



# 2014 SUSTAINABILITY REPORT













#### ABOUT THE REPORT

Türkiye Şişe ve Cam Fabrikaları A.Ş. ("Şişecam Group" or "Şişecam") is pleased to present its second sustainability report that has been prepared in accordance with the GRI G4 Reporting Guidelines and has been approved by GRI for the 12 month period ending 31 December 2014 to core level.

The GRI guideline provides a framework for reporting on the economic, environmental and social impacts of companies in terms of their sustainability, their targets, the activities that they undertake in relation to their impacts and the results of these activities. Further information can be found at the following link: www.globalreporting.org

This report addresses the economic, environmental and social impacts and performance of \$i\$ecam's operations in Turkey in 2014. The economic indicator data presented in this report is aligned with the consolidated results reported in \$i\$ecam's financial reporting and includes both \$i\$ecam Group's Turkish and overseas legal entities. The reporting boundary for all other indicators has been set as \$i\$ecam Group's Turkish entities for this report'. It is \$i\$ecam's intention to continue to expand the scope of its Sustainability Reporting to cover its overseas entities in future reporting periods.

#### The Period and Frequency of the Report

This report covers the 2014 calendar year. Where available and relevant, we have also included 2013 data for comparative purposes as well as relevant updates from the year-to-date in 2015. There is a G4 index according to GRI G4 principles at the end of the report. It is \$i\secam's intention to continue to report annually to its stakeholders.

#### Feedback

Collecting stakeholder feedback is vital for helping us improve both our practices and reporting processes. We closely examine every issue that comes to our attention, and we use any feedback from our stakeholders to continuously improve our practices. We invite our stakeholders to forward any opinions, suggestions or complaints to:

Dilek Bolcan
Environmental Manager
Corporate Development and Sustainability Department
+90 212 350 39 68
dbolcan@sisecam.com

The sustainability data covers all Şişecam's subsidiaries in Turkey but excludes our joint venture operations, Oxyvit Kimya Sanayii ve Ticaret A.S. and Omco-Istanbul Kalıp Sanayii ve Ticaret A.S.



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SUSTAINABILITY IS AT THE CORE OF OUR PLANS FOR HELPING TO REALISE OUR GOAL TO BE ONE OF THE TOP THREE COMPANIES IN THE GLOBAL GLASS INDUSTRY

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#### Esteemed Stakeholders of Şişecam,

With a long history of being a responsible corporate citizen and an innovative industrial leader in Turkey and internationally throughout its 80-year corporate history, \$işecam regards sustainability as a long-term process and fulfills its requirements accordingly.

As a global company fully committed to upholding the highest ethical values, transparency, accountability and integrity ever since its inception, \$i\timesecam is fully committed to ensuring compliance with all laws in all regions where it has a presence. Linked to this commitment, \$i\timesecam underwent its first-ever corporate governance rating process in 2014, achieving one of the highest scores among the highest-scoring industrial companies in the initial assessment in Turkey.

As an international giant operating in an energyintensive sector, \$iṣecam takes sustainability very seriously and sensitively manage all the activities in its most material areas that include energy management and improvement, reducing greenhouse gas (GHG) emissions from the operations, ensuring the safety of our workforce and customers, the implementation of international standards and best practice in all our national and international operations. Indeed, as part of our focus on increasing efficiency, safety and profitability, sustainability is at the core of our plans for helping to realize our goal to be one of the top three companies in the global glass industry.

We believe that communicating our efforts and progress on sustainability demonstrates our firm dedication to our valued stakeholders. For this purpose, we prepared this, our second, consecutive sustainability report in line with the GRI G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) that outlines many of the projects and actions we have already taken in order to measure and improve our sustainability performance.

I am certain that we will continue to attain important progresses in our sustainability journey and I would like to extend my sincere thanks to all our stakeholders for their valuable contributions and their unwavering support and for helping to maintain \$i\$ecam as one of the most respected in Turkey and internationally.

Yours sincerely,

H. Frsin Özince

Chairman of the Board of Directors

## LETTER FROM THE



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OUR FOCUS IS ON INTEGRATING
SUSTAINABILITY IN ALL THAT WE DO AND
ON BEING A RESPONSIBLE CORPORATE
CITIZEN AND GLOBAL LEADER IN OUR
INDUSTRIES IN TERMS OF INNOVATION
AND TECHNOLOGY

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#### To Our Stakeholders,

I am delighted to present \$isecam Group's second Sustainability Report prepared in accordance with the Sustainability Reporting Guidelines (GRI) G4 Core level of the Global Reporting Initiative for 2014. In addition to \$isecam Group Sustainability Report, we have simultaneously issued Sustainability Reports for the operations in Turkey of our Flatglass, Glassware and Glass Packaging Businesses and Soda Sanayii A.\$. from our Chemicals Business in accordance with GRI G4.

We have been operating as a responsible company for 80 years that is fully committed to respecting people and the environment whilst creating high-quality and energy-efficient products that enhance people's lives. At the same time, we are steadily moving towards our target of being one of the top three glass companies globally and in providing products that add value and that can enrich all aspects of life.

In addition, we are in constant interaction with our global stakeholders. Our products reach millions of customers through our operations in 44 plants in 13

countries and our exports to 150 countries as a result of our production network across the globe in Flat Glass, Glass Packaging, Glassware and Chemicals Businesses.

With the production of 4.2 million tons of glass, 2.1 million tons of soda ash and 4 million tons of industrial raw materials in 2014, our Group is taking concrete steps towards sustainable growth with our financial performance. Despite difficult economic conditions in some of the markets where we operate in 2014, Şişecam not only increased its net sales income by 15% to TRY 6.9 billion but also increased its share of international sales to 52% of total turnover. We also successfully maintained our BA1 and BB+ corporate credit ratings by international rating agencies Moody's and S&P in 2014. In addition, as exemplifying our strong reputation as an ethical and responsible company, our Group was evaluated\* for its Corporate Governance practices for the first time in 2014 and achieved a high score of 9.28, which placed us in the upper ranks amongst the highest scoring industrial companies in the initial assessment.

<sup>\*</sup> The Corporate Governance assessment is conducted by Saha Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A.Ş. (SAHA).

