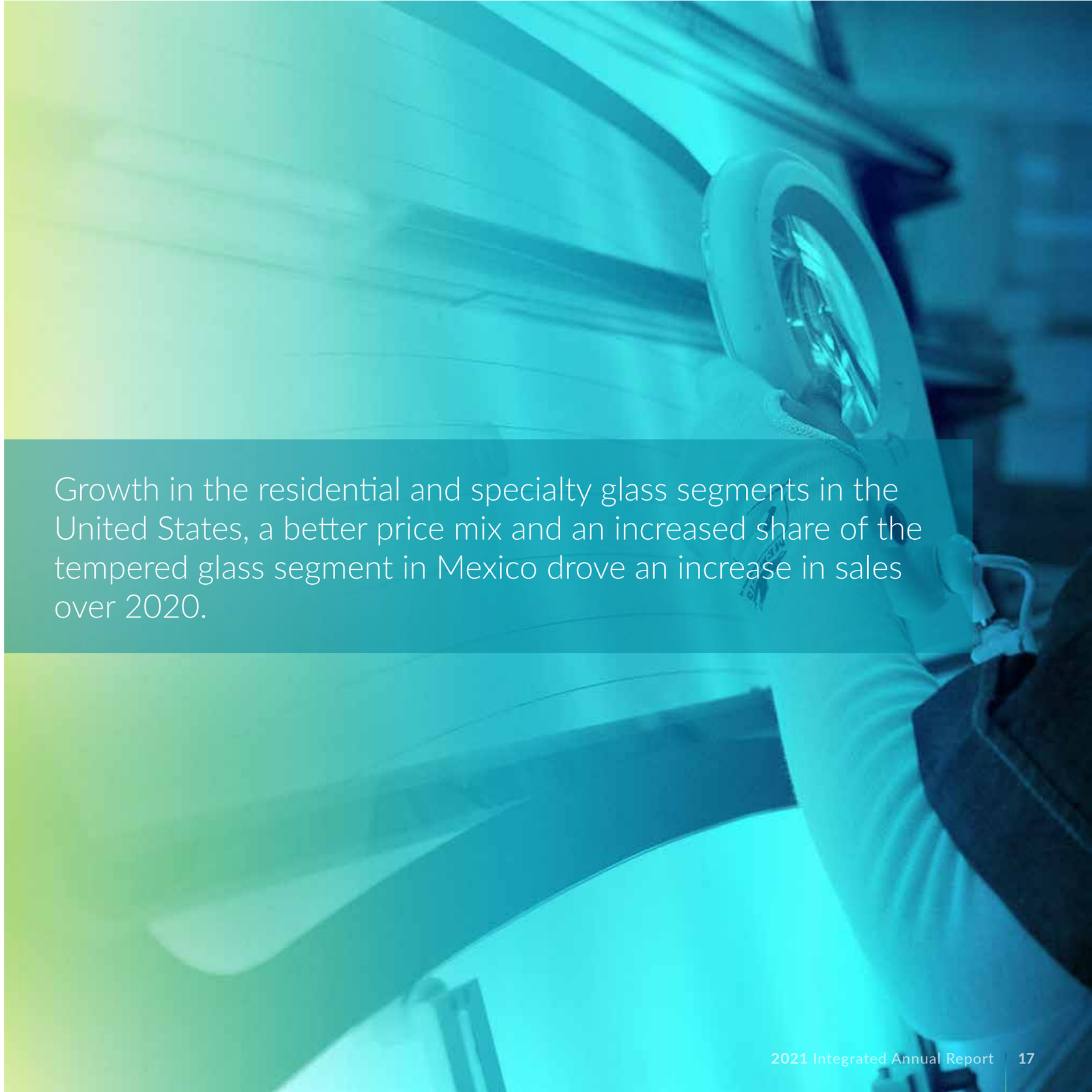
The chip shortage brought a halt to the growing increase in the original equipment market, which in turn depressed our sales to that market. These negative factors were partially offset by sales in the Spare Parts and Architectural Glass segments which were spurred on by an advance in the residential and specialty glass segments in the United States, a better price mix and an increased share of the tempered glass segment in Mexico, ultimately resulting in an increase in sales over 2020.

Sales by our Container division also supported the company's results: the cosmetics, fragrances, toiletries and premium liquors segments all performed well, helping to absorb costs and boost production efficiency.

The Machine Manufacturing division (FAMA) reported higher results due to increased sales of maintenance services, IS machines and new projects developed with its affiliate. Growing competition in the Inorganic Chemicals division resulted in a temporary drop in sales volume in some segments, and although others recovered, it was not enough to meet our projections for the year.

By the close of 2021, the company's EBITDA stood at USD 204 million, 9.9% lower than in 2020. Among the factors behind this decline were reduced sales by the Automotive Glass division to the OEM market, low capacity utilization and lower cost absorption due to the production halt by our clients in the auto assembly industry. The EBITDA of Vitro's companies was also affected by a marked rise in the average price of natural gas and electrical energy and increased costs on some raw materials for packaging and shipping.

The Chemicals segment suffered from production disruptions due to operating failures that reduced absorption of overhead because it had to correct failures and acquire outside products to meet commitments to clients.



Growth in the residential and specialty glass segments in the United States, a better price mix and an increased share of the tempered glass segment in Mexico drove an increase in sales over 2020.

Sustainable Development

One of the core values of our business philosophy is sustainability, whose purpose is to create ideal conditions to operate and grow in harmony with the environment and the communities we serve. In 2021, more than eleven decades after this company's founding, we proved the strengths, aptitudes and sense of responsibility that make up Vitro and its people.

The COVID-19 pandemic remains present throughout the world, and with it, uncertainty and fear among much of the population over when the illness will lessen and be brought fully under control. Vitro is not immune to these circumstances, and we are closely watching the situation and all it entails. The health and well-being of our employees and their families, clients, supplies and all of our stakeholders is of the utmost importance.

Hygiene protocols and monitoring through our call centers have been common practice since March 2020. Through the work of our committees and the application of sanitary measures in our facilities, from the most basic like frequent handwashing, social distancing and correct use of masks, to avoiding congregations of personnel in closed spaces or heavily trafficked areas, we have kept the number of contagions within the company to a minimum.

Through our Saving Lives fund, created to support employees that have no access to medical services in government institutions due to their saturation or the lack of specialized equipment, we have provided 15,564 diagnostic tests (PCR and antigens) and funded 1,178 outpatient hospital services and 127 hospitalizations.

The medical departments in our company workplaces kept close track of contagions, hospitalizations and specialized care when required, as well as the recovery of those who fell ill.

15,564

diagnostic tests (PCR and antigens)

Public health authorities expect that as the vaccination process continues, the COVID-19 pandemic can be brought under control, but we need to remain alert to the emergence of new variants and waves of contagion. We will continue to encourage a culture of prevention and care, abiding at all times by the instructions and recommendations of international organizations in charge of setting standards in matters of global health. All of our operations and activities come together in working for the sustainable development of both the company and our sphere of action. Along with our heath initiatives, we are also continuing to obtain and renew certifications in environmental, industrial safety and labor areas, to mention just a few.

Our companies' technology, product development and innovation areas are continually searching for proposals that will keep them at the forefront of their respective industries while offering innovation solutions for energy savings, reduced waste and discharges, and recycling of glass and other materials, among others.

This report provides further information on our day-to-day initiatives at the company, in keeping with Vitro's sustainability model.

The business strategies of Vitro and its subsidiaries are aimed at creating value.

Growing stronger, building value together

2021 was clearly a complex and challenging year, in which we had to face a number of challenges as a company, not to mention widespread uncertainty and discouragement due to the continuing presence of the pandemic, which has affected us as a community. Returning to the pace of growth we were showing before COVID-19 will take time. Economic and financial analysts believe that growth will remain moderate in 2022. New variants of this virus remain a threat, and vaccination programs need to spread more quickly.

The global economy is gradually recovering in certain industries, but in others that seemed ready to resume their growth, external factors stood in the way.

Despite all the obstacles that arose, we at Vitro are confident that we have come out stronger as a company, determined to achieve the sustainable growth to which we aspire. We know we cannot do this alone: the chain of success involves all of our stakeholders. But we are sure that we are growing stronger, building value together.

With regard to the pandemic, we will continue our safety and health programs to protect the welfare of our people, their families and all of our stakeholders. We will not lower our guard before this crisis, and we are prepared to provide the support required and to take the measures necessary to combat it.

In 2022 we will focus on installing more capacity in strategic and profitable segments. Our vision is clear: together we will discover the full potential of glass to improve how we will move, build and live in the future. We will be sure to develop and launch new products and technologies that break with paradigms while generating value and growth opportunities.

The business strategies of Vitro and its subsidiaries are aimed at value creation; we will continue to place a priority on projects and plans that offer a secure and stable return on investment. We will maintain strict administration and control of our cost and expenses. We will preserve our solid financial position and flexibility to that we can stay on course with the plans we have devised and take advantage of the opportunities for sustainable development as they arise.

To all our stakeholders, on behalf of the Board of Directors, the executive committee and the members of Vitro's most valuable asset, its 14,598 employees; we pledge to continue working together to be the best choice for all of you.

Today more than ever, with the adversities we have faced, we are still standing, and we have grown stronger. We extend our commitment to shareholders and thank them for their support and enduring confidence in us. Be assured that we will repay your trust through operating excellence and generation of value.

Sincerely,

Adrián Sada González
Chairman of the Board of Directors

Adrián Sada Cueva
Executive CEO

February 16, 2022

DATA HIGHLIGHTS

GRI: 102-45, 201-1,

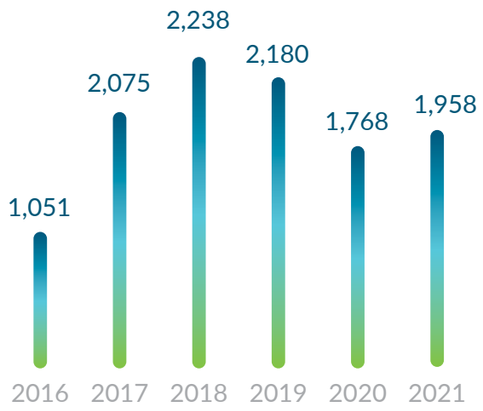
Vitro, S.A.B. de C.V. y Subsidiaries
(Figures in millions of U.S. dollars under IFRS unless otherwise indicated)

	USD [1]		%
	2021	2020	Chge. [2]
Income Statement			
Consolidated net sales	**$ 1,958**	$ 1,768	10.7
Domestic	**614**	559	9.9
Export	**291**	257	13.4
Offshore subsidiaries	**1,052**	953	10.4
Earnings before others (EBIT)	**21**	76	(72.1)
Net earnings	**(107)**	(45)	
Majority net loss	**(107)**	(45)	
Majority net loss per share [3]	**(0.23)**	(0.10)	
EBITDA [4]	**204**	227	(9.9)
Balance sheet			
Total assets	**2,539**	2,893	(12.2)
Total liabilities	**1,339**	1,588	(15.7)
Total shareholders' equity	**1,200**	1,305	(8.0)
Majority shareholders' equity	**1,200**	1,304	(8.0)
Financial Indicators			
Debt / EBITDA (times)	**3.6**	4.1	
Net debt / EBITDA (times) [6]	**3.1**	1.9	
Interest coverage (times)	**7.3**	5.8	
(EBITDA / total net interest expense)			
EBIT margin (%)	**1%**	4%	
EBITDA margin (%)	**10%**	13%	
Number of employees	**14,598**	14,588	0.1
Capex [5]	**$ 97**	$ 96	0.8

[1] The functional currency for the company starting in 2018 has been the U.S. dollar.
[2] Change from 2020 to 2021.
[3] Based on the weighted average number of shares outstanding.
[4] EBITDA = operating income before others, plus depreciation, amortization and employee pension fund obligations.
[5] Represents investment in fixed asset during the fiscal year, and therefore differs from investments presented under.
[6] Debt net of cash and equivalents.
The financial figures are presented in accordance with International Financial Reporting Standards (IFRS).

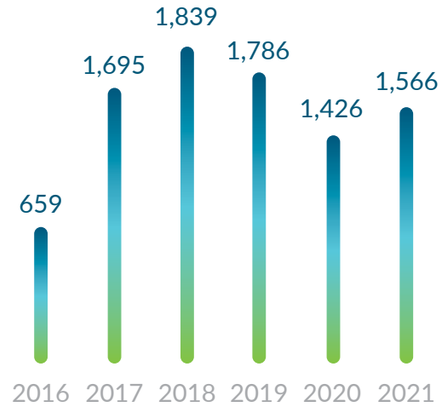
CONSOLIDATED NET SALES

Figures in millions of dollars



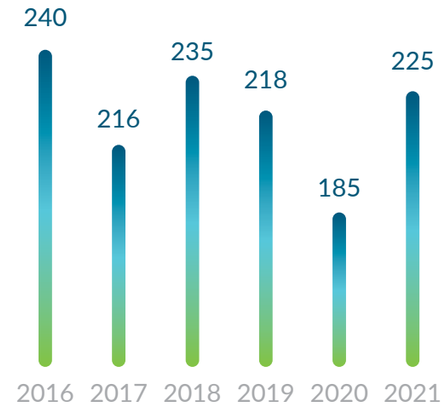
NET SALES FLAT GLASS

Figures in millions of U.S. dollars



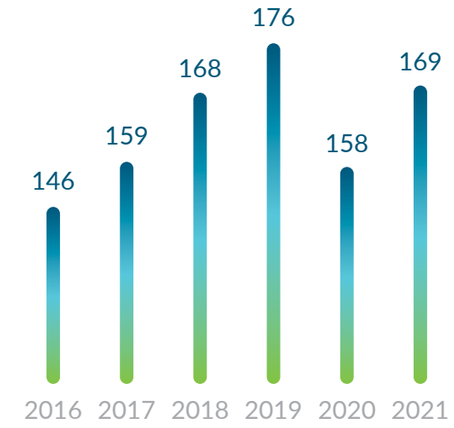
NET SALES CONTAINERS

Figures in millions of U.S. dollars



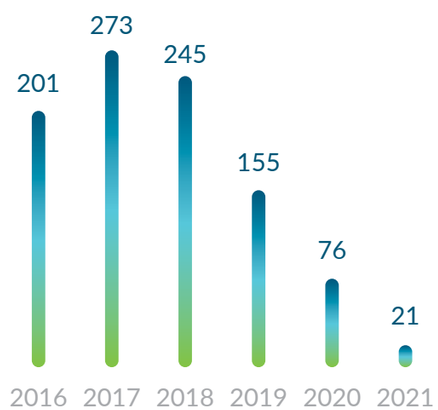
NET SALES INORGANIC CHEMICALS

Figures in millions of U.S. dollars



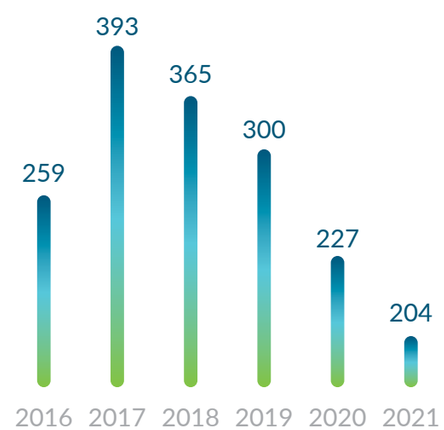
OPERATING INCOME (BEFORE OTHER INCOME AND EXPENSE)

Figures in millions of U.S. dollars



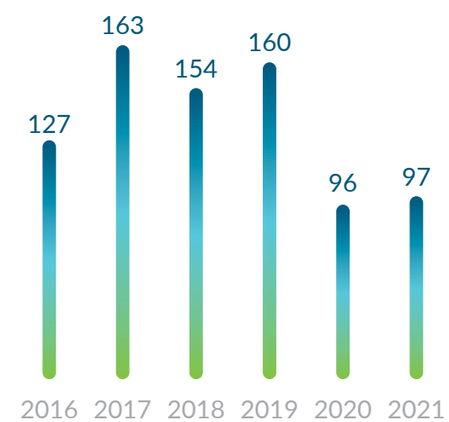
CONSOLIDATED EBITDA

Figures in millions of U.S. dollars



CAPEX

Figures in millions of U.S. dollars



In line with our ethical principles and the values that are part of our philosophy as a company, we apply the highest standards of corporate governance and transparency in all economic, social, environmental and business matters.

GOVERNANCE STRUCTURE AND COMMITTEES

CORPORATE GOVERNANCE

GRI: 102-18, 102-22, 102-33, 102-34, 405-1,

Our Board of Directors has 12 members, 41.66% of which are independent

In line with our ethical principles and the values that are part of our philosophy as a company, we apply the highest standards of corporate governance and transparency in all economic, social, environmental and business matters, so that the company can operate in an open, above-board manner and with full trust on the part of all its stakeholders.

Vitro's more than eleven decades of operation stand attest to its commitment to compliance with all government and industry regulations, to meeting the requirements of its clients, non-governmental organizations and civil society, and to protect the interests of the communities where we are present as well as our environment.

One of the bodies responsible for establishing and guaranteeing the execution of strategies, systems, policies and procedures to regulate and oversee correct administration of the companies of Vitro, S.A.B. de C.B., is its Board of Directors, which has 12 members, 41.66 percent of which are independent

The Board of Directors is supported by Audit, Corporate Practices and Chairmanship Committees, the decisions and actions of which are reviewed and endorsed each year in the General Ordinary Shareholders' Meeting.

Currently, the company has engaged the auditing firm of KPMG Cárdenas Dosal, S.C. (KPMG) as independent external auditor for fiscal years 2020, 2021, 2021 and 2022.

GOVERNANCE STRUCTURE AND COMMITTEES

GRI: 102-22

ADRIÁN SADA GONZÁLEZ (1944)

Member since 1984

Chairman of the Board of Directors
Chairman of the Chairmanship Committee.
Board Member of Cydsa, Consejo Mexicano de Negocios (CMN) and Grupo de Industriales de Nuevo León.

ÁLVARO FERNÁNDEZ GARZA (1968)

Member since 2011

Chief Executive Officer of ALFA and member of the boards of directors of Cydsa, Grupo Aeroportuario del Pacífico, Grupo Citibanamex, and President of the University of Monterrey.

TOMÁS GONZÁLEZ SADA (1943)

Member since 1980

Chairman of the Board and Chief Executive Officer of Cydsa; Vice President of the Mexican Institute for Competitiveness (IMCO), Honorary Consul of Japan in Monterrey, Mexico. Additionally, he is a member of the Regional Council of the Bank of Mexico (Central Bank), the Business Round Table (CMN), Grupo de Empresarios of Nuevo León and member of the Board of Trustees of Cáritas de Monterrey and Treasurer of the Fundación Martínez Sada, an organization that grants academic scholarships.

MARIO LABORÍN GÓMEZ (1952)

Member since 2010

President of ABC Holding and ABC Capital. Has been managing director of Bancomext, CEO of Nacional Financiera, CEO of Bancomer and President of its Brokerage Firm, and founding President of Mexder, as well as co-founder and general director of Grupo Vector. He has served as a member of the boards of directors of TV Azteca, Cervecería Cuauhtémoc, Transportación Marítima Mexicana, Bancomer, the Mexican Stock Exchange, Mexder, Indeval, Xignux, Megacable, Cydsa, Astrum México, Banco de México Nuevo León, Gruma, AXA Seguros, Goldman Sachs, Avanzia and Across.

DAVID MARTÍNEZ GUZMÁN (1957)

Member since 2013

Chairman and Special Counsel for Fintech Advisory, Inc. and Board Member of ALFA, CEMEX, ICA Tenedora and Sabadell Banc (Spain).

RICARDO GUAJARDO TOUCHÉ (1948)

Member since 2013

Board Member of BBVA Bancomer, Bimbo, Grupo Aeroportuario del Sureste, and Coca-Cola FEMSA. He was a Member of the International Advisory Committee of the Federal Reserve Bank of New York. He has served in various executive positions in companies such as BBVA Bancomer, Valores de Monterrey, FEMSA and Grupo AXA.

GUILLERMO ORTIZ MARTÍNEZ (1948)

Member since 2010

Partner and Board Member of BTG Pactual, Chairman of the Per Jacobsson Foundation and Founder of Guillermo Ortiz y Asociados. Member of the Group of Thirty and of the Boards of Directors of Bombardier, Grupo Aeroportuario del Sureste, and Orbia. Has served as Chairman of the Board of the Bank for International Settlements, Governor of Banco de México and Minister of Finance and Public Credit for the Mexican federal government. At the International Monetary Fund, he chaired the External Panel for the Review of the Fund's Risk Management Framework and also served as Managing Director.

RICARDO MARTÍN BRINGAS (1960)

Member since 2007

Chairman of the Corporate Practices Committee.

Chief Executive Officer and Vice Chairman of the Board of Directors of Organización Soriana. Board Member of Teléfonos de México, Grupo Financiero Banamex, Consejo Mexicano de Negocios, Grupo de Empresarios of Nuevo Leon and Asociación Nacional de Tiendas de Autoservicio y Departamentales (ANTAD). Chairman of the Endowment for the Hospital Regional Materno Infantil.

JAIME RICO GARZA (1957)

Member since 2008

Chief Executive Officer and Chairman of the Board of Vitro Europa and Vitro Global (2002-2017), as well as Board Member of Vitro Cristalglass and Chief Executive Officer of Vitro Cristalglass (2007-2012).

ADRIÁN SADA CUEVA (1975)

Member since 2010

Executive Chief Executive Officer of Vitro, S.A.B. de C.V. Board Member of Grupo Financiero Banorte, the Dallas Museum of Art, Nemak and ALFA. Former president of the of Cámara de la Industria de Transformación (CAINTRA) Nuevo León. Member of Organización Vida Silvestre and the General Council of the Universidad de Monterrey.

JAIME SERRA PUCHE (1951)

Member since 1998

Chairman of SAI Consultores, Founder of Aklara (Electronic Auctions), and Centro de Arbitraje de México (CAM). Chairman of the Board of BBVA Bancomer and publicly-traded companies Fondo México, Tenaris, and Vitro. He held several positions in the Mexican federal government (1986-1994) as Undersecretary of Revenue, Minister of Trade, and Minister of Finance. Currently, he is a member of the Yale University President's Council on International Activities and is a Trustee for the Trilateral Commission.

JOAQUÍN VARGAS GUAJARDO (1954)

Member since 2000

Chairman of the Audit Committee.

Chairman of the Board of Grupo MVS and of Grupo CMR. Board Member of Grupo Financiero Santander, Grupo Costamex, El Universal, Grupo Aeroportuario del Pacífico and Médica Sur. He has served as Chairman of National Chamber of Radio and Television Industry (2000-2001), Chairman of Mexican Restaurant Association (1985-1987) and Chairman of the Association of Restaurant Chain Directors (1989).

ALEJANDRO F. SÁNCHEZ MÚJICA (1954)

Secretary of the Board since 2007 (Non Board Member)

He has been Legal Manager for Indeval, Chief Legal Officer for a division of Grupo Kuo, Corporate Counsel for Grupo Pulsar/Savia, Vice President and Chief Legal Officer of Vitro, and Senior Partner of the law firm Thompson & Knight, currently of Counsel at Holland & Knight. He has served on the board of various Mexican and foreign corporations and is currently a member of the Private Charitable Board for the State of Nuevo León. He has a law degree from the Escuela Libre de Derecho and master's degrees from the University of Texas at Austin.

VITRO BOARD OF DIRECTORS

Chairman
Adrián G. Sada González

Independent member
Joaquín Vargas Guajardo

Álvaro Fernández Garza

Tomás Roberto González Sada

Ricardo Guajardo Touché

Independent member
Mario Martín Laborín Gómez

Independent member
Ricardo Martín Bringas

David M. Martínez

Independent member
Guillermo Ortiz Martínez

Jaime Rico Garza

Adrián G. Sada Cueva

Independent member
Jaime José Serra Puche

Non-member Secretary
Alejandro Francisco Sánchez Mújica

VITRO AUDIT COMMITTEE

Chairman
Joaquín Vargas Guajardo

Independent member
Guillermo Ortiz Martínez

Independent member
Jaime José Serra Puche

Non-member financial expert
Jonathan Davis Arzac

Non-member Secreatry
Claudio Luis Del Valle Cabello

VITRO CORPORATE PRACTICES COMMITTEE

Chairman
Ricardo Martín Bringas

Independent member
Joaquín Vargas Guajardo

Independent member
Guillermo Ortiz Martínez

Independent member
Mario Martín Laborín Gómez

Non-member Secreatry
Alejandro Francisco Sánchez Mújica

CHAIRMANSHIP COMITTEE

Chairman
Adrián Sada González

Adrián Sada Cueva

Secretary
Claudio L. Del Valle Cabello

FLAT GLASS

The Flat Glass business unit is a North American leader in the manufacture and processing of float glass for the construction and automotive industries, for the latter in both the original equipment and spare parts segments. In addition to making, processing, marketing, distributing and installing glass, the division leads the industry in developing added-value products through its technological research center, enabling it to meet the exacting demands of every client.

FLAT GLASS

For the Architectural glass business, conditions were highly favorable. The division was able to overcome logistical obstacles and supply disruptions and offset some of the rise in inflation through a better price mix.

2021 SUMMARY

Overall, 2021 remained a complex period. COVID-19 pandemic trends came and went, and although the economy began to rally from its slump, some of the Flat Glass businesses were unable to advance as we had hoped.

The temporary shutdown of many industries in 2020 forced some companies to cut back production and others to divert production to markets where demand was stronger. This was the case of chip manufacturers, where orders exceeded their capacity. As industries like automotive manufacturing recovered, semiconductor supply chain disruptions caused chaos.

Adding to this situation, a global cold front in February brought below-freezing temperatures in the south of the United States and north of Mexico, temporarily interrupting exports of natural gas to Mexico from Texas and depriving Vitro's companies of one of their main inputs.

At the same time, the prices of manufacturing materials, fuels and logistical services all rose sharply and there were shortages of some of these, which added to the year's complexities.

All of these challenges combined to pressure total results in the Flat Glass division, which ended the year below the projected results. Even so, stronger sales in the various businesses brought a growth in overall net sales for the division compared to 2020.

Architectural Glass

For the Architectural glass business, conditions were highly favorable: it was able to overcome logistical obstacles and supply disruptions and offset some of the rise in inflation through a better price mix.

Like the rest of Vitro's businesses and other outside companies, including suppliers and clients, problems with input shortages, insufficient energy supply and delays in transportation logistics, to name but a few, posed challenges that had to be overcome in one way or another. Additionally, the continuing pandemic made it more difficult to maintain personal contact with clients in commercial activities, a situation we countered by redoubling our efforts to stay in touch by digital media.

But through our Vitro Operating Excellence Program, and thanks to the commitment and efforts of our employers, we were able to overcome the shortage of kay raw materials, palliate the effects of the February freeze and rise above the difficulties. All of the facilities in the Architectural Glass division worked at full capacity and without operating problems.

Automotive Glass

Conditions in the Automotive business were less than propitious in 2021: the market began to revive in the third quarter of the year but faltered again for various reasons.

In February, extreme weather in Texas caused various companies that supply us raw materials to halt operations, disrupting the supply chain for our business. At the same time, clients in the automotive industry had to stop production due to an unforeseen shortage of the chips they use to make their vehicles, which caused problems further down the line: production suspensions by original equipment manufacturers in the US had a severe impact on Vitro, which supplies this market.

All in all, the business was hard hit by supply chain problems, a sharp increase in energy prices, inflation at levels not seen for more than 20 years, and a shortage of labor in the United States; and these were just some of the challenges this business was called upon to face.

The labor shortage obligated us to increase base salaries and offer hiring and retention bonuses in order to minimize employee turnover. Although we have taken measures to mitigate costs, the sum of all these challenges made last year a very complicated one and affected financial and operating results.

MARKET CONDITIONS

Vitro Architectural Glass

As companies gradually returned to normal operations with the easing of the 2020 pandemic crisis, the economy began to revive, although some markets have taken longer than others to recover.

In the United States and Canada, the residential segment came back strongly while the retail sector remained very close to its year-end 2020 levels. The Mexican construction industry was stable, gradually resuming its pace, but the abrupt halt to the recovery of the automotive OEM market affected sales of float glass to this segment.

In June of 2021 we announced a USD 120 million investment to build a third float glass furnace at our García plant in Nuevo León, Mexico, which enabled this business to handle growing demand from the market in Latin America, increase the availability of product and improve logistical issues.

Automotive Glass

The original equipment automotive glass market was heavily affected by production cuts among carmakers responding to the semiconductor shortage. This considerably weakened sales for the division, but at the end of the year, Automotive Glass sales were showing a slight increase. The spare parts segment performed well: some of the production of windshields we usually send to the OEM market were re-directed to these clients, which offset some but not all of the impact on our final results.

USD 120 million invested building a third float glass furnace at our García plant in Mexico, enabling this business to handle growing demand from the market in Latin America, increase the availability of product and improve logistical issues.

STRATEGIES THAT CREATE VALUE

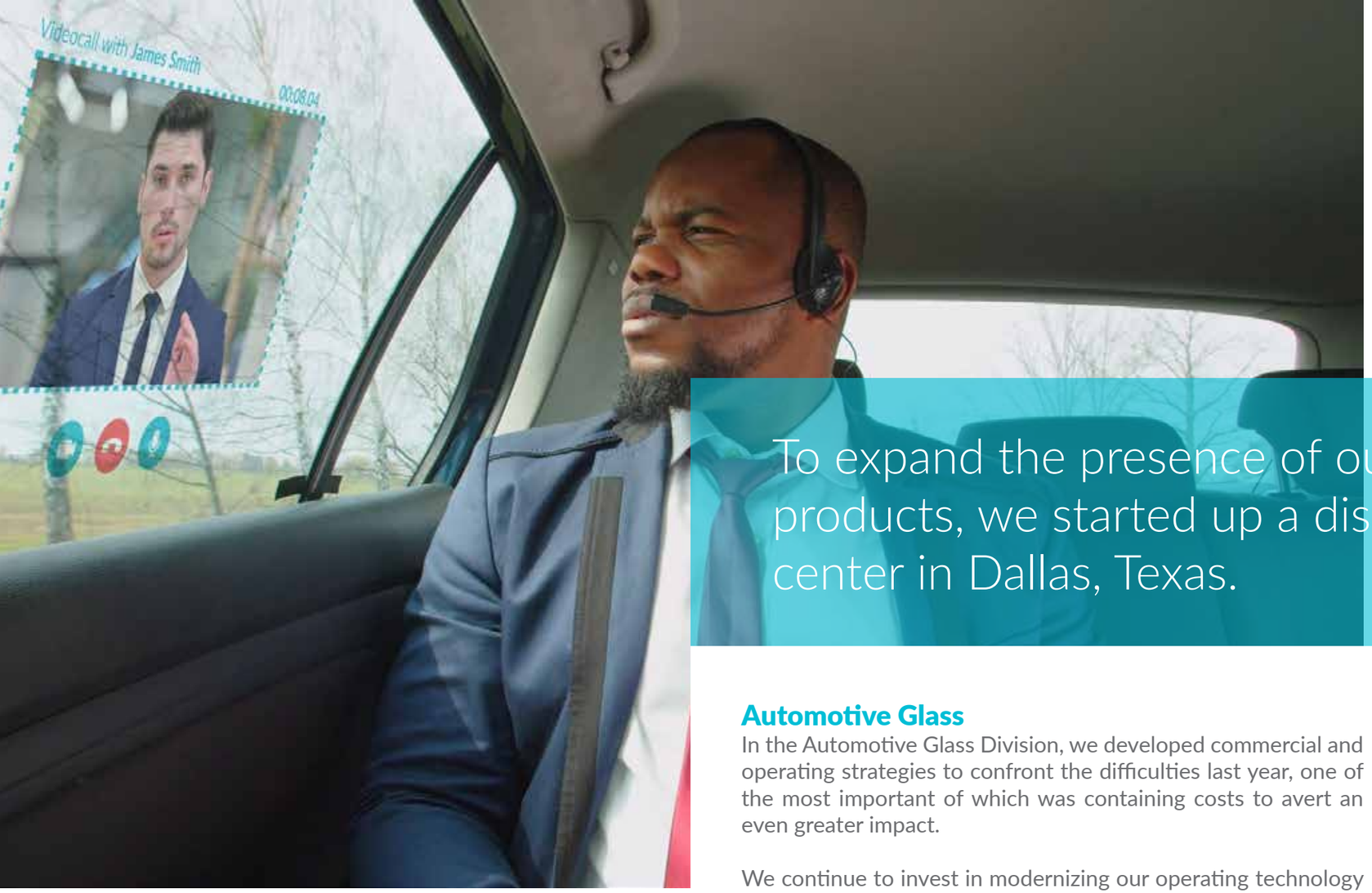
Architectural Glass

Strategies in the Architectural Glass business are based on and aligned with the Operating Excellence Model, which, among other things, is designed to make Vitro and its subsidiaries a high-yield organization, a leader in the segments in which it participates, with a planned and effective cost management structure.

Having state-of-the-art equipment that sets us apart from the competition and enables us to develop added-value products is one of our key strategies for the division.

In 2021, the high-speed tempering line operated three shifts with excellent results. This line serves the glass residential and refrigerator door market.

Also last year, we started up a line that manufactures photovoltaic glass modules that can applied to facades, domes and skylights, which are not only attractive but can generate renewable energy and save on the cost of air conditioning the buildings where they are installed.



To expand the presence of our spare-parts products, we started up a distribution center in Dallas, Texas.

Automotive Glass

In the Automotive Glass Division, we developed commercial and operating strategies to confront the difficulties last year, one of the most important of which was containing costs to avert an even greater impact.

We continue to invest in modernizing our operating technology and keeping up with trends in autonomous and assisted driving and electrification in new generations of automobiles, intent on staying at the forefront of new products and processes.

One of our strategies in the original equipment segment has been the inclusion of Advanced Driver Assistance Systems and the incorporation of Head-Up Display devices in windshields to improve driver attention and visibility of information like speed, GPS guidance and other visuals.

In 2021 we responded to shipping disruptions and rising import costs on glass from China by taking advantage of our position in Mexico, turning challenges into opportunities to become more competitive in the supply of glass to the spare parts market.

To expand the presence of our spare-parts products, we started up a distribution center in Dallas, Texas to serve installers in that market with ready access to automotive glass so they did not have to keep their inventories fully stocked and could instead go to the distribution center or have the glass shipped directly to them as needed.

In Mexico, we began a pilot program through our Vitrocar installation chain, involving an app that provides mobile service to people who find it difficult to get to our installation centers. The plan is to deploy this service across all of Mexico.

ADDED-VALUE PRODUCTS AND SERVICES

Architectural Glass

In our business, glass manufacturing goes beyond meeting the basic requirement of covering space. We are continually working to develop glass that offers not only aesthetic appeal but high energy performance through products that reduce heat while allowing natural light to pass. One such product is what is called low emissivity, or low-E, glass.

In 2021, we launched new glass lines like the low-E layered Solarban™ R77, a neutral reflective glass with a soft silver-blue appearance. Its solar control and low emissivity features make it the ideal option for comfort in any bioclimatic zone. We also began producing photovoltaic modules for glass-roofed atriums and facades through the Solarvolt™ brand, which help generate renewable energy.

We also signed an agreement for exclusive North American sales of our VacuMax™ line, which is vacuum-sealed glass that provides the most advanced thermal properties in the industry, equivalent to those offered by standard walls.

Automotive Glass

This business's strategies last year focused on creating added-value products and services. For example, despite the semiconductor shortage, our clients in the OEM market launched various new car brands on the market, incorporating specialized automotive glass with Vitro's quality seal, safety and cutting-edge technology.

In addition to advanced assistance built into some of our automotive glass, we have developed efficient coatings that reflect solar radiation and retain heat and energy, improving battery charge times and improving the autonomy of electric vehicles.

Among the vehicles launched on the market with Vitro glass in 2021 were the Acura MDX and the Nissan Pathfinder. We also supplied glass for Ford's Bronco, Maverick and Transit models. Other cars that include our glass are the Hyundai Santa Cruz, the Infinity QX60, the GMX Hummer EV, the Toyota Tundra and the Cadillac Lyriq. All of these models incorporate Vitro's innovation, quality and certified technology.

In 2021, we launched new glass lines like the low-E layered Solarban™ R77.

Consolidated net sales of Flat Glass in 2021 closed the year at USD 1.57 billion, 9.8% higher than the year before.

RESULTS

Consolidated net sales of Flat Glass in 2021 closed the year at USD 1.57 billion, 9.8% higher than the USD 1.53 billion reported in the previous year. Higher sales in the Architectural Glass division and the automotive spare parts market were strong factors in this advance, offsetting some of the decline in sales to the OEM segment.

Sales of original equipment were heavily affected by the shortage of semiconductors and other materials used in manufacturing cars, which reduced the volume of orders from our clients.

EBITDA in this business unit was down 13.8%, coming at USD 97 million in 2021 compared to USD 112 million in 2020. Among the factors behind this result were higher labor costs on the United States, a lower absorption of overhead, and higher prices on raw materials, packing materials, shipping, transportation and energy, among others.

GROWING STRONGER, BUILDING VALUE TOGETHER

The prospects for 2022 remain uncertain. The pandemic is not over yet, and many industries have not stabilized. There is a latent risk of further disruptions, particularly those outside of our control like weather conditions, input shortages and logistical problems, among others.

Nevertheless, the companies of Vitro's Flat Glass division will continue to grow stronger, revamping and upgrading operations with the best technology available to generate value and grow sustainably.

2021

was a good year for this business, and in the year ahead we will continue to refine our current commercial strategies.

Architectural Glass

2021 was a good year for this business, and in the year ahead we will continue to refine our current commercial strategies, serving clients by segment and specialization in the United States, and through project specification teams in Mexico.

We expect that as markets stabilize, we can achieve moderate growth. If the automotive industry is able to resolve its problems with the supply of chips and other materials, it may achieve a brisker pace.

The new float glass furnace we plan to start up this year, equipped with cutting-edge technology, will expand our capacity and enable us to cover rising demand while bringing our product to clients more quickly.

We will continue to focus on creating added-value products that improve quality of life, generate profits and save energy, while enhancing the beautify and functionality of the building.

Automotive Glass

Last year was a difficult one for this business. A series of disruptions weighed down the final results, but we are not giving up: the experience, capacity and resilience of our companies and employees tell us that we are ready for 2022.

We expect the trend toward electrification and vehicle autonomy to continue, and although the industry as a whole is suffering on all levels, our clients recognize that Vitro continues to modernize and invest in the best technology, which why we are confident that once the input disruptions are behind us, we will once again bring in new business.

The economic crisis that accompanied the pandemic will continue to hamper our industry, but Vitro's balance sheet is stable, so we will remain comparatively solid, continuing to gain strength and capitalize on our competitive advantages to build value.

CONTAINERS

Vitro containers are backed by the quality and service excellence that come from more than 110 years of experience. Through cutting-edge technology and strict, quality, safety and hygiene controls, the company makes highly sophisticated and attractive products designed for the cosmetics, fragrances and toiletries industry. It also serves clients in the pharmaceutical and premium liquors segments. Its Machinery and Equipment division makes specialized tools for glassmakers and offers engineering and automation services to various industries.

CONTAINERS

His business unit closed the year with satisfactory results, achieving a growth in financial indicators and operating improvements.

2021 SUMMARY

Containers

Conditions were difficult in 2021: the pandemic continued across the globe, and the economic slump of 2020 had a lingering impact, limiting the supply of certain materials and inputs and causing logistical and shipping disruptions, high energy prices and higher inflation. These were just some of the challenges our Container division had to face.

The glass container business was not immune to the difficulties affecting companies and the economies during the year. Despite an initial reactivation, new variants of the COVID virus appeared and once again dampened activity.

We had to keep our workforce focused and motivated, even under pressure from clients and suppliers, filling increased orders from the former while facing delivery delays and materials shortages, as well as higher prices, from the latter.

As always, our people proved their resilience and capacity and adapt to the changes. We applied absolute discipline in protecting our employees, clients and the company. At the same time, our flexibility and capacity for rapid response enabled us to respond promptly to sudden changes in requirements.

Despite the difficulties, this business unit closed the year with satisfactory results, achieving a growth in financial indicators and operating improvements.

Among the actions taken in our facilities were adjustments to raw materials, furnaces, feeders and basement to add 40 metric tons of daily glass capacity. Two additional IS machines were installed—these are used to make perfume bottles—increasing the number of glass molding machines in the plant from 25 to 27.

We also worked on the multi-cavity mold project in order to use this machinery to turn out the main high-volume products.

In October 2021, Vitro announced an investment of about USD 70 million to build a new furnace at the Toluca plant in Mexico State. This was necessary to meet higher demand for containers and is expected to start up operations in the first half of 2023.

Machine Manufacturing (FAMA)

The disruptive events that affected Vitro in 2021 were also clearly evident in the Machine Manufacturing business.

Supply chain disruptions caused suppliers to postpone deliveries of raw material, directly impacting our sales and service indicators.

Nevertheless, FAMA fared better than in 2020, thanks to constant monitoring of financial metrics in order to make agile decisions on cost and operating expense savings and keeping the business above the break-even point.