Being fully aware of our responsibilities in the global ecosystem, we consider sustainability not just as financial continuity but as a long term vision that incorporates issues and opportunities related to environmental protection, natural resources, raw materials, consumptions, customers, employees and values and we integrate our sustainable activities

fully throughout our operations. Consequently, our Group focuses its sustainability activities on current and emerging topics through the value chain with the most activities connected to three main topics: energy efficiency, innovation, and compliance with international standards.

#### **ENERGY EFFICIENCY**

We are one of the largest energy consumers in our country with an approximate annual natural gas consumption of 1.5 billion m3. Therefore, energy and energy management are among our most material topics. Our Group targets using natural resources as efficiently as possible, reducing the environmental effects of our operations and continually increasing energy efficiency as part of our corporate environmental and energy strategy. Linked to these plans, we have started applying our Environmental and Energy Policy, in all our global operations. We have already achieved significant savings as a result of increasing energy efficiency and reducing energy consumption and associated greenhouse gas (GHG) emissions in our operations in Turkey and internationally. We have many innovative projects focused on increasing energy savings and there are numerous examples outlined in this report, such as energy efficient furnaces, waste heat recovery and recycling projects.

In order to develop the glass recycling infrastructure and support the transition into a 'recycling society', we have been working on one of the most comprehensive sustainability and social responsibility projects in Turkey since 2011. Each 10% increase in the cullet use ratio during production results in 12% reduction in materials, 2.5% reduction in energy and 5% reduction in carbon emissions.

Through our 'Cam Yeniden Cam' (Glass and Glass Again) Project, which we started in order to raise Turkey's glass recycling rate to European levels; activities like raising awareness in public to separate glass waste collection, improving the glass packaging waste collection infrastructure, modernizing and increasing the capacity of recycling facilities are undertaken in collaboration with local administrations. Through this project 1.7 billion glass bottles have been recycled since 2011 and the recycling rate has been increased to 17% from 8%. The ultimate goal of the project is increasing the glass recycling rate in Turkey to 60%.

#### INNOVATION

We are targeting being the leader in our selected areas and adapting the fast developments in glass science and technology, during constant innovation to develop highly competitive products and technology ownership. Our Group has incorporated our corporate R&TD (Research and Technological Development) activities that started in 1976, under our "Science and

Technology Center" which is the only and most well equipped center of glass and glass products in Turkey, and one of only a few in Europe.

The future in glass requires in depth expertise and innovation. As a result, we are focused on developing production technologies and enriching our product portfolio with products that add value.

#### **COMPLIANCE WITH INTERNATIONAL STANDARDS**

As a global player, our Group is committed to keeping its operations at international standards level. Consequently, almost all of our facilities both in Turkey and internationally have been certified to international standards for their quality, environment, energy, and occupational health and safety management systems.

All of our activities related to occupational health and safety are performed in line with international best practices. As a result, our Occupational Health and Safety Policy has been implemented to cover all our facilities in Turkey and internationally. Programs, training and activities are being implemented to help us move towards our target of reducing accidents and injuries to zero in all our workplaces.

While improving and applying strategies that support our global vision, we have continued to improve our human resources management in order to attract and retain the workforce that will add value globally and in extending our corporate culture. Similarly, we place importance on equal opportunity in performance management, career development, and training and development programs for all our employees.

In recognition of our responsibilities as a global company, we are determined to continue to improve our sustainability performance and make further progress in sustainability by launching new targets and projects throughout our global operations.

I would like to take this opportunity to thank all our stakeholders for their support, valuable contributions and the trust you have shown in Şişecam as we progress along our sustainability journey.

Sincerely,

Prof. Dr. Ahmet Kırman
Vice Chairman and CEO

Anni Munyen.



# **Şişecam:** an Introduction

- ♦ Global Scale and Presence
- ♦ Şişecam Group Structure
- Mission, Vision and Values
- Risk Management and Internal Audit Activities
- ◆ Compliance with the Law and Legislation
- Ethics and Code of Conduct

#### **GLOBAL SCALE AND PRESENCE**

Founded in 1935 by İşbank upon the directive of Atatürk, Şişecam Group is one of the most established industrial organizations in Turkey with 80 years of corporate history, and it is among the world's most prestigious glass manufacturers due to its high degree of specialization and the outstanding competitive edge of its operations. In addition to being one of the most valued brands in Turkey and internationally, Şişecam Group has also managed to successfully penetrate into international markets and currently have 44 production facilities in 13 countries while we export to over 150 countries.

At the end of 2014, Şişecam Group had a global workforce of over 21,000 people and over 12,000 in Turkey. In 2014, Group achieved international sales of TRY 3.4 billion, 4.2 million tons of glass production, 2.1 million tons of soda ash production and 4 million tons of industrial raw material production in Turkey and internationally.

Sisecam Group consists of four operating segments including companies operating in flat glass, glassware, glass packaging, chemicals, and others that provide export, import, energy and insurance agency services. The Group's main area of activity is glass production and it deals with complementary industrial and commercial operations for glass production. Additionally, the Group participates in the management of various industrial and commercial companies. The Group is the leader in its business lines in Turkey; encompassing all the key areas of glass production, i.e.flat glass, glassware, glass packaging, and glass fiber as well as soda and chromium chemicals.

Further information about the different business lines of Şişecam Group are in the following section.







150 COUNTRIES



WORKFORCE
>21,000
Employees Globally
>12,000
Employees in Turkey

#### **ŞİŞECAM GROUP STRUCTURE**

#### **GROUP'S ORGANIZATIONS AND NATURE OF OPERATIONS**

Şişecam Group (Şişecam) consists of a holding company, T. Şişe ve Cam Fabrikaları A.Ş., 54 subsidiaries, 5 joint ventures and 3 associates¹. The Group was established in 1935 by Türkiye İş Bankası A.Ş. ("İş Bankası"), one of the largest private commercial banks in Turkey. The shares of the Company have been publicly traded on the Borsa Istanbul A.Ş. ("BIST"), formerly named as

Istanbul Stock Exchange ("ISE"), since 1986. As of the balance sheet date, İş Bankası holds 65.47% of the shares and retains the control of the Group.

As at the reporting period end, the principal shareholdings of Şişecam Group are shown below.