The support of our staff working from home was also crucial in achieving these results.

MARKET CONDITIONS

Containers

Trends in the markets served by our Container division were positive. In Latin America (Mexico, Colombia, Argentina and Peru) the perfume and cosmetics industry came back strongly, and demand exceeded our capacity, except for in Brazil, where orders dwindled dramatically in the second half of the year.

In the United States, all categories saw a brisk and solid recovery, particularly skin care and air fresheners. In premium liquor containers, we had new launches supported by a boom in the segment. This line reported double-digit growth in Mexico and Central America, particularly tequila and rum.

The pharmaceutical market saw a decline, however, because our main clients in the Mexican healthcare sector lost some public tenders.

Machine Manufacturing

FAMA ceased to be the exclusive supplier to Vitro's container manufacturing subsidiaries when the division was sold to outside owners. From that time on, the Machinery and Equipment business has been reconverted to explore other markets and achieve financial autonomy. In 2021, the company made significant progress:

Machinery: A good year, which saw the sale of four IS machines and the suite of technical and spare parts services that improve the revenue mix and brought sales up to targeted levels.

Automation: Strong progress toward becoming a core business for the group, strengthening and expanding technical capacities and developing new businesses with clients in the smelting and discrete manufacturing segments.

In premium liquor containers, we had new launches supported by a boom in the segment and achieved double-digit growth in Mexico and Central America, particularly in tequila and rum.

STRATEGIES THAT CREATE VALUE

Containers

In 2020, the glass container business drafted a 2025 Strategic Plan that encompasses the following aspects:

Geographic growth

In 2021 we started up a decoration line in the state of Bahía, Brazil, reinforcing a clear message of being there for our clients to offer them service and flexibility.

Competitiveness

Overall, operating results were better than the year before. We know we still have opportunities to improve, but we were able to deal with a situation of excess demand by offering more flexibility and improving performance.

Efficiency metrics in our decorating processes remain above target, and we also reduced product losses.

Innovation

Creativity is one of the Container division's distinguishing features. In 2021 we launched 93 new molds and 407 finishes. Globally, 35% of our sales last year were new products.

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We worked on two projects that came out of the Innova Design Competition: Decisions and Kiotis Raíces, in collaboration with our clients House of Fuller and Stanhome, respectively.

Innspire
We issued new challenges in our "Innspire" program in 2021, aiming to improve process productivity and efficiency and reduce plant costs and processing losses.

We held to events to recognize our employees' creativity and Innovation. More than 45 ideas were submitted and 16 of them received special distinction. More than 140 innovators were recognized for their great ideas and proposals, which year after year bring tangible benefits and savings for the company.

Added value
Prestige Products: In 202 we were selected as suppliers in premier launches by international clients in the skincare industry.

Premium liquors
This segment grew by more than 230% in value compared to 2020.

Sustainability
- More than 50,000 metric tons of cullet used in the manufacturing process.
- More than 24,000 m3 of treated water reused.
- Installation and startup of lines 19 and 10.
- Reduced 26,186 kg of hazardous waste between 2019 and 2021.

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Machine Manufacturing

In both 2020 and 2021, FAMA reacted to the difficulties of the pandemic and the market downturn by refocusing strategy on the following areas:

Commercial

Reinforcement of Automation Business

This strategy is aimed at positioning FAMA in the industry and ensuring exponential growth. In 2021 the division was able to put together a robust work team by filling more than 70 key positions to bolster the business and increase our market share in various industrial branches, opening new lines of business.

FAMA Machine Services

To adapt to the industry needs and the new environment, the business expanded its portfolio of to include repair, maintenance and spare parts for the IS machine market, where customers want to extend the useful life of their assets and reduce their Capex investment. In 2021, FAMA sold an IS machine to its client Vidriera Guatemalteca and developed a specialized technical service team to support it.

Manufacturing

Financial health

The main strategy was to constantly monitor business costs and expenses, and with this FAMA cut back on unexpected expenses and optimized spending through savings in operating areas. In financial terms, the business broke even for the year.

Inventory liquidation

The purpose of this initiative was to optimize inventory and monetize idle assets through strategic sales. During the year USD 1.5 million in inventory was sold, essentially in the manufacture of IS machines for our affiliate, and the sale of spare parts.

Safeguarding operations

To keep the business competitive in its markets, with a unified workforce capable of adopting best practices and efficiencies, FAMA completed its plans focused on the Vitro Operating Excellence model.

Resilient sourcing

FAMA wants to create a more agile, effective and flexible supply chain by developing strategic suppliers and inventories. In 2021 it created a specialized work team to work with more than 35 suppliers to complement their manufacturing capacities.

Technical independence (R&D)

FAMA is committed to ensuring technological continuity by building up its own equipment to serve the industry. Three developments were completed last year, completing its technological independence from outside suppliers.

Consolidated net sales for the Container division were up 22.1% as of December 31, 2021.

ADDED VALUE

Containers

Vitro makes containers for specialized market segments where exclusive new and sophisticated designs are most in demand. In 2021 our share of the premium liquors segment grew exponentially: we brought in four new clients and achieved sales above our projections.

Machine Manufacturing

In November 2020 we acquired a business that makes what are called building integrated photovoltaic (BIPV) glass modules, under the Solarvolt™ brand. With this the business, we can serve the renewable industry market by supplying attractive photovoltaic modules to replace traditional construction materials in facades, roofs, skylights, etc., generating an economic return for clients and end users and helping them reduce their carbon footprint.

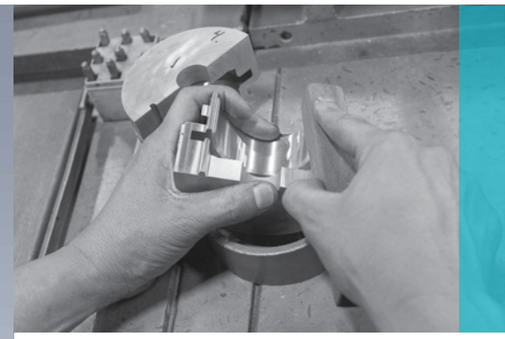
The division booked its first sales of these products in 2021 and obtained certifications that attest to their safety. With this and the maturation of other strategic projects, prospects for 2022 are good.

RESULTS

Consolidated net sales for the Container division were up 22.1% as of December 31, 2021, totaling USD 225 million, compared to USD 185 million in 2020, thanks to the performance of the glass container and machinery and equipment divisions.

As markets served by the CFT business recovered, demand grew for added value products, particularly in the fragrance, premium liquor and cosmetic segments. FAMA also sold four IS machines and specialized technical services.

EBITDA for this business unit was USD 54 million, 22.9% more than the USD 44 million reported in 2020. This was because of higher sales in the CFT business and FAMA, a better price mix, optimizing of production capacity and better cost absorption. Increases in the price of natural gas, electrical energy, packing material, shipping and transportation were offset by better performance in the Container businesses.



Creativity and innovation remain key differentiating elements to grow with our clients in products and developments.

GROWING STRONGER, BUILDING VALUE TOGETHER

The horizons ahead remain uncertain. The repercussions of the pandemic, the economic recession, price volatility and instability and supply chain disruptions will all pose ongoing challenges.

Nevertheless, Vitro and its people have proven over more than 112 years that they have the capacity, the availability and the strength to move forward, to turn challenges into opportunities. We have the experience and the tools need to look around and discover new markets and different ways of working, and to be there for our clients.

Containers

Looking ahead to 2022, the glass container business is prepared, above all, to care for its employees, to be flexible and respond to changes in the environment, always bearing in mind that our clients are at the center of all we do.

We expect growing demand to bring our facilities to full capacity in both smooth and decorated glass, so we will remain aligned with the Vitro Operating Excellence model to ensure top-quality products and processes, as always.

We will reinforce tactics to boost reliability and service to existing and new clients with whom we have projects to supply this year and in the near future. Creativity and innovation will continue to serve as key differentiating features to grow along with our clients in their products and developments.

Construction of a new furnace will mean better technology for producing high-quality glass, with a high level of design and sophistication. We will be able to offer a wider availability of high added-value containers, manufactured through sustainable processes.

Briefly put, 2022 will be a year of service stabilization, of great creativity in containing and reducing costs, while substantially improving operations and continuing on the path to growth, along with our clients.

Machine Manufacturing

Overall, we expect a more propitious market in 2022, a reactivation of our clients' operations and their continuing investment in capital, which should trigger an increase in our sales compared to last year.

We will continue to strictly follow the strategies applied in our finance area to achieve even better financial results in 2022, and we will maintain commercial and operating strategies that give clients increasing confidence in our products and processes.

CHEMICALS

The Chemicals division produces sodium carbonate, sodium bicarbonate, sodium chloride and calcium chloride for use in glassmaking, detergents, water treatment, pharmaceuticals, food, oil & gas industry operations, road deicing, and livestock farming, among other applications.

CHEMICALS

In sodium bicarbonate, the food and distribution segments were helped by solid demand, as were the pharmaceutical and industrial segments

2021 SUMMARY

The disruptive events mentioned in this report affected not only Vitro's companies but most industries in general. Besides severe winter conditions, interruptions in the supply of energy and materials, logistics problems and inflation, the Inorganic Chemicals business had to deal with other obstacles.

The pandemic, still far from being fully controlled, affected business for a number of our clients and caused some delays in our projects. Additionally, production was disrupted in May and June due to failures in the raw materials lift that feeds the furnaces.

Also, the power plant of one of our suppliers of steam and electrical energy suffered failures that affected performance of the business.

For these reasons, our plants did not reach full capacity last year: sodium carbonate production reached 91%, sodium bicarbonate 92%, and sodium chloride 98%. Production of calcium chloride recovered amid growing market demand and closed the year 4% better than the budget.

MARKET CONDITIONS

Trends in the markets served by our Inorganic Chemicals division fluctuated, but in general we can say that demand recovered.

For sodium carbonate, which is used in the detergents market, demand normalized to pre-pandemic levels. In the glass segment, growth was driven by new capacities and projects among our existing clients. Mining, smelting and other markets remained at average consumption levels, except for the distribution segment, which started off 2021 facing weak demand.

In sodium bicarbonate, the food and distribution segments were helped by solid demand, as were the pharmaceutical and industrial segments. The livestock market was affected by the entry of substitute products and imports, which eroded our market share in this segment.

In sodium chloride, demand from the food sector was as expected, despite constant changes in regulations on salt by government agencies and clients' reformulation of finished products. Demand in the industrial and brine segment remained firm, in line with the average.

In 2021 we attracted five new clients, one in Mexico, for sodium carbonate, and four in exports of calcium chloride.

In the calcium chloride line, which serves the oil & gas market, there were no significant changes in Mexico, but demand in the export market grew stronger, primarily in the United States and Brazil, where this industry recovered. In the deicing, feed grade, concrete and industrial segments, unusually cold weather early in the year prompted growth for the year.

In sales to the food market, consumption was in line with the average.

In 2021 we attracted five new clients: one in Mexico, in the sodium carbonate line, and four others—in the United States, Canada, Puerto Rico and the Dominican Republic—for exports of calcium chloride.

STRATEGIES THAT CREATE VALUE

We took action to confront operating failures that affected our facilities and those of our steam and electricity supplier, and the gradual rise in competition in Mexican markets. The strategies developed by the Inorganic Chemicals division in 2011 focused on:

- Maintaining all certifications.
- Reinforcing preventive maintenance programs and routines.
- Preserving our relationship with clients through virtual and one-on-one contact to fortify commercial ties and mutual trust.
- Investment focused in deploying sustainable actions in favor of the environment and the community.

EBITDA for the Chemicals business unit was down 29.0%, from USD 59 million in 2020 to USD 42 million in 2021.

ADDED-VALUE PRODUCTS AND SERVICES

The Chemicals division makes products that are used as raw materials for a number of industries and markets ranging from glass, detergents, water treatment, pharmaceuticals, food products, oil, road de-icing and agriculture, among others. This versatility of the segments served makes it even more important to have all the certifications that these industries require.

Last year, the business maintained its ISO 9001, ISO 14001, FSSC 22000, and ANIQ SARI certifications. We also earned a 100% compliance store in the 2021 performance evaluation by our client Recicladora Industrial de Acumuladores S.A. de C.V. (RIASA).

RESULTS

Consolidated net sales for the Chemicals division in 2021 closed at USD 169 million, 6.8% higher than in 2020, when they totaled USD 158 million.

Among the factors contributing to these results were: a recovery in demand for calcium chloride in the oil & gas industry and for deicing products in the United States and Canada; higher available volume in the industrial wet salt (sodium chloride), a better price mix, and higher demand for sodium carbonate and sodium bicarbonate.

EBITDA for this business unit was down 29.0%, from USD 59 million in 2020 to USD 42 million in 2021.

Higher prices on raw materials, energy, packing materials and transportation fees for distributing our products negatively affected EBITDA in this segment. Additionally, operating failures detracted from productivity and absorption of overhead, and this, among other factors, hurt our results.

We will reinforce preventive maintenance following the Vitro Operating Excellence model

GROWING STRONGER, BUILDING VALUE TOGETHER

The plan for 2022 is consistent with our performance. The goal is for all plants to operate at optimum efficiency. We will closely track each of our operations, reinforce preventive maintenance and follow the Vitro Operating Excellence model. These actions should help ensure that we meet our commitments to clients and generate the cash flow we are projecting.

We expect to see new quality regulations and specific requirements from food safety regulators in sodium bicarbonate, sodium chloride and calcium chloride for the food market, so we will ensure we comply fully with all standards and fill all client orders.

We expect higher demand for sodium carbonate in Mexico due to new plans in the glass industry. Calcium chloride sales projections remain very solid and we expect to see increased orders in the oil & gas segment, linked to the winter season in the United States and Canada.

In 2022, we will have to regain the confidence of clients for sodium bicarbonate market for the livestock market in Mexico, who turned to our competitors in 2021 when we ran into production problems.

SUSTAINABILITY

Vitro's commitment to environmental care, social impact and transparency goes beyond offering quality products and services that contribute value, offer certainty and safety to stakeholders. With its sustainability actions, programs and strategy, the company is looking toward a better future for all.

2021 DATA HIGHLIGHTS

14,598
employees.

100%
of OEM product plants certified by ISO 14001:2015 standard.

Average of **33.4 work hours/employee** invested in training.

4,731
new hires.

53
Persons with auditory, motor or intellectual training in the Vitro family.

USD 16.76 million
invested in the Comprehensive Health and Safety System.

20% of our operations were recognized for their excellent practices.

More than **USD 4 million** invested in the Salvando Vida fund against COVID-19.

We helped protect **131,851 hectares** and conserve **1,370 species** together with the Organización Vida Silvestre (OVIS).

686,282

metric tons of glass recycled and **123,530.76 metric tons of CO_2** avoided.

52,723 people visited Vitro's El Manzano Park.

More than 260 families benefited from social projects under our alliance with the Asociación Nacional Pro Superación Personal, A.C. (ANSPAC) and CLISA.

5,370 metric tons less send to landfill than the year before.

12% of energy used at Vitro comes from renewable sources.

91% of our employees believe the company is committed to being a socially responsible enterprise.

More than **USD 5 million** invested in environmental improvement initiatives in water, energy, air and waste.

SUSTAINABILITY

GRI: 103-2, 102-2, 102-40, 102-47, 103-1

The ways of working and doing business have changed, but achieving profitable growth while remaining sustainable has always been a matter of lasting importance for Vitro

Sustainability Strategy

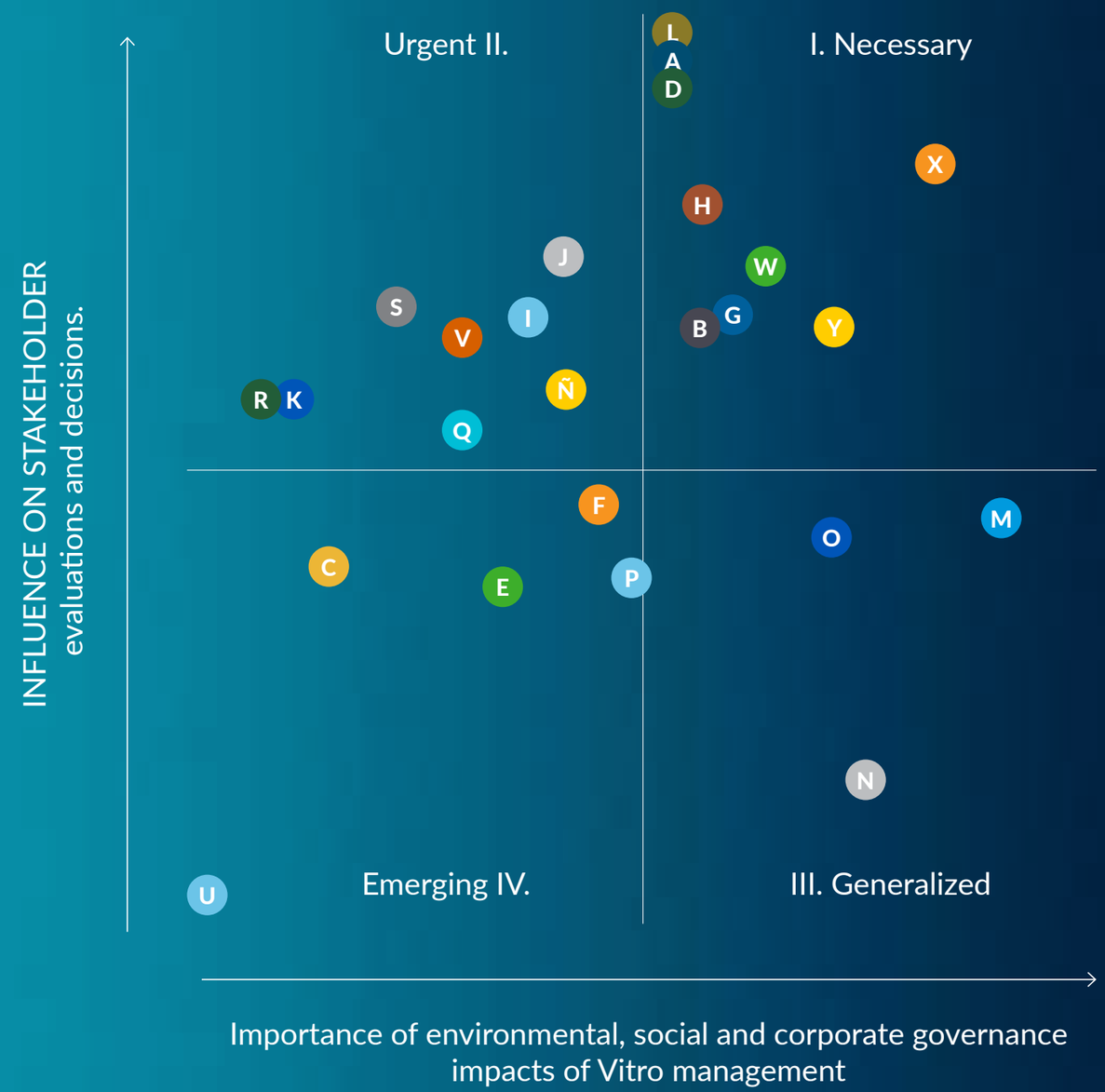
Creating conditions for operating and growing in harmony with the environment and the communities we serve is one of the values of Vitro's corporate philosophy. That is why our Sustainability Strategy is based on the generation of social, environmental and economic value. The company is not only concerned about but dedicates itself to creating facilities that respect and preserve the environment along with the well-being of people and stakeholders.

Materiality analysis

The ways of working and doing business have changed, but achieving profitable growth while remaining sustainable has always been a matter of lasting importance for Vitro. We conducted a materiality study to determine the relevant issues that concern and affect our stakeholders.

This list of issues provides a guide for creating strategies and initiative aligned with the highest standards of quality, safety and environmental care.

AXIS	KEY	ISSUE – BY COMBINED AXIS (X,Y)
I	X	Product quality and safety
I	W	Product, quality, processes, marketing, organizational and technological innovation
I	Y	Stakeholder reputation due to products and services offered
I	H	Climate change and emissions
I	G	Energy efficiency and renewable energy
I	L	Occupational safety and health
I	A	Ethics, transparency and anti-corruption
I	D	Compliance (national and international regulations)
I	B	Risk management
II	J	Prevention of environmental impact
II	I	Circular economy (recycle, reuse and manage waste)
II	Ñ	Labor conditions
II	V	Product value added. Research and communication of benefits.
II	S	Positive impact on communities where the company operates.
II	Q	Identification of risks in the supply chain.
II	K	Water stewardship (use and discharges)
II	R	Sustainable sourcing
III	M	Human capital development
III	O	Diversity and inclusion
III	N	Talent recruitment and retention
IV	F	Vitro brand positioning strategy
IV	P	Corporate culture and employee commitment
IV	E	Stakeholder engagement
IV	C	Corporate governance
IV	U	Volunteer activities
IV	T	Monetary and non-monetary donations



SUSTAINABILITY MODEL

Vitro's sustainability model rests on six pillars that are interrelated in such a way that the company ensures its compliance with business and sustainability strategy, creating value and generating benefits for all.

In 2021 we worked on projects focused on each of these pillars. Among them is the Saving Livs Fund, a program that supports employees without access to quality medical care during the pandemic. More than USD 4 million were invested in antigen and PCR tests, outpatient services, hospitalizations and vaccination campaigns.

We also pursued programs to reduce our emissions, energy consumption and waste, and to increase our water efficiency, among others. We worked together with Organización Vida Silvestre, A.C. (OVIS) to conserve more than 1,370 species of flora and fauna and to protect 585 hectares of pine-encino forests.

In our communities, Vitro worked for family education and togetherness through partnerships with organizations like CLISA Descubriendo el Mundo con Otros Ojos and Asociación Nacional Pro Superación Personal, A.C. (ANSPAC) Women's Program. We also worked on our own projects, like the Path of the Future Leader, and offered academic grands to support quality education for our employees' children.

Under the "Innovation" pillar we held the Innova Design Contest and Innspire program in which more than 140 innovators were recognized, involving organizations like the Asociación Mexicana de Envase y Embalaje (AMEE), la Cámara Nacional de la Industria de Productos Cosméticos y la Asociación Nacional de la Industria de Productos del Cuidado Personal y del Hogar, A.C., along with students and representatives of various industries. Furthermore, we developed products like Solarban R77™ and VacuMax ™, focused on energy efficiency and reduced emissions in the architectural sector.

In subsequent sections of this report you will find more information on these projects, initiatives and products.

SDG-Sustainability Model Alignment

Based on our sustainability strategy and model, we identified our alignment with the UN Sustainable Development Goals (SDG), challenging initiatives and projects toward the 2030 Agenda, in order to contribute to both local and global growth.

Although these are the key SDG for the company, certain projects also adress other goals and contribute toard a wider number of these universal objectives.

ETHICS

US

PLANET

INNOVATION AND CONTINUOUS IMPROVEMENT

VITRO COMMUNITY

HABITAT

ETHICS

Since our founding, Vitro has worked to ensure that our decisions and the way we do our jobs are consistent with our sense of business ethics, and strictly comply with the laws, regulations and principles of each of the countries where we operate or do business. With this in mind, our company creates solid foundations to promote sustainable development and improve quality of life for all our stakeholders.

ETHICS

GRI: 102-33, 205-1, 205-2, 205-3, 206-1, 307-1, 411-1, 416-2, 419-1.

Vitro creates solid foundations to promote sustainable development and improve quality of life for all our stakeholders.

Since our founding, we have worked to ensure that our decisions and the way we do our jobs are consistent with our sense of business ethics, and strictly comply with the laws, regulations and principles of each of the countries where we operate or do business. With this in mind, our company creates solid foundations to promote sustainable development and improve quality of life for all our stakeholders.

Read our Code of Ethics and Conduct

Vitro Code of Ethics and Conduct

In keeping with the principle of transparency and best corporate ethics practices, Vitro has a Code of Ethics and Conduct that defines its commitment to stakeholders and the responsibility it has to ensuring excellent operation, and describes the way in which the Code is administered and applied.

The Code of Ethics and Conduct applies to all of our employees regardless of their position or the business unit where they work, including the Board of Directors, anyone acting on behalf or in representation of Vitro, and suppliers. To foster closer communication and understanding of these guidelines, each year all employees must take a course to reinforce their knowledge and understanding of the Code of Ethics.

Some of the matters covered by the Code of Ethics and Conduct are:

Environment
The Code of Ethics and Conduct requires us to comply with regulatory standards in every one of our operations and through our environmental management system to continue to prevent, minimize and offset any impact we might have on the environment. This commitment is expressed in various projects we carried out in 2021 focused on reducing emissions and making the company more efficient in its use of water and energy. Investment in these environmental sustainability actions totaled more than USD 5 million.

Details of these projects can be seen in the "Planet" section of this report.

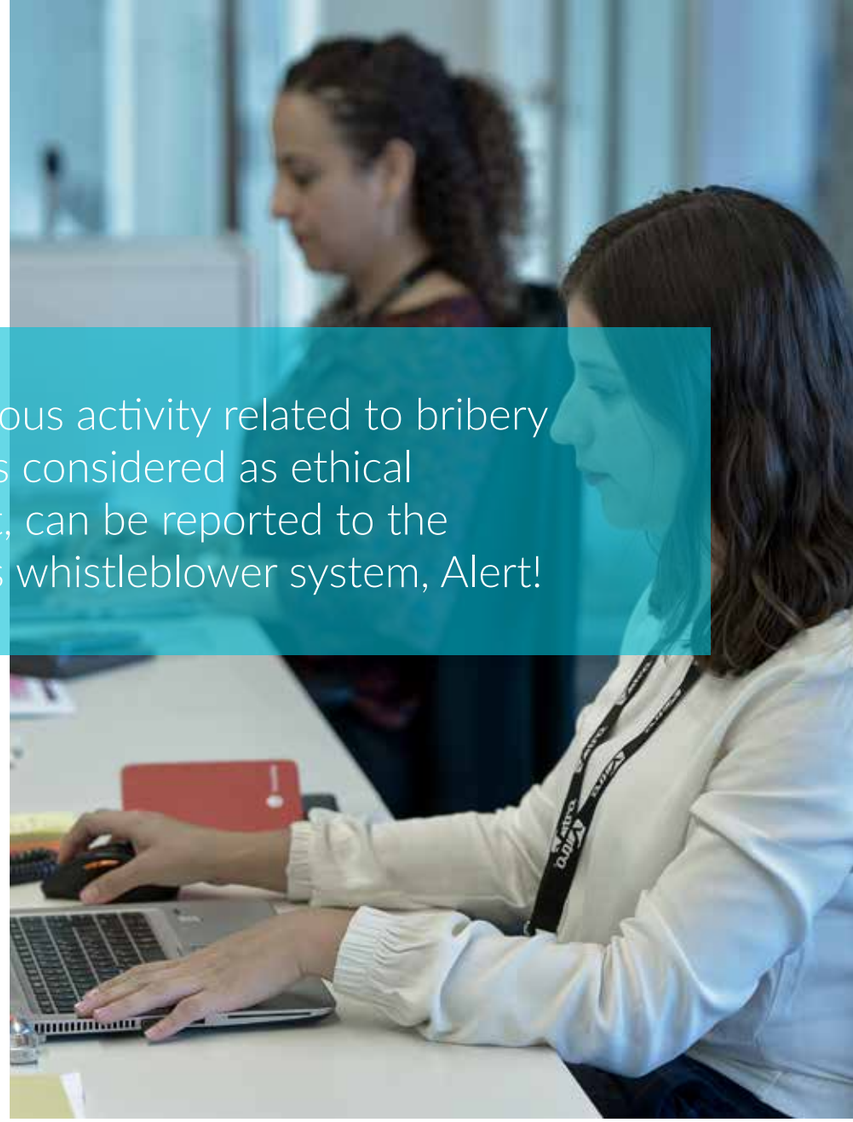
Conflicts of interest
There are specific restrictions on the involvement of employee family members or company shareholders and members of the supply chain, with an emphasis on employees with outside businesses, like shareholders, clients or suppliers.

Regulatory and legal compliance
We are responsible for complying with the laws and regulations of every country where we are present. We are mindful of the laws that apply to us by functional area and country and consider ignorance of the law no excuse for failure to comply. In January-December 2021, there were no administrative proceedings opened that resulted in or could be considered a significant risk to the business.

Ban on and Zero Tolerance for Bribery
We have a zero-tolerance policy toward bribery or any activity that entails an improper advantage, benefit or special treatment for the Company by any outside party, such as paying a person or another company to obtain a business, to facilitate something of value (money, gifts, meals, etc.) to a person or company in exchange for a permit, license, certification or any other personal or commercial advantage. Any suspicious activity related to bribery or unethical failures may be reported through the Alert! Whistleblower system. The results of these reports and a breakdown by category can be viewed in the "Ethics" section of this report.

a!ert

Any suspicious activity related to bribery and matters considered as ethical misconduct, can be reported to the anonymous whistleblower system, Alert!



Unfair competition
This company abides by all laws, rules, standards and practices of corporate ethics and business transparency. The Code of Ethics and Conduct sets guidelines for compliance with antimonopoly laws and regulations on fair competition and stipulates fair and equal treatment for all active and potential suppliers.

Non-discrimination
Vitro offers equal opportunities to jobs, training and professional advancement to all employees based solely on merit. Any discrimination in treatment or hiring on the basis of race, color, gender, age, language, ownership, nationality or country of origin, religion, ethnic group, disability, pregnancy, political affiliation or opinion, sexual preference or any other prejudice that may be motive for discrimination, is strictly prohibited. This same rules applies to our clients, commercial partners and the markets where we participate.

Anonymous reports of discrimination filed between January and December 2021 can be viewed in the "Ethics" section of this report.

Occupational Health and Safety

Our company's most valuable asset is its human team. For that reason we are committed to ensuring that health and safety are priorities in every one of our operations, both for our employees and for the communities around us.

Vitro is committed to guaranteeing that the design, manufacture, sale and distribution of our products, as well as all the services we provide, are carried out responsibly, to protect our employees, clients and the general public, and minimize environmental impact. In 2021, 92% of our employees said they believed the company was committed to safety.

The results of this section can be seen in the section entitled "Us."

Marketing communications

Regarding advertising campaigns and marketing messages, we ensure that all promotion and sales pitches are free of offensive and discriminatory messages or misinformation, and we endeavor to describe our products and services honestly and accurately. In 2021 there were no cases of non-compliance with regulations and voluntary codes on marketing advertising, promotion or sponsorship.

In 2021, 92% of employees said the company was committed to their safety.

The Alert! System allows anyone to anonymously file reports or complaints of conduct that goes against Vitro's values or ethics.

Ethics Committee

To keep track of ethical issues, we have structures in place to address questions and handle reports. The Corporate Ethics Committee coordinates the efforts of the various regional committees and reports from our LatAm operations, and is also informed of material violations of this Code of Ethics and Conduct that occur throughout the organization, regardless of where they are located in terms of the Ethics Committee Regulations.

Ethics committee – 2021
1. Javier Arechavaleta (Legal) – Chairman
2. Jorge Rodela (Administration)
3. Elena Nogaledo (Planning and Talent Development)
4. Alfonso Gómez (Human Resources)
5. Rafael Colomé (Tax, audit and internal control)

Because each region has its own legal and cultural characteristics, committees have been created for each of them. There are three Regional Committees, each made up of at least five people who represent various operational areas. The human resources, legal and finance areas are always represented on these committees.

Alert! Whistleblower system

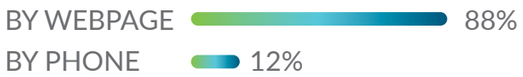
To guarantee that anyone—whether employee, client, supplier or interested third party—can anonymously report any issue or action that goes against the company's business ethics and values, in any of our operations the company has an anonymous whistleblower system called Alert! This system has been administered since December 1, 2021 by an external company—Navex Global--which was selected after the appropriate process of public tender that we follow whenever we change service suppliers.

The system allows any person to freely file complaints or reports of actions in our operations that are out of keeping with Vitro values or ethics. It can be accessed by phone or internet, in the language of the countries where Vitro operates, 24 hours a day, 365 days a year.

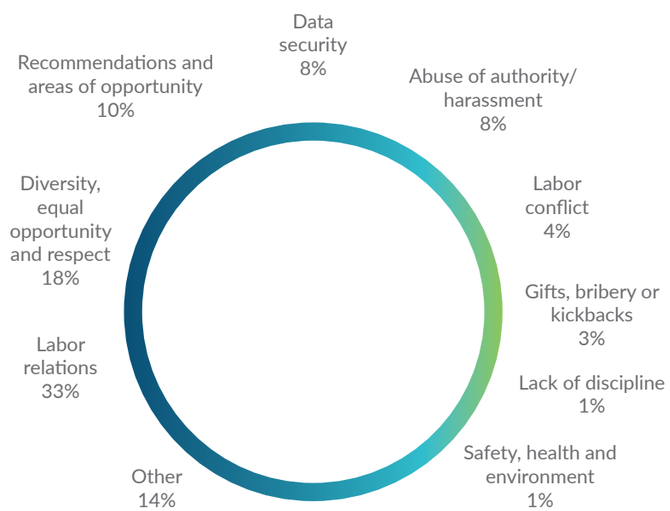
The reports are then processed by the Ethics Committee through the Internal Audit Area, which carefully and privately handles each of the reports received until they are finally resolved.

Whistleblower files complaint

REPORTS BY CHANNEL



REPORTS BY TYPE



In 2021 we received 20% fewer complaints than in 2020.

In 2021, we received 79 complaints through this system, 20% fewer than in 2020. 88% of these complaints were made by internet and 12% by phone. Most of the reports had to do with labor relations, followed by diversity, equal opportunity and respect, accounting for 20% and 11% of complaints, respectively.

Regulatory Compliance

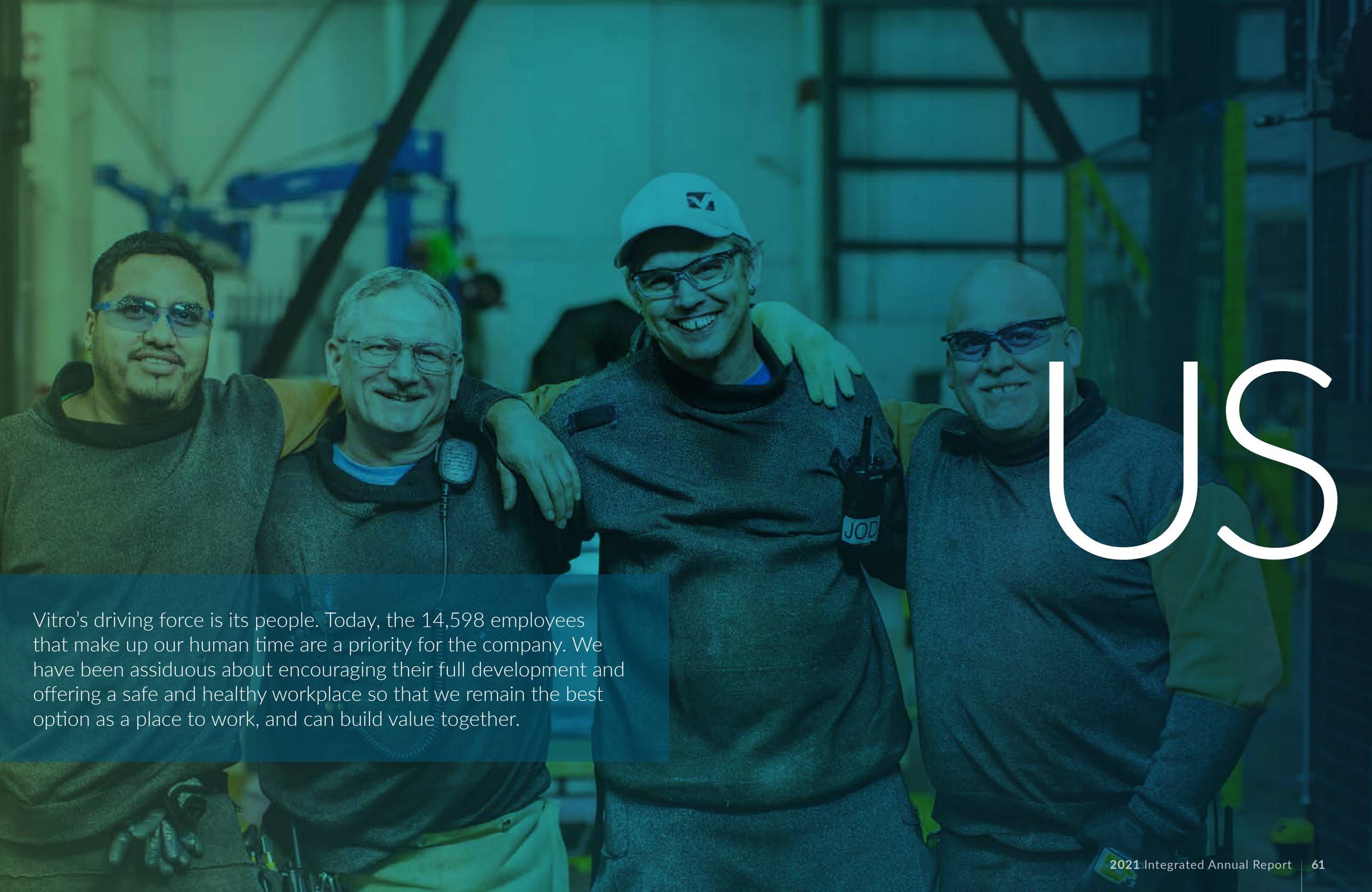
The conditions in which we live are constantly changing. Most of the time these alterations come from external factors, like climate change, pandemics, technological progress, trends in sustainable production, among others. All of this implies threats and opportunities, and Vitro endeavors to detect, record, channel and propose solutions that enable us to take advantage of situations and avoid or take precautions against risk.

From time to time, government authorities, specialized public and private organizations modify the standards and rules that regulate economic, industrial, retail, environmental and social activities. To remain current with these changes and act promptly, Vitro has a compliance department in charge of identifying regulatory changes in our industry, government, and even in specialized agencies that may affect how we do business.

There were no material or significant cases of non-compliance last year that might affect the ordinary course of business for the company and its subsidiary in connection with these issues.

Our Code of Ethics and Conduct states that Vitro and its employees are obligated to remain up to date with all legal provisions, including but not limited to:

- Use of minerals from zones or countries in conflict within our supply chain
- Imports and exports
- Safety, health, environment and energy
- Personal data protection
- Labor and human rights protection
- Anti-bribery and money-laundering
- Anti-monopoly and free competition
- Political participation by corporations



US

Vitro's driving force is its people. Today, the 14,598 employees that make up our human time are a priority for the company. We have been assiduous about encouraging their full development and offering a safe and healthy workplace so that we remain the best option as a place to work, and can build value together.

US

GRI: 102-41, 201-3, 401-2, 401-3, 403-1, 403-4, 407-1, 408-1, 409-1, 412-1

According to the engagement survey, 90% of our employees are proud to work at the company, and 85% would recommend Vitro as a great place to work.

Vitro's driving force is its people. Today, the 14,598 employees that make up our human time are a priority for the company. We have been assiduous about encouraging their full development and offering a safe and healthy workplace so that we remain the best option as a place to work, and can build value together.

To fulfill our responsibility to our employees, every year we conduct what is called an engagement survey, in which we assess, among other issues, the level of our employees' commitment and satisfaction with the material issues of our organization. These results are taken into account as a feedback process that strengthens the organization. It also allows us to define a plan that incorporate, among other issues, family activities, sporting events, and health and wellness.

Our People

In 2021, there were 14,696 people working or carrying internships in the company. The largest share of these were employed in the Automotive Glass division, with 6,562, followed by Architectural Glass with 3,434, and Containers with 2,952.

Business	Total Employees
HEADQUARTERS	408
CONTAINERS	2,952
MACHINE MANUFACTURING	484
INORGANIC CHEMICALS	856
ARCHITECTURAL GLASS	3,434
AUTOMOTIVE GLASS	6,562

In terms of the diversity of our workforce, 2 out of 10 employees are women, most of them working on the operating side (2,157). However, considering the number of employees by type of position, women predominate in internships, with 60%. This is followed by salaried employees with 23% (compared to 77% men).

Type of Position	Gender			
	Male	Female	Ratio Men	Ratio Women
Executives	174	11	94%	6%
Employees	2,485	751	77%	23%
Operating	9,020	2,157	81%	19%
Total	11,679	2,919	80%	20%
Interns	39	59	40%	60%
Grand Total	**11,718**	**2,978**	**79.7%**	**20.3%**

Breakdown of workforce by Type of Position	Total
Executives	185
Employees	3,236
Operating	11,177
Interns	98

By region, our employees are distributed as follows:

Region	Women	Men	All	% of Total
Mexico	2,290	9,418	11,708	80%
US and Canada	542	1,948	2,490	17%
Europe and Asia	113	177	290	2%
Central and South America and Caribbean	33	175	208	1%
TOTAL	**2,978**	**11,718**	**14,696**	**100%**

For more than 112 years, Vitro has endeavored to offer its employees a healthy, safe, clean and orderly workplace to its employees.