Shareholder	Amount TRY	Share %
T. İş Bankası A.Ş.	1,113,022,171	65.47
T. İş Bankası Pension Fund	75,766,774	4.46
Efes Holding A.Ş.	63,188,280	3.72
Anadolu Hayat Emeklilik A.Ş.	816,991	0.05
Publicly Traded Portion	447,205,784	26.30
	1,700,000,000	100.00

#### **ŞİŞECAM GROUP BUSINESS LINES**

The following section contains an overview of \$isecam's 4 main business lines. More detailed information on each of the business lines and on its sustainability performance and impacts can be found

in each business line's Sustainability Report for 2014, which can be accessed from the websites of each business line.

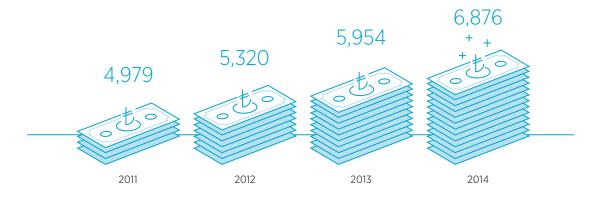
Please see the appendices to this report for the list of all entities included in the organization's consolidated financial statements.

#### FINANCIAL PERFORMANCE

Notwithstanding challenging economic conditions locally and internationally, \$isecam managed to increase total sales by 15.5% from the prior year to TRY 6,876 million in 2014. As the leader in Turkey in its business lines, \$isecam maintains this leadership through a continued focus not only on financial indicators but also

on the underlying key drivers of financial performance, which include brand management, business integrity, commitment to global standards and sustainability and effective collaboration with our key stakeholder groups across all areas of our business.

#### TOTAL SALES IN TURKISH LIRA (MILLIONS)







#### **CORPORATE GOVERNANCE**

Sisecam's principles of equality, transparency, accountability and responsibility are the cornerstone of its approach to corporate governance. Our vision is to be a global industry leader, and technological development, innovation and a strong commitment to corporate governance are the core aspects to achieving this vision. In order to realize our long-term vision for

our company, the adoption of corporate governance principles and implementation of best practice are paramount. This vision helps ensure we can appoint board members and senior managers with the skills, experience and perspective to make the strategic decisions needed to allow us to realize our long-term goals.



#### **FLAT GLASS BUSINESS**



28%
OF TOTAL ŞİŞECAM
SALES IN 2014

In order to carry out the activities of \$iṣecam Group in the field of flat glass, Trakya Cam San. A.\$., was founded in 1978 as a subsidiary of Türkiye \$iṣe ve Cam Fabrikaları A.\$. It is the largest flat glass producer in Turkey, the 5<sup>th</sup> in the world and the 2<sup>nd</sup> in Europe in 2015

**Production Facilities Abroad** 

Trakya Glass Bulgaria EAD - Bulgaria

Float Plant

Autoglass Plant

Glass Processing Plant

Richard Fritz Holding GmbH - Germany, Slovakia,

Hungary

GlassCorp SA - Romania

HNG Float Limited (JV) - India

SG Glass Egypt SAE (JV) - Egypt

Trakya Glass Rus ZAO (JV) - Russia

(flat glass, patterned glass, mirror, laminated glass, coated glass, and glass for architectural applications), automotive glass and glass for other vehicles, energy glass and glass for home appliances.

Şişecam Flat Glass employs the latest technologies in

production and operates in the fields of basic glass

#### **Production Facilities in Turkey**

Trakya Cam San. A.Ş.

Trakya Plant - Kırklareli

Otocam Plant - Kırklareli

Mersin Plant - Mersin

Trakya Yenişehir Cam San. A.Ş. - Bursa Trakya Polatlı Cam San. A.Ş. - Ankara

#### **GLASSWARE BUSINESS**

Turkey's largest glassware producer, Paşabahçe Cam San. A.Ş. carries out the activities of Şişecam Group in the field of glassware and it is the first company founded by Şişecam Group, currently ranks 3rd in the world and 2<sup>nd</sup> in Europe in its business field with its solid distribution channel structure, broad product range, superior production capability and customerfocused strategic approaches. The Glassware group offers its customers over 20,000 glassware items of automated and handmade production in three different segments: household, hotels, restaurants and cafe (HoReCa), industry sectors. The Group has a retail chain business (Paşabahçe Mağazaları A.Ş.), offering a wide range of products to its customers for tabletop and kitchen and has a paper-cardboard packaging business (Camiş Ambalaj San. A.Ş.), which is among the leading companies in its business.



OF TOTAL ŞİŞECAM SALES IN 2014

#### **Production Facilities in Turkey**

#### Paşabahçe Cam San. ve Tic. A.Ş.

Kırklareli Plant - Kırklareli Mersin Plant - Mersin Eskişehir Plant - Eskişehir

Denizli Cam San. ve Tic. A.Ş - Denizli Camis Ambalaj Sanayii A.Ş.

Tuzla Plant - İstanbul Eskişehir Plant - Eskişehir

Paşabahçe Mağazaları A.Ş. (Retail chain with 45 stores)

#### **Production Facilities Abroad**

Trakya Glass Bulgaria EAD-Tableware Plant - Bulgaria Paşabahçe Posuda Limited - Russia



TURKEY'S LARGEST GLASSWARE **PRODUCER** 

> # RANKED 3rd LARGEST IN THE WORLD AND 2<sup>nd</sup> IN EUROPE



#### GLASS PACKAGING BUSINESS



**22%**OF TOTAL ŞİŞECAM
SALES IN 2014

Anadolu Cam San. A.Ş. carries out the activities of Şişecam Group in the field of glass packaging and produces packaging of different colors and sizes for the food, beverage, alcoholic drinks, pharmaceutical and cosmetic sectors. The company has a history that

dates back to 1935 when the first production facility in Paşabahçe, Beykoz was established. Sişecam Glass Packaging, which is the largest glass packaging producer in Turkey, currently ranks  $4^{\rm th}$  in the world and in Europe in its sector.

#### **Production Facilities Abroad**

OOO Ruscam - Russia

OAO Rucam Pokrovsky – Russia

OOO Ruscam Glass - Russia

OOO Ruscam Glass Packaging Holding - Russia

Ruscam Ufa Plant - Russia

Ruscam Kirishi Plant - Russia

Merefa Glass Company Ltd – Ukraine JSC Mina – Georgia

#### **Production Facilities in Turkey**

Anadolu Cam San. A.S.