Inclusion and Diversity

At the end of 2021, 53 people with auditory, motor or intellectual disabilities were working with us, in various of our divisions. Vitro is proud of the recognition received from the federal Ministry of Labor and Social Planning with the Gilberto Rincón Gallardo distinction for Inclusive Companies.

In 2021, our Container division received NMX-R-025-SCFI-2015 certification for Labor Equality and Non-Discrimination.

Vitro also employs 253 senior citizens, equivalent to 2% of its total workforce.

Age Group	Percentage of employees
18-30	33%
31-50	49%
51-60	16%
61+	2%

Furthermore, according to the engagement survey, 89% of employees believe the company treats all it people equally and fairly regardless of their background.

Occupational Safety and Health

The engagement survey revealed that 92% of our employees feel that the company is committed to safety, and 90% say that Vitro is a safe place to work.

For more than 112 years, Vitro has endeavored to offer its employees a healthy, safe, clean and orderly workplace to its employees. Through the Comprehensive Health and Safety System (CHSS), it establishes the best safety and health conditions for all of its companies. This system is made up of polices and procedures that track, control and regulate indicators that measure the physical safety of people and workspaces.

Based on the regulations developed by safety, health and environmental specialists, and on techniques and methodologies such as risk analysis, behavioral feedback, operating controls, internal and corporate audits, planned inspections and constant monitoring, we evaluate the level of risk in materials, equipment and machinery, as well as in the physical spaces, creating prevention and maintenance solutions that minimize the possibility of harm.

Investment in the Comprehensive Health and Safety System:

USD 16.76 million.

Employees are a fundamental part of the CHSS, and by involving them through consultations and safety chats, hotlines, participation surveys and risk analysis, they provide continuous feedback on the system, improving Vitro's EHS System.

ACCIDENT RATE	
2021	0.6
2020	0.7
2019	1

There were no work-related fatalities in 2021.

During the pandemic, the Saving Lives Fund was created, and to date has contributed more than USD 4 million.

COVID-19 Saving Lives Fund

To support employees who lacked medical care due to insufficient government services, we created the Saving Lives Fund during the COVID pandemic, which to date has contributed mor than USD 4 million.

Hospitalizations: 127

The Fund covered medical care in private hospitals, particularly for employees in Latin America.

Outpatient Services: 1,178

Outpatient services (specialized studies, medical fees, etc.) for people that required a hospital visit but were not admitted for a stay.

Diagnostic testing: 3,355 PCR tests and 12,209 antigen tests

To prevent the propagation of the virus we offered PCR and Antigen testing. With this we were able to identify those that required quarantine. The tests were applied onsite; at facilities where there was no infirmary, we had them taken at testing labs.

Vaccination support: 1,663

In 2021, under an agreement between the governments of Nuevo León, Mexico and Texas, United Stats, Vitro employees were taken across the border for vaccination.

When vaccination centers were set up in Nuevo Leon, the company provided transportation for its employees to local vaccination centers during working hours. Doctors at our plants in central Mexico were also taken by plane to Monterrey to be vaccinated, since the federal government did not include private medical personal in its first round of vaccinations.

The percentage of Latin American employees vaccinated was 81%, compared to an average of between 50% and 55% in Latin America as a whole.

A total of 490,692 work-hours of training were given in 2021, an average of 33.39 hours per employee.

Training and development

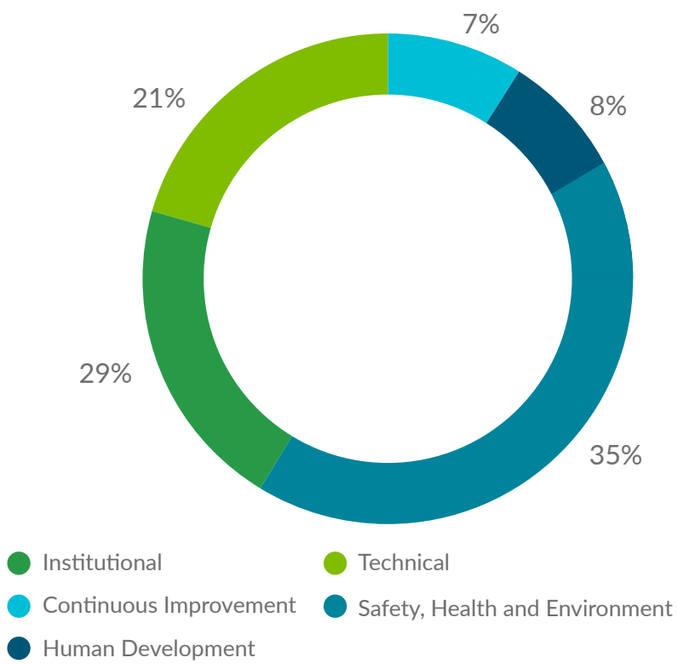
Vitro's prosperity does not depend solely on its machinery and equipment. We have proven time and again that our people are a vital link in this chain. That is why the comprehensive advancement of our employees is crucial, and why we have an ongoing program of training, education and specialization for their professional growth. The plan is designed according to the duties and description of each job, with the idea of building specific skills.

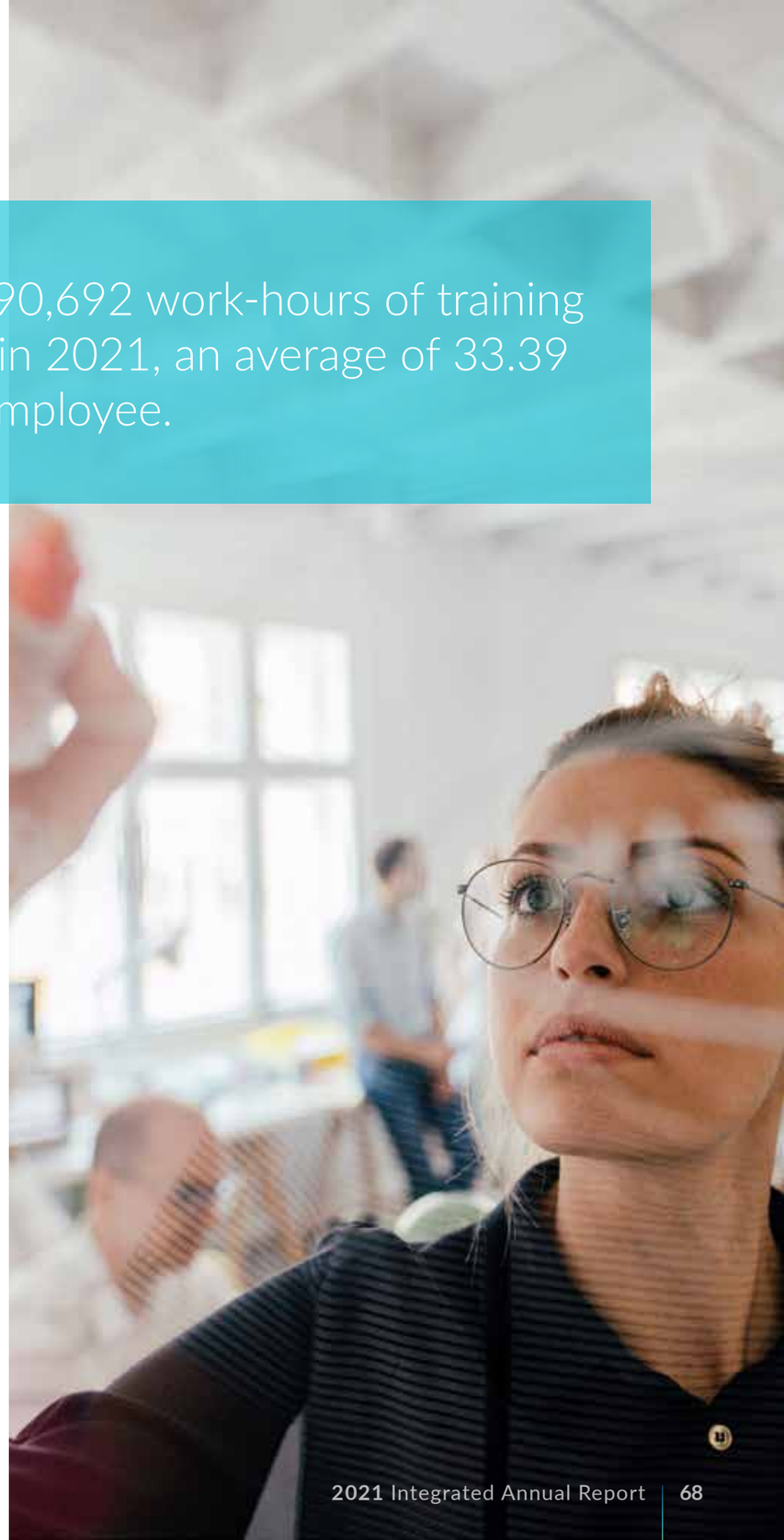
	Number of employees	Average hours of training
Total employees	14,696	33.39
Women*	2,978	27.59
Men*	11,718	28.50

Nota: US does not report due to legal regulations.

Job category	Average hours of job training by category
Executives	4
Employees	20
Operating	38
Interns	1

Breakdown of total training hours by type





According to the results of our survey, **8 out of 10 employees** say the company provides them training and development opportunities.

Some examples of the types of training we offer:

Institutional	Continuous Improvement	Human Development	Technical	Safety, Health and Environment
Code of Ethics and Conduct	Vitro Model of Excellence	Emotional wellness unit	Quality manuals at the source, by position	Industrial safety/safety chats
Cybersecurity training	Green Belt	Gender	Operating procedures	COVID-19/ CLIMXX protocols
ISO 28000	5S and continuous improvement	Human rights protection system	Visual work instructions	Sustainability and environment
Onboarding program for new hires	Problem solving	Mourning: resignifying death	Skills certification program	Safety standards
NOM-035-STPS	Statistical tools	Human Relations	Power tools	Brigades (firefighting, first aid, search and rescue)

Employee evaluations

The development, commitment and effort of our employees is assessed through measurement tools like the Individual Performance Planning and Analysis (IPPA) system, which determines the extent to which each employee is meeting their individual performance goals. Every year, the employee decides, together with their boss, on the goals to achieve, which must be aligned with the business strategy.

Job Category	Women	Men	Total	Percentaje
Executives	11	169	180	97%
Employees	496	1548	2044	63%

*Note: IPPA performance evaluations are applied only to administrative personnel. Employees in operating areas are rated by efficiency metrics and business results.

According to the survey results, 8 out of 10 employees believe the company offers them opportunities for training and development, and 9 out of 10 say they have the training needed to do their job effectively.

Employees who are nearing retirement participate in the Retirement Program, in which thy receive information each year about planning for this phase of their life, including a manual addressing matter such as the company's retirement policy.

With the COVID-19 pandemic still ongoing, sanitary and hygiene measures remained in place to guarantee the quality of life of both employees and visitors to our facilities.

Labor Practices and Quality of Life

Based on our business principles, Vitro adheres faithfully to the Declaration of the International Labor Organization (ILO) and the UN Universal Declaration on Human Rights, ensuring that the physical and working conditions of each of our companies are consistent with the principles enumerated in those declarations.

Our Code of Ethics and Conduct is grounded in our commitment to respect and enforce human rights in every one of our workplaces, and we recognize the importance and universality of these rights. We offer equal job opportunities based solely on merit, aptitudes for the position, and vocation. Any act of discrimination is inexcusable; everyone has the right to aspire to a position, promotion and job benefits.

We abide by the labor laws of each country where we operate. Our people have the right to free association, privacy, and collective bargaining. In the countries where collective bargaining agreements exist, our employees are free to participate in them. We keep records to ensure that we are not complicit in any form of forced or child labor or human trafficking.

One example confirming this is the Child Labor-Free Mexico State distinction from the Mexican Ministry of Labor, which Vitro received on June 11, 2021, underscoring our commitment to eradicating child labor throughout our value chain.

Vitro also offers benefits that extend to our employees' family members, including health, economics, education, personal and family development and values programs, to name just a few.

One of the ways we contribute to the progress of the community is by providing dignified compensation and benefits to our employees. We ensure that every workplace provides at least the minimum benefits required by law, and to exceed them through compensation initiatives, prizes and special recognitions.

With the COVID-19 pandemic still ongoing, sanitary and hygiene measures remained in place to guarantee the quality of life of both employees and visitors to our facilities. Health protocols (temperature-taking, disinfection checkpoints, anti-bacterial gel, frequent hand-washing, use of face masks and shields and social distancing) remain in place, as do procedures for monitoring and control to detect and promptly address any cases of contagion.

Our engagement survey not only evaluates our employees' commitment but also serves as an indicator of their satisfaction with their work conditions and their perceptions about their leaders' interest in their welfare. In 2021, 83% of those surveyed said they were satisfied with the benefits they receive from the company, and 84% said that the company's executives were genuinely interested in the welfare of the employees.

Vitro Initiatives

In addition to programs promoting quality life and a healthy workplace, we have specific initiatives to protect employees' physical and emotional health, including:

Wellness Program: Its goal is to improve the overall health of people who work at Vitro, minimizing risks and encouraging them to adopt healthy habits (physical activity, nutrition, etc.).

Emotional Wellness Unit: Aims to provide a comprehensive professional service to Vitro people, contributing to their well-being, quality of life, psychological development and education.

Recognition of people retiring from Vitro: We organize a special event to say goodbye to our retirees, accompanied by their entire work team.

In 2021, 83% of those surveyed said they were satisfied with the benefits they receive from the company.

Vitro Control Towers (COVID-19): In order to keep track of the health of our employees and family members with COVID-19, we put together a multi-disciplinary team to monitor the status of the sick and raise awareness about taking preventive measures to reduce further contagion.

Measures to retain disabled employees: Activities aimed at learning what the disabled feel and think about their work so that we can create initiatives to support their well-being.

PLANET

Growing in harmony with and respect for the environment and the communities we serve by pursuing optimum conditions is our Sustainability value proposition. To do so, we have a Safety, Health, Environmental and Energy policy, which provides guidelines for prospering and working without harming the environment, creating benefits for all.

PLANET

By recycling cullet we monetized

686,282 metric tons of glass waste and avoid the emission of approximately 123,530.76 tCo_2e.

Circular Economy

This company understands the vital importance of protecting and optimizing all the resources we use in our operations, so we have an environmental management system that strictly abides by all current laws and endeavors to respect the natural environment. We strive for sustainability in all our practices are sustainable and contribute to a circular economy by using all resources in the best way possible.

Glass recycling

Glass is a 100% recyclable material, a quality we try to exploit to the maximum in our manufacturing processes, given that glass is the main element in most of our products.

We reuse glass waste (called cullet) produced in our production lines and also acquired from companies that collect glass. By reusing this material, we are able to use a smaller volume of raw material in the smelting furnace, improve process efficiency, reduce energy consumption, lower process emissions and save on operating costs.

By recycling cullet we monetized 686,282 metric tons of glass waste and avoid the emission of approximately 123,530.76 tCo_2e.

123,530.76 t de CO_2 avoided =

The emission of 499 million km traveled in a car

o

The emissions from the energy consumption of 14,876 homes in a year

o

The emissions captured by 151,347 hectares of forest.

*Data from the Environmental Protection Agency (EPA).

We sent 5,370 metric tons of waste less to landfills than in 2020.

Other recycled materials

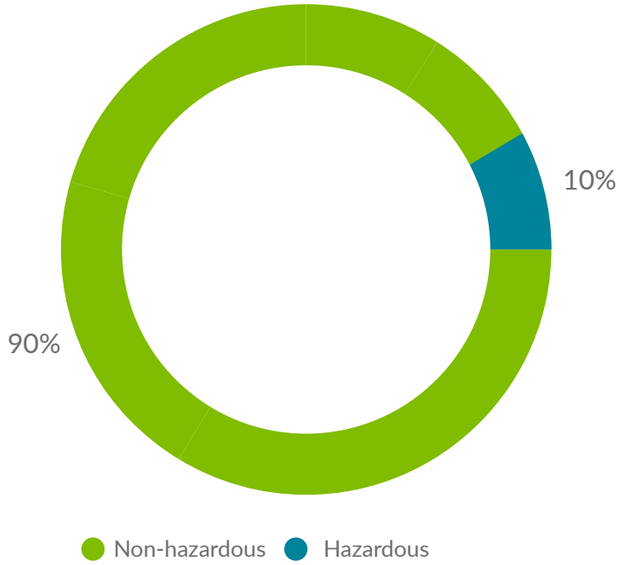
The nature of certain of our products and the specifications of our clients limit our ability to reuse material for packaging and containers. Nevertheless, we have made an effort to include suppliers who use recycled materials, and thus reduce the carbon footprint of our value chain as a whole.

Three out of every ten Vitro products are packed in paper or corrugated cardboard. At present, 18% of this packaging contains material that is 100% recycled. Suppliers who work with recycled material are asked to supply a letter guaranteeing that this requirement is met.

Comprehensive Waste Management

The Comprehensive Waste Management Program focuses on correct separation of waste through evaluations, processes and training that help detect areas of opportunity in the process and take advantage of recyclable materials. The waste we handle is classified into hazardous and non-hazardous.

In 2021, 9 out of every 10 metric tons of waste generated was non-hazardous. During that period, we sent 5,370 metric tons of waste less to landfills than in 2020.



In 2021, 12% of the electrical energy we used, or 2% of all the energy consumed at Vitro, came from renewable sources.

Energy efficiency

When it comes to protecting the planet, responsible production and consumption become increasingly important with every passing day at Vitro. We have system for managing energy that incorporates energy savings projects and initiatives to reduce the impact of our operations.

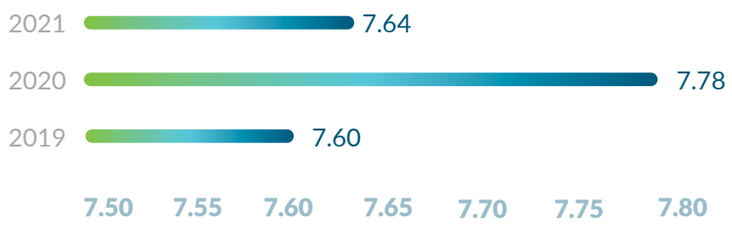
Because of the nature of the products we manufacture, we use various types of fuel, so we place special emphasis on projects that reduce our energy consumption. Our operations are powered by natural gas, electricity, steam, and fossil fuels.

Energy sources	%
Natural gas	62%
Electricity	17%
Steam	20%
Other fossil fuels	1%

The National Commission for Energy Efficiency recognized Vitro for its Voluntary Energy Efficiency Agreement (VEEA), citing its measures for reducing energy intensity and increasing energy efficiency. We earned this recognition in part because of our energy intensity rating of 7.64% and our overall reduction of 2% in energy consumption for 2021.

Also, in keeping with the targets for renewable energies in the regions where we operate, in 2021, 12% of the electrical energy we used, or 2% of all the energy consumed at Vitro, came from renewable sources.

Energy intensity



The Inorganic Chemicals Business obtained ISO 9001, ISO 14001 and FSSC 2200 certifications and received a 100% performance approval rating from our clients.

Emissions and Climate Change

According to SDG goal of Climate Action, we need to adopt measures to combat climate change and its effects. One of our strategies in this regard has been to seek evaluations and certifications in the areas of environment, resources stewardship, use of renewable energies, and others.

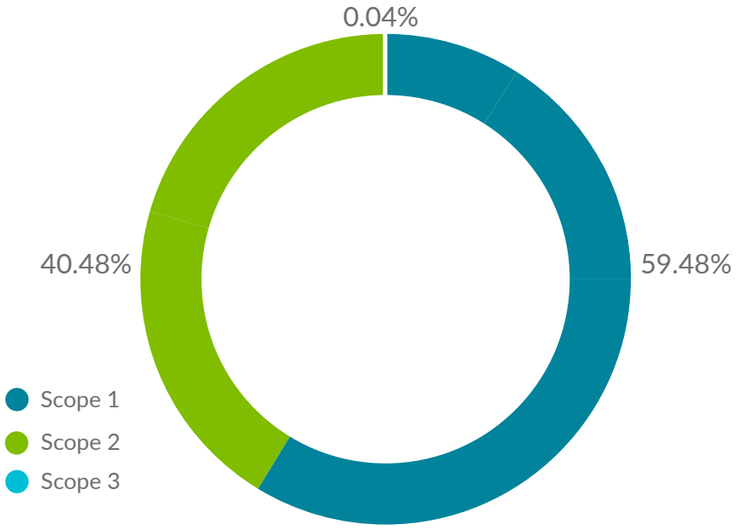
We voluntarily adopt and abide by the requirements of industry, clients, specialized organizations—whether official, private or NGOs—audits, recertifications and evaluations to guarantee that we are within the correct parameters and, if any discrepancy is detected, that we can make the necessary corrections.

In our management of the company, we assume our responsibility for complying with environmental laws, seek continuous improvement in our processes to preserve our environmental performance while maintaining competitiveness, ultimately contributing to clean, safe environments and sustainable growth.

In 2021, the company's scope 1 emissions accounted for 59.48% of our total emissions; scope 2 and 3 emissions made up 40.48% and 0.04%, respectively.

*Note: scope 3 emissions include only emissions generated by business travel.

Emissions by type of scope



More than USD 5 million invested in environmental improvement initiatives in the areas of water, energy, air and waste.

Emissions intensity

We reduced greenhouse gas emission intensity by 2% during the year. This achievement is reflected in ISO 9001, ISO 14001 and FSSC 2200 certifications obtained by our Inorganic Chemicals Business. At the same time, the division received a 100% performance approval rating from our clients.

Meanwhile, three of our manufacturing plants in Mexico received a positive opinion for certification by official GHG emissions verification and validation agencies, after going through the process of emission testing for the National Emissions Registry. This was in compliance with the General Law on Climate Change, specifically the sections regarding the Registry, and the Emissions Trading System program.

We participated in the Federal Environmental Protection Agency's voluntary environmental audit program to further support our Clean Industry Certifications.

Vitro Initiatives

We invested more than USD 5 million in environmental improvement initiatives in the areas of water, energy, air and waste, among others.

Area of the initiative	Investment in USD	%
Water	131,800.00	2.6%
Air	3,229,741.00	63.2%
Energy	1,732,669.25	33.9%
Waste	8,883.44	0.2%
Others	5,501.55	0.1%
Total	5,108,595.24	100%

In an employee survey, 89% said the company is committed to minimizing its environmental impact.

With an investment of USD 131,800, we introduced water efficiency initiatives involving water recovery or recycling, process improvements, and elimination of leaks and other forms of water loss.

Water

With an investment of USD 131,800, we introduced water efficiency initiatives involving water recovery or recycling, process improvements, and elimination of leaks and other forms of water loss. We expect these projects to save a total of more than 53,000 cubic meters of water a year.

Energy

We worked on a number of projects to upgrade technology in our peripheral services, including modifying processes and eliminating leaks or water losses. We estimate that these changes saved more than 2,400,000 kWh of energy a year and avoided the emission of 1,795 metric tons of CO2. According to the US Environmental Protection Agency, these are equivalent to the CO2 emissions generated by 326 households in that country. The investment totaled USD 1,732,670.

Air

In keeping with environmental regulations of the San Joaquin Valley Air Pollution Control district, we replaced emissions monitoring system (the Continuous Emissions Monitoring System) in our facilities in California, United States.

Furthermore, the Inorganic Chemicals Business began a project worth almost USD 3 million to reduce emissions to 94% in the second scrubbing phase at 4 calcium chloride plants, thus reducing their dispersal time.

Waste

In 2021 we developed initiatives involving comprehensive management of the waste generated by the company, avoiding the generation of 7,306 metric tons of non-hazardous waste and another 151 metric tons of waste that were not sent to landfills, and were instead recycled and put back to use.

INNOVATION AND CONTINUOUS IMPROVEMENT

According to the SDG, industry, innovation and infrastructure are three drivers of economic growth and social value creation. The goal is to develop resilient infrastructure, promote sustainable industrialization and foster innovation.

Sustainable industrialization is a contributing factor for minimizing poverty in the most vulnerable communities, but this must be done in a planned and organized fashion, to avoid the pressures of adding one more burden on people and the planet.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Since 2019 we have applied an Excellence Model in all our companies, to encourage the creation and standardization of best practices and to turn each of them into a center for excellence.

INNOVATION AND CONTINUOUS IMPROVEMENT

Vitro Excellence Model

Vitro has always concerned itself with keeping operations efficient, making cutting-edge products using the highest technology, but always bearing in mind its social responsibility to its stakeholders. At Vitro, we understand that exceeding expectations with the highest efficiency, reliability and quality, leads us to Operating Excellence.

Since 2019 we have applied an Excellence Model in all our companies, to encourage the creation and standardization of best practices and to turn each of them into a center of excellence, to remain a highly competitive company in all markets where we participate, with value propositions that enable sustainable growth.

In 2021, we continued to focus on seven key systems:

1. Visual management and the 5 S system (Sort, Set in Order, Shine, Standardize, and Sustain).
2. Standard Treatment Workflows (STW), characterized by clearly and visibly describing every activity in a process.
3. Training and qualification (T&Q), to build the appropriate skills in employees so they can do their jobs effectively.
4. Daily Management (DM): the continuous process of assessing and confirming results at various levels of the organization, ensuring alignment.
5. Environment, Health and Safety (EHS), for working in the right environment and keeping risks under control.
6. Problem Solving (PS).
7. Total Productive Maintenance (TMP), to ensure smooth operation of equipment by keeping it in optimum working conditions.

As part of our improvement process, we conducted cross-audits of our plants. With the support of an external consultant and the business leaders, we reviewed the maturity status of each of these systems onsite and the value being created through these applications. The leaders were asked to assess a different Vitro company than their own.

The purpose of these evaluation was to develop a consistent concept of excellence applied to day-to-day work. To identify and transfer best practices and improve performance. Once the visits were over, reports were drawn up and discussed, and based on this feedback, action plans were designed that will help us move ahead more quickly and standardize best practices.

After introducing the excellence model in 2021, we have gradually increased the level of maturity, evolving from implantation to standardization. By 2021, around 20% of our operations were recognized for best excellence practices:

- 10 plants recognized for good practices
- 5 plants recognized for maturity of implantation – Silver Level
- 5 plants recognized for installation and value generated – Best implantation

The benefits of our Excellence Model include building a strong commitment to quality, continuity and process control, the ability to identify high-impact opportunities, promoting Change Management, ensuring a strong alignment, coaching and collaboration among all the business units, plants and corporate headquarters, the introduction of excellence systems and tools, effective evaluations and proactive feedback, all of which fosters an organization-wide culture of excellence.

By 2021, around 20% of our operations were recognized for best excellence practices.

At Vitro, product and service innovation is focused on developing solutions that help improve the environment.

Sustainable innovation

In the strictest sense of the word, innovating means moving or altering something to introduce something new. For Vitro, however, innovating products and services means providing solutions that meet clients' and users' needs, in terms of efficiency and practicality, that that help improve the environment, society and the economy, creating added value.

Architectural Glass

Among the wide range of high-efficiency, high-quality, high-safety and sustainable architectural glass that Vitro makes, in 2021 we launched a number of new products that have rapidly gained a position in the market.

Solarvolt™: A line of photovoltaic glass modules that can be incorporated into buildings—facades, atriums, awnings, railings, skylights, etc. This product is not only attractive but provides an option for generating CO2-free renewable energy and protecting commercial buildings from the elements. All of this while reducing air conditioning costs and replacing other construction materials in facades, which means additional savings.

Lumax®: A low-reflecting, high-transmittance solar control glass introduced to the Mexican market in January 2021. The market response has been very positive in both residential and retail settings. This glass allows more natural light to pass while reducing heat inside the building by up to 33% compared to traditional clear glass. It allows 6 times more daylight through, providing a cool, luminous atmosphere and protecting from the sun's heat.

Solarban R77™: the newest line of our extensive assortment of low-emissivity glass, this product helps architects and developers meet the increasingly exacting standards of ASHRAE 90.1. Its high-yield solar control coatings favor energy efficiency, occupants' comfort, and building sustainability (fewer carbon emissions from electricity use).

Vacumax™: Two lites of 4mm glass separated by a non-leaded proprietary metal seal and a vacuum space. The unit's slim construction and light weight allows it to be incorporated into virtually any traditional glazing system, window frame or curtainwall application.

The VacuMax™ VIG units improve the performance of any glass configuration, effectively blocking heat transmission and delivering a level of insulation 2 to 4 times greater than conventional insulating architectural glass, and 6 to 20 times greater than single-pane glass. The product offers energy savings and reduced carbon emissions due to lower consumption of BTUs (or kWh).

Automotive Glass

Vitro's automotive glass products not only have the quality and safety standards demanded by the industry through specialized agencies that set standards and certify manufactures, but they are made with cutting-edge technology to provide tangible sustainable benefits.

WeatherMaster® 600 Windshields: These use Sungate™ infrared reflective coating as a transparent resistance to electrically heat the windshield. The infrared reflection reduces fuel requirements for powering the car's air conditioning system, and thus CO_2 emissions.

The heating function not only enhances passenger comfort but reduces energy, fuel use and CO_2 emissions created by traditional ice and snow melting systems.

Low-emissivity coating: This is a film that is vacuum-sealed to the glass using durable materials to cling to the inner surface of the glass. By reducing the exchange of radiant energy between the car's windows and the inner surface, it provides a more comfortable ambience. This coating keeps the car's interior cooler in the summer and warmer in the winter, which means less energy used and CO_2 produced in air conditioning and heating.

Lightweight glazing: Auto makers are constantly looking for materials that will lighten their vehicles in order to reduce their fuel use and CO_2 emissions. Vitro offers lightweight products for all vehicle window openings, whether single-pain tempered constructions or two-light glass constructions with a layer between. Regardless of their construction, our products meet government safety standards and client's expectations for use on the road (door closing, resilient to gravel impact, etc.)

Innspire Program

In 2021 more than 45 ideas were entered, and 16 of them by 140 innovators were selected.

Innovation Culture

The comprehensive advancement of all Vitro employees includes both their personal and professional growth; among the tactics the company follows to this end is promoting a culture of innovation, stimulating our people's creative capacities through contests and innovation programs.

Innspire Program

Innspire is an innovation program at our Container division that encourages and recognizes continuous improvement, productivity and process efficiency. All of this is the result of our employees' valuable contributions, proposals and ideas, which have led to transformations in their work areas and in our plants.

More than 45 ideas were put forth in 2021, 16 of which received special distinction. There were two events during the year to recognize the more 140 innovators responsible, whose ideas have brought tangible benefits and savings for the company.

Innova Design Contest

In this annual contest for proposals to design an innovative perfume bottle, the top 3 of 10 finalists are awarded prizes. The contest is open to clients, technical experts, the company's sales team, the AMEE (Mexican Association of Containers and Packaging), CANIPEC (combining the National Chamber of Cosmetic Products and the National Association of Personal Care and Household Products Industry), as well as university students and representatives.

The purpose of the contest is to promote and recognize the talents of students in industrial design or similar programs who are challenged to develop the prototype for a perfume bottle. In 2021, two new projects--Decisions and Kiotis Raíces—were selected for products made by our clients House of Fuller and Stanhome, respectively.

With initiatives like this, we contribute to building ties between students, clients, the industry and Vitro, and attracting talent, promoting innovation and recognizing creativity in Mexico.

VITRO COMMUNITY

For eleven decades, Vitro has been proving its commitment to operating and growing sustainably, providing its employees and the communities where it operates healthy and safe spaces for work and leisure.

Through health and wellness plans and initiatives, environmental care, and support for vulnerable groups and communities, we make sure we are having a lasting positive impact and promote comprehensive development. We understand that we are part of a society, and to help it advance and grow we need to work together with stakeholders. This is the best way—the only way—to build value in a win-win formula.

VITRO COMMUNITY

Since its origins, Vitro has worked hard to ensure that every one of its actions and decisions is consistent with its business philosophy.

Vitro Family

The pandemic that began in 2020 made living conditions more complicated for our employees and their families. But the company once again proved that its human team and their loved ones are what is most important, by carrying out activities to guarantee their safety and welfare, while continuing and strengthening those that we have used to strengthen the social fabric for decades.

Among the initiatives we pursued, some in conjunction with strategic allies, are:

ASOCIACIÓN NACIONAL PRO SUPERACIÓN PERSONAL WOMEN'S PROGRAM

ANSPAC worked with us on this program to encourage the comprehensive development of the individual, based on the conviction that only by developing their full human potential can women build a new and better world, for their families and for their communities. The program is active in three locations: in Nuevo León, Monterrey (Machine Manufacturing), and García (Architectural Glass, Automotive Glass and Inorganic Chemicals), and in Mexico State, Toluca (Containers). Despite the pandemic, the program went forward online in 2021, supporting more than 60 registered participants.

FUNDACIÓN CLISA – DISCOVERING THE WORLD THROUGH OTHER EYES

We sponsored 204 eye exams and donated 96 pairs of glasses to children from the ages of 5 to 15, with the support of Fundación CLISA. The aim is to help our employees' kids do better in school and improve their overall quality of life.

THE PATH OF THE FUTURE LEADER

Aimed at employees' children between 14 and 16 years of age, this program helps youth develop skills as responsible and efficient leaders, to work for their own well-being and that of the people around them. It consists of eight modules: Microsoft Office, Vocational Guidance, Teamwork, Emotional Intelligence, Leadership, Assertive Communication, Financial Education, and Internet and Social Media. This program was carried out successfully in July 2021 with 47 participants.

ENGLISH FOR KIDS
This is an online program of Saturday classes for the children of our employees, offered through the Teams Platform. It promotes safe learning while respecting public health protocols during the pandemic, allowing children to study without exposing themselves to contagion. The program benefited 125 families.

SCHOLARSHIPS
Vesta provides economic aid to help employees' children during their education. In 2021 we invested MXN 285,000 in this collaborative scheme.

Strategic Partners

FEAC
The schools of Formación Educativa, A.C. (FEAC) were founded as primary schools for the children of our employees, and although today all four of them also accept children from the general public, they guarantee Vitro employees that their children have access to an excellent education. All together there are 1,160 students enrolled in the schools, with 514 new students enrolling in 2021 and 275 graduating.

In addition to attending primary school, students participate in sporting, cultural, civic and social events. There are also activities for children and their parents, strengthening the social fabric through the family.

Among the activities promoted by FEAC schools are:
- Recycling programs, to build awareness about the importance of optimizing resources.
- Environmental campaigns that encourage environmental preservation and protection, teaching kids how to optimize water and energy at their schools.
- Plastic bottlecap collection together with the Alianza Anticáncer Infantil to support the battle against this illness.
- Ongoing healthcare programs focused on COVID-19 prevention, which encourage proper diet, basic health, and a strong immune system.

Provides economic aid. In 2021 we invested MXN 285,000 in this collaborative scheme.

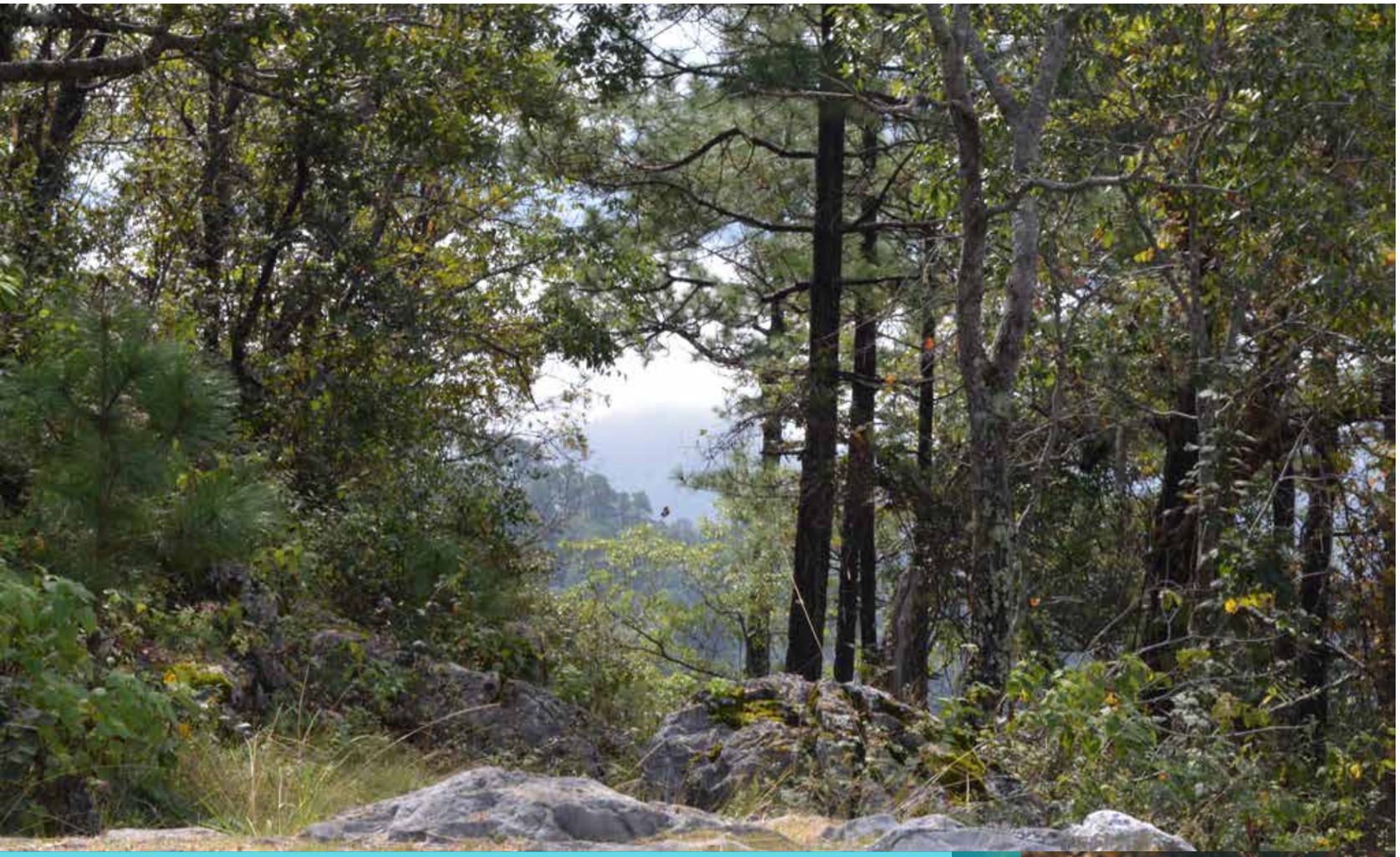
- Campaigns for parents on topics like mental health and emotional wellness.

In 2021, FEAC schools demonstrated the academic excellence of their students, who won distinctions in various math competitions sponsored by the Federation of Private Schools:

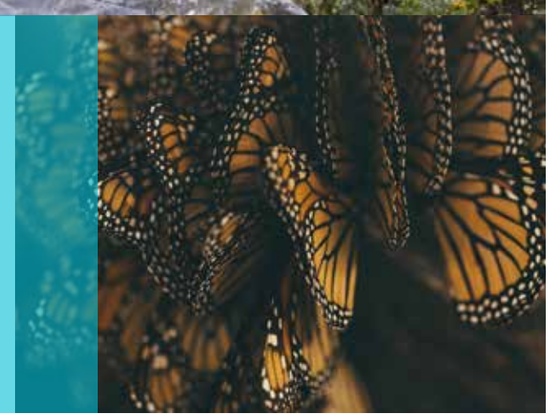
Escuela Roberto G. Sada
- 3rd Place, First Grade Math Contest
- 1st Place, Statewide Third Grade Math Contest
- 2nd Place, Statewide Fourth Grade Math Contest
- 1st Place, Regional Second Phase
- 3rd place, Statewide Sixth Grade Math Contest

Escuela Industria del Vidrio
- 1st Place, Tenth Northeast Region Second-Grade Math Contest
- 1st place, Tenth Northeast Region Fifth-Grade Math Contest
- 2nd place, Tenth Third-Grade Math Contest
- 3rd place, Tenth Fourth-Grade Math Contest
- 1st place, Third National Fifth-Grade Mathematics Cup

According to our engagement survey, 87% of employees are satisfied with the company's social responsibility actions.



585 hectares of protected forest that are home to numerous species of flora and fauna.



Vitro Parque el Manzano

Vitro Parque El Manzano is a 585-hectare natural protected woodland area that is home to numerous species of flora and fauna, an example of the company's dedication and sense of responsibility for preserving the environment.

The park has recreational and leisure areas for its employees and their families to enjoy, and is also open to members of the general public. Last year 52,723 people visited the park, and with these we promoted a culture of environmental care through brochures on ecology.

Park personnel continually monitor local flora and fauna to help preserve them, with procedures for detecting pine tree diseases and avoiding the invasion of exogenous animal species that might be harmful to native fauna.

Because the space is open to the public, in order to keep it in optimum condition, we provide the necessary preventive and corrective service to keep furniture and equipment, electrical networks, water networks, bathrooms, internet and radio communication in good working order.

A wildfire broke out near the park in 2021 but it was contained a scant 800 meters before it reached the park. To prepare for the emergency, 25 people participated in brigades from various Vitro areas.

Glass Museum

Opened thirty years ago, the Glass Museum celebrates the history of glass in Mexico. Through its extensive collections, visitors to the museum have an opportunity to view European glass from the 16th to the 9th century, examples of Mexico's "pulque glass," and the first examples of artisanal and industrial glass in Mexico, along with various pieces by pioneering Mexican glassmakers from the late 19th and early 20th century, to mention just a few examples of its collections' treasures.

In 2021, the museum remained closed to the general public, due to the pandemic and public health protocols, but organized online visits starting in 2021, attended by 6,688 "virtual visitors." We also held a "virtual camp" which 126 children attended.

Additionally, following all the hygiene measures recommended by the authorities, we visited shopping centers and handed out 220 drawing and activity kits for children so they could have fun and learn about glass at home. We also gave out 2,500 kits to our employees' families, and 100 kids to teachers to share with their students.

In January 2022, the glass museum reopened to the public, complying fully with the recommendations of the state health authorities.

The museum hosted online visits starting in 2021 and received 6,688 "virtual visitors." We also held a "virtual camp" which 126 children attended.

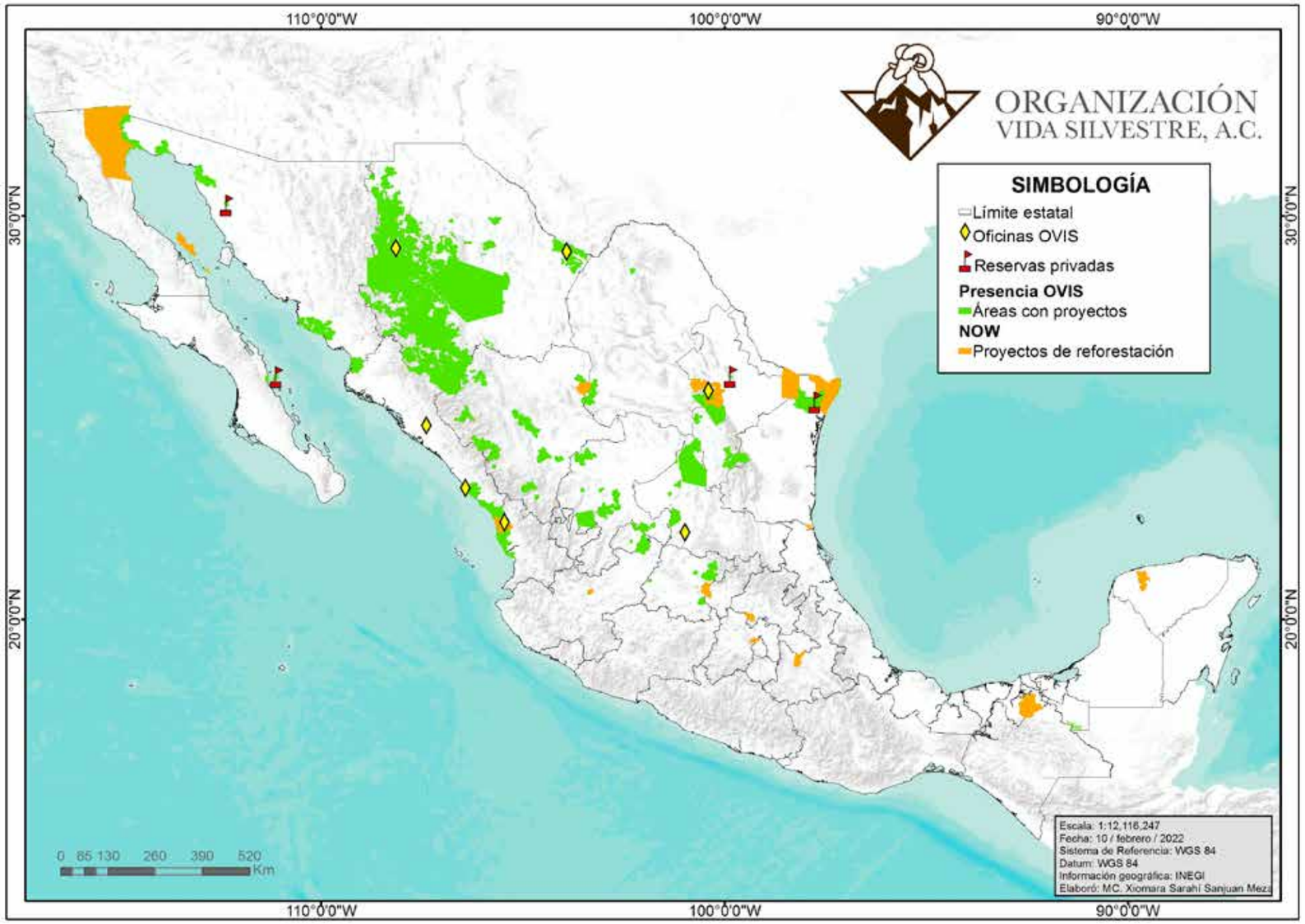
HA BI TAT

In line with SDG number 15, Life on Land, which includes sustainable forestry, the battle against desertification, stopping and reversing soil degradation and halting the loss of biodiversity, Vitro has incorporated habitat as one of the pillars of its sustainability model, and it remains committed to growing in harmony with the environment and the communities where it is present.

Photo: OVIS Susana Eleonora Pérez Sauceda

15 LIFE ON LAND

HABITAT



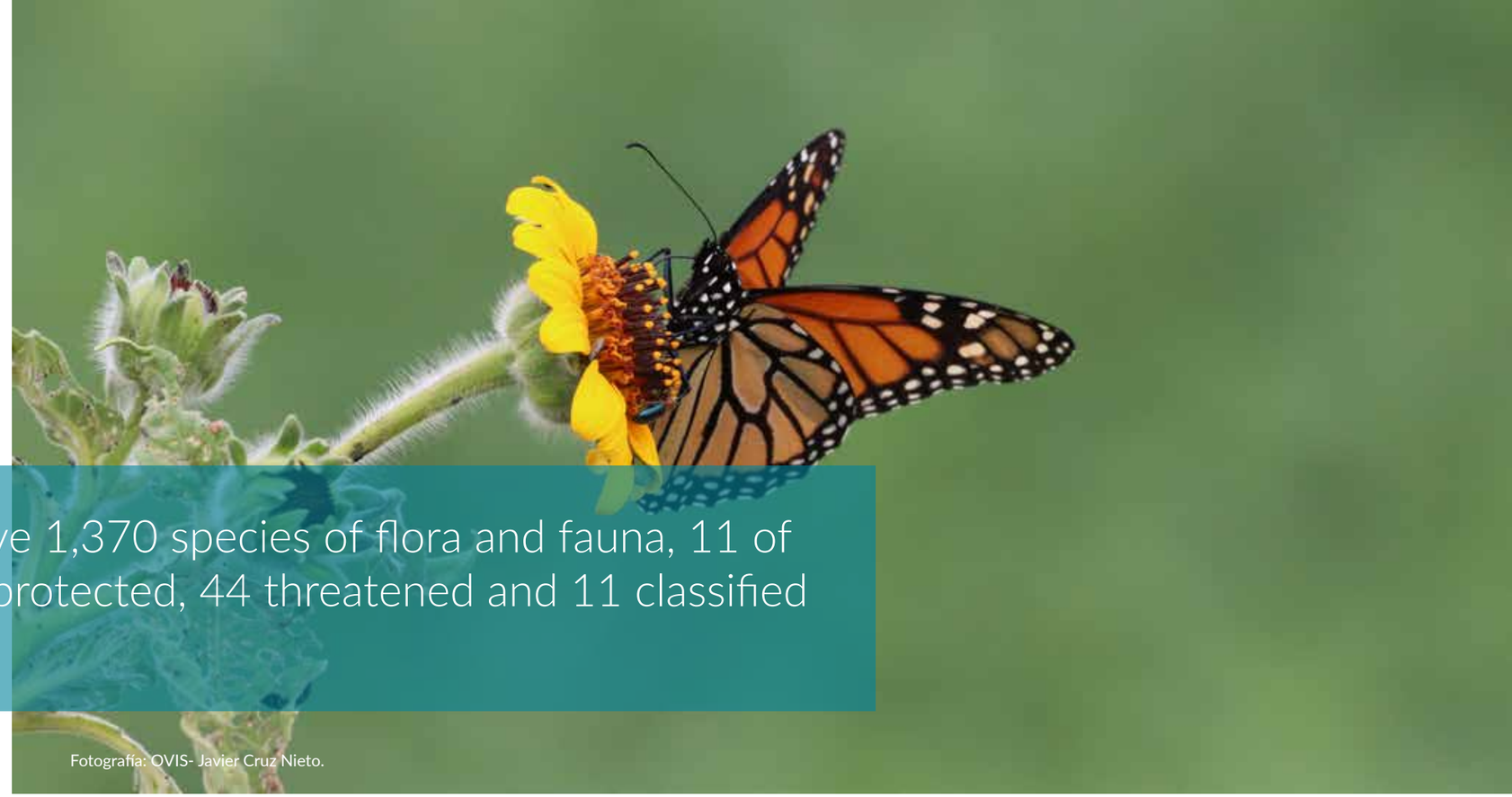
In line with SDG number 15, Life on Land, which includes sustainable forestry, the battle against desertification, stopping and reversing soil degradation and halting the loss of biodiversity, Vitro has incorporated habitat as one of the pillars of its sustainability model, and it remains committed to growing in harmony with the environment and the communities where it is present.

OVIS

In 1996, Vitro was one of the founders and supporters of an organization called Organización Vida Silvestre, A.C. (OVIS), a nonprofit organization dedicated to the preservation of the world's wildlife species. Since then, our company has worked closely with OVIS to support the preservation and sustainable coexistence of endangered species of flora and fauna.

As a result of this synergy, we have been able to carry out significant conservation initiatives in various ecosystems of Mexico, protecting priority species to preserve our country's natural wealth.

Currently, the organization helps manage and conserve 131,851 hectares of protected land, 38,268 of which are private reserves in the states of Baja California Sur, with Isla El Carmen; Sonora, with Rancho El Plomito; Nuevo León, with Rancho La Mesa; and Tamaulipas, with Rancho los Ébanos; in addition to 93,583 hectares of ecological buffer zones in the states of Nayarit, with Reserva Los Laureles; San Luis Potosí, with Reserva El Salado; Nuevo León with Reserva San Joaquín de Soto; and Chiihuahua, with the Hechiceros and Las Auras reserves.



All told, OVIS has helped to conserve 1,370 species of flora and fauna, 11 of them endangered, 10 endemic, 39 protected, 44 threatened and 11 classified as rare.

Fotografía: OVIS- Javier Cruz Nieto.

Through maintenance and restoration efforts in each of these preserves, we help keep priority ecosystems in good condition—from forests of pipe cactus and pastures to extensive mangroves and pine forests, conserving and in some cases increasing populations of threatened or endangered species, like the golden eagle, Mexican grey wolf, bighorn sheep, black bear and Mexican prairie dog, among others.

Official Mexican standard NOM-059-SEMARNAT-2010, Environmental Protection of Mexican Native Species of Wildlife-Risk Categories and Specifications for Inclusion, Exclusion or Change – List of species at risk

Species	Category
Golden Eagle	Threatened
Thick-billed parrot	Endangered
Maroon-fronted parrot	Endangered
Mexican Grey Wolf	Probably extinct in the wild
Black bear	Endangered
Mexican prairie dog	Endangered
Black-tailed prairie dog	Threatened
Mountain plover	Threatened

In the Nayarit National Wetlands Biosphere Reserve, OVIS has helped restore 1,200 hectares of mangroves and increased production for more than 100 local commercial fisheries, with a direct impact on communities in the region as well as the ecosystem benefits that mangroves provide.

In Mexico's highlands (south of Nuevo León and north of San Luis Potosí), exclusion zones and good agricultural and livestock farming practices have been introduced, helping reduce soil loss over more than 5,000 hectares of pasture and woodlands, increasing grassland production and supporting livestock activity. In the same region, thanks to soil conservation activities in various areas, infiltration in the aquifers has been improved and surface water retention increased, for the benefit of cities and towns.

MEMBERSHIP IN ORGANIZATIONS AND ASSOCIATIONS

US and Canada	Latin America and the Caribbean
Cosmetic Industry Buyers and Suppliers – CIBS	Asociación de Empresas de Ahorro de Energía en la Edificación - ALENER
Blair County Chamber of Commerce	Asociación de Vidrieros de Nuevo León
Building Envelope Campaign – BEC	Asociación Mexicana de Ayuda a Niños con Cáncer del Estado de México (AMANC)
Center for Automotive Research – CAR	Asociación Mexicana de la Industria Salinera, A.C. - AMISAC
Corporate Associate, Façade Tectonics Institute – FTI	Asociación Mexicana de Ventanas y Cerramientos, A.C. - AMEVEC
Fenestration Canada	Asociación Nacional de la Industria Química - ANIQ
Fenestration Glazing Industry Alliance – FGIA	Asociación Nacional Pro Superación Personal, A.C.
Glass Manufacturing Industry Council – GMIC	Cámara Nacional de la Industria la Transformación - CAINTRA
Insulating Glass Certification Council Board of Governors – IGCC	Campus Universitario Siglo XXI
International Living Future Institute Products Hub – ILFI	Centro de Educación Básica para el Adulto
Living Building Challenge Red List of materials – LBC	Cluster de Vivienda y Desarrollo Urbano Sustentable
Motor & Equipment Manufacturers Association / Original Equipment Supplier Association – MEMA/OESA	Confederación Patronal de México - COPARMEX
National Fenestration Rating Council – NFRC	Federación de Trabajadores de Sindicatos Autónomos
Pennsylvania Chamber of Commerce	Fideicomiso para el Ahorro de la Energía Eléctrica - FIDE
Safety Glazing Certification Council – SGCC	Grupo Clisa
The United States – Mexico Chamber of Commerce	Industriales Regiomontanos del Poniente, A.C. - IRPAC
Wichita Falls Chamber of Commerce	Instituto de Estudios Superiores de Jocotitlán
	Instituto Tecnológico y de Estudios Superiores de Monterrey
	Primaria Mariano Riva Palacios y Primaria Derechos Humanos
	Secretaría del Trabajo y Previsión Social
	Servicio Nacional de Aprendizaje (Colombia)- SENA
	Sistema Nacional para el Desarrollo Integral de las Familias
	Sustentabilidad para México, A.C. - SUMe
	Tecnológico de Estudios Superiores de Tianguistenco
	Universidad Autónoma de Nuevo León
	Unión Industrial del Estado de México - UNIDEM
	Universidad del Valle de México
	Universidad UniverMilenium

FINANCIAL OPERATING ANALYSIS

FINANCIAL AND OPERATING ANALYSIS

In 2021, the global economy began showing signs of recovery after more than 12 months of obstacles and challenges from the COVID-19 virus and its variants. But supply chain disruptions and inflation pressures continued to drag on the results of many businesses and industries.

In addition to these difficulties, certain extraordinary events during the year had a broad-based impact on the operation of many industries. One of these was an unprecedented winter storm that hit the United States and the northern states of Mexico, bringing widespread disruptions in the form of gas, electricity and water system outages. Most of the companies in that geographical area were unable continue business as usual, forcing the industry to temporarily seek out alternate energy sources to keep up operations and meet their commitments to clients. In parallel, a growing demand for energy, both electricity and gas, stressed the energy network and caused a major failure and a massive supply cut. The supply of gas and electricity came back quickly, but it set a clear precedent of vulnerability in the face of the globalization of these energy sources.

A shortage of automotive semiconductors was another factor that has gradually worsened since last year. It began as a temporary delay in supplies with the closure of non-essential businesses, but new outbreaks of the virus and increased demand from various companies that make electronics, televisions, computers, game consoles and mobile phones squeezed the market for chips. This increase in demand directly impacted production by original equipment manufacturers (OEM) in the United States and Mexico, in turn affecting the suppliers to the segment.

One of the events that marked the commercial and financial environment in most economies in the world was high inflation during the year. The public health crisis exerted pressure on some industries, forcing their prices downward in the past, and while they normalized upwards again in 2021, the global crisis in containers and foreign trade, has made raw materials significantly more expensive, negatively affecting many of the industries and markets in which we participate.

Late in the year, the prices of natural gas and electricity surged, primarily because of record low levels of natural gas reserves and, projections of a possible shortage of natural gas in Europe during winter, which was expected to be more severe than usual, and geopolitical factors. This increase in prices affected the results of our businesses, as we were running our furnaces at full capacity.

With the reactivation and economic recovery in countries where Vitro is present, the company was able to seize the opportunity to resume projects that had been suspended during the early phase of the pandemic, and work on new projects to drive its development. Demand for glass quickly raised our plant operations to capacity levels, enabling us to optimize production in most of our facilities and plants.

GDP Growth	2016	2017	2018	2019	2020	2021
Mexico	2.9%	2.1%	2.6%	-0.1%	-8.3%	[*]
United States	1.5%	2.3%	3.0%	2.3%	-3.5%	[*]
Global	3.2%	3.7%	3.7%	2.6%	[*]	[*]
Mexico	3.4%	6.8%	4.8%	2.8%	3.2%	[*]
Mexico inflation	2.1%	2.1%	1.9%	2.4%	1.4%	[*]
US inflation	18.7	18.9	19.23	19.25	21.49	[*]
Tipo de Cambio Promedio USD Peso MX	2.9%	2.1%	2.6%	-0.1%	-8.3%	[*]

The peso/dollar exchange rate closed 2021 at 20.47, compared to 19.91 at the close of 2020.

During the year, the monthly closing exchange rate hovered in a range of 19.85-21.45 pesos per dollar, the high point being November 2021. Compared to 2020, the Mexican peso grew stronger against the dollar, with monthly average exchange rates of MXN 20.28, compared to MXN 21.48 in 2020.

CONSOLIDATED OPERATING RESULTS

The amounts presented in this section are expressed in nominal U.S. dollars. In 2018 the company changed its functional currency to the US dollar, in keeping with regulatory provisions contained in International Accounting Standard 21 (IAS 21) "Effects of Changes in Foreign Exchange Rates," since this currently better reflects Vitro's current economic climate and form of operation.

SALES

Consolidated net sales for the fiscal year ended December 31, 2021 were USD 1.96 billion, compared to USD 1.77 billion in 2020, an increase of 10.7%.

Consolidated net sales	
Year	USD million
2016	1,051
2017	2,075
2018	2,238
2019	2,180
2020	1,768
2021	1,958

FLAT GLASS

Sales in the Flat Glass division for 2021 grew 9.8% year-over-year, to USD 1.57 billion from USD 1.43 billion in 2020. Sales by this division benefited mainly from the reopening of business by the Architectural and Automotive Glass divisions, which had been declared non-essential businesses in the first quarter of 2020, alongside a pickup in construction markets in Mexico and the United States.

Sales in the Architectural Glass business rose 13.4% from 2020 to 2021, due to increased vigor and stronger demand from the construction and specialties market in Mexico and the United States. Another factor supporting the rise in Architectural Glass sales was the rise in the price of commercial and residential architectural glass, basically due to inflation and capacity factors. In the last quarter of the year, sales were hurt by a reduction in volume available for sale, because part of production capacity went to build up inventory to cover repairs to the number 2 float glass furnace, the largest in the Vitro system, located in García, Nuevo León, Mexico.

In 2021, despite the adverse climate caused by supply chain disruptions, including the chip shortage, sales of automotive glass were up by 4.6% compared to 2020. The Automotive Glass business reported higher sales due to increased demand fueled by the reopening of the automotive markets in Mexico, the US and Europe, since in 2020 the automotive industry was eventually suspended as another non-essential activity. One factor that prevented sales from growing at the expected pace was the temporary shutdown of some production lines in response to production halts by our clients, in an effort to balance production and inventory generation with our clients' needs.

Flat Glass Sales	
Year	USD million
2016	659
2017	1,695
2018	1,839
2019	1,786
2020	1,426
2021	1,566

CHEMICALS

Sales by the Inorganic Chemicals Business in 2021 rose 6.8% year-over-year, primarily due to better sodium chloride sales in Mexico, higher average prices on our products, and increased demand in Mexico for calcium chloride used in the oil and gas industry, in addition to higher sales of deicing products in the United States and Canada. Sales of Sodium Carbonate declined early in the year due to production halts in the glass and smelting segments, in turn the result of electricity and gas outages and price pressures from imports coming into Mexico from India and China, as well as a lack of availability of sodium carbonate product in the last quarter of 2021. Sales of bicarbonate of soda declined in 2021 despite growing demand from the pharmaceutical and food industries; in the fishery market we lost market share to the entry of substitute products and imports.

Chemicals Sales	
Year	USD million
2016	146
2017	159
2018	168
2019	176
2020	158
2021	169

CONTAINERS

The Container division, which includes glass containers for the cosmetics, fragrances, liquor and toiletries (CFT) segment and the machine manufacturing business (FAMA), reported a 22.1% rise in sales, with revenues totaling US225 million in 2021, compared to USD 185 million in 2020.

CFT sales grew 14.5% year-over-year, basically due to higher sales volume of value-added products in the cosmetics and fragrances segments in Mexico and the United States, a better price/product mix due to lower sales in the pharmaceutical segment, and a substantial increase in sales of premium liquor bottles. In the first quarter of the year, CFT sales were dampened by severe winter storm weather in the United States and northern Mexico that forced us to temporarily shut down operations in response to fuel shortages and logistical problems with shipping due to highway closures.

FAMA sales grew 112% from 2020 to 2021, mostly due to a reactivation of capex by our clients, including maintenance, repair and expansion projects, which had been provisionally suspended in 2020.

Container Sales	
Year	USD million
2016	240
2017	216
2018	235
2019	218
2020	185
2021	225

EARNINGS BEFORE OTHER INCOME AND TAXES (EBIT) AND EBITDA

EBITDA for the year 2021 was 9.9% lower than in 2020, due to a lower use of production capacity in the Automotive division plants, an increase in average fuel prices, a rise in the cost of transportation, shipping and packing.

The margin of EBITDA to sales was 10.4%, lower than in 2020. The reduction was due to increased fuel prices, higher transportation and shipping costs, and a rise in the cost of packaging.

The Architectural segment reported a reduction in EBITDA in 2021 compared to 2020, heavily affected by the rise in natural gas prices, transportation and shipping costs, partly offset by increased production efficiency.

In the Automotive business, EBITDA was also lower than in 2020, the result of higher distribution expenses in the United States, lower operating efficiencies resulting from unexpected shutdowns by OEMs facing a shortage of semiconductors, higher labor costs due to a shortage of labor in that country, and stiff price competition in a market with excess capacity and an accumulation of inventories. The automotive industry supply chain continued to suffer disruptions, mainly in the supply of chips, which made it more difficult to operate efficiently, reducing operating efficiency limiting absorption of overhead at our plants.

In the Inorganic Chemicals division, EBITDA declined in 2021 compared to 2020, chiefly because of lower sales of sodium carbonate and sodium bicarbonate, price hikes in raw materials, especially coke and ammonia, and in energy and packing materials, combined with higher transportation costs for distributing our products. In the first quarter of 2021, EBITDA in this division was affected by electrical outages and gas consumption restrictions at our plants, which caused production halts and lowered the volume of product available for sale. This was offset partly by a cost- and expense-cutting program put in place to deal with the effects of the pandemic and the rise in international oil prices.

The Container division, including the cosmetics, pharmaceutical, liquors and toiletries (CFT) business and machinery and equipment (FAMA), reported higher EBITDA in 2021 than in 2020, primarily because of high production efficiency, which improved the absorption of overhead, and a more favorable price/product mix resulting from the reduction in sales in the value-added segment, mitigating in part the negative impact of higher prices on natural gas and electricity, and the increased cost of packaging, transportation and shipping.

	Earnings before other income and taxes (EBIT)	Consolidated EBITDA	
Year	USD million	USD million	% of sales
2016	201	259	25%
2017	273	393	19%
2018	245	365	16%
2019	155	300	14%
2020	76	227	13%
2021	21	204	10%

NET FINANCIAL COST

The Company reported a net financial cost of USD 68.5 million in 2021, up from USD 39 million in 2020.

This increase in net financial cost in 2021 was due primarily to hedging and foreign-exchange losses.

TAXES

In 2021, Vitro paid income tax of USD 25 million, lower than in 2020.

NET FISCAL-YEAR EARNINGS

Vitro reported a consolidated net loss of USD 107 million for the year, compared to a loss of USD 45 million the year before.

CASH FLOW

Free cash flow in 2021 was negative by USD 130 million, compared to a positive flow of USD 130 million in 2020. Most of the erosion was attributable to an increase in working capital investment as well as higher taxes and dividends.

INVESTMENTS IN FIXED ASSETS

The company invested USD 97 million in fixed assets in 2021.

The Flat Glass division invested USD 29.6. million in Architectural Glass, USD 44.8 million in the Automotive business and USD 6.1 million in Inorganic Chemicals. The Container division invested USD 14.1 million in the CFT busines and USD 0.8 million in FAMA. The remainder—USD 1.3 million—went to general corporate purposes.

CONSOLIDATED FINANCIAL POSITION

As of December 31, 2021, the company had a cash balance of USD 110 million, compared to USD 114 million at the close of the third quarter of the year. The reduction in the cash balance was due primarily to investments in working capital in accounts receivable and inventories.

Total debt closed 2021 at USD 733 million, made up of dollar-denominated long-term debt including a bilateral loan of USD 170 million, a note for USD 180 million, a bilateral loan of USD 150 million, a bilateral loan of USD 75 million, USD 51.2 in leasing liabilities usage rights, and short-term debt including the balance withdrawn from dollar-denominated revolving credit lines.

The debt/EBITDA ratio ended 4Q21 at 3.6x, with a net debt to EBITDA ratio of 3.1x.

STOCK PERFORMANCE (MXN PER SHARE)

The value of the shares representing the Company's capital stock (VITROA) on the Mexican Stock Exchange (BMV) closed 2021 at MXN 24.50 per share, compared to MXN 31.81 per share at the end of 2020.

Quarter	LOW	HIGH
I	23.20	31.58
II	23.80	26.43
III	24.61	28.50
IV	22.03	26.24

MATERIAL EVENTS

VITRO COMPLETES CORPORATE MERGER

On January 1, 2021, Vitro announced that the simultaneous merger of Vitro Automotriz, S.A. de C.V., Distribuidora Álcali, S.A. de C.V., Vidriera Los Reyes, S.A. de C.V. and VAU, S.A. de C.V. (the "Merged Companies") into Vitro, S.A.B. de C.V. took place at midnight.

The foregoing was based on a merger agreement between Vitro and the Merged Companies signed on the same date and approved in a General Ordinary Meeting of Vitro shareholders on September 22, 2020, and all the shareholders with voting rights in the Merged Companies, through unanimous approval. Vidriera Monterrey, S.A. de C.V. was not merged with Vitro at that time because the precedent condition agreed upon in that shareholders' meeting was not fulfilled.

As a result of the merger, Vitro received as universal assignee, without reservation or limitation whatsoever, of the rights, assets, shares, liabilities, obligations, and in general all of the property of the Merged Companies. Furthermore, Vitro replaces the Merged Companies, as the case may be, in all acts, agreements and contracts they have signed and, accordingly, the rights and obligations pertaining thereto.

With the successful conclusion of this merger, the company has taken a great step forward toward implementation of the New Vitro Structure, which was previously approved in the General Ordinary Shareholders' meeting of July 1, 2020.

VITRO PAYS OFF A PORTION OF ITS DEBT IN ADVANCE

On January 4, 2021, Vitro announced that on that same day it had made a voluntary partial prepayment of debt totaling USD 180 million in legal tender of the United States of America (dollars) against a syndicated loan, in order to reduce interest payments and preserve the solidity of its financial structure.

The prepayment was made using the proceeds of an issuance of notes placed with The Prudential Insurance Company of America, announced on December 30, 2020.

VITRO CLARIFIES ANNOUNCEMENT OF BUSINESS SALE

On January 11, 2021, Vitro announced that on that same day a report had been published in various digital media indicating that "Grupo Vitro" had been acquired by a private equity trust (DHS Private Equity Trust).

Vitro and its subsidiaries have no deal arranged with DHS Private Equity Trust of any kind and are unaware of the existence of any company in Mexico (or abroad) named Grupo Vitro and engaged in the manufacture of glass and the production, distribution and sale of various beverages.

Vitro's stock structure, management and operation remain unchanged, including its glass manufacturing plants for the automotive, architectural and container markets in the Americas, Europe and Asia, as well as plants for the manufacture of inorganic chemical products, machinery and equipment for industrial use.

VITRO REFINANCES A PORTION OF ITS DEBT

On January 27, 2021, Vitro announced that on the preceding day certain operating subsidiaries of its businesses in Mexico had acquired financing in the form of a Bilateral Loan Agreement with BBVA México, for the purpose of refinancing a portion of the consolidated debt it holds under the Syndicated Loan, which totals USD 224 million legal tender in the United States of America ("dollars"). The purpose of the refinancing is to maintain a solid financial structure, extend the average life of the debt and reduce financing costs.

The Bilateral Loan was structured for up to USD 150 million and expires in January 2026. The proceeds of this financing will be used to pay off USD 150 million of the existing debt in advance.

VITRO PAYS OFF A PORTION OF ITS DEBT IN ADVANCE

On February 2, 2021, Vitro announced that on that same day it had made a voluntary partial prepayment of debt totaling USD 140 million in legal tender of the United States of America (dollars) against a syndicated loan, in order to reduce interest payments and preserve the solidity of its financial structure.

The prepayment was made using the proceeds of the Bilateral Loan Agreement with BBVA México announced on January 27, 2021.

VITRO ANNOUNCES ELECTRICAL ENERGY AND NATURAL GAS SUPPLY DISRUPTIONS

On February 18, 2021, Vitro announced that since February 15 of the year, due to extreme weather conditions, some of its plants were not receiving electrical energy and were also notified of possible reductions in the supply of natural gas. This forced three of its automotive industry plants in Mexico to temporarily suspend operations, and some of its furnaces to switch to alternate sources in order to consume less natural gas.

The company also notifies the investing public that as of this date, the automotive business plants have begun to receive a small amount of electricity and have begun to partially resume operations.

The Company has taken the actions necessary to deal with this contingency and is working to preserve the integrity of its equipment and operate to the extent possible, avoiding any impact on our client to the best of our ability. Once this situation is resolved, which we expect will be soon, and we return to normal operations in the following two or three days as our service suppliers indicate, Vitro will be able to quantify the economic impact, and if it is material, it will notify the public through this same medium.

VITRO COMPLETES DEBT REFINANCING

On February 26, 2021, Vitro announced that on the previous day various of its operating subsidiaries in the United States of America (USA) had acquired financing through a bilateral loan agreement with ING Bank N.V. ("ING") totaling USD 75 million, legal tender in the USA, expiring in February 2026. The proceed will be used to pay off existing debt in advance, in the amount of USD 75 million.

With this transaction, as of March 1, 2021, we will have successfully completed execution of our plan to fully refinance the syndicated loan. The purpose of this refinancing is to reduce financing costs and extend the average life of our debt.

VITRO PAYS OFF SYNDICATED LOAN IN ADVANCE

On March 1, 2021, Vitro announced that as of that same day it had completed repayment of a syndicated loan for USD 84 million, legal tender in the United States of America.

The payment was made with some of the proceeds of a Bilateral Laon Agreement signed with BBVA México and announced on January 27, 2021, as well as the proceeds of a loan from ING Bank N.V., announced on February 26, 2021.

Having paid off this debt in advance, Vitro has successfully completed its refinancing plan, the main goal of which was to reduce financing costs and extend the average life of its debt.

VITRO BOARD OF DIRECTORS APPROVES CONSTRUCTION OF A NEW FLOAT GLASS FURNACE AT THE GARCÍA, NUEVO LEÓN PLANT

On June 22, 2021, Vitro announced that its Board of Directors had approved construction of a third float glass furnace at its plant in García, Nuevo León.

The investment of approximately USD 120 million will enable the company to meet growing demand in the Latin American market and offer wider product availability and better logistics. With this, Vitro can continue offering the highest level of service to its clients and the markets in which it participates.

"The Board's approval of the construction of this new float glass line reiterates Vitro's commitment to meeting the needs of the markets we serve," said Vitro CEO Adrián Sada Cueva. "Vitro is continually developing new more efficient and attractive products with more value to the market, as well as to our clients. Given growing demand in the construction industry of the region, these are the features the market is looking for in glass. By expanding our capacity we will be able to meet that demand, and bring glass to our clients even more quickly, using new production technologies."

Since Vitro acquired the flat glass business from PPG in 2016 and Pittsburgh Glass Works in 2017, the company has invested heavily in its North American operations, including rebuilding two float glass lines at the Carlisle, PA plant and building a jumbo coater in Wichita Falls, TX, with a total investment of USD 67 million.

"Although the main goal of this new line is to meet growing demand in the Latin American market, the additional capacity will enable us to offer a higher level of service to our clients in the United States," said Ricardo Maiz, President of Vitro Architectural Glass. "This is highly important, because we are continuing to launch new products that are in high demand, like our "Acuity" ultra-clear glass, with the full range of Solarban® low-emissivity solar control coatings."

Construction of the new furnace will begin toward the end of this year.

VITRO WILL INVEST IN BUILDING A NEW CONTAINER FURNACE

On October 12, 2021, Vitro announced an investment of approximately USD 70 million to build a new furnace for its container plant in Toluca, Mexico State.

The investment was approved by the Board of Directors for the purpose of handling rising demand for glass containers in the segments this business serves. "This new furnace will be equipped with the best manufacturing technology for making high-quality, high-design, highly sophisticated glass. With this we can offer a wider availability of value-added products," remarked Vitro CEO Adrian Sada Cueva. "The company makes the finest glass containers in the world, and this investment confirms its commitment to offering the best level of service to clients in the markets where we are present."

In 2007, Vitro began operating one of the largest glass container plants in the world to meet demand in the market for containers for cosmetics, fragrances, toiletries and pharmaceuticals, among others, with the highest standards of quality and production efficiency.

"Construction of this new furnace will give us additional capacity to offer and support and our clients and their growing needs for glass containers, enhancing service levels in the regions and segments where we participate. The furnace will be equipped with state-of-the-art technology to make high added-value containers through sustainable processes," said Shlomo Frymerman, Director of the Container Division.

Construction of the new furnace will begin this year and is slated for startup in the first half of 2023.

CONSOLIDATED FINANCIAL STATEMENTS

Vitro, S.A.B. de C. V. and Subsidiaries

Consolidated financial statements as of December 31, 2021 and 2020 and for the years then ended, and Independent Auditors' Report dated March 28, 2022.

Vitro, S.A.B. de C.V. and Subsidiaries

Independent Auditors' Report and Consolidated Financial Statements for the years ended on December 31, 2021 and 2020

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INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF DIRECTORS AND STOCKHOLDERS
VITRO, S.A.B. DE C.V.:

(Thousands of U.S. dollars)

OPINION

We have audited the consolidated financial statements of Vitro, S.A.B. de C.V. and subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2021 and 2020, the consolidated statements of profit or loss and other comprehensive income, changes in stockholders´ equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly in all material respects, the consolidated financial position of Vitro, S.A.B. de C.V. and subsidiaries, as of December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended, in accordance with International Financial Reporting Standards (IFRS).

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Mexico, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

TESTING OF IMPAIRMENT ANALYSIS OF LONG-LIVED ASSETS

See notes 10, 12 and 13 of the consolidated financial statements.

Key audit matter

Property, machinery and equipment, intangible assets and other assets with a defined useful life in addition to goodwill (long-lived assets) for $1,456,880 represents 57% of total consolidated assets, of which $603,491 corresponds to the Cash-Generating Unit (CGU) of the Architectural Business in the United States (U.S.) and $567,031 (includes net operating assets for $102,220) to the CGU of the Automotive Business (Automotive CGU).

Management tests long-lived assets for impairment when there are triggering events and in case of goodwill at least once a year at year end. Several key assumptions are used in the determination of estimated value in use, including estimates of future sales amounts and prices, operating costs and the discount rate.

We have identified the impairment testing of long-lived assets of the Architectural Business in the U.S. CGU and the Automotive Business as a key audit matter due to the complexity and the significant judgment required in determining the estimated value in use.

How the key audit matter was addressed in our audit

Our audit procedures for this key audit matter included the following, among others:

- Involving our own valuation specialists to assist us in evaluating the appropriateness of the discount rates applied and comparing it to available public information of comparable companies.
- Evaluating the assumptions applied to key inputs such as long-term growth rates expected for the CGU of the Architectural Business in the U.S. and the Automotive Business determined by the Group.
- Performing our own sensitivity analysis, which included assessing the effect of reasonably-likely reductions in forecast cash flows, to evaluate the estimated impact on the estimated value in use of the CGU of the Architectural Business in the U.S. and the Automotive Business.
- Evaluating the adequacy of the disclosures in the consolidated financial statements.

OTHER MATTER

Our audit was performed with the purpose to have an opinion over the consolidated financial statements as a whole. The supplementary information disclosed in note 26 is presented for additional analysis purposes only and is not required as part of the consolidated financial statements. Such information corresponds to the year ended as of December 31, 2021, has been subject to audit procedures in the context of the audit of the consolidated financial statements, and in our opinion, is presented fairly in all material respects in relation to the consolidated financial statements as of December 31, 2021 as a whole.

OTHER INFORMATION

Management is responsible for the other information. The other information comprises the information included in the Group's annual report for the year ended December 31, 2021, to be filed with the National Banking and Securities Commission (Comision Nacional Bancaria y de Valores) and the Mexican Stock Exchange (Bolsa Mexicana de Valores), (the "Annual Report") but does not include the consolidated financial statements and our auditors' report thereon. The Annual Report is expected to be made available to us after the date of this auditors' report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read the Annual Report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.
Those charged with governance are responsible for overseeing the Group's financial reporting process.

AUDITORS´ RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. 'Reasonable assurance' is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.

- Conclude on the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern.

- If we conclude that a material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the (consolidated) financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

KPMG Cárdenas Dosal S. C.

C.P.C. R. Sergio López Lara

Monterrey, N.L., México, March 28, 2022.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As of December 31, 2021 and 2020
(Thousands of U.S. dollar)

	Notes		2021		2020
Assets					
Cash and cash equivalents	17	**$**	**110,122**	$	483,909
Trade accounts receivable, net	6 y 17		**212,864**		178,228
Recoverable taxes			**8,096**		7,304
Recoverable value added tax			**46,478**		16,193
Other current assets	5		**33,805**		61,981
Inventories, net	7		**458,129**		386,412
Current assets			**869,494**		1,134,027
Investment in associated companies	8		**22,642**		10,587
Investment properties	9		**20,147**		18,533
Property, plant and equipment, net	10		**1,143,029**		1,208,924
Right of use assets, net	11		**58,865**		68,009
Goodwill	12		**57,703**		62,139
Intangible and other assets, net	13		**256,148**		275,450
Deferred income taxes	22		**111,294**		115,363
Long-term assets			**1,669,828**		1,759,005
Total assets		**$**	**2,539,322**	**$**	**2,893,032**

See accompanying notes to consolidated financial statements.