Mersin Plant - Mersin

Anadolu Cam Yenişehir San. A.Ş. - Bursa

Anadolu Cam Eskişehir San. A.Ş. - Eskişehir

#### **CHEMICALS BUSINESS**

The fundamental operations of the Şişecam Chemicals are carried out by Soda Sanayi A.Ş., which was founded in 1969 to produce soda, besides of the main raw materials of the glass industry started to produce chromium chemicals in 1982. Soda Sanayii is the largest soda ash producer in Turkey and the fourth largest soda ash producer in Europe and the tenth largest in the world. In the field of chromium chemicals, it is the largest sodium dichromate, the largest basic chromium sulphate and fourth largest chromic acid producer in the world. Şişecam Chemicals also produces, glass fiber, industrial raw materials, electricity, vitamin K3 derivatives and sodium metabisulphite.

Şişecam Soda Lucavac d.o.o. - Bosnia Herzegovina

Rudnik Kecnjaka Vijenac. (JV) - Bosnia Herzegovina

**Production Facilities Abroad** 

Camiş Egypt Mining Ltd. Co. - Egypt

Solvay Sodi AD (JV) - Bulgaria

Cromital S.p.a - Italy



OF TOTAL ŞİŞECAM SALES IN 2014

#### **Production Facilities in Turkey**

Soda San. A.Ş. - Mersin

Soda Plant

Kromsan Chromium Compounds Plant

RANKED 1st LARGEST SODIUM DICHROMATE AND BASIC CHROMIUM SULPHATE PRODUCER IN THE WORLD

Camiş Madencilik A.Ş.\*

Cam Elyaf San. A.Ş. - Kocaeli

Oxyvit Kimya San. ve Tic. A.Ş. - Mersin

Camiş Elektrik A.Ş. - Kırklareli



#### **MISSION, VISION AND VALUES**

This section outlines the Mission, Vision and Values that apply to all Şişecam's operations in Turkey and internationally.

#### MISSION

"To be a company that adds value to life through its high-quality products, offering comfort, and that respects people, nature and the law."

#### VISION

"While rising to the top as one of the leading global companies in glass and our other business lines, Sişecam will team up with business partners to deliver innovative solutions; distinguish itself through high-end technology and global brands; and ensure great respect for individuals and the environment."

#### Our Vision Focuses on the Following Core Elements:

Continuous development with innovative ideas

Globally recognized brands

Being a solution and growth partner for our customers through innovative solutions

Distinguishing our company through high-end technology

Environmental awareness and a sustainable approach to production

#### **VALUES**



## WE DERIVE STRENGTH FROM OUR TRADITIONS AND SUPPORT ONE ANOTHER:

- We shall initiate changes that would create a successful future based on strength from our experience and knowledge.
- We shall enhance our reputation through our sustainability commitments and results-oriented approach.
- We shall maintain our legacy and tradition, and it shall be our duty to pass these onto the future generations.



### WE THRIVE AND DEVELOP ONE ANOTHER

- We shall encourage each other to constantly develop our skills.
- We shall continuously be open to changes that would bring us closer to our vision; and we shall make efforts to develop and improve each other with the help of our stakeholders.
- We shall consider creativity and innovation as a means of development, and inspiration.



#### WE EXHIBIT A FAIR AND TRANSPARENT MANAGEMENT APPROACH

- We shall treat all of our stakeholders equally, and we shall pursue winwin strategies that benefit both our stakeholders and our business.
- We shall measure the performance with the same scales, and make the performance evaluations in a fair manner.
- We shall act consistently toward our stakeholders; and we shall not give promises we cannot keep.



#### WE CARE FOR OUR ENVIRONMENT

- We shall commit to our business to achieve the growth and profitability expectations of our shareholders and business partners.
- We shall be customer-focused; we shall quickly respond to suggestions and complaints of our customers, and improve the quality of products and services.
- We shall closely monitor technologies and make appropriate investments as part of our responsibility to the environment and nature; we shall also promote awareness on these issues.



#### WE RESPECT DIFFERENCES

- We shall hire employees from different countries and different cultures; we know that this diversity shall add value to our business.
- We shall freely express our different opinions.
- We shall allow different job categories to work as a team, to learn from each other, and to develop each other in order to sustain our shared values.



#### AWARD: Şişecam gets SAP 'The Year's Strategic Project' Award

Şişecam's Strategic Management Project was rewarded with 'The Year's Strategic Project' award in the SAP Innovation Forum held on 14<sup>th</sup> March 2014. The project was initiated by installing the system and adapting it in March 2013 by SAP, one of the biggest software companies in Europe. A total of 20 corporate data sets have been transferred to web based recording performance systems from manual ones.

#### **RISK MANAGEMENT AND INTERNAL AUDIT ACTIVITIES**

Operating in an intensively competitive environment, \$isecam Group implements efficient risk management and internal audit processes in order to provide adequate risk assurance to its stakeholders. The global crisis that started in 2008, coupled with the geopolitical risks that have become tangible in geographies where we operate, resulted in increased uncertainty. With increasing customer expectations, tightening regulatory requirements and developments in corporate governance, the Risk Management and Internal Audit functions were separated in order to be able to focus on all plants by 2014.

Under this structure, our Group handles existing and potential risks with a proactive approach and carries out audit activities with a "risk-based" perspective. At Sisecam Group, risk management and internal audit activities have been structured under the parent company. The activities are directly reported to the Board of Directors of the parent company in coordination

with the CEOs, managing the core operational areas. The results of regular and planned meetings held with the "Risk Committee", the "Audit Committee", and the "Corporate Governance Committee" which have been established in Şişecam Group companies listed in Borsa İstanbul, are reported to the Boards of Directors in accordance with the legislation. During the activities carried out with the aim of establishing a corporate structure, providing the required assurance to stakeholders, protecting the tangible and intangible assets of Şişecam Group, minimizing the losses caused by uncertainties and maximizing benefit from potential opportunities, communication between the internal audit and risk management functions is maintained at the maximum level and is directed toward the goal of supporting decision-making processes and increasing management efficiency.



#### RISK MANAGEMENT AT ŞİŞECAM GROUP

At Sisecam Group, risk management activities are carried out with a holistic and proactive approach based on enterprise risk management principles. The potential effects of such risks with each other and the characteristics of the countries where the Group operates are also taken into account in the course of operations. Thanks to this perspective, geographical distribution and risk diversification are converted into a significant advantage, and any risks encountered as specific to a country and/or a business segment are integrated with the risk processes before they are implemented elsewhere and the interaction of risks with each other is monitored. Thus, decision support

processes are assisted and efficient use of resources is ensured. The risk catalogues for all business segments across the Group are periodically updated with the participation Sisecam Group employees and the risks are ranked according to their importance. By taking the "risk appetite" of the Board of Directors into account, with regard to analyzed risks, the strategies to be implemented are established and the necessary measures are taken. These risk management activities are not only limited to financial and strategic risks, but also cover operational risks such as production, sales, health and safety, emergency management, information technologies, and environment.

#### INTERNAL AUDIT AT ŞİŞECAM GROUP

The objective of the internal audit activities, which have been carried out within \$i\secam Group for many years, is to assist the healthy development of the Group's companies, to ensure uniformity in practices, and to guarantee that all activities are performed in compliance with internal and external regulations, as well as the execution of corrective actions in a timely manner. In line with the stated objectives, audit

activities are being carried out on ongoing basis within the bodies of the companies of the Group operating domestically and abroad. Internal audit is carried out in accordance with the periodic auditing programs approved by the Board of Directors. During the preparation of the audit programs, the results of the risk management activities are also used, meaning that "risk-based audit" practices are implemented.

#### **COMPLIANCE WITH THE LAW AND LEGISLATION**

Sisecam Group pays regard to complying with the law and legislation with care and caution in every respect and as a leading company and the earliest group in glass production in Turkey; it always shows maximum awareness in obeying competition law and acts due to being the leader in Turkey in its sectors.

In this regard, employees of \$i\$ecam Group are subjected to training regarding regulation and legislation of the competition by the legal consultancy department from time to time. \$i\$ecam Group management expects all its group companies to observe the competition legislation in all their agreements, actions and conducts and that the Legal Consultancy Department will supervise whether they follow the rules in an effective way.

Şişecam Group has comprehensive policies and principles in place that all affiliated companies in Turkey and internationally are required to follow in terms of anti-bribery and corruption, internal audit and risk management. For example, the aim of the Anti Bribery and Corruption Policy² is to clearly set out the commitments and position of Şişecam Group with regards to bribery and corruption and to help uphold the corporate image. This policy, being an integrated part of Code of Conduct adopted by the Group, aims to provide the necessary information for prevention of bribery and corruption in all Group activities and to specify responsibilities and rules in that regard.

#### ETHICS AND CODE OF CONDUCT

All Sisecam Group companies carry out their activities following the Sisecam Group Code of Conduct. There are five main principles in the Code of Conduct: Honesty, Transparency, Impartiality, Confidentiality,

and Compliance with laws and regulations. For the complete Sisecam Group Code of Conduct, please visit the following website: <a href="https://www.sisecam.com.tr/en/investor-relations/code-of-conduct/">www.sisecam.com.tr/en/investor-relations/code-of-conduct/</a>

<sup>2</sup> http://www.sisecam.com.tr/en/investor-relations/anti-bribery-and-corruption-policy-2/



## Our Sustainability Approach

- Sustainability Governance
- Approach to Stakeholders
- Approach to Materiality
- Approach to Standards and Organizations

#### SUSTAINABILITY GOVERNANCE

Sustainability is an integral part of our all-inclusive approach. We consider sustainability not just as financial continuity, but rather as an integrated concept that expands by also preserving the environment, natural resources, consumption, customers and values.

In this regard, Şişecam Corporate Development and Sustainability Department carries out numerous studies to promote and improve the efficiency in all segments of our business. The Chief Officer of this Department who reports directly to the Şişecam CEO is a member of the Executive Board and is responsible for overseeing the following functions beside his other responsibilities.





#### **Environmental Performance**

Co-ordinates projects aimed at developing and implementing principles to monitor, report and continuously improve \$isecam Group's environmental performance.

#### **Energy Supply**

Supplies \$isecam's energy needs, especially natural gas and electricity, by evaluating opportunities for bulk purchases in order to create competitive advantage.





#### **Energy Efficiency**

Continuously creates improvement and saving plans with the activity groups and ensures the implementation of such plans. Monitors and develops energy efficiency systems across plants and units.

#### **Corporate Development And Change Management**

Responsible for improving processes and operations with continuous development approach, managing the governance of Şişecam Operating Model, leading Project Management Office activities and the Change Management Program in the organization.



OUR APPROACH GUIDES
OUR BUSINESS CHOICES,
CUSTOMER ORIENTATION,
COMMUNITY AFFAIRS AND
INDUSTRIAL RELATIONS
AND FOCUSES ON THE
ISSUES THAT ARE MATERIAL
FOR OUR STAKEHOLDERS
AS WELL AS FOR OUR
COMPANY.

#### SUSTAINABILITY COMMITTEE

Şişecam's Sustainability Committee was established in 2015 in order to prioritize and realize the sustainability related issues for Şişecam Group, The Committee comprises the Chief Officer of the Corporate Development and Sustainability Department and the members are Production Vice Presidents of Businesses, Sustainability Director, Human Resources Director,

Corporate Communication Director and Industrial Relationship Director.

The Committee has five working groups, which are named as Environment, Energy, Occupational Health and Safety, Innovation and Social Responsibility.

#### SUSTAINABILITY GOALS

Alongside our continued focus of building on our legacy, Şişecam is adopting a challenging roadmap to guide our future efforts and initiatives in sustainability. This roadmap includes goals for strong, relevant key performance indicators for our business; leadership in compliance with international sustainability standards and best practice; excellence in research and technological development; and a robust process of working with our stakeholders and re-identifying

priority issues for our business. Our approach guides our business choices, customer orientation, community affairs and industrial relations and focuses on the issues that are material for our stakeholders as well as for our company.

We comply with and benchmark ourselves against leading best practice internationally in sustainability.

Strategic Goals	Progress
Create strong sustainability principles	Sustainability strategy road map and accompanying analysis were completed.
Increase energy efficiency	Energy efficiency projects (page 39) and energy efficiency portal studies (page 36) were undertaken.
Enhance and encourage participation in social responsibility projects	Social responsibility projects given in page 70-77 were completed
Strengthen employer brand image and be the most admired and preferred company by the most talented employees	Projects related to Human Resources, as explained on pages 63-69, were completed.
Motivate employees	Projects related to Human Resources, as explained on page 63-69, were completed.
Enhance the value of our corporate culture	Projects related to Human Resources, as explained on page 63-69, were completed.