Adrián Sada Cueva
Executive CEO

Claudio L. Del Valle Cabello
Chief Financial & Administrative

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As of December 31, 2021 and 2020
(Thousands of U.S. dollar)

	Notes	2021	2020
Liabilities			
Short-term debt	14	$ 101,672	$ 102,138
Short-term maturity of long-term debt	14 y 17	573,798	186,974
Interest payable	17	584	1,678
Short-term maturity of lease liability	11	17,851	18,715
Trade accounts payable	17	270,188	240,781
Accrued expenses and provisions	15 y 17	48,039	33,754
Income tax payable	22	21,121	8,609
Deconsolidation income tax	22	19,225	34,513
Other short-term liabilities	5 y 17	90,134	79,993
Short-term liabilities		1,142,612	707,155
Long-term debt	14	7,221	575,502
Long-term lease liability	11	32,792	39,344
Deconsolidation income tax	22 y 5	9,578	27,582
Deferred income taxes	22	15,678	40,648
Other long-term liabilities	5	9,134	11,300
Derivative financial instruments	17	13,011	33,210
Employee benefits	16	108,891	153,378
Long-term liabilities		196,305	880,964
Total liabilities		1,338,917	1,588,119
Stockholders' equity			
Capital stock	18	378,860	378,860
Repurchased shares	18	(32,621)	(27,549)
Additional paid-in capital		344,037	344,037
Other comprehensive loss	18	(19,842)	(44,153)
Retained earnings	18	529,235	652,774
Controlling interest		1,199,669	1,303,969
Non-controlling interest	18	736	944
Stockholders' equity		1,200,405	1,304,913
Total liabilities and stockholders' equity		**$ 2,539,322**	**$ 2,893,032**

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the years ended December 31, 2021 and 2020
(Thousands of U.S. dollars, except the amounts per share)

	Notes		2021		2020
Net sales	24	**$**	**1,957,568**	$	1,768,299
Cost of sales	23		**1,561,562**		1,401,589
Gross profit			**396,006**		366,710
Administrative expenses	23		**130,471**		100,215
Distribution and sale expenses	23		**244,388**		190,619
Income before other expenses, net			**21,147**		75,876
Other (income)	20 a)		**-**		(4,758)
Other expenses	20 b)		**30,041**		37,229
Operating (loss) income			**(8,894)**		43,405
Financial cost, net:					
Financial income	21 a)		**(2,647)**		(13,088)
Financial cost	21 b)		**71,217**		52,517
Total financial cost			**68,570**		39,429
Share in net income of associated companies	8		**(4,580)**		-
(Loss) profit before income taxes			**(82,044)**		3,976
Income taxes	22		**24,854**		49,468
Loss of the year		**$**	**(106,898)**	**$**	**(45,492)**
Other comprehensive income:					
Items that will not be reclassified to profit or loss:					
Actuarial remeasurements of the defined benefit obligation, net of deferred taxes	16 y 18	**$**	**4,209**	$	(48,461)
Total items that will not be reclassified to profit or loss		**$**	**4,209**	$	(48,461)

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the years ended December 31, 2021 and 2020
(Thousands of U.S. dollars, except the amounts per share)

	Notes		2021		2020
Items that can be reclassified to profit or loss:					
Profit (loss) in fair value of hedging financial instruments, net of deferred taxes	17 y 18	$	**21,846**	**$**	(7,763)
Effect of foreign currency translation	18		**(1,655)**		(23,627)
Total items that can be reclassified to profit or loss			**20,191**		(31,390)
Total other comprehensive income (loss)			**24,400**		(79,851)
Total comprehensive loss of the year		**$**	**(82,498)**	**$**	**(125,343)**
Total loss of the year attributable to:					
Controlling interest	18	**$**	**(106,601)**	$	(45,376)
Non-controlling interest	18		**(297)**		(116)
Total loss of the year		**$**	**(106,898)**	**$**	**(45,492)**
Total comprehensive loss of the year attributable to:					
Controlling interest	18	**$**	**(82,290)**	$	(125,255)
Non-controlling interest	18		**(208)**		(88)
Total comprehensive loss of the year		**$**	**(82,498)**	**$**	**(125,343)**
Earnings per common share:					
Basic and diluted loss per share	18	**$**	**(0.2261)**	$	(0.0957)

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020

(Thousands of U.S. dollars)

	Notes		2021		2020
Cash flows in operating activities:					
Net loss		**$**	**(106,898)**	$	(45,492)
Adjustments for:					
Depreciation and amortization	10,11,13 y 23		**147,776**		144,941
Impairment loss	23		**50,000**		-
Loss (gain) on sale of assets	9 y 20		**9,711**		(4,758)
Investments in associates	8		**4,580**		-
Income taxes	22		**24,854**		49,468
Plant closing	9		**-**		14,128
Investment retirement cost	9		**-**		5,024
Inventory obsolescence reserve	7		**5,216**		5,281
Financial income	21 a)		**(2,647)**		(5,903)
Derivative financial instruments	17 y 21 b)		**19,177**		2,852
Effect of exchange variation and others			**8,416**		(8,878)
Financial costs	21 b)		**44,809**		49,665
			204,994		206,328
Changes in working capital:					
Trade accounts receivable, net			**(38,095)**		36,111
Inventories			**(81,700)**		11,715
Trade accounts payable			**31,940**		(7,239)
Other operating assets			**(9,020)**		14,427
Other operating liabilities			**(27,201)**		12,946
Employee benefits			**(40,737)**		(6,790)
Income taxes paid			**(65,080)**		(43,803)
Net cash flows generated by operating activities		**$**	**(24,899)**	$	223,695

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020
(Thousands of U.S. dollars)

	Notes	2021	2020
Cash flows in investing activities:			
Purchase of property, plant and equipment		**$ (96,777)**	$ (95,973)
Proceeds from sale of property, plant and equipment and investment properties		**16,316**	4,723
Prepayment for land purchase		**6,896**	-
Investment in joint venture		**(2,000)**	(2,624)
Purchase of intangible assets		**(4,096)**	(8,322)
Other assets		**(3,231)**	(3,991)
Interest collected		**2,373**	5,998
Net cash flows used in investing activities		**(80,519)**	(100,189)
Cash flows in financing activities:			
Acquisition of new debt	14	**364,200**	438,977
Payment of loans	14	**(545,407)**	(249,205)
Lease payments	11	**(18,272)**	(15,913)
Interest paid		**(34,663)**	(41,886)
Dividends paid	18	**(16,938)**	-
Repurchase of own shares	18	**(5,072)**	(20)
Debt raising cost	14	**(1,542)**	(2,145)
Derivative financial instruments		**(8,681)**	(1,408)
Net cash flows (used in) generated by financing activities		**(266,375)**	128,400
Net (decrease) increase in cash and cash equivalents:		**(371,793)**	251,906
Cash and cash equivalents as of January 1,		**483,909**	230,165
Effect of exchange fluctuations		**(1,994)**	1,838
Cash and cash equivalents as of December 31		$ 110,122	$ 483,909

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

For the years ended December 31, 2021 and 2020
(Thousands of U.S. dollars)

	Capital stock	Repurchased shares and additional paid-in capital	Other comprehensive income	Retained earnings	Controlling interest	Non-controlling interest	Total stockholders' equity
Balances as of January 1, 2019	**$ 378,860**	**316,508**	**$ 35,726**	**$ 698,150**	**$ 1,429,244**	**$ 1,032**	**$ 1,430,276**
Transactions with Company's stockholders:							
Repurchased shares (Note 18e)	-	(20)	-	-	(20)	-	(20)
Comprehensive income:							
Other comprehensive loss (Note 18h)	-	-	(79,879)	-	(79,879)	28	(79,851)
Net profit	-	-	-	(45,376)	(45,376)	(116)	(45,492)
Comprehensive loss	-	-	(79,879)	(45,376)	(125,255)	(88)	(125,343)
Balances as of December 31, 2020	**$ 378,860**	**$ 316,488**	**$ (44,153)**	**$ 652,774**	**$ 1,303,969**	**$ 944**	**$ 1,304,913**
Transactions with Company's stockholders:							
Repurchase of shares (Note 18e)	-	(5,072)	-	-	(5,072)	-	(5,072)
Dividends paid (Note 18d)	-	-	-	(16,938)	(16,938)	-	(16,938)
Comprehensive income:							
Other comprehensive income (Note 18h)	-	-	24,311	-	24,311	89	24,400
Net los	-	-	-	(106,601)	(106,601)	(297)	(106,898)
Comprehensive los	-	-	24,311	(106,601)	(82,290)	(208)	(82,498)
Balances as of December 31, 2021	$ 378,860	$ 311,416	$ (19,842)	$ 529,235	$ 1,199,669	$ 736	$ 1,200,405

See accompanying notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2021 and 2020
(Amounts in thousands of U.S. dollars)

1. THE COMPANY'S ACTIVITY

Vitro, S.A.B. de C.V. ("Vitro", together with its subsidiaries the "Company") is a holding and operating company whose subsidiaries are engaged in serving diverse markets, including flat glass for the construction and automotive industries, as well as glass containers for the cosmetics, fragrances, pharmaceutical and liquor markets. In addition, Vitro and its subsidiaries are engaged in the manufacture of machinery, equipment and capital goods for industrial use,the manufacture of inorganic chemical products as well as energy commercialization. Vitro's corporate offices are located at Avenida Ricardo Margain Zozaya No. 400, Colonia Valle del Campestre, San Pedro Garza Garcia, Nuevo León, Mexico.

2. SIGNIFICANT EVENTS

2021

a) Restructuring

The Board of Directors resolved favorably on a proposal for Vitro's businesses to adopt a new flexible corporate structure that allows them to have access to more competitive capital markets and allows them to take advantage of better business opportunities by industry, either through strategical mergers and acquisitions, co-investments, or through injections of capital and debt (hereinafter referred to as the "New Corporate Structure").

The adoption of this New Corporate Structure, whose implementation was approved by the Shareholders' Meeting on July 1, 2020, has begun through the mechanism and operations described below:

i. Creation of four new subsidiaries with residence in Spain that are wholly owned by Vitro S.A.B. de C.V., with the purpose that each one of them, respectively, holds the shareholding of the subsidiaries that operate the businesses of automotive glass, architectural glass, glass containers and inorganic chemical products, as appropriate (hereinafter referred to as the " Newly Created Subsidiaries").

ii. Direct transfer by Vitro, S.A.B. of C.V. in favor of the respective Newly Created Subsidiaries, of the shares or partnership interests of the subsidiaries resident in Mexico and abroad that are directly related to the operation of the automotive glass, architectural glass, glass container and chemical products business, as appropriate.

iii. Transfer of a financial structure for each business by Vitro in favor of the Newly Created Subsidiaries and/or one or more of the companies subject to the transfer, so that each of them has its own assets and liabilities related to the automotive glass, architectural glass, glass container and chemical product businesses, as applicable, and

iv. Transfer or grant of temporary use or a mix of the previous, by Vitro and some of its subsidiaries in favor of the Newly Created Subsidiaries and/or one or more of the companies subject to transfer, of certain assets that are directly related to the operation of the architectural glass, automotive glass, glass container and inorganic chemical products businesses, as applicable.

The implementation of the New Corporate Structure has no impact on the operations with our customers, suppliers, employees and other stakeholders. The effective date of this implementation was January 1, 2021.

As a result of such restructuring, the segment note presented in note 24 was updated to the new form of management and the information for 2020 was restructured accordingly.

b) Dividends paid

In the Ordinary General Meeting held on April 20, 2021, the shareholders agreed to declare and pay dividends at the rate of $0.03604 per share (see Note 18d), the payment was made on April 29, 2021.

c) Debt prepayment

On January 4, 2021, Vitro made a voluntary prepayment of $180,000 to its syndicated loan, in order to reduce interest payments (see Note 14).

d) Debt refinancing
On February 27, 2021, Vitro entered into financing through a bilateral credit agreement with BBVA for up to $150,000 for the purpose of paying existing debt (see Note 14).

e) Debt prepayment
On February 2, 2021, Vitro made a voluntary partial prepayment of $140,000 to the syndicated loan in order to reduce interest payments and lengthening its average life while maintaining a solid financial structure (see Note 14).

f) Debt refinancing
On February 26, 2021, Vitro entered into financing through a bilateral credit agreement with ING Bank N.V. for $75,000 for the purpose of paying the existing debt (see Note 14).

g) Debt prepayment
On March 1, 2021, Vitro made a voluntary prepayment of $84,000 to the syndicated loan, in order to fully pay the balance of the syndicated loan and complete the refinancing of the debt (see Note 14).

2020

a) Commercial arbitration resolution
On January 21, 2020, Vitro received payment of $39,200 (see note 24) as a final resolution of an arbitration brought before the International Chamber of Commerce (ICC). This arbitration was initiated in 2018 to resolve the differences it had over the glass distribution contract for the architectural market. The costs incurred were $6,066, which were recorded in operating expenses.

b) Debt refinancing
On January 20, 2020, Vitro and certain subsidiaries signed a bilateral loan agreement with The Bank of Nova Scotia for $170,000 to refinance part of its debt.

c) Debt prepayment
On February 4, 2020, Vitro made a voluntary prepayment of $76,000 to its syndicated loan, in order to maintain a solid financial structure by improving its financial structure, as well as reducing interest payments with the resources obtained from the portfolio sale program.

d) Definitive closure of the Evansville, Indiana and Evart, Michigan plants in the United States of America.
On June 2, 2020, Vitro informed that it made the decision to close permanently the operations of two plants where it manufactures automotive glass in the United States, located in Evart, Michigan and Evansville, Indiana. This was done in order to reorganize its automotive glass production and make the business more efficient. This decision does not affect customers nor other stakeholders of the automotive glass business since other Vitro plants have the capacity to produce the parts at the Evansville, IN and Evart, MI plants (See note 9).

e) Refinancing of a portion of debt
On December 30, 2020, the operating subsidiaries of four business units in the United States of America entered into a Note Purchase Agreement with The Prudential Insurance Company of America, in order to refinance part of their existing consolidated debt under the Syndicated Credit Facility. The Notes were issued in two tranches: (i) $130,000 due December 30, 2026, and (ii) $50,000 due December 30, 2030.

3. BASIS OF PREPARATION AND CONSOLIDATION

A) BASIS OF PREPARATION

The consolidated financial statements as of December 31, 2021 and 2020, and for the years then ended, have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

The accompanying consolidated financial statements have been prepared on the historical cost basis, which includes the revaluation of the assumed cost, except for certain financial instruments which are recorded at fair value and investment properties which are recorded at fair value. Generally, historical cost is based on the fair value of the consideration given in exchange for the assets.

i. New IFRS's adopted in 2021
– COVID 19 – Rent concessions (Amendments to IFRS 16)

–Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)

The adoption of these new standards and amendments did not have a material impact on the Company's consolidated financial statements.

ii. New IFRS's issued but not yet adopted
As of the date of these consolidated financial statements, the Company has not adopted the following new and revised IFRS Standards that have been issued but are not yet effective:

– Onerous contracts - Cost of compliance with contract (Amendments to IAS 37) (1)

– Property, plant and equipment: proceeds prior to the intended use (Amendments to IAS 16) (1)

– Reference to the conceptual framework (Amendments to IFRS 3) (1)

– Classification of a liability as current and non-current (Amendments to IAS 1) (2)

– IFRS 17 – Insurance contracts [2]

– Disclosure of accounting policies (Amendments to IAS 1 and IFRS 2) [2]

– Definition of accounting estimates (Amendments to IAS 8) [2]

– Deferred taxes related to assets and liabilities arising from the same operation (Amendments to IAS 12) [2]

[1] Effective for annual periods beginning on or after January 1, 2022.

[2] Effective for annual periods beginning on or after January 1, 2023.

Management does not expect the adoption of the new standards and amendments mentioned above to have a material impact on the Company's consolidated financial statements in future periods.

B) BASIS OF CONSOLIDATION OF FINANCIAL STATEMENTS

The consolidated financial statements include those of Vitro, S.A.B. de C. V. and its subsidiaries on which it has control. Control is achieved when the Company: 1) has the power over the entity; 2) it is exposed or has rights to variable returns from its involvement with the investee; and 3) has the ability to use its power to affect its returns. Power is the actual ability to direct relevant activities of an entity. Intercompany balances and transactions have been eliminated in these consolidated financial statements. Investments in associates and other non-consolidated investments where there is material influence are accounted for using the equity method and at acquisition cost, respectively (Note 8).

As of December 31, 2021, the main entities controlled by Vitro and its shareholding are as follows:

FLAT GLASS	Vitro Arquitectónico España, S.L.U.[1]	100.00%		
	Vitro Automotriz UE, S.L.U.[1]	100.00%		
	Cristales Automotrices, S.A. de C.V.	51.00%		
	Cristales y Servicios, S.A. de C.V.	51.00%		
CHEMICAL	Industria del Álcali, UE, S.L.U.(1)	100.00%		
CONTAINERS	Vitro Empaques, S.L.U.(1)	100.00%	Vitro Vidriera Monterrey, S.A. de C.V.	100.00%
	Fabricación de Maquinas S.A. de C.V.	100.00%		
CORPORATE	Aerovitro, S.A. de C.V.	100.00%		

[1] Spanish Companies.

The Company's proportion of voting rights in entities on which it has control is similar to its shareholding.

C) FUNCTIONAL AND REPORTING CURRENCY

The functional and recording currencies of the main countries in which Vitro has operations are as follows:

			Closing exchange rate as of December 31,		Average exchange rate as of December 31,	
Country	**Recording currency**	**Functional currency**	**2021**	**2020**	**2021**	**2020**
USA	Dollar	Dollar	$ 1.0000	$ 1.0000	$ 1.0000	$ 1.0000
Mexico	Peso	Dollar/Peso	$ 0.0489	$ 0.0502	$ 0.0479	$ 0.0501
Canada	Canadian Dollar	Canadian Dollar	$ 0.7915	$ 0.7850	$ 0.7856	$ 0.7784
Colombia	Colombian Peso	Colombian Peso	$ 0.0003	$ 0.0003	$ 0.0003	$ 0.0003
Poland	Polish Zloty	Polish Zloty	$ 0.2481	$ 0.2683	$ 0.2449	$ 0.2676

The presentation currency is the U.S. dollar. In these consolidated financial statements and their notes, when referring to dollars or "$", refers to amounts rounded to thousands of dollars, likewise, when referring to "$ Ps.", they correspond to Mexican pesos.

D) USE OF ESTIMATES AND JUDGMENTS

The accompanying consolidated financial statements have been prepared in conformity with IFRS, which require that management make certain estimates and use certain assumptions that affect the amounts reported in the consolidated financial statements and their related disclosures. The Company's management, upon applying professional judgment, considers that estimates made, and assumptions used were adequate under the circumstances; however, actual results may differ from such estimates.

The related estimates and assumptions are reviewed continuously. Changes to accounting estimates are recognized in the period in which the estimate is changed if the change affects solely that period, or the current period and future periods if the review affects both current and future periods.

Critical accounting judgments and key uncertainty sources when applying the estimates performed as of the date of the consolidated financial statements, and that have a significant risk of resulting in an adjustment to the carrying amount of assets and liabilities during the following financial period are as follows:

A. Judgments

i. Going concern

As a result of the permanence of COVID-19 in the world the Company has been taken sanitary measures and to mitigate the spread of this virus, social isolation has been maintained, support to employees who have tested positive, restrictions on visits to its places of business, including surveillance and monitoring of personnel.

As a result of the pandemic and other factors, there were complications in the supply chain in all the regions of the automotive sector where the Company has a stake, the scarcity of raw materials, high prices of steel and plastic resins, and the lack of semiconductors, among others. Other factors have caused constant stoppages in the plants of our OEM clients in the US and Mexico, to mitigate this effect, some production lines were temporarily closed, trying to balance production and inventory generation.

Operating costs and expenses for 2021 amounted to $1,892,534, which increased by 1% with respect to total sales compared to 2020 when they amounted to $1,692,423. The increase is due to a higher price of electricity, transportation costs, raw materials, among others.

ii. Functional currency

In order to determine the functional currency of the subsidiaries, management evaluates the economic environment in which it primarily generates and expends cash. Therefore, factors related to sales, costs, funding sources and cash flows generated from operations are considered.

iii. Estimate of the lease term

The Company participates in lease contracts that do not have a definite forced term, a defined renewal period (if it contains a renewal clause), or automatic annual renewals; therefore, to measure the lease liability, it estimates the term of the contracts considering their contractual rights and limitations, their business plan, as well as the management's intentions for the use of the underlying asset. In addition, the Company considers the early termination clauses of its contracts and the probability of exercising them, as part of its estimate of the lease term.

B. Estimates

iv. Evaluations to determine the recoverability of accounts receivable.

The Company performs an allowance for doubtful accounts, based on the expected credit losses required by IFRS 9; in addition, it considers key factors such as the customers' financial and operating situation, conditions of expired accounts and the economic conditions of the country.

v. Evaluations to determine obsolete and slow-moving inventories

The Company performs a reserve for obsolete and/or slow-moving inventories, considering its internal control process and operating and market factors of its products. This reserve is reviewed periodically and is determined considering the turnover and consumption of raw materials, work-in-process and finished goods, which are affected by changes in production process and by changes in the market conditions in which the Company operates.

vi. Evaluations to determine recoverability of deferred tax assets

As part of the tax analysis carried out by the Company, the projected tax result is determined annually based on the judgments and estimates of future transactions to conclude on the likelihood of recoverability of deferred tax assets.

vii. Useful lives of intangible assets and of property, plant and equipment

Useful lives of both intangible assets and property, plant and equipment are used to determine the amortization and depreciation of assets and are defined according to the analysis by internal and external specialists. Useful lives are periodically reviewed, at least once a year, and are based on the current conditions of assets and the estimate of the period during which they will continue to generate economic benefits to the Company. If there are changes in the estimate of useful lives, the carrying amount of assets is affected prospectively, as well as the amortization or depreciation expense, as applicable.

viii. Impairment of long-lived assets

The carrying amount of long-lived assets is reviewed for impairment in case that situations or changes in the circumstances indicate that it is not recoverable. If there are impairment indicators, a review is carried out to determine whether the carrying amount exceeds its recoverability value and whether it is impaired.

ix. Employee benefits from retirement

The Company uses assumptions to determine the best estimate for these benefits. Assumptions and estimates are established in conjunction with independent actuaries. These assumptions include demographic hypothesis, discount rates and expected increases in remunerations and future permanence, among others. Although the assumptions are deemed appropriate, a change in such assumptions could affect the value of the employee benefit liability and the results of the period in which it occurs.

x. Estimation of the discount rate to calculate the lease liability

The Company estimates the discount rate to be used in the determination of the lease liability, based on the incremental loan rate ("IBR") using a three-level model: (i) reference rate, (ii) credit risk component and (iii) adjustment for characteristics of the underlying asset. In this model, management also considers its policies and practices to obtain financing, considering types of assets, currency in which the contract is agreed upon and the term of the contract, mainly.

xi. Contingencies

Due to their nature, contingencies relate to the conclusion of certain future events that are not entirely controlled by the Company that migh or might not occur. The evaluation of such contingencies significantly requires judgments and estimates on the possible result of such future events. The Company evaluates the potential outcomes of lawsuits and contingencies according to estimates carried out by its legal advisors. These estimates are reviewed periodically.

E) CLASSIFICATION OF COSTS AND EXPENSES

Costs and expenses presented in the consolidated statement of profit or loss and other comprehensive income were classified according to their function.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies of the Company are as follows:

A) FOREIGN CURRENCY

The individual financial statements of each of the Company's subsidiaries are prepared in the currency of the primary economic environment in which the Company operates (its functional currency). To consolidate the financial statements of foreign subsidiaries, they are translated from the functional currency into the reporting currency. The financial statements are translated into U.S. dollars (the reporting currency), considering the following methodology:

- The transactions where the recording and functional currency is the same, translate their financial statements using the following exchange rates: (i) the closing exchange rate for assets and liabilities and (ii) the weighted average for revenues, costs and expenses, as they are deemed representative of the existing conditions at the transaction date. Translation adjustments resulting from this process are recorded in other comprehensive income (loss). The adjustments related to goodwill and fair value generated from the acquisition of a foreign transaction are deemed assets and liabilities of such transaction and are translated at the exchange rate in effect at yearend.
- Foreign currency transactions are recorded at the exchange rate in effect at the applicable translation date. Monetary assets and liabilities denominated in foreign currency are stated at the exchange rate in effect at the balance sheet date. Exchange fluctuations are recorded in the consolidated statements of profit or loss and other comprehensive income.

B) CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist mainly of bank deposits in checking accounts and short-term investments in securities, highly liquid and easily convertible into cash in a period no longer than three months. Cash is stated at nominal value and cash equivalents are valued at fair value. Any cash equivalent which liquidity is longer than three months is presented in the other current assets line item. Any cash equivalent whose use has been restricted is classified as restricted cash.

C) FINANCIAL INSTRUMENTS

Financial assets and liabilities are initially measured at fair value. The costs of the transaction that are directly attributable to the acquisition or issuance of a financial asset or liability (different from financial assets and liabilities recognized at fair value through profit or loss) are added to or deducted from the fair value of the financial assets and liabilities at their initial recognition. The costs of the transaction directly attributable to the acquisition of financial assets or liabilities that are recognized at fair value through profit or loss are recognized immediately in the income or loss of the year.

Financial assetss

The Company subsequently classifies and measures its financial assets based on the Company's business model to manage its financial assets, as well as the characteristics of the contractual cash flows of those assets. In this way, financial assets can be classified at amortized cost and effective interest method, at fair value through other comprehensive income, and at fair value through profit or loss.

All financial assets are recognized and written off at the trade date, whereby a purchase or sale of a financial asset is under an agreement with terms thar require the delivery of the asset within a period that is generally established by the corresponding market, and is initially valued at fair value, plus the transaction costs, except for those financial assets classified as at fair value with changes through profit or loss, which are initially valued at fair value, without including the transaction costs.

Financial assets and liabilities are offset and the net balance is presented in the consolidated statement of financial position when, and only when, the Company has a legal right to offset the corresponding balances and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

i. Financial assets at amortized cost

Financial assets at amortized cost are those that i) are kept within a business model whose objective is to maintain such assets to obtain the contractual cash flows and ii) the contractual conditions of the financial asset give rise, on specified dates, to cash flows that are only payments of the principal and interest on the amount of the outstanding principal.

The amortized cost of a financial asset is the amount at which the financial asset is measured at initial recognition less principal reimbursements, plus accumulated amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss. The gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting any allowance for losses.

ii. Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income are those whose business model is based on obtaining contractual cash flows and selling financial assets, in addition to their contractual conditions giving rise, on specified dates, to cash flows, which are only payments of the principal and interest on the amount of outstanding principal.

iii. Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are those that do not comply with the characteristics to be measured at amortized cost or at fair value through other comprehensive income, since: i) they have a business model different from those that seek to obtain contractual cash flows or obtain contractual cash flows and sell the financial assets, or, ii) the cash flows they generate are not only payments of the principal and interest on the amount of the outstanding principal.

The company's model is to maintain financial assets to collect contractual flows. There is a segment of accounts receivable that are subject to a transfer of collection rights (with no recourse) through the use of financial factoring. The purpose of these operations is to accelerate the collection of the nominal amount documented in certain accounts receivable generated by the supply of goods and in some clients chosen by the financial counterparty (see note 6) and thus optimizing the Company's cash flows. The scheme is that of a financial factoring without recourse and under the delegated collection modality (it is Vitro who receives the cash flows associated with this collection and immediately pays the financial counterparty), through which the collection rights of certain invoices to clients chosen by Santander, who, once it accepts them, the collection rights are contractually transferred under the Financial Factoring contract, thus replacing the issuer (Vitro's operating subsidiaries) of the billing and receiving the nominal amount of accepted invoices, less a financial discount. It should be noted that the risks (mainly that of non-collection) and benefits of these operations are transferred from Vitro to Santander, with Vitro remaining as a free commission agent to receive payments of these accounts receivable and immediately transfer such payments to Santander. For accounting purposes, these particular operations and for the eligible portfolio, follow a trading business model; however, they are recognized at the nominal value of the invoices and, since the recovery periods are short, such value is similar to the fair value at the moment of initial recognition and the moment that elapses, between the issuance of the eligible invoices and the acceptance by Santander. It is until the moment in which the acceptance by Santander is perfected under the Financial Factoring contract, when Vitro temporarily recognizes a collection right towards this (settlement account) and simultaneously affects as financial expense, the amount that Santander adjusts by providing liquidity prior to collection, until it recognizes the settlement of the account receivable at its adjusted value for financial cost, proceeding to remove the collection right towards Santander from the Company's financial position. Although subsequently, Vitro and in order to maintain the commercial relationship with these clients, whose invoices were subject to the Financial Factoring scheme, continues to act as the collector, when these nominal funds arrive, they are immediately turned over to Santander to satisfy what is required regarding subsequent involvement of the service under IFRS 9. IFRS 9 requirements for derecognition or removal from the balance sheet of those assets eligible for Financial Factoring by the financial counterparty are present to account for the transaction, and the associated administrative management and recovery costs that Vitro incurs without any remuneration, are already in place as costs and expenses in the income statement.

Derecognition of financial assets

The Company derecognizes a financial asset when:

– the contractual rights to the cash flows of the financial asset expire; or

– it transfers the rights to receive the contractual cash flows in a transaction where:

- all the risks and rewards of ownership of the financial asset are substantially transferred; or
- the Company does not substantially transfer or retain all the risks and rewards of ownership and does not retain control of the financial asset.

The Company enters into transactions whereby it transfers assets previously recognized in its statement of financial position; in these cases, the transferred assets are derecognized.

Impairment of financial assets

As of December 31, 2021 and 2020, the Company recognizes an allowance for impairment of financial assets on an expected credit loss approach, such as trade receivables and sundry debtors. The credit losses expected in these financial assets are estimated using a calculation model based on the historical experience of credit losses of the Company, adjusted to the factors that are specific to the debtors, the general economic conditions and an evaluation of both of the current management and the conditions existing at the date of the report, including the time value of the money, when appropriate.

The measurement of expected credit losses is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information as described above. For exposure at default, for financial assets, this is represented by the gross carrying amount of the assets at the reporting date; for financial guarantee contracts, the exposure includes the amount stated at the reporting date, together with any additional amounts expected to be obtained in the future per default date determined based on historical trend, the Company's understanding of the specific financial needs of the debtors, and other relevant forward-looking information.

The Company adopted a simplified model for calculating expected losses, through which it recognizes the expected credit losses during the lifetime of the account receivable. The model consists of determining the average write-off of accounts receivable for each customer, which is defined as the default threshold. The Company then determines the average value of accounts receivable for the last twelve months that have exceeded the default threshold, which is used as the basis for the calculation. The percentage to be applied to this base amount is the percentage that represents the average of the accounts receivable that exceeds the default threshold divided by the average sales of the last twelve months. This methodology imposes a provision on the initial recognition of the accounts receivable in order to determine the impairment of accounts receivable. For certain categories of financial assets such as trade accounts receivable, assets that have been subjected to impairment tests and that have not suffered individually, are included in such assessment on a collective basis. Before the objective evidence that an accounts receivable portfolio could be impaired, the Company's past experience with regards to collection, an increase in the number of overdue payments in the portfolio that exceed the average credit period, as well as observable changes in international and local economic conditions that correlate with the default in payments could be included.

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or when it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred, or in which the Company neither transfers nor retains substantially all the risks and rewards of ownership and does not retain control over the financial assets.

For financial assets recorded at amortized cost, the amount of impairment loss recognized is the difference between the carrying amount of the asset and the present value of future collections, discounted at the original effective interest rate of the financial asset. The carrying amount of the financial asset is reduced for the impairment loss directly for all financial assets, except for trade accounts receivable, where the carrying amount is reduced through an account for allowance doubtful accounts. When a doubtful account is deemed uncollectible, it is eliminated against the allowance. The subsequent recovery of the previously eliminated amounts is converted to credits against the allowance. Changes in the carrying amount of the allowance account are recognized in profit or loss.

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit- impaired includes observable data about the following events:

For all other financial assets, objective evidence of impairment could include:

- Significant financial difficulty of the issuer or the borrower.
- A breach of contract such as a default or past due event.
- The lenders of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, grant the borrower a concession that the lender would not otherwise consider.
- It is increasingly likely that the debtor will go into bankruptcy or some other financial reorganization.
- The extinction of a functional market for the financial asset due to its financial difficulties.

Financial liabilities

Financial liabilities at fair value with changes through profit or loss.

Financial liabilities are classified at fair value through profit or loss when the financial liability is (i) contingent consideration from an acquirer in a business combination, (ii) held for trading or (iii) designated as fair value through profit or loss.

A financial liability is classified as held for trading purposes if:

– It is acquired mainly in order to repurchase it in the near future; or

– It is part of an identified financial instrument portfolio managed jointly, and for which there is evidence of a recent pattern of taking short-term profits; or

– It is a derivative that has not been designated as a hedging instrument or does not meet the conditions to be effective

A financial liability that is not held for trading purchasing or contingent consideration of an acquirer in a business combination may be designated as fair value through profit or loss on initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or

- The financial liability is part of a company of financial assets or liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company's documented risk management or investment strategy, and information about the group is provided internally on that basis; or

- It is part of an agreement that includes one or more embedded derivative instruments, and IFRS 9 allows the entire combined contract to be designated as fair value through profit or loss.

Financial liabilities at fair value through profit or loss are recorded at fair value, with any gain or loss arising on remeasurement recognized in the statement of comprehensive income.

Financial liabilities measured at amortized cost

Other financial liabilities, including loans, are initially valued at fair value, net of costs of the transaction, and are subsequently valued at amortized cost using the effective interest rate method, and interest expenses are recognized on an effective return base.

The effective interest rate method is a method for the calculation of the amortized cost of a financial liability and of the assignment of the financial expense along the period concerned. The effective interest rate is the rate that exactly discounts the estimated cash payments along the expected life of the financial liability (or, where adequate, in a shorter period), which represents the net amount in books of the financial liability at its initial recognition.

Derecognition of financial liabilities

The Company writes off financial liabilities if, and solely if, the obligations are met, cancelled or expired. The difference between the carrying amount of the financial liability written off and the consideration paid and payable is recognized in profit or loss.

When the Company exchanges with the existing lender one debt instrument for another one with substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Company accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective rate is at least 10 percent different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between: (1) the carrying amount of the liability prior to the modification; and (2) the present value of the cash flows subsequent to the modification should be recognized in profit or loss as an extinguishment gain or loss, within other income or expenses.

The costs for obtaining and issuing a new debt are capitalized within the consolidated statement of financial position, except for those costs associated with debt settlement, provided that both debts are with the same creditor.

If a debt is settled, the capitalized costs associated with such debt are canceled by recording them in profit or loss on the settlement date.

D) INVENTORIES

Inventories are valued at the average purchase price or average production cost, provided they do not exceed the net realizable value. Cost of sales is determined applying these averages upon sale.

Net realizable value is the selling price estimated during the regular course of business, less estimated termination costs and selling costs.

The Company uses the absorption cost system to determine the cost of inventories of production-in- progress and finished goods, which includes both direct costs and those indirect costs and expenses related to production processes.

E) ASSETS HELD FOR SALE

Long-term assets are classified as held for sale if their carrying amount will be recovered through a sale transaction and not though their continuous use. This condition is deemed met solely when the sale is highly probable and the asset (or group of assets for sale) is available for immediate sale in its current condition, once classified as assets held for sale, these assets are no longer depreciated. They are presented in the consolidated statements of financial position in the short term, according to the realization plans, and they are recorded at the lesser of their carrying amount or fair value less costs of sale.

F) INVESTMENT IN ASSOCIATED COMPANIES AND OTHER INVESTMENTS

An associated company is a company in which the Company has significant influence. Significant influence is the power to participate in the definition of financial and operating policies of an entity, but it does not have control or joint control on such policies.

The results, assets and liabilities of the associated companies are included in the Company's consolidated financial statements using the equity method. Under this method, an investment in an associated company is recognized in the consolidated statements of financial position at cost. When the comprehensive loss of an investment in an associated company exceeds the Company's equity in its capital, the Company discontinues the recognition of such losses. Additional losses are recognized up to the amount of the Company's obligations and legal commitments for its equity in the associated company.

Any excess of acquisition cost of the Company's equity in an associated company on the net fair value of identifiable assets, liabilities and contingent liabilities of such associated company is recognized as goodwill, which is included at the carrying amount of such investment. Any excess of net fair value of the identifiable assets, liabilities and contingent liabilities on the acquisition cost of an associated company is recognized in current earnings.

The results, assets and liabilities of other investments are included in the Company's consolidated financial statements at acquisition cost. Other investments are analyzed when there are indications of impairment, in which case the recovery value of such other investments is compared to the book value.

G) PROPERTY, PLANT AND EQUIPMENT

Land and buildings, machinery and equipment held for use in production for rendering services or for administrative purposes are recognized in the consolidated statement of financial position at historical costs, less accumulated depreciation or accumulated impairment losses.

Depreciation is recorded in earnings and is calculated using the straight-line method based on the remaining useful lives of the assets, which are reviewed annually with the residual values, and the effect of any change in the recorded estimate is recognized on a prospective basis. The assets related to finance leases are depreciated in the shorter period between the lease and their useful lives, unless it is reasonably certain that the Company will obtain the ownership at the end of the lease period.

The estimated useful lives for the main classes of fixed assets that correspond to current and comparative periods are as follows:

	Years
Buildings	15 a 50
Machinery and equipment	3 a 30

When components of building, machinery and equipment have different useful lives, they are recorded as separate items (significant components) of buildings, machinery and equipment.

Gains and losses on the sale of land and buildings, machinery and equipment are determined by comparing the proceeds from the sale with the carrying amount of the item and are recognized net within other (income) and expenses, in income.

Investments in process are recorded at cost less any impairment loss recognized. The cost of assets constructed by the Company include cost for constructing the asset, as well as the cost for dismantling, removing items, restoring the place where they are located, and the costs for capitalized loans, according to the Company's policy. The depreciation of these assets, as in other properties, commences when the assets are ready for use and the conditions necessary for operation are met.

H) INVESTMENT PROPERTIES

Investment properties are those held to obtain rents and increase in value (including investment properties under construction for such purposes), and are initially valued at acquisition cost, including the costs incurred in the related transactions. After the initial recognition, investment properties are valued at fair value. The fair value of the investment properties is determined annually through appraisals performed by an expert appraiser, who uses different valuation techniques such as observable markets, amortized costs, among others. Gains or losses arising from changes in the fair value of the investment properties are included in other (income) expenses in the consolidated statements of profit or loss and other comprehensive income in the period in which they arise.

An investment property is eliminated upon disposal or when it is permanently retired from use and no future economic benefits are expected from the disposal. Any gain or loss arising from derecognition of the property (calculated as the difference between net income from disposal and the carrying amount of the asset) is recognized in earnings in the consolidated statements of comprehensive income in the period in which the property is derecognized.

I) LEASES

The Company evaluates whether a contract is or contains a lease agreement, at the beginning of the contract term. A lease is defined as a contract in which the right to control the use of an identified asset is granted, for a specific term, in exchange for a benefit. The Company recognizes a right-of-use asset and a corresponding lease liability, with respect to all lease contracts in which it operates as a lessee, except in the following cases: short-term leases (defined as leases with a term of lease less than 12 months); leases of low-value assets (defined as leases of assets with an individual market value of less than $ 7.5 (seven thousand five hundred dollars)); and lease contracts whose payments are variable (without any contractually defined fixed payment). For these contracts that exclude the recognition of a right-of-use asset and a lease liability, the Company recognizes rent payments as an operating expense in a straight line during the term of the lease.

The right-of-use asset is measured at cost and consists of of lease payments discounted at present value; direct costs to obtain a lease; advance lease payments; and the obligations of dismantling or removal of assets. The Company depreciates the right-of-use asset during the shortest period of the lease term and the useful life of the underlying asset, beginning on the start date of the lease; in this sense, when a purchase option in the lease is likely to be exercised, the right-of-use asset depreciates in its useful life. The right-of-use asset is tested for impairment when there are indications, in accordance with the long-lived asset impairment accounting policy.

The lease liability is measured in its initial recognition by discounting at present value the minimum future payments according to a term, using a discount rate that represents the cost of obtaining financing for an amount equivalent to the value of the contract, for the acquisition of the underlying asset, in the same currency and for a term similar to the corresponding contract (incremental loan rate). When the contract payments contain non-lease components (services), the Company has chosen, for some asset classes, not to separate them and measure all payments as a single lease component; however, for the rest of the asset classes, the Company measures the lease liability only considering the payments of components that are leases, while the services implicit in the payments are recognized directly in profit or loss as operating expenses.

In determining the term of the lease, the Company considers the mandatory term, including the likelihood of exercising any right to extend the term and/or an early exit.

Subsequently, the lease liability is measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and reducing the carrying amount to reflect the rental payments made.

When there are changes to the lease payments for inflation, the Company remeasures the lease liability from the date on which the new payments are known, without reconsidering the discount rate. However, if the changes are related to the term of the contract or to the exercise of a purchase option, the Company re-evaluates the discount rate in the liability remeasurement. Any increase or decrease in the value of the lease liability after this remeasurement is recognized by increasing or decreasing to the same extent, as the case may be, the value of the right-of-use asset.

Finally, the lease liability is written off at the time the Company settles all the contract's payments. When the Company determines that it is likely that it will exert an early exit from the contract that merits a cash outlay, such consideration is part of the remeasurement of the liability quoted in the preceding paragraph; however, in those cases in which the early termination does not imply a cash outlay, the Company cancels the lease liability and the corresponding right-of-use asset, immediately recognizing the difference between them in the consolidated statement of profit or loss.

In addition, the Company does not have any significant lease agreements in which it acts as lessor. During the year, the Company did not receive any rental concessions that required special treatment.

During the fiscal years 2021 and 2020 due to COVID-19, there were no changes in agreements that implied a change in relation to the requirements of the standard and its clarifications or amendments issued in 2021.

J) BORROWING COSTS

The costs for loans directly attributable to the acquisition, construction or production of qualifying assets, which are assets that require a substantial period until they are ready to use, are added to the cost of those assets. Capitalization of loan costs ceases at the time that the assets are available for use. Exchange rate fluctuations arising from the procurement of funds in foreign currency are capitalized to the extent that they are deemed adjustment to the interest cost. The income obtained from the temporary investment of specific loans to be used in qualifying assets, is deducted from costs for loans eligible for capitalization. All other borrowing costs are recognized in profit or loss in the period they are incurred.

K) INTANGIBLE ASSETS

Intangible assets with finite and indefinite lives

Intangible assets that are acquired by the Company, and which have finite useful lives are recorded at cost less accumulated amortization and accumulated impairment losses. The estimated useful lives and amortization method are reviewed at the end of each year, and the effect of any change in the recorded estimate is recognized prospectively.

Intangible assets with indefinite useful lives are not amortized and are annually subject to impairment tests.

L) GOODWILL

Goodwill arises from a business combination and is recognized as an asset at the date control is acquired (acquisition date). Goodwill is the excess of the consideration transferred on the fair value at the acquisition date of the identifiable assets acquired and liabilities assumed. When the fair value of the identifiable net assets of the acquired exceeds the sum of the consideration transferred, the amount of such excess is recognized in the consolidated statement of comprehensive income as a gain on purchase. Goodwill is not amortized and is subject to annual impairment tests.

For the purposes of the evaluation of the impairment, goodwill is assigned to each of the cash generating units for which the Company expects to obtain benefits. If the recoverable amount of the cash-generating unit is less than the amount in books of the unit, the impairment loss is allocated first in order to reduce the amount in books of the goodwill allocated to the unit and then to the other assets of the unit, proportionally, on the basis of the amount in books of each asset in the unit. Impairment loss recognized for goodwill purposes cannot be reversed in a subsequent period.

Upon disposal of a subsidiary, the amount attributable to goodwill is included in the determination of the profit or loss on the disposal.

M) IMPAIRMENT OF TANGIBLE AND INTANGIBLE ASSETS

The Company reviews the carrying amounts of its tangible and intangible assets to determine if there is any indicator that those assets have suffered any impairment loss. If there is any indicator, the recoverable amount of the asset is calculated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash generating unit to which such asset belongs. When a reasonable and consistent basis of distribution can be identified, corporate assets are also assigned to the individual cash generating units, or otherwise, are assigned to the smallest group of cash generating units for which a reasonable and sound distribution base can be identified. Intangible assets that have an indefinite useful life are subject to impairment tests at least annually, and whenever there is an indicator that the asset may have been impaired.

The recoverable amount is the higher between the fair value less cost to sell it and the value in use. Value in use calculations require the Company to determine the future cash flows generated by the cash generating units and an appropriate discount rate to calculate the present value thereof. The Company uses cash flow projections of revenues using estimates of market conditions, future pricing of its products and production and sales volumes. Likewise, for discount rate and perpetuity growth purposes, indicators of market risk premiums and long-term growth expectations in the markets in which the Company operates are used.

The Company estimates a pre-tax discount rate for goodwill impairment testing purposes that reflects current assessments of the time value of money and the risks specific to the asset for which estimates of future cash flows have not been adjusted. The discount rate estimated by the Company is based on the weighted average cost of capital of similar entities. In addition, the discount rate estimated by the Company reflects the return that investors would require if they were to make an investment decision on an equivalent asset in terms of cash flow generation, timing and risk profile.

If it is estimated that the recoverable amount of an asset (or cash-generating unit) is less than it is carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. Impairment losses are recognized in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, such that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for that asset (or cash-generating unit) in prior years, except for goodwill.

External and internal indicators are subject to annual evaluation.

N) DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING OPERATIONS

The Company's activities expose it to a variety of financial risks, including foreign exchange risk, interest rates and price risk such as generic goods, mainly that of natural gas.

The Company's policy is to contract derivative financial instruments ("DFI's") in order to mitigate and cover the exposure to which it is exposed, given its productive and financial transactions. The Company designates these instruments either as fair value hedges, cash flow hedges or hedges of a net investment in a foreign operation.

There is a Risk Committee, which is responsible for enforcing risk management policies, as well as for monitoring the proper use of financial instruments contracted by the Company.

The Committee is composed by several of the Company's officials. In addition, to perform this type of transactions an authorization from the Board of Directors is required.

The Company recognizes all derivative financial instruments in the consolidated statement of financial position at fair value, regardless of the intention of its holding. In the case of hedging derivatives, the accounting treatment depends on whether the hedging is of fair value or cash flows. DFI's negotiations may include considerations agreements, in which case, the resulting amounts are presented on a net basis.

The fair value of financial instruments is determined by recognized market prices and when instruments are not traded in a market; it is determined by technical valuation models recognized in the financial field using inputs such as price, interest rate and exchange rate curves, which are obtained from different sources of reliable information.

When derivatives are contracted in order to cover risks and comply with all the hedge accounting requirements, their designations are documented describing the purpose, features, accounting recognition and how the measurement of effectiveness will be carried out.

The Company designates certain derivatives as hedging instruments in respect to rate risk cash flow hedges.

At the inception of the hedge relationship, the Company documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes resulting from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Company actually hedges and the quantity of the hedging instrument that the Company actually uses to hedge that quantity of the hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Company adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

The Company designates the full change in the fair value as the hedging instrument for all of its hedging relationships involving forward contracts.

The Company shall cease to apply the specific policy of assessing the economic relationship between the hedged item and the hedging instrument (i) to a hedged item or hedging instrument when the uncertainty arising from the reform of the reference interest rate is no longer present with respect to the timing, and the amount of cash flows based on the interest rate of the respective item or instrument or (ii) when the hedging relationship is discontinued. For its highly probable assessment of the hedged item, the Company will no longer apply the specific policy when the uncertainty arising from the reform of the reference interest rate on the timing and amount of future cash flows based on the interest rate of the hedged item is no longer present, or when the hedging relationship is discontinued.

O) PROVISIONS

Provisions are recognized for current obligations that arise from a past event that will probably result in the use of economic resources, and that can be reasonably estimated. For the purpose of accounting records, provisions are discounted at present value when the discount effect is material. Provisions are classified as current or non-current based on the estimated time period to meet the obligations that are covered. When the recovery of a third of some or all the economic benefits required to settle a provision is expected, an account receivable is recognized as an asset if it is virtually certain that the payment will be received, and the amount of the account receivable can be valued reliably.

P) INCOME TAXES

Income taxes for the year include the current and deferred income tax. Current taxes and deferred taxes are recognized in profit or loss, except when they are related to a business combination, or items recognized directly in stockholders' equity, or in other comprehensive income (loss).

Current income tax is the tax expected to be paid or received. The income tax payable in the fiscal year is determined according to the legal and tax requirements, applying tax rates enacted or substantially enacted as of the report date, and any adjustment to the tax payable with respect to prior years.

Deferred income tax is recorded using the asset and liability method, which compares the accounting and tax values of the Company's assets and liabilities and deferred taxes are recognized with respect to the temporary differences between such values. No deferred income taxes are recognized for the following temporary differences: the initial recognition of assets and liabilities in a transaction other than a business acquisition and that does not affect the accounting or tax result, and differences related to investments in subsidiaries and joint ventures to the extent it is probable that they will not be reversed in a foreseeable future. In addition, deferred income taxes for taxable temporary differences arising from the initial recognition of goodwill are not recognized. Deferred income taxes are calculated using rates that are expected to apply to temporary differences when they are reversed, based on enacted laws or which have been substantially enacted at the reporting date.

Deferred income tax assets and liabilities are offset only if there is a legally enforceable right to offset current income tax assets and liabilities, and they correspond to the income tax levied by the same tax authority and to the same tax entity, or on different tax entities, and current tax assets and liabilities are intended to settled on a net basis or their tax assets and liabilities are simultaneously materialized.

A deferred income tax asset is recognized for tax loss carryforwards, tax credits and deductible temporary differences, to the extent that it is probable that there is taxable income to which they can be applied. Deferred income tax assets are reviewed at the reporting date and are reduced to the extent that the realization of the corresponding tax benefit is no longer likely.

Management periodically evaluates positions exercised in tax returns with respect to situations where applicable law is subject to interpretation. Provisions are recognized when appropriate based on the amounts expected to be paid to the tax authorities. Deferred income tax assets are recognized only when it is probable that future taxable profit will be available against which deductions for temporary differences can be used.

Q) EMPLOYEE BENEFITS

i. Defined benefit plans

Pension plans

A defined benefit plan is a benefit plan at the end of a labor relationship different from one of defined contributions. The Company's net obligations with respect to the defined-benefit pension plans are calculated separately for each plan, estimating the amount of future benefit accrued by employees in return for their services in ongoing and past periods; that benefit is discounted to determine its present value, and the fair value of the plan assets is deducted. The discount rate is the yield at the reporting date of the government bonds that have maturity dates approximate to the maturities of the Company's obligations which are denominated in the same currency in which benefits are expected to be paid. The calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit for the Company, the recognized asset is limited to the net total of unrecognized past service costs and the present value of the economic benefits available in the form of future refunds from the plan or reductions in future contributions to the plan plus the plan assets. To calculate the present value of the economic benefits, the minimum funding requirements applicable to the Company's plan are considered. An economic benefit is available to the Company if it can be realized during the life of the plan, or upon settlement of the plan obligations.

When the benefits of a plan are improved, the portion of the improved benefits relating to past services by employees is recognized in profit or loss using the straight-line method over the average period until it acquires the right to the benefits. When the benefits are earned, the expense is recognized in profit or loss.

The Company recognizes actuarial remeasurements derived from defined benefit plans in the other comprehensive income (loss) account, in the period in which they occur, and they are never recycled to profit or loss.

Medical post-employment benefits

The Company grants medical benefits to retired employees at the end of the employment relationship. The right to access these benefits usually depends on whether the employees have worked up to the retirement age and have completed certain minimum service years. The period cost of these benefits is recognized in profit or loss using the same criteria as those described for pension plans.

ii. Termination benefits

Termination benefits are recognized as an expense when the Company commitment can be evidenced, without real possibility of reversing, with a detailed formal plan either to terminate employment before the normal retirement date, or else, to provide benefits for termination as a result of an offer that is made to encourage voluntary retirement.

The benefits from termination in cases of voluntary retirement are recognized as an expense, solely if the Company has made an offer of voluntary retirement, the offer is likely to be accepted, and the number of acceptances can be estimated reliably. If the benefits are payable no later than 12 months after the reporting period, they are discounted at the present value.

iii. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as services are rendered.

A liability is recognized for the amount expected to be paid under short-term cash bonus plans if the Company has a legal or assumed obligation to pay these amounts as a result of past services provided by the employee and the obligation can be estimated reliably.

R) STATUTORY EMPLOYEE PROFIT SHARING ("PTU")

PTU is recognized in profit or loss of the fiscal year in which it is incurred, and is presented within operating income.

S) REVENUE RECOGNITION

Revenue from the sale of products in the course of normal operations is recognized at the fair value of the consideration received or receivable, net of returns, commercial discounts and volume discounts.

For revenue recognition of contracts with customers, a comprehensive model is used for the accounting of revenues from contracts with customers, which introduces a five-step approach to revenue recognition: (1) contract identification; (2) identify performance obligations in the contract; (3) determine the price of the transaction; (4) allocate the transaction price to each performance obligation in the contract; and (5) recognize revenues when the entity satisfies the performance obligation.

The Company has signed contracts with its most representative customers, in which sales price lists, agreed currency, purchase volumes, cash discounts and volumes are agreed, for customers who do not have a contract, purchase orders are defined as contracts where the same characteristics mentioned above are defined.

The Company's most important performance obligations are not separable and are met at one point in time; therefore, the customer cannot be partially satisfied, generally, in these contracts, there is more than one performance obligation and they are treated as an integral and non-separable service.

In the contracts and purchase orders, the selling prices for the performance obligations identified are agreed, as well as discounts, if applicable.

The Company recognizes revenue when the performance obligation with its customers is satisfied, i.e. when control of the goods is transferred to the customer, which is given at the moment of delivery of the promised goods to the customer in accordance with the agreed terms and conditions.

In the case of payments related to obtaining contracts, these are capitalized and amortized over the duration of the contract. If an advance payment is received, it is recorded as an advance payment from customers and if it is to be made over a period of more than one year, it is reclassified to long-term.

T) FINANCIAL INCOME AND COSTS

Financial income includes income interest on invested funds, changes in the fair value of financial assets at fair value through profit or loss, Exchange gains and the related employee benefit effects of both the defined benefit obligation and the plan assets. Interest income is recognized in income as earned, using the effective interest method.

Financial costs include interest expenses on loans, effect of the discount by the passage of time on provisions, exchange losses, changes in the fair value of financial assets at fair value through profit or loss and impairment losses recognized on financial assets. The borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset, are recognized in earnings using the effective interest method.

U) EARNINGS PER SHARE

The Company presents information about basic and diluted earnings per share ("EPS") corresponding to its common stock. The basic EPS is calculated by dividing the earning or loss attributable to stockholders that hold the Company's common stock by the weighted average outstanding common stock during the period, adjusted for the own shares held. The diluted EPS are calculated by adjusting the earning or loss attributable to stockholders that hold common shares and the weighted average number of outstanding shares, adjusted for the own shares held, for the effect of the dilution potential of all common shares, which include convertible instruments and options on shares granted to employees.

For the years ended December 31, 2021 and 2020, the Company has no dilutive effects.

V) REPURCHASE OF SHARES

When capital stock recognized as stockholders' equity is repurchased, the amount of the consideration paid, which includes directly attributable costs, net of taxes, is recognized as a reduction to stockholders' equity. Shares that are repurchased are classified as treasury shares and are presented as a deduction from stockholders' equity. When treasury shares are subsequently sold or reissued, the amount received is recognized as an increase in stockholders' equity, and the surplus or deficit resulting from the transaction is transferred to retained earnings. Finally, when treasury shares are cancelled, an increase is recognized in "Retained earnings," a decrease in "Stockholders' equity" equivalent to the par value of the cancelled shares, and the surplus or deficit from the cancellation, with respect to the previous repurchase, is recognized in "Additional paid-in capital."

W) SEGMENT INFORMATION

Operating segments are defined as the components of an enterprise engaged in the production and sale of goods and services that are subject to risks and rewards that are different from those associated with other business segments.

The Company's subsidiaries are grouped according to the business segments in which they operate. For internal and organizational purposes, each business carries out the management and supervision of all the activities of the respective business, which refer to production, distribution and marketing of its products. Consequently, the Company's management internally evaluates the results and performance of each business for decision-making purposes. Following this approach, in day-to-day operations, economic resources are allocated on an operating basis of each business.

Transactions between segments are determined on the basis of prices comparable to those that would be used with or between independent parties in comparable transactions at market value.

X) FAIR VALUE DETERMINATION

Several of the Company's accounting policies and disclosures require the determination of the fair value of both financial and non-financial assets and liabilities. Fair values for measurement and disclosure purposes have been determined based on the methods mentioned in subsequent paragraphs; where appropriate, further information about the assumptions made in determining the specific fair values of that asset or liability is disclosed in the notes to the consolidated financial statements.

The levels that cover 1 to 3, based on the degree to which the fair value of the financial instruments is observed, are:

- Level 1 are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 are those derived from indicators other than quoted prices included within Level 1, but which include indicators that are observable for an asset or liability, either directly to prices quoted or indirectly; i.e. derived from these prices; and
- Level 3 are those derived from valuation techniques that include indicators for assets and liabilities, which are not based on observable market information (non-observable indicators).

The techniques and method of calculation are disclosed in Note 9 for investment properties and Note 17 for derivatives and debt disclosure.

5. 5.OTHER CURRENT ASSETS AND OTHER SHORT AND LONG-TERM LIABILITIES

The balances of other current assets as of December 31, 2021 and 2020 are as follows:

	December 31,	
	2021	2020
Sundry debtors [1]	$ 18,787	$ 35,331
Related parties (note 19)	3,141	15,333
Prepayments	5,115	4,718
Prepayment of inventories	2,726	1,660
Assets held for sale	2,692	4,939
Derivative financial instruments	1,344	-
Total	**$ 33,805**	**$ 61,981**

The balances of other short–term liabilities as of December 31, 2021 and 2020 are as follows:

	December 31,	
	2021	2020
Sundry creditors	$ 69,842	$ 65,263
Taxes payable	16,509	13,441
Derivate financial instruments	3,783	1,289
Total	**$ 90,134**	**$ 79,993**

The balances of other long-term liabilities as of December 31, 2021 and 2020 are as follows:

	December 31, 2021	December 31, 2020
Provision for compensations	$ 2,878	$ 3,012
Other liabilities	6,256	8,288
Total	**$ 9,134**	**$ 11,300**

6. TRADE ACCOUNTS RECEIVABLE, NET

Trade accounts receivable consists of the following:

	December 31, 2021	December 31, 2020
Trade accounts receivable	$ 224,996	$ 188,015
Less allowance for doubtful accounts	(12,132)	(9,787)
Total	**$ 212,864**	**$ 178,228**

On December 23, 2019, Vitro entered into an agreement to initiate a non-recourse portfolio sale program with Banco Santander, S.A. for 3 years, which is extendable for an additional year; the amount of such program is up to $ 110,000. As of December 31, 2021 and 2020, the amount of the portfolio sold amounted to $66,643 and $87,274, respectively. Since the Company considers this transaction as an advanced payment, the cash flows related are recorded in the consolidated statement of cash flows within the changes of trade receivables.

The following is an analysis of the aging of trade receivable balances as of December 31, 2021 and 2020:

	Current	30 days	31 to 60 days	Over 60 days
2020	$ 174.441	$ 31,229	$ 2,504	$ 16.822
2019	$ 140,108	$ 31,334	$ 6,342	$ 10,231

The movement in the allowance for doubtful accounts is as follows:

	2021	2020
Opening balance	$ 9,787	$ 12,579
Increase of the year	38,456	17,281
Applications	(36,111)	(20,073)
Final balance of the year	**$ 12,132**	**$ 9,787**

7. INVENTORIES

Inventories consist of the following:

	December 31, 2021	December 31, 2020
Finished goods	$ 227,507	$ 181,622
Work in process	48,971	36,130
Raw Material	82,538	79,496
Spare parts	61,564	62,910
Others	37,549	26,254
Total	**$ 458,129**	**$ 386,412**

Inventories as of December 31, 2021 and 2020 are reduced to their net realizable value due to the obsolescence and slow-moving reserve in the amount of $ 12,645 and $11,701, respectively; this reserve mainly decreases the balances presented in the finished good, spare part and raw material lines.

In 2021 and 2020, inventories in the amount of $589,322 and $576,039, respectively, were recognized as an expense and included in cost of sales for those periods.

8. INVESTMENT IN ASSOCIATED COMPANIES

- Investments in associates

	% Holding	December 31, 2021	December 31, 2020
Shandong PGW Jinjing Automotive Glass Co. Ltd.[a]	50.00	15,502	1,047

[a] Investment in Shandong PGW Jinjiang Glass Co, LTD, a company engaged in the production of automotive glass. During 2021, cash flows sent for the expansion of the company were capitalized for $19,035, after recognition of the equity method, a loss of $4,580 was recognized.

- Other investments

	% Holding	December 31, 2021	December 31, 2020
Servicio Superior Ejecutivo, S.A. de C.V.[b]	50.00	$ 7,140	$ 7,140
Others	25.00	-	2,400
Total		$ 7,140	$ 9,540

[a] Joint venture held in April 2019, the created Company is dedicated to passenger air transportation.

9. INVESTMENT PROPERTIES

As of December 31, 2021 and 2020, the balance of the investment properties is $20,147 and $18,533, respectively; these assets are mainly made up of land and buildings. The fair value of the investment properties was determined by independent and external property appraisers, who have appropriate recognized professional qualifications and recent on-site experience.

The fair value of investment properties was calculated based on Level 2 of the fair value hierarchy (Note 17iv).

Valuation technique	Significant unobservable inputs	Interrelationship between key unobservable inputs and fair value
The commercial values of land in similar locations and dimensions were used. The price per square meter of this land was weighted.	-Location of similar land (address) - Land dimensions	Estimated fair value would increase (decrease) if: The replacement value would vary if the average square meter in the area were to decrease or increase if the square meter were to increase.

10. PROPERTY, PLANT AND EQUIPMENT, NET

A summary of this balance is as follows:

	December 31, 2021	December 31, 2020
Land	$ 165,831	$ 159,958
Buildings	490,582	510,978
Accumulated depreciation	(304,787)	(301,208)
Impairment of buildings	(7,793)	-
	343,833	369,728
Machinery and equipment	1,533,831	1,567,024
Accumulated depreciation	(877,713)	(851,708)
Impairment of machinery and equipment	(35,929)	-
	620,189	715,316
Investments in process	179,007	123,880
Total	**$ 1,143,029**	**$ 1,208,924**

Cost or valuation	Buildings	Machinery and equipment	Investments in process	Total
Balances as of January 1, 2020	$ 521,789	$ 1,536,953	$ 136,196	$ 2,372,137
Additions	10,806	101,457	(14,239)	98,048
Disposals	(4,286)	(8,501)	-	(16,720)
Translation effect	(12,904)	(16,960)	(768)	(36,605)
Closing of plants	(2,346)	(12,943)	-	(15,289)
Ilumimex purchase	-	-	2,691	2,691
Transfers	(2,081)	(32,982)	-	(42,422)
Balance as of December 31, 2020	**$ 510,978**	**$ 1,567,024**	**$ 123,880**	**$ 2,361,840**
Additions	$ 478	$ 40,945	$ 55,916	$ 105,883
Disposals	(18,686)	(68,803)	-	(90,172)
Translation effect	(2,188)	(5,335)	(789)	(8,300)
Balance as of December 31, 2020	**$ 490,582**	**$ 1,533,831**	**$ 179,007**	**$ 2,369,251**

Accumulated depreciation and impairment	Buildings	Machinery and equipment	Investments in process	Total
Balances as of January 1, 2020	$ 296,756	$ 803,765	$ -	$ 1,100,521
Depreciation of the year	18,249	86,186	-	104,435
Disposals	(4,188)	(6,887)	-	(11,075)
Closing of plants	(834)	(327)	-	(1,161)
Transfers	1,021	(17,993)	-	(16,972)
Translation effect	(9,796)	(13,036)	-	(22,832)
Balance as of December 31, 2020	$ 301,208	$ 851,708	$ -	$ 1,152,916
Depreciation of the year	$ 16,772	$ 87,772	$ -	$ 104,544
Impairment	7,793	35,929		43,722
Disposals	(12,198)	(58,031)	-	(70,229)
Translation effect	(995)	(3,736)	-	(4,731)
Balance as of December 31, 2021	**$ 312,580**	**$ 913,642**	**$ -**	**$ 1,226,222**

A) CAPITALIZED BORROWING COST

As of December 31, 2021 and 2020, the Company did not have assets that qualify for interest capitalization in the investments in process line item.

B) ASSET WRITE-OFF FOR CLOSING OF PLANTS

As of December 31, 2020 and 2019, no impairment expense related to value in use was recorded; however, as mentioned in Note 2d., in fiscal year 2020, the Company closed two of its plants, the effect of this situation was for an amount of $14,128, which was recorded in other expenses and other assets were also written off for an amount of $5,024. During 2021, due to the disposal plan for the plants, the company sold assets with a net cost of $19,831 and generated income from such sale of $13,894.

C) INVESTMENTS IN PROGRESS

As of December 31, 2021, investments in progress are mainly related to investments made for the Automotive industry related to a windshield line, in Architectural for the repair of the VF2 Furnace and a jumbo cutter in the plant located in Mexicali. In the inorganic chemicals division, it is primarily a vapor emission condenser. To complete the aforementioned projects, an additional investment of cash flows of $50,500 is expected. The aforementioned projects are expected to come into operation during 2022 and early 2023.

D) MPAIRMENT LOSS

The company carried out its tests of the value in use of its assets and derived from the situation and uncertainty of the automotive industry, an impairment loss of $43,722 lodged in the property, plant and equipment belonging to such industry was recognized, which was registered in the cost of sales. The assumptions used to calculate brand impairment are the same as those mentioned in note 12.

11. RIGHT OF USE ASSET, NET AND LEASE LIABILITY

The following is a summary of the right-of-use assets and the lease liability:

	Building	Machinery and equipment	Transport equipment	Other	Total
Opening balance as of January 1, 2020	$ 12,548	$ 49,933	$ 4,280	$ 11	$ 66,772
Additions	6,785	10,367	200	1,857	19,209
Depreciation expense of the year	(3,828)	(11,712)	(1,615)	(817)	(17,972)
Final balance as of December 31, 2020	$ 15,505	$ 48,588	$ 2,865	$ 1,051	$ 68,009
Additions/ disposals	7,012	1,333	3,091	(580)	10,856
Depreciation expense of the year	(6,737)	(9,714)	(3,438)	(111)	(20,000)
Final balance as of December 31, 2021	**$ 15,780**	**$ 40,207**	**$ 2,518**	**360**	**$ 58,865**

a) Amounts recognized in consolidated statement of profit or loss

	2021	2020
Depreciation expense of right of use asset	$ 20,000	$ 17,972
Interest expense on lease liabilities	2,665	3,022
Expense related to low value leases	7,235	8,847

b) As of December 31, 2021 and 2020, the total cash outflow for leases amounts to $20,937 and $18,935, respectively.

The changes in the lease liability that derive from financing activities in accordance with the cash flow are as follows:

Balance as of January 1, 2020	$ 54,763
Interest expense on lease liabilities	3,022
Additions	19,209
Lease payments	(18,935)
Balance as of December 31, 2020	$ 58,059
Interest expense on lease liabilities	2,665
Additions	10,856
Lease payments	(20,937)
Balance as of December 31, 2021	**$ 50,643**

Total future minimum lease payments are analyzed as follows:

	December 31, 2021
Contractual obligations	58,301
Interests to be accrued	7,658
Obligations at present value	50,643
- Less than 1 year	17,851
- More than one year	*32,792*

Interest rates used as of December 31, 2021 are as follows:

	Term in months	Pesos Interest rate	Dollars Interest rate
Buildings	36-120	9.72–10.10%	3.68 -4.60%
Machinery and equipment	24-120	9.61–9.90%	3.49 -4.06%
Transport equipment	24-120	9.70-10.10%	3.61 -4.60%
Others	24-36	9.52-9.92%	3.41 -4.12%

The Company does not face a significant liquidity risk with respect to lease liabilities. Lease liabilities are monitored through the Company's treasury.

12. GOODWILL

Goodwill balances as of December 31, 2021 and 2020 consist of the following:

		2021		2020
Balance as of January 1,	$	62,139	$	61,653
Impairment of goodwill		(4,582)		-
Translation effect		146		486
Balance as of December 31,	**$**	**57,703**	**$**	**62,139**

Goodwill was generated as a result of the acquisition of PPG's Flat Glass and Coatings Business and PGW's Original Equipment Automotive Glass Business, segment information for which is presented in Note 24. The recoverable amount of goodwill is determined based on its value in use, which uses projected cash flows based on the financial budget authorized and approved by the Board of Directors; This budget covers a period of five years. Value in use was determined using an after-tax discount rate calculated in perpetuity of 6.7% and 7.54% in 2021 and 2020, respectively. The growth rate in the automotive industry for the year 2022 is estimated at around 47% and for 2023 and onwards an average of 0.87%. The growth rate in the architectural industry for the United States of America market (Cash Generating Unit "CGU" that concentrates goodwill and other significant intangible assets) in 2022 is estimated at around 3% and by 2023 and in forward by an average of 4%, it should be noted that a perpetuity rate of 1.06% was used to determine the value in use and 1.5% for the architectural sector.

The Company recognized an impairment loss to goodwill assigned to the cash-generating unit of the automotive industry in the amount of $4,582, which was recorded in other expenses.

13. INTANGIBLES AND OTHER ASSETS, NET

a) As of December 31, 2021 and 2020, intangible assets consist of the following:

		December 31, 2021		2020
Software	$	20,629	$	23,373
Trademarks and intellectual property		80,715		90,687
Customer relationships		129,492		139,009
Others		6,469		3,693
Total	**$**	**237,305**	**$**	**256,762**

Cost or valuation	Software	Trade-marks and intellectual property	Customer relationships	Others	Total
Balance as of January 1, 2020	$ 54,481	$ 125,453	$ 179,011	$ 3,026	$ 361,971
Additions	4,494	3,063	-	765	8,322
Reclassification	7,583	-	-	-	7,583
Ilumimex intangibles	-	2,074	-	-	2,074
Translation effect	(492)	-	140	-	(352)
Balance as of December 31, 2020	**$ 66,066**	**$ 130,590**	**$ 179,151**	**$ 3,791**	**$ 379,598**
Additions	2,404	-	-	1,692	4,096
Reclassification	155	-	-	1,281	1,436
Translation effect	(71)	(25)	43	-	(53)
Balance as of December 31, 2021	**$ 68,554**	**$ 130,565**	**$ 179,194**	**$ 6,764**	**$ 385,077**

Accumulated amortization	Software	Trade-marks and intellectual property	Customer relationships	Others	Total
Balance as of January 1, 2020	$ 39,316	$ 30,564	$ 30,710	$ -	100,590
Amortization of the year	3,693	9,339	9,404	98	22,534
Translation effect	(316)	-	28	-	(288)
Balance as of December 31, 2020	**$ 42,693**	**$ 39,903**	**$ 40,142**	**$ 98**	**122,836**
Amortization of the year	$ 4,133	$ 9,412	$ 9,490	$ 197	$ 23,232
Impairment	1,164	532	-	-	1,696
Translation effect	(65)	3	70	-	8
Balance as of December 31, 2021	**$ 47,925**	**$ 49,850**	**$ 49,702**	**$ 295**	**$ 147,772**

Amortization of intangible assets was calculated using useful lives of 15 years for trademarks and intellectual property, 20 years for customer relationships and 5 years for software.

The company carried out its tests of the value in use of its assets and derived from the situation and uncertainty of the automotive industry, an impairment loss of $1,696 lodged in the intangible assets belonging to such industry was recognized, which was recorded in the cost of sales. The assumptions used to calculate brand impairment are the same as those mentioned in note 12.

b) Other assets balances as of December 31, 2021 and 2020 are composed as follows:

	December 31, 2021	December 31, 2020
Costs for obtaining contracts	$ 9,117	$ 9,040
Others	9,726	9,648
	$ 18,843	**$ 18,688**

14. DEBT

As of December 31, 2021 and 2020 short-term debt consists of the following:

	Interest rate	Currency	2021	2020
Revolving credit	Libor + 1.85%	Dollar	$ 11,200	$ 11,200
Short-term line	Libor + 1.80%	Dollar	52,972	53,266
Revolving credit	Libor + 1.70%	Dollar	37,500	37,672
			$ 101,672	**$ 102,138**

As of December 31, 2021 and 2020, long-term debt consists of the following:

	Interest rate	Currency	Maturity date	2021	2020
Leases	2.4% a 9.5%	Dólar	2020 a 2025	$ 9,698	$ 12,619
Syndicated loan	Libor [1]	Dólar	2023	-	404,000
Bilateral credit	Libor + 1.58%	Dólar	2026	170,000	170,000
Bilateral credit	Libor + 2.12%	Dólar	2026	150,000	-
Purchase agreement	Serie A: 2.80%	Dólar	2026	130,000	130,000
Sale of memos	Serie B: 3.43%	Dólar	2030	50,000	50,000
Bilateral credit	Líbor + 2.125%	Dólar	2026	75,000	-
Debt issuance costs				(3,679)	(4,143)
Total long-term debt				581,019	762,476
Less short-term maturities				(573,798)	(186,974)
Long term debt, excluding current maturities				**$ 7,221**	**$ 575,502**

[1] Variable interest rate of LIBOR plus an applicable margin according to the consolidated leverage ratio.

Bank loans include certain obligations (covenants), as well as maintain certain financial ratios. As of December 31, 2021, due to the interpretation of the accounting standard IAS 1, the long-term debt as of December 31, 2021 in the amount of $571,321 was reclassified to short-term. See note 27.

2021 DEBT TRANSACTIONS

On January 4, 2021, a voluntary partial prepayment of $180,000 was made to the syndicated loan in order to reduce interest payments and maintain a financial structure in accordance with what was established by the Company's risk committee, this was done with the resources obtained by the execution of the Note Purchase Agreement with The Prudential Insurance Company of America, entered into on December 30, 2020. Derived from the interest rate hedge that was executed on this loan, with the prepayment an excess hedge was generated with an effect of a charge to financial cost in the amount of $10,315 and a charge to financial cost for the amortization of capitalized costs in the amount of $953 that were recognized in January 2021 and considering the tax effects of the operation.

On February 2, 2021, a voluntary partial prepayment of $140,000 was made to the syndicated loan in order to reduce interest payments and extend its average life. The prepayment was made with the resources obtained from the execution of the Bilateral Credit Agreement with BBVA Mexico announced on January 27, 2021 for an amount of $150,000. Derived from the interest rate hedge that was executed, with the prepayment an excess hedge was generated with an effect of a charge to the financial cost for an amount of $5,982 and a charge to the financial cost for the amortization of capitalized costs for an amount of $717 that were recognized in February 2021 and considering the tax effects of the operation. In addition, on February 26, 2021, the Company acquired a loan for $75,000 with ING Bank, these resources were used for the prepayment of the syndicated loan.

On March 1, 2021, the prepayment of the debt was made under the syndicated loan for $84,000. The aforementioned payment was made with part of the resources obtained by the loans mentioned in the previous paragraph.

2020 DEBT TRANSACTIONS

In order to maintain a solid financial structure by improving its financial structure, as well as reducing interest payments, on February 4, 2020, a voluntary prepayment of $76,000 was made to the syndicated loan with the resources obtained from the portfolio sale program.

On January 30, 2020, Vitro and certain subsidiaries signed a bilateral loan for $170,000 with the purpose of making a voluntary prepayment for the same amount to the syndicated loan, thus reducing the financial cost and extending the average life of the debt.

Derived from the bilateral loan, Vitro capitalized costs for obtaining debt amounting to $2,145, and amortized in the results $2,663 corresponding to old debt costs (see Note 22).

On June 16, 2020, Vitro restructured a portion of a swap-type derivative financial instrument it entered into in 2018 with the objective of decreasing interest payments at an annual fixed rate of 1.6810% for 170,000, covering 100% of the bilateral loan agreement.

On December 30, 2020, the operating subsidiaries of its four business units in the United States of America entered into a Note Purchase Agreement with The Prudential Insurance Company of America, in order to refinancing part of their existing consolidated debt under the Syndicated Loan. The Notes were issued in two tranches: (i) $130,000 due December 30, 2026, and (ii) $50,000 due December 30, 2030.

Reconciliation between relevant changes in debt and cash flows from financing activities:

	2021	2020
Initial balances	$ 864,614	$ 661,180
Acquisition of loans	364,200	438,977
Loan payments	(545,407)	(249,205)
Payment of commissions and other expenses	(1,542)	(2,145)
Amortization of expenses	1,986	2,663
Exchange fluctuation	(1,160)	13,144
Final balances	**$ 682,691**	**$ 864,614**

15. ACCRUED EXPENSES AND PROVISIONS

As of December 31, 2021 and 2020, accrued expenses payable were as follows:

	December 31,	
	2021	2020
Wages and benefits payable	$ 27,171	$ 23,759
Services and other accounts payable	1,352	1,335
Other expenses payable	19,516	8,660
Total	**$ 48,039**	**$ 33,754**

16. EMPLOYEE BENEFITS

Employee benefits recognized in consolidated statements of financial position, by country, are as follows:

	December 31, 2021	December 31, 2020
Mexico	$ 45,836	$ 48,767
USA	66,566	105,942
Canada	(3,639)	(1,493)
Otros	128	162
Total net defined liability (asset)	**$ 108,891**	**$ 153,378**

A description of types of post-employment benefits granted by the Company are as follows:

DEFINED BENEFITS PLAN

The Company has a defined benefits pension plan covering Mexican staff, which consists of a lump sum payment or a monthly pension calculated based on the sum of a basic pension, an additional seniority factor and an additional factor for income equal to or less than the maximum limit used for the Mexican Social Security Institute.

The Company's plan in Mexico also covers seniority premiums, which consist of a lump sum payment of 12 day's wage for each year worked, calculated using the most recent salary, not to exceed twice the legal minimum wage established by law. The related liability and annual costs of such benefits are calculated by an independent actuary, based on formulas defined in the plans, using the projected unit credit method.

In addition, in the USA and Canada, the Company grants retirement plans to key personnel, as well as a post-employment medical benefits plan, mainly.

Employee benefits retirement plans valuation is based on service years, current age, and estimated remuneration at retirement date. The main subsidiaries of the Company have constituted funds for the payment of retirement benefit payments through irrevocable trusts. The Company is not exposed to unusual risks related to the plan assets.

Financial information related to employee benefits is as follows:

	December 31, 2021	December 31, 2020
Net defined liabilities (assets) for:		
Pension plans	$ 79,822	$ 106,589
Post-employment medical benefits	29,069	46,789
Total net defined liabilities	**$ 108,891**	**$ 153,378**
Amount recognized in profit and loss for:		
Pension plans	$ 10,165	$ 11,847
Post-employment medical benefits	(14,468)	1,617
Total recognized in profit and loss	**$ (4,303)**	**$ 13,464**
Amount recognized in comprehensive income, before taxes, for		
Pension plans	$ (658)	$ 48,329
Post-employment medical benefits	(1,375)	13,104
Total recognized in comprehensive income	**$ (2,033)**	**$ 61,433**

The present values for defined benefit obligations, as well as of the assigned plan assets to such obligations are as follows:

	Mexico	USA	Canada	Others	Total
December 31, 2021:					
Defined benefit obligations	$ 203,022	$ 170,593	$ 7,737	$ 128	$ 381,480
Plan assets	(157,186)	(104,027)	(11,376)	-	(272,589)
Net defined (asset) liability	**$ 45,836**	**$ 66,566**	**$ (3,639)**	**$ 128**	**$ 108,891**
December 31, 2020:					
Defined benefit obligations	$ 225,400	$ 210,571	$ 8,834	$ 162	$ 444,967
Plan assets	(176,633)	(104,629)	(10,327)	-	(291,589)
Net defined (assets) liabilities	**$ 48,767**	**$ 105,942**	**$ (1,493)**	**$ 162**	**$ 153,378**

Movements in defined benefit obligations during the year are as follows:

	Year ended December 31,	
	2021	2020
Defined benefit obligations as of January 1,	$ 444,967	$ 439,299
Service cost	(10,568)	7,392
Interest cost	17,656	20,020
Actuarial re-measurements	(16,139)	41,892
Benefits paid	(48,075)	(51,623)
Translation effect	(6,327)	(12,016)
Others	(34)	3
Defined benefit obligations	**$ 381,480**	**$ 444,967**

The cost of the service period for the year includes a benefit of $14,604 as a result of a modification in the employee benefit plan of a subsidiary. As of January 1, 2022, medical coverage is provided for retirees and covered spouses or dependents up to age 65 under a PPO plan. Beginning at age 65, retirees and covered spouses will receive monthly contributions of $100 that can go toward a health care plan premium or other health care expenses.

Changes in the fair value of the plan assets are as follows:

	Year endedDecember 31,	
	2021	2020
Fair value of the plan assets as of January 1,	$ 291,589	$ 339,467
Actual yield	12,621	15,097
Actuarial re measurements	(14,106)	(19,541)
Company contributions	11,958	424
Benefits paid	(23,634)	(31,789)
Administrative expense	(1,230)	(1,150)
Translation effect	(4,609)	(10,919)
Fair value of the plan assets	**$ 272,589**	**$ 291,589**

As of December 31, 2021 and 2020, the main actuarial hypotheses used were as follows:

	December 31,	
	2021	2020
Discount rate		
Mexico	7.75%	6.00%
United States of America		
Vitro Flat Glass	2.64%	2.36%
Pittsburgh Glass Works	2.40%	2.46%
Canada	3.19%	2.59%
Salary increase rate		
Mexico	4.25%	4.00%
United States of America		
Vitro Flat Glass	2.00%	2.50%
Pittsburgh Glass Works	1.50%	1.50%
Canada	3.00%	3.00%

The average duration of defined benefit obligations is approximately 10 years.

The following table shows future cash flows for benefits expected to be paid in the following ten years:

Payments expected in the years:	Amount
2022	$ 56,464
2023	31,437
2024	31,252
2025	31,746
2026 and thereafter	230,581
	$ 381,480

These amounts are based on current data and reflect future services expected, as the case may be. Benefit payments are based on the assumptions that inactive participants retire at 65 years old, and other actuarial hypothesis, that they do it along a 10-year period.

The categories of the plan assets as of December 31, 2021 and 2020 are as follows:

	Actual yield rate		Fair value of plan assets	
	2021	2020	2021	2020
Equity instruments	(4%)	(18%)	$ 170,698	$ 183,754
Debt instruments	2.10%	7.4%	101,891	107,835
			$ 272,589	**$ 291,589**

As of December 31, 2021 and 2020, plan assets include 54,201,598 shares of Vitro, whose fair values amount to $63,829 and $86,652, respectively. The Company is not exposed to unusual risks related to plan assets.

The Company, within its U.S. subsidiaries, has assets invested as follows: cash 3%, fixed income assets 35%, and equity assets ranging 62%.

The determination of defined benefit obligations is carried out using actuarial assumptions, such as the discount rate and salary increases. The sensitivity analysis shown below was developed based on the reasonableness of possible changes with respect to the actuarial assumptions as of December 31, 2021, holding all other assumptions constant; however, it may not represent actual changes in the defined benefit obligations, since the actuarial assumptions are correlated and are unlikely to change in isolation.

The amounts included in the following table represent increase or (decrease) in the defined benefit obligation, as the case may be.