#### APPROACH TO STAKEHOLDERS

Sisecam uses the stakeholder feedback it receives, to determine its strategically important issues and focus on the sustainability topics that have most relevance to the company and its stakeholders in its sustainability reporting.

While the stakeholders of Şişecam Group of Companies vary between the different business units, the principal stakeholder groups within our Group include employees, suppliers, customers and public institutions. All stakeholders can communicate with us through the telephone and email on the corporate websites. The main stakeholder groups are prioritized based on their ability to influence Sisecam and the level of the company's impact on stakeholders.

As part of the ongoing stakeholder engagement program that formed a direct input to the preparation of this GRI G4 report, the company applied the GRI principle of 'stakeholder inclusiveness' for defining report content, reviewed its stakeholder engagement program and undertook specific additional engagement where it required further information to ensure that it fully understood the priorities of its most important stakeholders based on their interest in, and influence over the activities of our organization.

Şişecam informs, consults, negotiates and proactively monitors the expectations of its stakeholders with regard to its sustainability performance through a range of different engagement channels, such as strategic collaborations, one-to-one meetings, conferences, seminars, workshops, focus group studies, surveys and similar platforms.



#### KEY STAKEHOLDER GROUPS AND ENGAGEMENT

#### EXTERNAL STAKEHOLDERS

Stakeholder Group	Engagement Platforms	Frequency of Stakeholder Engagement	Evaluation of Engagement in the Reporting Period
Customers	Since Şişecam engages with its customers at the level of its business lines, a detailed summary of customer engagement activities is given in the respective 2014 Sustainability Reports for the Şişecam	Continuous interaction by email, social media and telephone Ad hoc meetings as needed	Sisecam engages with its customers as part of routine business activity. Customers are able to submit their feedback regarding the Company's environmental and social performance through a number of channels.
	Businesses.  However, the main means of customer engagement include customer satisfaction surveys, social media, meetings and conferences, feedback received via telephone and email.		Şişecam considers its customers the focus of all its activities. Please refer to the 2014 Sustainability Reports of Şişecam Groups for a summary on each of the business lines' stakeholder engagement approach.
Public authorities/ Regulatory institutions	Systematic reporting     Meetings, forums, conferences	Continuous as general course of business (e.g. by email, telephone, face to face conversation)	Sisecam demonstrates the utmost care in complying fully with the law and regulations in all of its activities.
	Press releases     One-to-one meetings	Meetings as required	For corporate governance at Sisecam, please refer to Corporate Governance section at page 11.
Suppliers	Şişecam's main suppliers include those connected to its Headquarters in Istanbul such as providers of utilities and cleaning. In addition, at the underlying Şişecam Businesses there are many suppliers connected to the Businesses' production activities.	Continuous as general course of business (e.g. by email, telephone, face to face conversation) Meetings as required	Please refer to the 2014 Sustainability Reports for the Şişecam Businesses for a summary on each of the business lines' stakeholder engagement.
	Typical methods of engagement with all suppliers includes:  • Daily business cycle  • Meetings  • Email communication		
Non- governmental organizations	Strategic collaborations     Events     Regular Meetings	Minimum once a month	Sharing with the community is viewed as very important to \$işecam, which supports NGOs regarding social, economic and environmental issues and by carrying out joint projects with them.
			For corporate social responsibility activities at Sisecam, please refer to Corporate Social Responsibility section at page 70.
Media	<ul><li>Press conferences</li><li>Press releases</li><li>Interviews</li></ul>	Minimum once a month	Sisecam companies are in regular contact with national and international media in order to raise awareness about the Company and deal with any queries.
Community	• Media	Varies depending on the type of initiative	Şişecam announces all events by media.  For corporate social responsibility at Şişecam, please refer to Corporate Social Responsibility at page 70.

#### INTERNAL STAKEHOLDERS

Stakeholder Group	Engagement Platforms	Frequency of Stakeholder Engagement	Evaluation of Engagement in the Reporting Period	
Employees	<ul> <li>Employee Satisfaction Survey</li> <li>Suggestion and Idea Platforms</li> <li>Employee Interviews</li> <li>Seniority Award</li> <li>Recognition and Reward System</li> </ul>	Varies depending on the type of engagement	\$işecam's most important asset is its people. \$işecam companies are leading companies in their sectors in terms of training and support provided to its human resources.	
Top Management	Executive Board Meetings     Email Communication	Minimum once a month	The Executive Board which includes the Chief Corporate Development & Sustainability Officer met on a regular basis during the reporting period, assessing a range of sustainability issues and opportunities.	
			Strategic direction and day-to-day activities of the Sustainability Department are led by the Chief Corporate Development & Sustainability Officer.	
			For details of the organizational profile at Sisecam, please refer to Sustainability Governance section at page 21.	
Shareholders, analysts	General Board Meetings	Varies depending on the type of	The Company, which is in regular	
and investors	• Meetings with analysts and investors	engagement	communication with its shareholders and	
	• Phone calls/teleconferences and email communication with investors		investors through various channels, met all information disclosure requirements under Turkish legislation during the reporting period.	
	<ul> <li>Periodically published informative publications (e.g. Annual Reports, CDP reporting, Earnings and Interim Reports)</li> </ul>			
	Social media			
	Investor Feedback Mechanism			

G4-24, G4-25, G4-26, G4-27

Concerns related with sustainability are raised with the Corporate Development and Sustainability Department and appropriate actions are taken, including undertaking specific initiatives, and implementing policy recommendations. The critical concerns raised during the reporting period are listed below.

#### CRITICAL CONCERNS RAISED BY KEY STAKEHOLDER GROUPS AND OUR RESPONSE

Critical Concern	Stakeholder Group that raised the Critical Concern	Our response to Critical Concern
To report on our environmental impacts and performance	Customers, employees, investors	Based on the feedback received, we published our first Sustainability Report for the 2013 reporting period for Sisecam Group, which we prepared in line with GRI G4 Core level in 2014.
		This, our second GRI G4 Report, covers the 2014 reporting period.
		In addition, we prepared Annual Monitoring Reports relating to Environmental and Social Issues for the IFC and EBRD for our all production companies in Turkey and abroad.
To report on carbon emissions of all our production plants in Turkey and in Bulgaria.	Customers, NGOs, investors	We have responded to the CDP investor program since 2011 and supply chain program since 2012. In 2014, we were one of the best performing companies in Turkey for CDP with a disclosure score of 85% and a performance score in the Level B Band.
To report on financial performance	Shareholders	We published our Annual Report, which also included information relating to our environmental, HR, Industrial Relations and R&D activities and performance.
To increase employee motivation	Employees	Projects implemented in 2014 to improve employee motivation included: Şimdi! Social Activities Club, Flexible Benefits, Flexible Working Hours, Proposal Development System etc.

#### APPROACH TO MATERIALITY

Sisecam and its affiliated companies prioritise the interests and expectations of its key stakeholder groups (including employees, investors, customers, government entities and non-profit organizations) when identifying sustainability risks and determining their magnitude.

As part of the preparation for this report and the GRI G4 data collection and reporting process, we undertook a detailed analysis of our most material issues across our businesses, linked these issues to the corresponding GRI G4 indicators that we have reported on in this report and that we list on the list below. We also took into account stakeholder feedback received as part of our regular engagement with stakeholders during the reporting period and used this to calibrate the GRI G4 materiality analysis undertaken in 2015.

In carrying out the G4 materiality assessment for the Sustainability Report, we applied the GRI Principles for Defining Report Content and Quality so as to identify the information to be disclosed, by considering the activities, impacts, and the substantive expectations and interests of our stakeholders. We applied the Principle of Materiality by ensuring that the issues regarded as most important to our key stakeholder groups were prioritised in this report.

We have also linked our most material issues to our priority areas for sustainability, as explained in the section on our Sustainability Approach.

We applied the Principle of Sustainability Context by taking into consideration general trends in sustainability in Turkey and internationally and amongst our peer group, which helped us ensure that the report was materially complete. We also applied the Principle of Completeness by making sure there was no material information omitted by checking the report content against feedback received from our key stakeholder groups during the Reporting Period and through top management's review of the Report's completeness and accuracy. The Company applied the Principle of Stakeholder Inclusiveness by ensuring that the most material issues raised by our stakeholders, including from satisfaction surveys and workshop meetings, have been covered in this report.

The results of the Şişecam's G4 materiality analysis are shown below. Material topics were subsequently linked to the corresponding GRI G4 aspects and had regard to whether the aspect was material within our organization, outside the organization, or both. Topics are prioritized based on their significance of impact.

The results of this prioritisation were approved by Şişecam's management and have determined the focus and level of detail provided on each topic in this report.

In addition, we have documented our management approach to each material aspect in the relevant sections throughout this report.

Anti Competitive Behaviour	Human Rights Impact Assessment		
Anti-Corruption	Market Presence		
Customer Health and Safety	Non Discrimination		
Customer Privacy	Occupational Health and Safety		
Economic Performance	Process Compliance		
Energy	Product and Services		
Environmental Compliance	Product Compliance		
Equal Remuneration for Women and Men	Training and Education*		
GHG Emissions	Waste Management		

Note: All issues are considered material inside and outside the company's boundary with the exception of the one with an asterix in the list above. Aspects are arranged alphabetically.

#### APPROACH TO STANDARDS AND ORGANIZATIONS



WE ARE ALWAYS LOOKING
TO APPLY THE MOST
UP-TO-DATE AND HIGHEST
STANDARDS FOR OUR LOCAL
AND GLOBAL OPERATIONS.

As a Group with worldwide exports and operations in 13 countries, it is critical for us to comply with international standards for creating ethical guidelines to allow us to manage our environmental, social and economic impacts. We are always looking to apply the most up-to-date and highest standards for our local and global operations. Every product, every business practice and every interaction with our partners are managed by international standards and best practise. We are fully aware that the implementation of global frameworks is essential and necessary to realize our

vision of becoming a leading global glass manufacturer, and we strongly believe the intrinsic value of these frameworks for international expansion, product portfolio development, and growth of our market share through new investments. In addition to complying with international standards for quality, environment, occupational health and safety, and business partner and customer satisfaction, we also endorse national and international principles and initiatives as listed in following pages.



#### NATIONAL AND INTERNATIONAL MEMBERSHIPS

Şişecam Group has joined numerous reporting initiatives (CDP, REACH, GRI, Responsible Care etc.) and is working with many organizations in the field

of sustainability. A detailed list of memberships and partnerships followed by \$iṣecam Group is shown below.

LIST OF MEMBERSHIPS AND PARTNERSHIPS FOLLOWED BY ŞİŞECAM GROUP

#### INTERNATIONAL

Celsian Glass Solar B.V.	European Chemicals Agency	
European Container Glass Federation - Glassware Tableware Committee	European Domestic Glass Committee	
European Physical Society (Energy Working Group)	European Society for Glass Science and Technology	
European Soda Ash Producers Association	European Union Photovoltaic Technology Platform	
German Society of Glass Technologies	Glass Alliance Europe	
Glass for Europe	International Commission on Glass	
International Chromium Development Association	International Crystal Federation	
International Energy Agency	International Partnership for Glass Research	
World Energy Council Turkish National Committee		