	Liability
Increase in discount rate of 0.50%	$ (14,342)
Decrease in discount rate of 0.50%	15,093

17. FINANCIAL INSTRUMENTS

The carrying amounts of financial instruments and their fair values are presented below:

	December 31, 2021		December 31, 2020	
	Fair value	Carrying amount	Fair value	Carrying amount
Financial assets				
Cash and cash equivalents	$ 110,122	$ 110,122	$ 483,909	$ 483,909
Financial assets measured at amortized cost				
Accounts receivable and other current assets	246,924	246,924	238,679	238,679
Financial assets at fair value through profit or loss				
Derivative financial instruments	1,344	1,344	-	-
Financial liabilities				
Financial liabilities at amortized cost				
Debt and interest payable	720,300	683,275	897,468	866,292
Lease liability	59,019	50,643	58,059	58,059
Trades payable and other liabilities	340,030	340,030	306,044	306,044
Financial liabilities at fair value through profit or loss				
Derivative financial instruments	3,783	3,783	1,289	1,289
Financial liabilities at fair value through OCI				
Hedge derivative financial instruments	13,011	13,011	33,210	33,210

The following tables show the valuation techniques used to measure Level 2 fair values for financial instruments measured at fair value in the statement of financial position, as well as the inputs used. The corresponding valuation processes are described below.

Type	Valuation technique	Relationship between observed information and fair value
Derivative financial instruments SWAPS (Level 2)	The fair value is determined by calculating the difference between the net present value of the asset and liability leg. To calculate the net present value of each leg, the future cash flows are first calculated according to the corresponding underlying. These cash flows are subsequently discounted at present value with an interest rate (curve), which is in accordance with the currency of such cash flows.	For positions where a fixed price is paid, a decrease in the price of the underlying asset expects the derivative to decrease. If a fixed price is received, the value increases.
Derivative financial instruments – call options. (Level 2)	The fair value is determined by calculating the net present value of the expected difference between the future value of the underlying and the value agreed at inception, plus a premium based on the time remaining at the expiration of such option. To calculate the net present value, the expected value of the option at maturity is first calculated according to the corresponding underlying using models such as the Black-Scholes. Such cash flows are subsequently discounted at present value with an interest rate (curve), which is in accordance with the currency of such cash flows.	For positions where the call option is purchased, a decline in the price of the underlying asset expects the derivative to decline. If the call option is sold, the value increases.
Debt (Level 2)	The fair value of the debt is determined using interest rate and exchange rate curves and discounting future cash flows using yield rates of high credit institutions.	The fair value of the debt is inversely related to the hedging of its derivative financial instruments.

The Company is exposed to market risks (interest rate risk, commodity price risk and foreign exchange risk), credit risk and liquidity risk, which are managed in a centralized manner. The Board of Directors establishes and monitors the policies and procedures to measure and manage these risks, which are described below:

I. MARKET RISK

Market risk is the risk of changes in market prices, such as exchange rates, interest rates, commodities and equity instruments. The objective of market risk management is to manage and control exposures to market risks within acceptable parameters, at the same time that yields are optimized.

Interest rate risk

The Company is exposed to the risk of changes in interest rates mainly for the loans mentioned in note 14.

A benchmark interest rate reform has been underway globally. The reform seeks to replace some interbank offered rates (IBOR) with alternative quasi-risk-free interest rates (the "IBOR reform"). The Group has IBOR exposures on its financial instruments that will be replaced or reformed as part of these market initiatives.

The Group's main IBOR exposure as of December 31, 2021 is indexed to USD LIBOR. The alternative reference rate for USD LIBOR is SOFR. As of December 31, 2021, it is not yet clear when the announcement will take place that will set a date for the end of publication of USD LIBOR. However, the Group has completed the process of implementing the appropriate support provisions for all exposures indexed to USD LIBOR by the end of 2021.

Risk management monitors and manages the Group's transition to alternative rates. Risk management assesses the extent to which contracts reference IBOR cash flows, whether such contracts will need to be changed as a result of IBOR reform, and how to manage communication about IBOR reform with counterparties.

Risk management reports to the Company's steering committee on a quarterly basis and collaborates with other functions as needed. Provides periodic reports to management on interest rate risk and the risks arising from the IBOR reform.

As of December 31, 2021 and 2020, various contracts were entered into to exchange cash flows of so-called Interest Rate Swaps in order to mitigate the risk due to the variability of the interest rate paid on liabilities contracted in dollars.

These types of operations represent hedging mechanisms to seek to fix the interest rate of financial obligations. These operations, in accordance with accounting regulations, are considered as hedging operations. For accounting purposes, the Company has designated such Rate Swaps under the cash flow hedge model to cover a portion of the interest payment of the debt in USD.

As of December 31, 2021, the Company has an interest rate swap excess of $275,894, which has a market value of ($6,169), which affects the comprehensive financing result.

As of December 31, 2021, the position in the derivative financial instrument is summarized below:

Bank	ING[3]	BBVA	BBVA[2]
Notionalk	75,000	75,000	170,000
Notional currency	Dollar	Dollar	Dollar
Financial statement line item where the hedge instrument is presented	Derivative financial instruments	Derivative financial instruments	Derivative financial instruments
Delivery rate	1.69%	1.82%	1.68%
Receipt rate	Libor 1M	Libor 1M	Libor 1M
Fair value as of December 31, 2021	(1,650)	(1,709)	(3,483)
Maturity	January 26	February 26	June 25
Change in fair value to measure the ineffectiveness of the hedged instrument	(1,650)	(1,754)	(3,544)
Amount recognized in other comprehensive income (2)	1,133	1,155	(3,483)
Ineffectiveness recognized in statement of profit or loss	459	369	-
Reclassification of other comprehensive income to statement of profit or loss	-	-	-
Carrying value of hedged item (Exposure)	150,000	75,000	170,000
Currency carrying value	Dollar	Dollar	Dollar
Change in fair value to measure the ineffectiveness of the hedged instrument	1,228	1,724	3,494
Hedging ratio	50%	100%	100%
Effectiveness Test	100%	106%	100%[1]

(1) The coverage, despite being 100% of the notional, shows a percentage of ineffectiveness and a portion to be recognized in the income statement as ineffectiveness.
(2) In June 2020, Vitro renegotiated its interest rate swap with BBVA in order to align it to the new debt used to prepay in advance the syndicated loan that was covered.
(3) Corresponds to an interest rate swap contracted by Vitro, S.A.B. with ING which is replicated to two subsidiaries.

As of December 31, 2020, the position in the derivative financial instrument is summarized below:

Bank	ING[3]	BBVA
Notional	404,000	170,000
Notional currency	Dollar	Dollar
Financial statement line item where the hedge instrument is presented	Derivative financial instruments	Derivative financial instruments
Delivery rate	2.77%	1.68%
Receipt rate	Libor 1M	Libor 1M
Fair value as of December 31, 2020	(22,412)	(10,798)
Maturity	June 2023	June 2025
Change in fair value to measure the ineffectiveness of the hedged instrument	(22,412)	(10,798)
Amount recognized in other comprehensive income	(21,135)	(10,798)
Ineffectiveness recognized in statement of profit or loss	-	927
Carrying value of hedged item (Exposure)	404,000	170,000
Currency carrying value	Dollar	Dollar
Change in fair value to measure the ineffectiveness of the hedged instrument	21,210	186
Hedging ratio	100%	100%
Effectiveness Test	100%	111%[2]

(1) For hedging purposes, 94% of the notional amount of this instrument was designated as hedging. Six percent of the instrument is designated as held for trading measured at fair value through profit or loss.

(2) The hedge, despite being 100% of the notional amount, results in a percentage of ineffectiveness and a portion to be recognized in the statement of profit or loss as ineffectiveness.

As of December 31, 2021, 27% of borrowings are denominated at a fixed rate and 73% of borrowings are denominated at a variable rate (see Note 14).

Management assesses whether the hedging relationship meets the effectiveness criteria at the inception of the hedging relationship, on an ongoing basis at each reporting date and upon a significant change in circumstances affecting the hedging requirements.

Sensitivity analysis to interest rate risk

The Company performed a sensitivity analysis considering an increase or decrease of 0.5% in the value of the LIBOR rate, and its effects on the results of the year as of December 31, 2021.

The percentage used to analyze the sensitivity to exchange rate risk is the scenario that represents management's assessment of the reasonableness of possible variations in this reference rate, since it is a market rate with low or no volatility. As a result of the analysis, the effect of a possible increase or decrease in the interest rate would have had an impact on the profit or loss of the year of $968 as expense or income, respectively.

Foreign exchange risk applicable to foreign subsidiaries

A foreign subsidiary is a subsidiary that has a functional currency other than the U.S. dollar. Vitro's foreign subsidiaries maintain their assets and liabilities and carry out their operations mainly in Mexican pesos, Canadian dollars, euros, reales, soles, zlotys and Colombian pesos, in a market and business environment in the same currency. The Company's management considers assets and liabilities denominated in foreign currencies to be insignificant; therefore, the foreign exchange risk for these subsidiaries is almost nil.

As mentioned in Note 14, the Company's debt is denominated in U.S. dollars; therefore, there is no foreign exchange risk.

Foreign exchange risk applicable to subsidiaries located in Mexico.

Vitro's Mexican subsidiaries that maintain a U.S. dollar functional currency and that carry out transactions and maintain balances in pesos or in a foreign currency other than the peso, are exposed to the risk of exchange rate variations. This exposure to risk may result from changes in economic conditions, monetary and/or tax policies, the liquidity of global markets, local and international political events, among others.

The most significant foreign currency of Mexican subsidiaries is the Mexican peso; the carrying amount of financial assets and liabilities denominated in Mexican pesos at the end of the period is as follows:

	December 31,			
	2021		2020	
Financial assets	$Ps.	1,142,512,028	$Ps.s	3,313,988,465
Financial liabilities		(1,889,151,152)		(2,937,678,820)
Net financial asset position		(746,639,124)		376,309,645

Financial assets in Mexican pesos are mainly comprised of cash and other accounts receivable, while financial liabilities are mainly comprised of short-term bank debt, suppliers and sundry creditors, all of which are denominated in Mexican pesos. As of December 31, 2021 and 2020, the Company considers assets and liabilities denominated in foreign currencies other than the Mexican peso to be immaterial.

The exchange rates of the Mexican peso with respect to the U.S. dollar used to prepare these consolidated financial statements were as follows:

	December 31,			
	2021		2020	
Exchange rate:				
Pesos per dollar at year-end	$Ps.	20.4672	$Ps.	19.9087
Pesos per average dollar during the year	$Ps.	20.2830	$Ps.	19.9505

As of March 28, 2022, the issuance date of the consolidated financial statements, the exchange rate of the peso against the U.S. dollar was $Ps. 20.1313.

Foreign currency sensitivity analysis

The sensitivity analysis carried out by the Company considers a strengthening or weakening by 10% of the U.S. dollar against the Mexican peso and their effects on the results of fiscal years 2021 and 2020. The percentage used to analyze the sensitivity to foreign exchange risk is the scenario that represents the Management's evaluation of the fairness of possible variations in the exchange rate. As a result of the analysis, the effect of possible strengthening or weakening of the U.S. dollar against the Mexican peso would have had an impact on profit or loss of $740 and $2,100 as income or expense, respectively.

II. CREDIT RISK

Credit risk refers to the risk that a customer or counterpart breaches its contractual obligations resulting in a financial loss to the Company, and arises mainly from trade accounts receivable and investments in the Company's securities.

Trade accounts receivable and other accounts receivable

The Company continuously performs credit evaluations to its clients and adjusts the limits of credit based on the credit history and current creditworthiness. In addition, it monitors the collections and payments from customers, and has an allowance for doubtful accounts based on historical experience and on some specific aspect that has been identified. While these allowances for doubtful accounts have historically been within the Company's expectations and within the established allowance, there is no guarantee that it will continue to have the same level of allowances for doubtful accounts that it has had in the past. An important variation in the experience of the Company's allowances for doubtful accounts could have a significant impact on the consolidated results of operations and, therefore on the consolidated financial position.

The Company's exposure to credit risk is affected mainly by the individual characteristics of each customer. However, the Company's management also believes the

demographics of its customer base, which includes the risk of non-compliance of the industry and country in which customers operate, as these factors can influence the credit risk, particularly in deteriorated economic circumstances.

As of December 31, 2021, the maximum exposure to credit risk is $360,666. In addition, the Company has guarantees on certain balances of trade accounts receivable whose performance does not fully meet Management's expectations.

The Company has no concentration of credit risk, since consolidated sales and accounts receivable from a single customer did not exceed 10% of total sales, at the segment level there is a concentration in the container and flat glass division as indicated in Note 24.

III. LIQUIDITY RISK

Liquidity risk represents the possibility that the Company has difficulties to comply with its obligations associated with its financial liabilities that are settled by delivering cash or another financial asset.

The Company's approach to manage its liquidity risk is to ensure, to the extent possible, always having enough liquidity to meet its obligations when they fall due, without affecting the performance of the business or damage the image and reputation of Vitro.

The Company's Board of Directors is responsible for establishing an appropriate framework of liquidity risk management according to the Company's needs. The Company manages its liquidity risk by maintaining bank reserves and through a constant monitoring of cash flows.

In previous years, the Company's main source of liquidity has been predominantly cash generated from operating activities in each one of the business units and sale of certain assets.

The contractual maturities of the debt as of December 31, 2021, including the related interest, are as follows:

	Less than 1 year	1 to 3 years	3 to 5 years	Over 5 years
Fixed rate debt[1]	$ 7,832	$ 13,631	$ 145,010	$ 56,860
Variable rate debt[1]	111,986	35,116	400,494	-
Leases	20,550	17,829	17,075	2,847
Trade accounts payable and other liabilities	339,932	-	-	-
	$ 480,300	**$ 66,576**	**$ 562,579**	**$ 59,707**

As of December 31, 2021, the Company has available cash of $110,122.

[1]Maturities are considered with the original form of payments. See Note 27..

IV. FAIR VALUE OF FINANCIAL INSTRUMENTS

The fair value of financial instruments that are presented below has been determined by the Company using the information available in the market or other valuation techniques, which require judgment to develop and interpret the estimates of fair values. It also uses assumptions that are based on market conditions existing at each of the balance sheet dates. Consequently, the estimated amounts presented are not necessarily indicative of the amounts that the Company could realize in a current market exchange.

The Company's amounts of cash and cash equivalents, as well as accounts receivable and payable to third parties and related parties, and the current portion of bank loans and long-term debt approach their fair value, as they have short-term maturities. The Company's long-term debt is recorded at amortized cost and consists of debt that bears interest at fixed and variable rates, which are related to market indicators. To obtain and disclose the fair value of long-term debt, different sources and methodologies are used such as market quotation prices or quotations of agents for similar instruments; other valuation techniques for the cases of those liabilities that have no price in the market and is not feasible to find quotes of agents for similar instruments.

V. OTHER MARKET PRICE RISKS

In the ordinary business course, the Company has contracted calls and swaps and other derivate financial instruments (DFI) in order to mitigate and hedge its exposure to natural gas and electricity price fluctuations. The estimated percentage of fuel consumption covered has varied from 10% to 100%. During 2021 the percentage covered was 15%. The percentage of covered consumption and the covered prices varied constantly according to market conditions based on the needs of the Company and the use of alternative fuels within their production processes.

The derivate financial instruments that the Company held during the years presented were calls and swaps, which were acquired due to the need to economically cover the fluctuation price of natural gas and electricity used by some of the Company´s plants. Those DFIs, were not designated as a hedge for accounting purposes; therefore, fluctuations in fair value are recognized in profit or loss within net financial cost.

The following table shows the active positions and their characteristics for the year ended December 31, 2021:

Type of instrument	Type of underlying	Annual notional in MMBTUs	Average prince	Initial date	Maturity date	Fair Value
Call	Natural gas	720,000	$4.00	23-ago-21	01-sep-22	$ 112
Swap	Natural gas	831,047	$5.16	01-nov-21	01-mar-22	(854)
Swap	Natural gas	831,047	$5.04	09-nov-21	01-mar-22	(787)
Swap	Natural gas	831,047	$4.825	23-ago-21	01-mar-22	(641)
Swap	Natural gas	831,047	$4.75	29-nov-21	01-mar-22	(593)
Swap	Natural gas	605,724	$4.70	30-nov-21	01-mar-22	(563)
Swap	Natural gas	605,724	$4.43	30-nov-21	01-mar-22	(400)
Swap	Natural gas	403,815	$4.25	01-dic-21	01-mar-22	(192)
Swap	Natural gas	433,095	$1.36	29-nov-21	01-dic-22	168
Swap	Natural gas	433,095	$1.56	04-nov-21	01-dic-22	79

Type of instrument	Type of underlying	Annual notional in MMBTUs	Average prince	Initial date	Maturity date	Fair Value
Embedded	Electricity	27,875	$40- 67	31-dic-21	31-ene-22	(165)
Embedded	Electricity	13,090	$26- 43	31-dic-21	31-dic-22	1,397

The effects on profit or loss for the years ended December 31, 2021 and 2020 related to the DFIs described above are described in Note 21.

18. CAPITAL AND RESERVES

CAPITAL MANAGEMENT

The Company's objective in managing its capital structure is to safeguard its ability to continue as a going concern, and at the same time maximize the return to its stockholders through an adequate balance in its funding sources. In order to maintain this structure, the Company carries out various actions such as efficiently managing working capital, adjusting dividend payments in accordance with free cash flow generation, cancellation and/or issuance of new shares and/or debt, or investment or divestment of assets.

The Company, through the Board of Directors, evaluates the cost and risks associated with its capital structure on an ongoing basis. This evaluation is made primarily based on the ratios of indebtedness, debt to EBITDA (Earnings Before Interest and Income Taxes) flow for the last 12 months, and interest coverage. EBITDA is not a performance measure defined by IFRS. The debt ratio represents the ratio of net debt to EBITDA cash flow; EBITDA is calculated based on income before other income and expenses and adding the virtual items reflected in the statement of comprehensive income, within cost of sales and operating expenses, mainly depreciation, amortization and seniority premium and pension plan reserves; finally, interest coverage is calculated by dividing EBITDA by interest expense for the last twelve months of the period analyzed. Vitro has a long-term objective of maintaining the financial indebtedness ratio within a range of 1.5 to 3.5 times and interest coverage greater than 5 times. As of December 31, 2021, the results of the calculation of each of the aforementioned financial ratios were 3.06 times for the indebtedness ratio and 7.10 times for the interest coverage ratio.

COMMON STOCK STRUCTURE

a) As of December 31, 2021 and 2020, the Company's capital stock amounts to 470,027,224 and 474,127,227 common shares, fully subscribed and paid, and with no par value.

b) Retained earnings include the statutory legal reserve. The General Corporate Law requires that at least 5% of net income of the year be transferred to the legal reserve until the reserve equals 20% of capital stock at par value (historical pesos). The legal reserve may be capitalized but may not be distributed unless the entity is dissolved. The legal reserve must be replenished if it is reduced for any reason.

c) At the General Ordinary Stockholders' Meeting held on July 1, 2020, the following was approved:

- Create a reserve for the repurchase of own shares for a maximum amount of $52,000.

d) At the General Ordinary Stockholders' Meeting held on April 20, 2021, the following was approved:

- Declaration and payment of dividends at the rate of $0.0357 per share.

e) In 2021 and 2020, the Company repurchased 4,100,003 and 15,000 shares in the amount of $5,072 and $20.

f) As of December 31, 2021 and 2020, the Company holds 13,544,502 and 9,444,202 own shares in treasury, respectively.

g) The distribution of stockholders' equity, except for the restated amounts of contributed capital stock and tax earnings withheld, will give rise to income tax on dividends payable by the Company at the rate in effect when the distribution is made. The tax paid on such distribution may be credited against the income tax of the year in which the tax on dividends is paid and in the following two years, against the tax of the year and the provisional payments thereof.

The balances of the controlling interest in the tax accounts in stockholders' equity, corresponding to the Company's capital contribution account and net tax-income account amount to $572,066 and $2,847,658 as of December 31, 2021, and $547,847 and $1,271,286 as of December 31, 2020, respectively.

h) Other components of comprehensive income

Effect of translation of foreign transactions

The movement for the period is recorded when translating the consolidated financial statements from the functional currency to the reporting currency. During fiscal years 2021 and 2020, there are no other extraordinary movements affecting the cumulative translation adjustment recognized in stockholders' equity.

Actuarial remeasurements

Actuarial remeasurements are recognized as other components of comprehensive income. During December 31, 2021 and 2020, the actuarial remeasurements correspond solely to variations in actuarial assumptions for both the labor liability and the plan assets and are presented net of income taxes.

Hedging derivative financial instruments

The effective portion of valuation gains or losses on derivative financial instruments designated as cash flow hedges is recognized in other comprehensive income, net of income taxes.

Below is an analysis of the movements of the other comprehensive income accounts of the controlling interest:

	Effect of foreign currency translation	Hedging derivative financial instruments	Actuarial remeasurements	Total other comprehensive income
Balance as of January 1, 2020	147,602	(15,618)	(96,258)	35,726
Comprehensive income movement	(23,655)	(7,763)	(48,461)	(79,879)
Balance as of December 31, 2020	$ 123,947	$ (23,381)	$ (144,719)	$ (44,153)
Comprehensive income movement	(1,744)	21,846	4,209	24,311
Balance as of December 31, 2021	**$ 122,203**	**$ (1,535)**	**$ (140,510)**	**$ (19,842)**

i) Non-controlling interest is as follows:

	December 31, 2021	December 31, 2020
Capital stock	$ 683	$ 594
Retained earnings	53	350
	$ 736	**$ 944**

j) Basic and diluted earnings per share

The earnings and number of common shares used for the calculation of the basic and diluted earnings per share are as follows:

	Year ended December 31, 2021	Year ended December 31, 2020
(Loss) earnings from continuing operations attributable to controlling interest	$ (106,601)	$ (45,376)
Weighted average of common shares for calculation of basic and diluted earnings per share	471,431,335	474,134,727
Loss per share from continuing operations	**$ (0.2261)**	**$ (0.0957)**

The Company had no dilution effects affecting common stock averages for purposes of these calculations. The decrease in basic earnings per share and earnings per share was primarily due to the decrease in income for the year compared to the prior year.

k) As of December 31, 2021 and 2020, the total outstanding shares are analyzed as follows:

	2021	2020
Shares at the beginning of the year	474,127,227	474,142,227
Repurchase of shares	4,100,003	15,000
Shares at the end of the year	**470,027,224**	**474,127,227**

19. RELATED PARTIESS

Transactions with related parties carried out in the ordinary course of business, were as follows:

a) Purchase of food coupons. - The Company purchases food coupons for its staff from a self-service store, of which one of our board members is a stockholder. For the years ended December 31, 2021 and 2020, the amount of those purchases was $5,462 and $5,558, respectively.

b) Compensation to management's key personnel. - For the years ended December 31, 2021 and 2020, the total compensation for the services provided by our board members and directors was approximately $7,997 and $7,054, respectively. This amount includes fees, wages, variable compensation and retirement bonuses. This item is analyzed as follows:

	2021	2020
Fixed compensation	78 %	73%
Variable compensation	22 %	27%

c) Accounts receivable. – The Company has a receivable from Shandong PGW Jinjing Automotive Glass Co. Ltd. for the yeard ended as of December 31, 2021 and 2020, the total amount was $3,141 and $15,333, respectively.

d) Transactions with Shandong PGW Jinjing Automotive Glass Co. Ltd.- The Company has transactions with Shandong PGW Jinjing Automotive Glass Co. Ltd. for the twelve-month periods ended December 31, 2021 and 2020. In purchases the total amount was $6,954 and $3,971, respectively, and in accounts payable the total amount was $97 and $860, respectively.

20. OTHER EXPENSES (INCOME), NET

The analysis of other (income) expenses is as follows:

a) Other (income):

	Year ended December 31,			
		2021		2020
Gain on sale and write-off of assets	**$**	**-**	**$**	**(4,758)**

b) Other expenses:

		2021		2020
Loss on sale and write-off of assets	$	9,711	$	-
Reorganization expenses		11,399		16,665
Asset write-off due to plant closure		-		14,128
Impairment loss of goodwill		4,582		-
Other expenses		4,349		6,436
Total	**$**	**30,041**	**$**	**37,229**

21. FINANCIAL COST, NET

Below is a breakdown of the most significant items that compose financial cost:

a) Financial income:

	Year ended December 31,			
		2021		2020
Financial products	$	(2,647)	$	(5,903)
Exchange gain		-		(7,185)
Total	**$**	**(2,647)**	**$**	**(13,088)**

b) Financial cost

		2021		2020
Interest expenses	$	24,852	$	32,870
Restatement of taxes on tax consolidation		2,788		2,118
Derivative financial transactions		19,177		2,852
Interest expense on leases		2,665		3,022
Exchange loss		7,231		-
Financial result, net of employee benefits		5,035		4,187
Other financial expenses		9,469		7,468
Total	**$**	**71,217**	**$**	**52,517**

22. INCOME TAXES

Income taxes recognized in profit or loss are analyzed as follows:

	Year ended December 31			
		2021		2020
Current income taxes	$	45,905	$	21,419
Deferred income taxes		(21,051)		28,049
Total	**$**	**24,854**	**$**	**49,468**

The reconciliation between the Company's income tax rate and the actual rate, expressed as a percentage of income before income taxes, is analyzed as follows::

	Year ended December 31,	
	2021	2020
Expected (benefit) expense	(24,613)	1,193
Effects of inflation	(8,861)	(4,756)
Valuation allowance (reversal) for tax losses	142	5,593
Non-deductible expenses and others	10,470	4,119
Restructure	5,658	-
Derecognition of deferred tax assets, net	30,024	34,508
Rate difference for Companies outside of Mexico	8,255	14,920
Exchange fluctuation without tax effects	3,779	(6,109)
Income tax expense	24,854	49,468

The movements of the deferred taxes balance in the fiscal year are as follows:

	Year ended December 31,			
		2021		2020
Opening balance	$	74,715	$	93,043
Deferred tax applied to income		21,051		(28,049)
Actuarial remeasurements		2,177		12,972
Derivative financial transactions		(8,323)		2,588
Translation effects		5,996		(5,839)
Ending balance	$	95,616	$	74,715

The main temporary differences that gave rise to deferred income taxes in the consolidated statements of financial position are analyzed as follows:

		2021		2020
Accounts receivable	$	5,054	$	6,320
Employee benefits		36,266		37,802
Tax losses		24,192		16,064
Intangible assets		27,047		31,502
Fixed assets		(1,782)		6,663
Derivative financial instruments		905		3,390
Inventories		2,996		2,011
Others		16,616		11,611
Deferred income tax asset	$	111,294	$	115,363

		2021		2020
Accounts receivable	$	(4)	$	(203)
Employee benefits		(101)		407
Tax losses		(1,632)		(1,372)
Fixed assets		9,574		27,407
Derivative financial instruments		354		2,099
Advance payment to suppliers		194		591
Others		7,293		11,719
Deferred income tax liability	$	15,678	$	40,648
	$	95,616	$	74,715

As of December 31, 2021, the Company and its subsidiaries have tax-loss carryforwards of $312,359, which have the right to be applied to future income and expire as follows:

Expiration in:		Losses of Mexican companies	Losses of foreign companies
2022	$	32	-
2023		155	-
2024		50	-
2025		-	-
2026		-	-
2027		229	-
2028		2,627	-
2029		14,051	10,882
2030		1,590	31,693
2031 and thereafter		62,984	188,066
Total	$	81,718	230,641

In the determination of deferred income tax, as of December 31, 2021, the effects of tax-loss carryforwards from Mexican companies of $1,418 were included, which were not recognized as assets because there is not a high probability that they can be recovered.

In addition, tax-loss carryforwards of $230,641 were not recognized in the foreign entities. Management believes that it is probable that such losses will be recoverable in subsequent years; however, during 2021, it has decided to reserve the net deferred tax assets of foreign entities in the United States of America.

The income taxes recognized in other components of comprehensive income are analyzed as follows:

	Year ended December 31, 2021	2020
Effect of derivative financial transactions	$ (8,323)	$ 2,588
Actuarial remeasurement of benefit plan	2,177	12,972
Total income taxes recognized in other comprehensive income	$ (6,146)	$ 15,560

Through 2013, the Company consolidated its tax results from its operations in Mexico. Subsequently and in accordance with the tax reform, the Company has the obligation to pay the deferred tax determined at that date, which will be paid in accordance with the transitory provisions of the new Law. In 2021, the Company paid $33,292 and as of December 31, 2021, the tax consolidation income tax amounts to $19,225 in the short term and $9,578 in the long term.

As of January 1, 2021, Vitro entities headquartered in the United States of America were restructured creating four taxpayers: 1) Vitro Assets Corp. with Vitro Flat Glass, LLC (companies under tax consolidation) as its sole subsidiary; 2) Vitro Packaging, LLC; 3) Vitro Chemicals, Fibers and Mining, LLC and 4) Pittsburgh Glassworks, LLC with Vitro Autoglass LLC and Vitro Meadville Flat Glass, LLC as its subsidiaries. Prior to this restructuring, the aforementioned companies consolidated their fiscal results.

As indicated in Note 2, the Company restructured the different legal entities into four divisions, which were incorporated into different companies in Spain. The aforementioned restructuring by the legal entities in the United States of America generated a tax gain of approximately $137,538, which was offset by tax losses from prior years of $85,056 (previously unrecognized) and tax losses of the year of $44,116. After the effect of the amortization of tax losses, the effect on taxes amounted to $4,971.

23. COSTS AND EXPENSES

The main items comprising costs and general expenses as of December 31, 2021 and 2020 are as follows:

	2021		
	Cost of sales	Administration expenses	Distribution and sale expenses
Cost of inventory sales	$ 589,322	-	-
Salaries, wages and benefits	317,917	65,723	37,617
Freights	34,591	92	171,048
Depreciation and amortization	125,479	17,200	5,097
Impairment	45,418	-	-
Maintenance	70,554	2,221	1,430
Energy	82,477	794	564
Others	295,804	44,441	28,632
Total	$ 1,561,562	130,471	244,388

	2020		
	Cost of sales	Administration expenses	Distribution and sale expenses
Cost of inventory sales	$ 576,039	-	-
Salaries, wages and benefits	304,725	65,812	30,555
Freights	34,839	102	134,975
Depreciation and amortization	124,916	16,831	3,194
Maintenance	54,199	2,063	977
Energy	73,693	665	433
International arbitration recovery	-	(39,200)	-
Others	233,178	53,942	20,485
Total	$ 1,401,589	100,215	190,619

24. OPERATING SEGMENTS

An operating segment is a Company's component that is engaged in business activities for which it can earn income and incur expenses, including income and expenses relating to transactions with any of the other components of the Company. All the operation results of the operating segments are reviewed periodically by the Company's management to make decisions on the resources that must be distributed to the segment and assess their performance.

Transactions between segments are determined based on comparable prices to those that would be used with or between independent parties in comparable transactions.

The accounting, administrative and operating policies are the same as those described by Vitro. The Company evaluates the performance of its segments based on operating income. Sales and transfers between segments are recorded in each segment as if they were made to third parties; i.e. at market prices.

The segments reporting in Vitro are strategic business units that offer different products. These segments are managed separately; each requires its own system of production, technology, and marketing and distribution strategies. Each market serves to different customer bases.

The Company has two operating segments to be reported: Flat Glass and Glass Containers. The primary products of each one of the segments are:

Segment	Primary products
Flat glass	Flat glass for the construction and automotive industries, and carbonate and sodium bicarbonate.
Chemicals	Inorganic chemicals
Glass containers	Glass containers, precision components, as well as machinery and molds for the glass industry.

As the holding, corporate and other companies are not classified as an operating segment according to IFRS 8 "Operating segments," they are classified in the "Others" column.

a) The following tables present certain information by segment as of December 31, 2021 and 2020:

Year ended December 31, 2021

	Flat glass	Chemicals	Containers	Subtotal	Others and eliminations	Consolidated
Consolidated sales	$ 1,565,875	$ 169,083	$ 225,469	$ 1,960,427	$ (2,859)	$ 1,957,568
Sales to other segments	315	1,577	5,836	7,728	(7,728)	-
Net sales to third parties	1,565,560	167,506	219,633	1,952,699	4,869	1,957,568
Net income (loss) before other expenses	(57,850)	35,370	31,357	8,877	12,270	21,147
Interest income	6,416	4,844	16,192	27,452	(24,805)	2,647
Financial expenses	65,179	7,636	16,962	89,777	(18,560)	71,217
Net income (loss) before income taxes	(144,901)	31,286	28,719	(84,896)	2,852	(82,044)
Income taxes	(25,994)	10,726	8,453	(6,815)	31,669	24,854
Depreciation and amortization	121,839	5,905	20,668	148,412	(636)	147,776
Investment in fixed assets	72,030	5,828	17,435	95,293	1,484	96,777
Impairment loss	50,000	-	-	50,000	-	50,000

Derived from the decreases in the volume of the original equipment automotive market and given the uncertainty of this industry, the Company tested the recovery value of the assets of the automotive CGU that belongs to the flat glass segment, concluding in the recognition of an impairment loss for an amount of $50,000 which was allocated as follows: property, plant and equipment $43,722, intangible assets $1,696 and goodwill $4,582.

As of December 31, 2021, net sales to third parties of the Flat Glass and Containers segments are composed as follows:

		Flat glass
Architectural business	$	929,299
Automotive business		778,702
Eliminations		(142,441)
Total flat glass sales	$	1,565,560

		Glass containers
Pharmaceutical, perfume and medical container business	$	204,853
Machine, mold and spare part business		30,479
Eliminations		(15,699)
Total glass containers	$	219,633

The chemicals segment does not present sub-segment sales that have to be eliminated internally.

Year ended December 31, 2020

	Flat glass	Chemicals	Containers	Subtotal	Others and elimina-tions	Consolidat-ed
Consolidated sales	$ 1,425,580	$ 158,254	$ 184,702	$ 1,768,536	$ (237)	$ 1,768,299
Sales to other segments	293	2,534	1,877	4,704	(4,704)	-
Net sales to third parties	1,425,287	155,720	182,825	1,763,832	4,467	1,768,299
Income before other (expenses) income, net	(13,466)	52,367	22,832	61,733	14,143	75,876
Interest income	29,287	6,177	5,976	41,440	(28,352)	13,088
Financial expenses	52,206	2,300	1,207	55,713	(3,196)	52,517
Income (loss) before income taxes	(84,305)	40,786	119,789	76,270	(72,294)	3,976
Income taxes	16,485	2,385	5,378	24,248	25,220	49,468
Depreciation and amortization	121,368	5,999	18,159	145,526	(585)	144,941
Investment in fixed assets	81,615	5,748	7,964	95,327	646	95,973
Derecogni-tion of assets due to plant closure	14,091	-	37	14,128	-	14,128

As of December 31, 2020, net sales to third parties of the Flat Glass and Containers segments consisted of the following :

		Flat glass
Architectural business	$	819,544
Automotive business		744,153
Eliminations		(138,410)
Total flat glass sales	$	1,425,287

		Containers
Pharmaceutical, perfume and medical container business	$	178,914
Machine, mold and spare parts business		14,348
Eliminations		(10,437)
Total glass containers sales	$	182,825

The chemicals segment does not present sub-segment sales that have to be eliminat-ed internally.

As of December 31, 2021, assets and liabilities by segment are as follows:

	Flat glass	Chemicals	Containers	Subtotal	Others and eliminations	Consolidat-ed
Total assets	2,376,912	311,935	654,169	3,343,016	(803,694)	2,539,322
Total liabilities	1,206,420	173,286	415,753	1,795,459	(456,542)	1,338,917

As of December 31, 2020, assets and liabilities by segment are as follows::

	Flat glass	Chemicals	Containers	Subtotal	Others and eliminations	Consolidated
Total assets	3,098,904	1,832,665	1,423,818	6,355,387	(3,462,355)	2,893,032
Total liabilities	1,707,719	216,473	299,119	2,223,311	(635,192)	1,588,119

b) Information related to main customers

The consolidated net sales of the Company's glass container segment had two instances of concentration, the amount of which exceeded 10% for the year ended December 31, 2021 and 2020.

In addition, in the flat glass segment, there is a single case of concentration of sales to a single customer, whose amounts were greater than 10% for the fiscal year ended December 31, 2021 and 2020.

c) Geographical information

Certain geographical information regarding the Company's transactions is summarized as follows:

	Year ended December 31,			
		2021		2020
Net sales to customers [1] in:				
Abroad, mainly in the USA	$	1,343,289	$	1,209,466
Mexico		614,279		558,833

[1] According to the country where the Company is located.

Geographic information on land and buildings, machinery and equipment, and investments in process is summarized as follows:

	31 de diciembre de			
		2021		2020
Lands and buildings, machinery and equipment and investments in process:				
Abroad, mainly in the USA	$	501,622	$	541,440
Mexico		641,407		667,484

The other non-current assets other than monetary items are summarized as follows:

	December 31,			
		2021		2020
Intangible asset, including goodwill:				
Abroad, mainly in the USA	$	281,940	$	302,386
Mexico		13,068		16,516

25. CONTINGENT LIABILITY

The Tax Administration Service (SAT) notified Distribuida del Álcali S.A de C.V. subsidiary of Vitro, the beginning of the exercise of its review rights in relation to compliance with the obligations of the company as a direct subject, as well as withholder and jointly responsible in matters of income tax corresponding to the fiscal year of 2015. Until December 31, 2021, through its team of experts, Vitro has determined that since the notification of the SAT, the registration of a provision has not been required, since the probability of loss is considered less than probable. Our experts estimate that Vitro has sufficient elements to obtain a favorable resolution from the authority. However, until all the instances are finalized in this procedure, Vitro cannot guarantee the definitive favorable resolution.

26. ADDITIONAL INFORMATION

As of December 31, 2021, the Company's Management has presented financial information in compliance with certain contractual requirements, which is made up of the consolidated financial statements of Vitro, S.A.B. of C.V. and Subsidiaries except for the non-restricted Company Especialidades en Cristal, S.A. de C.V., this as part of the obligations acquired by the debt contracts with banking institutions (Note 14). Such information is as follows:

Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Statements of Financial Position
As of December 31, 2021

	Vitro, S.A.B de C.V. and Subsidiaries	Especialidades en Cristal, S.A. de C.V.	Eliminations	Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Assets				
Cash and cash equivalents	$ 110,122	$ 1,082	-	$ 109,040
Trade accounts receivable, net	212,864	4,916	3,098	211,046
Especialidades en Cristal, S.A. de C.V.	-	-	29,181	29,181
Recoverable taxes	8,096	-	-	8,096
Other recoverable taxes	46,478	3,751	-	42,727
Other current assets	33,805	6,654	5,220	32,371
Inventories, net	458,129	7,651	-	450,478
Current assets	869,494	24,054	37,499	882,939
Investment in associated companies	22,642	-	(2,067)	20,575
Investment properties	20,147	-	-	20,147
Property, plant and equipment, net	1,143,029	4,686	-	1,138,343
Right of use assets, net	58,865	770	-	58,095
Goodwill	57,703	-	-	57,703
Intangible and other assets, net	256,148	-	-	256,148
Deferred income taxes	111,294	692	-	110,602
Long-term assets	1,669,828	6,148	(2,067)	1,661,613
Total assets	$ 2,539,322	$ 30,202	35,432	$ 2,544,552

	Vitro, S.A.B de C.V. and Subsidiaries	Especialidades en Cristal, S.A. de C.V.	Eliminations	Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Liabilities				
Short-term debt	$ 101,672	$ -	-	$ 101,672
Short-term maturity of long-term debt	573,798	-	-	573,798
Interest payable	584	-	-	584
Short-term maturity of lease liability	17,851	277	-	17,574
Trade accounts payable	270,188	15,311	14,302	269,179
Especialidades en Cristal, S.A. de C.V.	-	-	8,318	8,318
Accrued expenses and provisions	48,039	15,104	14,879	47,814
Income tax payable	21,121	-	-	21,121
Deconsolidation income tax	19,225	-	-	19,225
Other short-term liabilities	90,134	659	-	89,475
Short-term liabilities	1,142,612	31,351	37,499	1,148,760
Long-term debt	7,221	-	-	7,221
Long-term lease liability	32,792	520	-	32,272
Deconsolidation income tax	9,578	-	-	9,578
Deferred income taxes	15,678	-	-	15,678
Other long-term liabilities	9,134	-	-	9,134
Derivative financial instruments	13,011	-	-	13,011
Employee benefits	108,891	398	-	108,493
Long-term liabilities	196,305	918	-	195,387
Total liabilities	1,338,917	32,269	37,499	1,344,147
Stockholders' equity				
Capital stock	378,860	3	3	378,860
Repurchased shares	(32,621)		-	(32,621)
Additional paid-in capital	344,037		-	344,037
Other comprehensive loss	(19,842)	(515)	(515)	(19,842)
Retained earnings	529,235	(1,555)	(1,555)	529,235
Controlling interest	1,199,669	(2,067)	(2,067)	1,199,669
Non-controlling interest	736	-	-	736
Stockholders' equity	1,200,405	(2,067)	(2,067)	1,200,405
			-	
Total liabilities and stockholders' equity	$ 2,539,322	$ 30,202	35,432	$ 2,544,552

Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Statement of Profit or Loss
For the year ended as of December 31, 2021

	Vitro, S.A.B de C.V. and Subsidiaries	Especialidades en Cristal, S.A. de C.V.	Eliminations	Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Net sales	$ 1,957,568	$ 30,998	18,639	$ 1,945,209
Cost of sales	1,561,562	29,175	16,708	1,549,095
Gross profit	396,006	1,823	1,931	396,114
Administrative expenses	130,471	884	882	130,469
Distribution and sale expenses	244,388	3,038	1,049	242,399
Income before other expenses, net	21,147	(2,099)	-	23,246
Other (income)	-	-	-	-
Other expenses	30,041	-	-	30,041
Operating loss	(8,894)	(2,099)	-	(6,795)
Financial cost, net:				
Financial income	(2,647)	(356)	(155)	(2,446)
Financial cost	71,217	118	155	71,254
Total financial cost	68,570	(238)	-	68,808
Share in net income of associated companies	4,580	-	1,555	6,135
Loss before income taxes	(82,044)	(1,861)	(1,555)	(81,738)
Income taxes	24,854	(306)	-	25,160
Loss of the year	$ (106,898)	$ (1,555)	(1,555)	$ (106,898)

Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Statements of Cash Flows
For the year ended as of December 31, 2021

	Vitro, S.A.B de C.V. and Subsidiaries	Especialidades en Cristal, S.A. de C.V.	Eliminations	Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Cash flows in operating activities:				
Net loss	$ (106,898)	$ (1,555)	$ (1,555)	$ (106,898)
Adjustments for:				
Depreciation and amortization	147,776	764	-	147,012
Impairment loss	50,000	-	-	50,000
Loss (Gain) on sale of assets	9,711	-	-	9,711
Income taxes	24,854	(306)	-	25,160
Investments in associated companies	4,580	-	1,555	6,135
Inventory obsolescence reserve	5,216	-	-	5,216
Financial income	(2,647)	(356)	(155)	(2,446)
Derivative financial instruments	19,177	-	-	19,177
Effect of exchange variation and others	8,416	-	-	8,416
Financial costs	44,809	118	155	44,846
	204,994	(1,335)	-	206,329
Changes in working capital:				
Trade accounts receivable, net	(38,095)	(4,939)	(17,372)	(50,528)
Inventories	(81,700)	(7,788)	-	(73,912)
Trade accounts payable	31,940	15,370	17,372	33,942
Other operating assets	(9,020)	(1,502)	(9,670)	(17,188)
Other operating liabilities	(27,201)	6,589	9,670	(24,120)
Employee benefits	(40,737)	17	-	(40,754)
Income taxes paid	(65,080)	-	-	(65,080)
Net cash flows (used in) generated by operating activities	$ (24,899)	6,412	-	(31,311)

		Vitro, S.A.B de C.V. and Subsidiaries	Especialidades en Cristal, S.A. de C.V.	Eliminations	Vitro, S.A.B de C.V. and Subsidiaries except Especialidades en Cristal, S.A. de C.V.
Cash flows in investing activities:					
Purchase of property, plant and equipment	$	(96,777)	(202)		(96,575)
Proceeds from sale of property, plant and equipment and investment properties		16,316	-	-	16,316
Investment in joint venture		(2,000)	-	-	(2,000)
Advance payment for land purchase		6,896	-	-	6,896
Purchase of intangible assets		(4,096)	-	-	(4,096)
Other assets		(3,231)	-	-	(3,231)
Trade accounts receivable subsidiares		-	(4,898)	(4,898)	-
Trade accounts payable to Especialidades en Cristal, S.A. de C.V.		-	-	4,869	4,869
Interest collected		2,373	100	153	2,426
Net cash flows used in investing activities		(80,519)	(5,000)	124	(75,395)
Cash flows in financing activities:					
Acquisition of new debt		364,200	-		364,200
Payment of loans		(545,407)	-		(545,407)
Lease payments		(18,272)	(261)		(18,011)
Interest paid		(34,663)	(100)	(153)	(34,716)
Trade accounts payable subsidiares		-	29	29	-
Dividends paid		(16,938)	-		(16,938)
Repurchase of own shares		(5,072)	-		(5,072)
Debt raising cost		(1,542)	-		(1,542)
Derivative financial instruments		(8,681)	-		(8,681)
Net cash flows(used in) generated by financing activities		(266,375)	(332)	(124)	(266,167)
Net (decrease) increase in cash and cash equivalents:		(371,793)	1,080	-	(372,873)
Cash and cash equivalents as of January 1,		483,909	-	-	483,909
Effect of exchange fluctuations		(1,994)	2	-	(1,996)
Cash and cash equivalents as of December 31,	$	110,122	1,082	-	109,040

At stockholders' equity level there are no effects, so what is presented in the statement of changes in stockholders' equity does not differ from this note.

The information presented in this note is not required by the International Financial Reporting Standards, so its use is exclusively for the purposes established in such note.

27. SUBSEQUENT EVENTS

RECLASSIFICATION OF LONG-TERM DEBT

As described in Note 14, dated December 31, 2021, long-term debt for $571,321 was reclassified to short-term debt as shown in the statement of financial position as of December 31, 2021 in compliance with accounting standard IAS 1, which is explained as follows.

In adherence and in legal and contractual compliance, the Company requested in advance from the creditor banks a waiver in a timely manner on January 19, 2022 for the accounting period that ended on December 31, 2021. Such waiver was granted by the creditor banks between February 14 and 25, 2022 within the legal and contractual framework agreed with the creditor banks. Due to the interpretation of the IAS 1 accounting standard, these waivers should have been granted before December 31, 2021 in order to continue classifying long-term debt, for the difference between the balance of stockholders' equity as of December 31, 2021 and certain contractual financial obligations.

On January 1, 2022, the Company reclassified back the short-term debt to long-term debt for an amount of $571,321, this because the Company has the necessary waivers from the creditor institutions in a timely manner according to with the legal and contractual framework agreed with the creditor banks. In the same manner and time, the amending agreements were made to adjust the stockholders' equity covenant for at least the 12 months of 2022 to ensure future compliance. As a result of the reclassification, the balance sheet at the beginning of January 1, 2022 is shown below:

		January 1, 2022
Assets		
Cash and cash equivalents	$	110,122
Trade accounts receivable, net		212,864
Recoverable taxes		8,096
Recoverable value added tax		46,478
Other current assets		33,805
Inventories, net		458,129
Current assets		869,494
Investment in associated companies		22,642
Investment properties		20,147
Property, plant and equipment, net		1,143,029
Right of use assets, net		58,865
Goodwill		57,703
Intangible and other assets, net		256,148
Deferred income taxes		111,294
Long-term assets		1,669,828
Total assets	$	2,539,322

		January 1, 2022
Liabilities		
Short-term debt	$	101,672
Short-term maturity of long-term debt		2,477
Interest payable		584
Short-term maturity of lease liability		17,851
Trade accounts payable		270,188
Accrued expenses and provisions		48,039
Income tax payable		21,121
Deconsolidation income tax		19,225
Other short-term liabilities		90,134
Short-term liabilities		571,291

		January 1, 2022
Long-term debt		578,542
Long-term lease liability		32,792
Deconsolidation income tax		9,578
Deferred income taxes		15,678
Other long-term liabilities		9,134
Derivative financial instruments		13,011
Employee benefits		108,891
Long-term liabilities		767,626
Total liabilities		1,338,917
Stockholders' equity		
Capital stock		378,860
Repurchased shares		(32,621)
Additional paid-in capital		344,037
Other comprehensive (loss) income		(19,842)
Retained earnings		529,235
Controlling interest		1,199,669
Non-controlling interest		736
Stockholders' equity		1,200,405
Total liabilities and stockholders' equity	$	2,539,322

CONSTRUCTION OF A NEW FLOAT FURNACE

During 2021, Vitro's Board of Directors approved the construction of a new float glass furnace whose investment will be approximately $120,000, this will allow the Company to meet the growing market demand in Latin America and offer greater availability of products, as well as an improvement in logistics will also allow it to offer the highest level of service to its customers and to the markets in which the Company participates.

CONSTRUCTION OF A NEW CONTAINERS FURNACE

At the end of 2021, Vitro's Board of Directors approved the investment of a new containers furnace at its plant located in Toluca, State of Mexico, whose investment will be approximately $70,000, with the purpose of compensating the increase in the demand for containers of glass in the segments in which Vitro participates.

28. AUTHORIZATION TO ISSUE THE CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements and notes of the Company as of December 31, 2021 and for the year ended on that date, were authorized for issuance by the Board of Directors on March 28, 2022, under the responsibility of Mr. Adrián G. Sada Cueva, Executive General Director, and C.P. Claudio L. Del Valle Cabello, General Director of Administration and Finance.

These consolidated financial statements are subject to the approval of the Company's Board of Directors, as well as approval at the ordinary stockholders' meeting, where they may be modified, based on provisions set forth in the Mexican General Corporate Law.

SCOPE OF THIS REPORT

With this publication, we seek to address a wide variety of topics having to do with the economic, operating, environmental and social dimensions of this company that are the most important for our stakeholders and for our company's sustainable development. This report communicates the salient events that occurred between January and December 2021.

The document consolidates information on our business units in their respective regions and operations. The business units it covers are Flat Glass (Architectural Glass and Automotive Glass), Inorganic Chemicals and Containers (Containers and Machine Manufacturing), discussing their performance, challenges and achievements in 2021.

The content of this report was based on the material issues identified in our 2019 materiality exercise, which remains current. That exercise involved various stakeholders from throughout our value chain, and aspects relating to our financial and operating performance as well as sustainability programs and initiatives in which this company participates.
The information compiled to prepare this report was obtained through internal management systems, surveys, interviews and databases, and from all of the business units and countries where we operate.

The operating, social, environmental, economic and other activities carried out by the company are ongoing, and the metrics, progress, areas of opportunity, strategies, etc. are regularly documented in an effort to fine-tune procedures and attain the precision and transparency required to share with our stakeholders and organizations specializing in this field.

INDEPENDENT ASSURANCE

This report includes a statement of external assurance from Deloitte Asesoría en Riesgos, S.C., an independent organization that verified the information and the process for calculating the following annual indicators: GRI 2-7, Employees; GRI 2-23, Policy commitment; GRI 2-26, Mechanisms for seeking advice and raising concerns; GRI 205-3, Confirmed incidents of corruption and actions taken; GRI 301-2, Recycled inputs used; GRI 302-1, Energy consumption within the organization; GRI 305-1 Direct (Scope 1) GHG emissions; GRI 305-2, Indirect (Scope 2) GHG emissions from power generation; GRI 401-1, New employee hires and employee turnover; GRI 403-1, Occupational health and safety management system; GRI 403-2, Hazard identification, risk assessment and incident investigation; GRI 403-3, Occupational health services; 403-4, Worker participation, consultation and communication on occupational health and safety; GRI 404-1, Average hours of training per year per employee; GRI 404-3, Percentage of employees receiving regular performance and career development reviews.

This organization was selected through a public tender process organized by the company's procurement area, in keeping with the guidelines on fair dealings established in our Code of Ethics and Conduct.

US

The data presented in the section on our employees covers only employees with permanent contracts, except for Mexico where it also includes those with temporary contracts, because of the significant number of employees in this situation. For details on temporary contracts by region, see GRI Indicator 2-7.

The margin of error in these data is +/- 2%, and they were obtained through census. No significant changes were detected compared to previous periods.
In the data on age group the information on 1 (one) employee was not included due to personnel turnover issues.

The average hours of training by gender were reported for countries that permit it. The figure on average hours of training per employee covers all employees.

PLANET

For materiality purposes, the information does not include energy consumption by Vitrocar and offices. This consumption does not imply a significant difference in the final tally of emissions. The Scope 3 emissions reported are produced exclusively by business travel.

GRI CON TENTS

Cont	Description	Response or reference
2. GENERAL DISCLOSURES		
2-1	Organizational Details	**Legal Name:** Vitro, S.A.B. de C.V. **Legal form:** Sociedad Anónima Bursátil de Capital Variable **Location of Headquarters:** Monterrey, Nuevo León, Mexico **Countries of operation:** Global Presence - page 09
2-3	Reporting period, frequency and contact point	**Reporting period of sustainability and financial report: The information presented in this report covers the period from January 1 to December 31, 2021** **Publication date of the report or reported information: This report was published on XX/XX/XXXX** **Contact point for questions about the report:** Sandra R. Rabbé González Corporate Social Responsibility and Sustainability Comments about the content of this report may be sent to: social@vitro.com or presented at corporate headquarters: Av. Ricardo Margáin #400, Col. Valle del Campestre, San Pedro Garza García, Nuevo León C.P. 66265, Mexico For more information, visit: www.vitro.com
2-4	Restatements of information	There is no restatement of information in this report compared to previous periods.
2-5	External assurance	**Policy and practice for seeking external assurance:** Scope of this Report - Page 156 **External assurance of the sustainability report:** Scope of this Report - Page 156 **Assurance Letter:** Assurance Letter - Page 167 **Description of assurance standards used and limitations:** Assurance Letter - Page 167
2-6	Activities, value chain and other business relationships	Flat Glass - Page 28 Containers - Page 36 Chemicals - Page 44 Global Presence - Page 09 Vitro Brands - Page 08
2-7	Employees	Our People - Page 73 **Total employees:** 14,696 Mexico: W: 2,290 | M: 9,418 | T: 11,708 | 80% US and Canada: W: 542 | M: 1,948 | T: 2,490 | 17% Europe and Asia: W: 113 | M: 177 |T: 290 | 2% Central and South America and Caribbean: W:33|M:175 | T:208 | 1% Note: This figure includes interns **Employees with permanent contracts:** Mexico: W: 2,066 | M: 8,720 | T: 10,786 | 74% US and Canada: W: 542 | M: 1,948 | T: 2,490 | 17% Europe and Asia: W: 113 | M: 177 |T: 290 | 2% Central and South America and Caribbean: W:33 | M:175 | T:208 | 1% **Employees with temporary contracts:** Mexico: W: 224 | M: 698 | T: 922 | 6% **Full-time employees:** Mexico: W: 2,290 | M: 9,418 | T: 11,708 |80% US and Canada: W: 542 | M: 1,948 | T: 2,490 | 17% Europe and Asia: W: 113 | M: 177 |T: 290 | 2% Central and South America and Caribbean: W:33|M:175 | T:208 | 1% These data were obtained by a headcount of personnel. There was no significant change in the number of Vitro employees compared to the previous period.
2-8	Workers who are not employees	**Total number of workers who are not employees:** US and Canada: 244 **Most common contractual relations:** Outsourcing agencies - Temporary Workers - Full Time **Most common type of work:** Factory operators, production support, cleaning, security These data were obtained by a headcount of personnel. There was no significant change in the number of Vitro employees compared to the previous period.
2-9	Governance structure and composition	Corporate Governance - Page 23
2-15	Conflicts of interest	Vitro Code of Ethics and Conduct - Page 56

Cont	Description	Response or reference
2-16	Communication of critical concerns	Vitro Code of Ethics and Conduct - Page 56 Ethics Committee - Page 59 No significant critical concerns were communicated to the highest governance body in 2021.
2-22	Statement on sustainability strategy	Letter to Stakeholders - Page 11
2-23	Policy commitments	Vitro Code of Ethics and Conduct - Page 56 Regulatory Compliance - Page 60 **Guidelines on respect for human rights:** Vitro is committed to respecting and enforcing human rights, and we recognize their importance and their universality. We comply with the laws of each country where we operate and are present, and abide by international standards in this area, and we know that human rights are inherent, inalienable, indivisible and interdependent. **Link to Vitro Code of Ethics and Conduct:** https://www.vitro.com/media/4350/codigo-de-etica-vitro.pdf
2-26	Mechanisms for seeking advice and raising concerns	**Mechanisms for seeking advice on ethical concerns:** Ethics Committee Process - Page 59 **Process for raising concerns about the organization's business conduct:** Whistleblower hotline - Page 59
2-27	Compliance with laws and regulations	In the period from January to December 2021, there were no administrative procedures brought against the company or opened that might be considered a significant risk to the business.
2-28	Membership associations	Membership in organizations and associations - Page 92
2-30	Collective bargaining agreements	100% of our employees are covered by collective bargaining agreements where the laws so require.
3. MATERIAL TOPICS		
3-1	Process to determine material topics	Materiality Analysis - Page 51
3-2	List of material topics	Materiality Analysis - Page 51
201. ECONOMIC PERFORMANCE		
201-1	Direct economic value generated and distributed	Consolidated Financial Statements - Page 101
201-3	Defined benefit and other retirement plans	Labor Practices and Quality of Life - Page 70 At Vitro, all employees receive the wages and benefits established by law, along with incentives in keeping with their performance.
205. ANTICORRUPTION		
205-1	Operations assessed for risks related to corruption	Vitro Code of Ethics and Conduct - Page 56 Regulatory Compliance - Page 60 Alert! Whistleblower Hotline - Page 59
205-2	Communication and training about anti-corruption policies and procedures	Vitro Code of Ethics and Conduct - Page 56
205-3	Confirmed incidents of corruption and actions taken	Alert! Whistleblower Hotline - Page 59 In 2021 there were no material or significant instances of legal non-compliance that might affect the ordinary course of business of the Company or its subsidiaries.
206. ANTI-COMPETITIVE BEHAVIOR		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Vitro Code of Ethics and Conduct - Page 56 In 2021 there were no material or significant instances of legal non-compliance that might affect the ordinary course of business of the Company or its subsidiaries.
301. MATERIALS		
301-2	Recycled inputs used	Circular Economy - Page 73
301-3	Reclaimed products and their packaging materials	Circular Economy - Page 73

Cont	Description	Response or reference
302. ENERGY		
302-1	Energy consumption within the organization	Energy Efficiency - Page 75 Total energy consumption: 26,613,887.18 GJ The factors used to calculate this consumption are taken from the California Heat Content of Natural Gas Deliveries to Consumers, the Texas Heat Content of Natural Gas Deliveries to Consumers, the 2021 list of fuels and caloric power produced by SENER-CONUEE and the EPA Emission Factors Hub
302-3	Energy intensity	Energy Efficiency - Page 75
302-4	Reduction of energy consumption	Energy Efficiency - Page 75
302-5	Reductions in energy requirements of products and services	Energy Efficiency - Page 75
303. WATER AND EFFLUENTS		
303-3	Water withdrawal	

	Megaliters
Total water withdrawal from all areas in megaliters, and a breakdown of this total by the following sources, if applicable:	10,224.37
Surface water	0
Ground water	5045.51
Sea water	0
Produced water	1676.81
Third-party water	3502.46

	Megaliters
Total water withdrawal from all areas with water stress in megaliters, and a breakdown of this total by the following sources, if applicable:	7281.01
Surface water	0
Ground water	4818.37
Sea water	0
Produced water	0
Third-party water	2462.71, 1692.27 wastewater and 770.4 municipal or piped water

*Water stress areas determined using WRI Aqueduct Methodology. Methodology applied starting 2019.

303-4 Water discharges

	Megaliters
Total water discharge to all areas	6239.35
Total water discharge to all areas with water stress in megaliters, and a breakdown of this total by the following categories:	4790.51

303-5 Water consumption

	Megaliters
Total water consumption from all areas in megaliters:	3,985.43
Total water consumption from all areas with water stress in megaliters:	2,490.57

304. BIODIVERSITY		
304-3	Habitats protected or restored	Habitat - Page 90
305. EMISSIONS		
305-1	Direct (Scope 1) GHG emissions	Emissions and Climate Change - Page 76 S1 Emissions: 1,296,388.91 tCO_2e The base year for the calculation is 2018; Scope 1 emissions reported in that year were 1,321,814.48 tCO_2e

Cont	Description	Response or reference
305-2	Indirect (Scope 2) GHG emissions from power generation	Emissions and Climate Change - Page 76 S2 Emissions: 882,242.53 tCO_2e The base year for the calculation is 2018; Scope 2 emissions reported in that year were 1,094,070.41 tCO2e Note: The 2020 RENE and EPA emission factor is used.
305-3	Other indirect GHG emissions (Scope 3)	Emissions and Climate Change - Page 76 Scope 3 emissions: 821.6 tCO_2e This calculation includes only business travel.
305-4	GHG emission intensity	Emissions and Climate Change - Page 76 Carbon footprint intensity: 0.63 tCO_2e per metric ton of equivalent product (including S1 and S2 emissions)
305-5	Reduction of GHG emissions	Emissions and Climate Change - Page 76 In 2021, our GHG emissions intensity declined by 2% from 2020. Our total emissions declined by 12%.
305-6	Emissions of ozone-depleting substances (ODS)	No emissions of substances that might damage the ozone layer (Mtons CFC-11e) were detected in our operations in 2021.
306. WASTE		
306-2	Management of significant waste-related impacts	Circular economy - page 73
306-3	Waste generated	Circular economy - page 73 Total waste generated: 136,733.15 metric tons
306-4	Waste diverted from disposal	71% of waste were sent to recycling or other recovery processes
306-5	Waste diverted from disposal	29% of waste was sent for confinement
308. SUPPLIER ENVIRONMENTAL ASSESSMENT		
308-1	New suppliers that were screened using environmental criteria	In 2021, 125 new suppliers were evaluated for environmental impacts
308-2	Negative environmental impacts in the supply chain and actions taken	Number of suppliers assessed for environmental impacts. — 125 Number of suppliers identified as having significant actual and potential negative environmental impacts. — 0 Significant actual and potential negative environmental impacts identified in the supply chain. — 0 Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment. — 0% Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why. — 0%
401. EMPLOYMENT		
401-1	New employee hires and employee turnover	**New hires** Mexico: 18-30 W: 426 M: 2327 | 31-50 W: 229 | M: 946 | 51-60 W: 6 M: 55 | 61+: W: 0 M: 0 | US and Canada: 18-30 W: 28 M: 138 | 31-50 W: 45 M: 117 | 51-60 W: 16 M:35 | 61+: W:0 M:5 | Europe and Asia: 18-30 W:38 M:111 | 31-50 W:45 M:117 | 51-60 W:10 M:11 | 61+: W:1 M: 0 | LATAM: 18-30 W:4 M:10 | 31-50 W:1 M:10 | 51-60 W:0 M:0 | 61+:W:0 M:0| **Employee turnover** Mexico: 18-30 W: 167 M: 1037 | 31-50 W: 99 M: 498 | 51-60 W: 8 M: 50 | 61+: W: 2 M: 11 | US and Canada: 18-30 W: 73 M: 203 | 31-50 W: 126 M: 319 | 51-60 W: 61 M:140 | 61+: W:34 M:112 | Europe and Asia: 18-30 W:19 M:81 | 31-50 W:28 M:68 | 51-60 W:8 M:11 | 61+: W:3 M: 1 | LATAM: 18-30 W:1 M:8 | 31-50 W:1 M:7 | 51-60 W:0 M:0 | 61+:W:0 M:0|
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Labor Practices and Quality of Life - Page 70 Some of the benefits we offer are: life insurance, sanitary assistance, coverage for temporary and permanent disability, parental leave, and retirement reserve
401-3	Parental leave	All employees, in all of Vitro's global operations, are entitled to parental leave

Cont	Description	Response or reference
402. LABOR-MANAGEMENT RELATIONS		
402-1	Minimum notice periods regarding operational changes	All the periods of prior notice of organizational change established in our collective bargaining contracts are respected fully. These agreements also include an assurance of physical safety protection through the review and regular provision of personal protection equipment.
403. OCCUPATIONAL HEALTH AND SAFETY		
403-1	Occupational health and safety management system	Occupational Safety and Health – Page 65 **Legal requirements of the occupational health and safety management system:** Vitro's EHS system is executed in accordance with the applicable laws in the countries where it operates. **Recognized risk management and/or management system standards/guidelines:** Behavioral Feedback, Awareness-Building and Training, Unsafe Condition Inspections, Accident Investigation/Analysis, EHS Alert Notifications, Lessons Learned / EHS Alerts, Risk Analysis/Operating Controls, Internal and Corporate Audits, Management Meetings, EHS Metrics by Leader, Health and Ergonomics **Scope of the occupational health and safety management system:** The standards extend to all Vitro plants and all personnel working in those plants.
403-2	Hazard identification, risk assessment, incident investigation and occupational health services	Occupational Safety and Health – Page 65 **Processes used to identify work-related hazards:** We have a risk analysis methodology as well as unsafe condition inspections through Gemba walks involving various plant leaders. We also have a process for behavioral observation and feedback, intended to promote safe behavior and eliminate unsafe acts, both based on effective feedback by leaders. **How the results are used:** We have indicators at the plant level and by leader, which are reviewed each month. These indicators reflect the performance of each plant/leader regarding compliance with the EHS standards assigned to them. Training sessions are scheduled to increase the level of awareness in EHS topics among workers and leaders, as well as worker's knowledge of their job operations. **Processes for workers to report work-related hazards:** Workers may notify the company of hazardous situations through various channels. 1. Safety talks with their supervisors 2. Vitro hotline (anonymous) 3. Annual engagement survey (anonymous) 4. Risk analysis involving workers. **Policies and processes for workers to remove themselves from work situations that they believe could cause injury or ill health:** Personnel are encouraged to refuse to work: If they do not know how to do a job, if they have not been trained, or if they observe an uncontrolled hazard or risk. STOP AND ASK YOUR SUPERVISOR. **Processes used to investigate work-related incidents:** EHS standards include accident investigation, which uses the "5 Why's" methodology to identify root causes and decide on courses of action. This is recorded in Intelex software. The same software tracks implementation of corrective action.
403-3		Medical departments in each plant participate in risk analysis in order to identify risks to health; they also play an important role in implementation and follow-up on worker health programs, as well as work micro-environment studies.
403-4	Worker participation, consultation, and communication on occupational health and safety	**Description of the processes for worker participation and consultation in the development, implementation, and evaluation of the occupational health and safety management system:** Workers may notify the company of hazardous situations through various channels. 1. Safety talks with their supervisors 2. Vitro hotline (anonymous) 3. Annual engagement survey (anonymous) 4. Risk analysis involving workers. **Joint management-worker health and safety committees:** Each plant in Mexico and Latinoamerica has a health and safety committee which participates in accident investigations, inspects working conditions, participates in safety promotion events, etc.
403-5	Worker training on occupational health and safety	Training and Development – Page 68 35% of training hours provided in 2021 had to do with issues relating to Environment, Safety and Health
403-6	Promotion of worker health	**Voluntary health promotion services and programs offered to workers to address major non-work-related health risks:** Among Vitro's health programs are medical campaigns at plants where they receive various prevention services and programs, such as cholesterol, nutrition, diabetes, prostate cancer, vasectomy, oral health, breast cancer, high blood pressure, and others.

Cont	Description	Response or reference
403-9	Work-related injuries	**Number of fatalities:** Zero **Number and rate of high-consequence work-related injuries (excluding fatalities):** 90 incapacitating accidents, accident rate/100 employees = 0.64 **Number and rate of recordable work-related injuries:** 840 total accidents; Accident rate/100 employees = 5.96 Main types of work-related injury: Finger lacerations and fractures **For all workers who are not employees but whose work and/or workplace is controlled by the organization:** **Number of fatalities:** Zero **Method for determining work-related hazards that pose a risk of high-consequence injury:** We have a risk analysis methodology as well as unsafe condition inspections through Gemba walks involving various plant leaders. **Hazards that have caused or contributed to high-consequence injuries during the reporting period:** Glass, moving machinery, tools, forklifts **Actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls:** Implementation of engineering controls to eradicate the probability of human error. Administrative controls (training, work procedures, checklists, signage, task observation, etc.) EPP Assignment/Improvement. **Calculation of rates:** Vitro uses the Accident index, which measures the frequency and gravity of accidents. This metric extends to all people employed by Vitro. **Additional information:** We have a software called Intelex, which administers information on accident investigations, action plans, behavioral observation/feedback, reporting of unsafe conditions, risk analysis action plants, etc. The Accident rate is calculated using Excel worksheets, which are prepared each month, along with other relevant indicators.
403-10	Work-related ill health	**Number of fatalities as a result of work-related ill health:** zero. **Number of cases of recordable work-related ill health:** zero. **For all workers who are not employees but whose work and/or workplace is controlled by the organization: Number of fatalities as a result of work-related ill health:** zero **How work-related hazards that pose a risk of ill health have been determined:** We have a risk analysis methodology as well as unsafe condition inspections through Gemba walks involving various plant leaders. **Actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls:** Implementation of engineering controls to eradicate the probability of human error. Administrative controls (training, work procedures, checklists, signage, task observation, etc.) EPP Assignment/Improvement.
404. TRAINING AND EDUCATION		
404-1	Average hours of training per year per employee	Training and Development - Page 68
404-2	Programs for upgrading employee skills and transition assistance programs	Training and Development - Page 68
404-3	Percentage of employees receiving regular performance and career development reviews	Training and Development - Page 68
405. DIVERSITY AND EQUAL OPPORTUNITY		
405-1	Diversity of governance bodies and employees	Governance Structure and Committees - Page 24 Us - Page 62 Inclusion and Diversity - Page 64
406. NON-DISCRIMINATION		
406-1	Incidents of discrimination and corrective actions taken	Vitro Code of Ethics and Conduct - Page 56 Inclusion and Diversity - Page 64 Labor Practices and Quality of Life - Page 70 Whistleblower Hotline - Page 59 In 2021 there were no material or significant instances of legal non-compliance that might affect the ordinary course of business for the company and its subsidiaries as a result of discrimination. Number of confirmed cases of discrimination during the period of this report: Zero.

Cont	Description	Response or reference
407. FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Regulatory Compliance – Page 60 Labor Practices and Quality of Life – Page 70 No operations or suppliers have been identified in which workers' right to freedom of association or collective bargaining may have been infringed or which pose a significant risk of doing so in any of the operations within the company's value chain. Internally, Vitro has a Code of Ethics and Conduct explaining workers' rights and regulatory compliance regarding freedom of association. For suppliers, we have supplier quality manuals, self-evaluations with evidence and on-site audits to verify workers' status.
408. CHILD LABOR		
408-1	Operations and suppliers at significant risk for incidents of child labor	Regulatory Compliance – Page 60 Labor Practices and Quality of Life – Page 70 No operations or suppliers have been identified in which child labor is employed or which pose a significant risk of child labor or the exposure of young workers to hazardous jobs. Internally, 100% of Vitro operations have Selection and Recruitment Policies prohibiting child labor in every country where we operate. For suppliers, we have supplier quality manuals, self-evaluations with evidence and on-site audits to verify workers' status.
409. FORCED OR COMPULSORY LABOR		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Regulatory Compliance – Page 60 Labor Practices and Quality of Life – Page 70 No operations or suppliers have been identified in which slave labor is employed or which pose a significant risk of slave labor or other forms of compulsory labor. Internally, 100% of Vitro operations have Selection and Recruitment Policies prohibiting slave labor in every country where we operate. For suppliers, we have supplier quality manuals, self-evaluations with evidence and on-site audits to verify workers' status.
410. SECURITY PRACTICES		
410-1	Security personnel trained in human rights policies or procedures	In 2021, 94% of our security staff received formal training in specific human rights policies and procedures of the organization and their application to security. This percentage includes all personnel employed by Vitro.
411. RIGHTS OF INDIGENOUS PEOPLES		
411-1	Incidents of violations involving rights of indigenous peoples	Regulatory Compliance - Page 60 There were no material or significant incidents of non-compliance with the law in 2021 that might have affected the ordinary course of Company business or that of its subsidiaries as a result of violations of the rights of indigenous peoples. **Total number of confirmed cases of discrimination during the period of this report:** Zero.
413. LOCAL COMMUNITY		
413-1	Operations with local community engagement, impact assessments, and development programs	Vitro Community - Page 85
414. SUPPLIER SOCIAL ASSESSMENT		
414-1	New suppliers that were screened using social criteria	In 2021, 125 new suppliers were screened for social impacts.
414-2	Negative social impacts in the supply chain and actions taken	Number of suppliers assessed for social impacts: 125 Number of suppliers identified as having significant actual and potential negative social impacts: 0 Significant actual and potential negative social impacts identified in the supply chain: 0 Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment: 0% Percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment, and why: 0%

Cont	Description	Response or reference
416. CUSTOMER HEALTH AND SAFETY		
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Vitro Code of Ethics and Conduct - Page 56 Regulatory Compliance - Page 60 In 2021 there were no material or significant instances of legal noncompliance that might affect the ordinary course of business for the company or its subsidiaries in connection with such issues.
417. MARKETING AND LABELING		
417-1	Requirements for product and service information and labeling	**Inorganic Chemicals Business** Salts for human consumption produced by our Inorganic Chemicals division Industria follow specific labeling regulations and comply with various Official Mexican Standards that establish labeling requirements for table salt, and which control the use and consumption of iodized salt in order for consumers to make informed decisions. We ensure that our products comply with the highest quality standards, including ISO-9001 certification and the Comprehensive Responsibility Management System (SARI) of the National Chemical Industry Association. **Flat Glass** For the applicable products, we abide by regulations like EU REACH, EU RoHS, RMI Responsible Minerals Initiative and California Prop65. **Architectural Glass** Our Architectural Glass division voluntarily monitors end products through the Living Building Challenge Red List and Cradle to Cradle Material Health certification. We ensure that our products comply with the highest quality standards, including ISO-9001 certification and the Comprehensive Responsibility Management System (SARI) of the National Chemical Industry Association.
417-2	Incidents of non-compliance concerning product and service information and labeling	**Incidents of non-compliance with regulations resulting in a fine or penalty:** 0 **Incidents of non-compliance with regulations resulting in a warning:** 0 **Incidents of non-compliance with voluntary codes:** 13
417-3	Incidents of non-compliance concerning marketing communications	In 2021 there were no material or significant instances of legal noncompliance that might affect the ordinary course of business for the company or its subsidiaries in connection with marketing communications.
418. CUSTOMER PRIVACY		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	In 2020, there were no identified claims of violations of customer privacy or loss of customer data. Users of the websites of Vitro and its subsidiaries are entitled to exercise their ARCO rights (Access, Rectification, Cancellation and Opposition) by directly sending their request to the person responsible at the e-mail protecciondedatos@vitro.com For more information about Vitro's Privacy Notice, visit the corporate website at vitro.com/es/aviso-de-privacidad

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Dividend policy
The declaration, amount and payment of dividends are decided upon by a majority of shareholders with voting rights, in the General Ordinary Shareholders' Meeting. This decision is generally based on a recommendation from the Board of Directors. The terms and conditions for payment of the dividends declared by the corresponding Shareholders' meeting are generally proposed by the Board of Directors, whose objective in terms of dividends is to maintain a healthy financial structure that allows the Company to consistently pay dividends.

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LIMITED INDEPENDENT ASSURANCE REPORT ON THE 2021 INTEGRATED ANNUAL REPORT

To management of Vitro, S.A.B. de C.V.

Identification of the subject matter information

We have been engaged by Vitro, S.A.B. de C.V. (Vitro) to perform assurance procedures to provide limited assurance on certain information of Vitro (hereinafter referred as "Vitro" or the Company") included in the Vitro´s 2021 Integrated Annual Report corresponding to the year ended December 31, 2021.

Our work was carried out by an independent and multidisciplinary team that includes assurance professionals and sustainability specialists. We used the work of sustainability specialists, mainly, to determine the reasonableness and traceability of the Company´s sustainability aspects within the indicators assured.

Our assurance commitment does not extend to the information related to prior periods or any other information included in the 2021 Integrated Annual Report.

Criteria

The criteria used by the Company to prepare the information included in the 2021 Integrated Annual Report, subject of the limited assurance, were established considering the terms and conditions defined by the GRI (Global Reporting Initiative) Standards, which are detailed in the attached Appendix A.

Company´s responsibility regarding subject matter information

The Company is responsible of:

- The content of the 2021 Integrated Annual Report, which includes determining the coverage and the performance indicators to be included, and their relevance to the stakeholders to which it is directed;
- The selection and definition of the applicable criteria for the preparation of the Report. The criteria adopted by the Company are those defined in the GRI Standards;
- The availability of appropriate records to support the management process of the relevant information and the execution of the performance measurement based on the established criteria.
- The design, implementation and execution of internal controls to prepare the sustainability information free from material misstatement, due to fraud or error;
- The preparation and presentation of the 2021 Integrated Annual Report.

The Company's 2021 Integrated Annual Report is subject to inherent uncertainty due to the use of non-financial information, which is subject to greater inherent limitations than financial information, given the nature of the methods used to determine, calculate, sample or estimate such information. In preparing the 2021 Integrated Annual Report, the Company´s Management makes qualitative interpretations about the relevance, materiality and accuracy of the information that are subject to assumptions and judgements.

Independence and quality control

We have complied with the ethical and independence requirements defined by the Code of Professional Ethics for Public Accountants issued by the International Ethics Standard Board for Accountants (IESBA), which is based on the principles of integrity, objectivity, professional competence, diligence, confidentiality and professional behavior.

Our Firm applies the International Standard on Quality Control 1 (ISQC 1) and therefore maintains an integral quality control system that includes policies and procedures documented with regards to the compliance with ethical requirements, professional standards and applicable laws and regulations requirements.

Deloitte.

Responsibility of the independent professionals regarding the assignment

Our responsibility is to express a limited assurance conclusion on certain information included in the Company's 2021 Integrated Annual Report based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance work in accordance with the "International Standard for Assurance Engagements, Other than Audits or Reviews of Historical Financial Information" ISAE 3000 - Revised issued by the International Auditing and Assurance Standards Board (IAASB). This standard requires planning and performing work to obtain limited assurance as to whether the information in the 2021 Integrated Annual Report is free from material error.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, evaluation of the suitability of quantification methods and reporting policies, and agreement with the underlying records.

Due to the assignment circumstances, we have performed the following activities:

- Interview the Company's management and personnel responsible for collecting the information and preparing the selected performance indicators in order to obtain an understanding of the Company's policies on sustainability.

- Inquire to obtain a general understanding of the Company's control environment and information systems, without evaluating the design of particular control activities nor obtaining evidence of their implementation and effectiveness.

- Understand the tools used to generate and report non-financial information through inquires with the personnel in charge.

- Carry out substantive tests on a random selective basis of sustainability information identified by the Company, to determine the standards and indicators subject to limited assurance and corroborate that the data has been adequately measured, recorded, compiled, and reported through:
  - Inspection
  - Observation
  - Confirmation
  - Recalculation

- Comparison of the contents presented by the Administration with what is established in the criteria section of this report.

The Appendix A details the GRI indicators included in the assignment's scope.

Our limited assurance engagement was performed only regarding the sustainability standards and performance indicators included in the Appendix A, for the year ended December 31, 2021; and we have not performed any assurance procedure regarding prior years, future projections and goals, or any other items included in the 2021 Integrated Annual Report and, therefore, we do not express a conclusion in this regard.

A limited assurance engagement implies evaluating the Company's use of the criteria as a guideline for the preparation of the sustainability information included in the 2021 Integrated Annual Report; evaluating the risks of material misstatement in reporting due to fraud or error; responding to assessed risks if necessary; and evaluating the general presentation of the information in the 2021 Integrated Annual Report. The scope of a limited assurance engagement is substantially less than that of a reasonable assurance engagement regarding both risk assessment procedures, including an understanding of internal control, and procedures performed in response to assessed risks. Therefore, we do not express a reasonable assurance conclusion about whether the sustainability information in the Company's report has been prepared in all material respects, in accordance with what is established in the criteria section of this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Deloitte.

Conclusion

Based on the work performed, the procedures carried out, and the evidence obtained, no matter has come to our attention that would lead us to believe that the sustainability standards and performance indicators included in the Company's 2021 Integrated Annual Report for the year ended December 31, 2021, have not complied in all material aspects, in accordance with the criteria section of this report.

Restrictions of the use of the assurance report

Our report is issued solely for the purpose defined in the first paragraph and is not to be used for any other purpose or distributed to other parties on its own. This report refers only to the matters mentioned in the preceding sections and to the sustainability information reviewed and does not extend to any other financial and non-financial information included in the 2021 Integrated Annual Report of the Company for the year ended December 31, 2021, nor to its financial statements, taken as a whole.

Galaz, Yamazaki, Ruiz Urquiza, S.C.
Member of Deloitte Touche Tohmatsu Limited
Alejandro Pérez Contreras
Partner of Deloitte Auditoría

July 13, 2022

Deloitte.

APPENDIX A

Performance indicators assured for the Company:

Indicator	Description
GRI 2-7 (2021)	Information on employees and other workers
GRI 2-23 (2021)	Policy commitments
GRI 2-26 (2021)	Mechanisms for seeking advice and raising concerns
GRI 205-3 (2016)	Confirmed incidents of corruption and actions taken
GRI 301-2 (2016)	Recycled input materials used
GRI 302-1 (2016)	Energy consumption within the organization
GRI 305-1 (2016)	Direct (Scope 1) GHG emissions
GRI 305-2 (2016)	Energy indirect (Scope 2) GHG emissions
GRI 401-1 (2016)	New employee hires and employee turnover
GRI 403-1 (2018)	Occupational health and safety management system
GRI 403-2 (2018)	Hazard identification, risk assessment, and incident investigation
GRI 403-3 (2018)	Occupational health services
GRI 403-4 (2018)	Worker participation, consultation, and communication on occupational health and safety
GRI 404-1 (2016)	Average hours of training per year per employee
GRI 404-3 (2016)	Percentage of employees receiving regular performance and career development reviews

* The scope of this indicator was limited to the validation of total average hours of training during the year for employee.

This Appendix is part of our Report dated July 13, 2022.

Galaz, Yamazaki, Ruiz Urquiza, S.C.
Member of Deloitte Touche Tohmatsu Limited
Alejandro Pérez Contreras
Partner of Deloitte Auditoría

July 13, 2022