#### NATIONAL

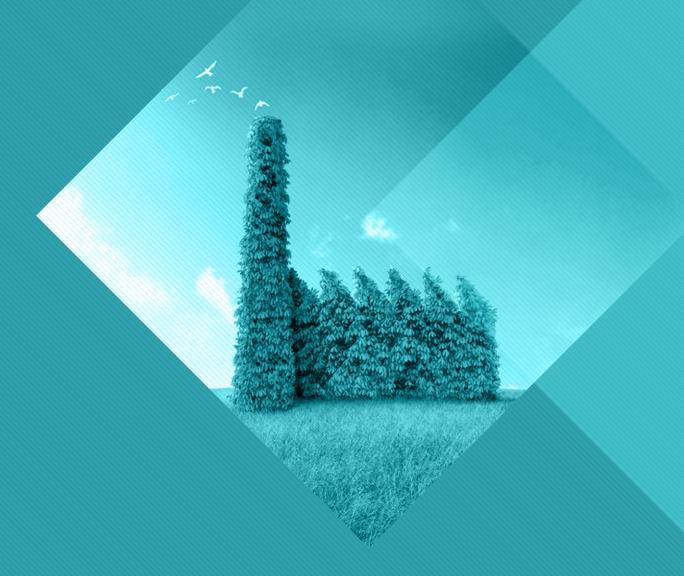
NATIONAL			
Association for Personnel Management in Turkey	Association of Solar Energy Industry in Turkey		
Assocciation of Turkish Construction Material Producers	Carton Board Packing Manufacturers Association		
Center for Solar Energy Research and Applications	Ceramic, Glass and Cement Raw Materials Manufacturers Association		
Corporate Governance Association of Turkey	Corrugated Packing Manufacturers Association		
Eurosolar Turkey	Food Safety Association		
Foreign Economic Relations Board	Foundation for Environmental Protection and Reuse of Packaging Waste		
Istanbul Chamber of Industry (Environment Experts Committee)	Istanbul Minerals and Metals Exporters Association		
Packaging Manufacturers Association in Turkey	Risk Managers' Association		
Turkish Chemical Manufacturers Association	Turkish Composite Manufacturers Association		
Turkish Exporters Assembly	Turkish Houseware Association		
Turkish Miners Association	Turkish Society for Quality		
Turktrade	Union of Chambers and Commodity Exchanges of Turkey, Working Groups		

#### MANAGEMENT SYSTEMS AT THE PLANTS IN TURKEY

	ISO 9001 <sup>1</sup>	ISO 14001 <sup>2</sup>	ISO 50001 <sup>3</sup>	OHSAS 18001 <sup>4</sup>	OTHERS
	THE FLA	TGLASS BU	SINESS		
Trakya Cam San. A.Ş. Trakya Plant	✓	✓	✓	✓	
Trakya Yenişehir Cam San. A.Ş.	✓	<b>√</b>	<b>√</b>	✓	
Trakya Cam San. A.Ş. Mersin Plant	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	
Trakya Cam San. A.Ş. Otocam Plant	<b>√</b>	<b>✓</b>	<b>√</b>	✓	ISO 16949 <sup>5</sup>
Trakya Polatlı Cam San. A.Ş.	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>	
	THE GLA	SSWARE BU	SINESS		
Paşabahçe Cam San. Tic. A.Ş. Mersin Plant	✓	✓	✓	✓	ISO 22000 <sup>6</sup>
Paşabahçe Cam San. Tic. A.Ş. Eskişehir Plant	<b>√</b>	<b>√</b>	<b>√</b>	✓	ISO 22000
Paşabahçe Cam San. Tic. A.Ş. Kırklareli Plant	<b>√</b>	<b>√</b>	<b>√</b>	✓	
Denizli Cam San. Tic. A.Ş.	<b>√</b>	✓		<b>✓</b>	
Camiş Ambalaj San. A.Ş. Tuzla Plant	<b>√</b>	<b>√</b>	<b>√</b>	✓	BRC <sup>7</sup> , ISO 12647 <sup>8</sup>
Camiş Ambalaj San. A.Ş. Eskişehir Plant	<b>√</b>	✓	<b>√</b>	✓	
	THE GLASS	PACKAGING	BUSINESS		
Anadolu Cam San. A.Ş. Mersin Plant	<b>√</b>	✓	<b>√</b>	✓	ISO 22000, FSSC 22000 <sup>9</sup> , BRC
Anadolu Cam Yenişehir San. A.Ş.	<b>√</b>	✓	<b>√</b>	<b>✓</b>	FSSC 22000, BRC
Anadolu Cam Eskişehir San. A.Ş.	<b>√</b>	✓	✓		ISO 15378 <sup>10</sup> , ISO 10002 <sup>11</sup> , FSSC 22000
	СНЕМ	ICALS BUSIN	NESS		
Soda San. A.Ş. Soda Plant	✓	✓	<b>√</b>	✓	ISO 22000, FSSC 22000
Soda San. A.Ş. Kromsan Plant	<b>√</b>	✓	<b>√</b>	✓	
Cam Elyaf San. A.Ş.	<b>√</b>	✓	*	*	
Camiş Madencilik A.Ş.	<b>√</b>	✓		✓	
Camiş Elektrik A.Ş.	<b>√</b>	✓	<b>√</b>	✓	

- \* Certification process is going to be completed in 2015.
- 1. Quality Management System
- 2. Environmental Management System
- 3. Energy Management System
- 4. Occupational Health and Safety Management System
- 5. Automotive Management System
- 6. Food Safety Management System

- 7. British Retail Consortium Standard for Food Safety
- 8. Graphic Technology Process Control for the Production of Half-Tone Colour Separations, Proof and Production Prints
- 9. Global Food Safety Management System
- 10. Primary Packaging Materials for Medicinal Products
- 11. Customer Satisfaction Management System



## Our Environmental Approach

- Environmental and Energy Policy
- Environmental Management System
- Environmental Compliance
- Energy Management System
- Energy Performance
- Greenhouse Gas (GHG) Emissions
- Waste Management

#### **ENVIRONMENTAL AND ENERGY POLICY**



**ENVIRONMENTAL APPROACH** IS INTEGRATED IN EVERY PHASE OF ŞİŞECAM'S STRATEGIC MANAGEMENT.

Environmental protection requires a constant commitment to robust policies and continuous action. Şişecam's objective is to minimise our impact across all business activities with zero environmental incidents. Şişecam, as an organization strongly aware of its responsibility towards protecting the environment, believes in the need to maintain the world as a livable place for coming generations. This approach is considered as the cornerstone of Şişecam's strategic management and is integrated in every phase of its work processes. Our aim is to carry out all environmental protection activities in Şişecam within a framework of an Environmental Management System, by taking account sustainability principles and continuously improve the system with the support of all our employees and stakeholders. We focus most on our most material issues meaning that as an energy intensive production group we are continuously striving to reduce energy consumption and maximise energy efficiency in our operations as much as possible. Other material areas that we are prioritising include reducing our total greenhouse (GHG) footprint and waste generation, and preserving natural resources. We aim to inspire other companies with our performance.

In striving to protect the environment and manage our environmental impact, we are guided by legal requirements, Şişecam standards, and industrial practices. Moreover, we listen to our stakeholders, and we do our best to satisfy their expectations regarding minimizing our environmental impact. More detailed information on our approach is available on the section on stakeholder engagement in this report. In all of our operations in Turkey we have established environmental management systems in order to monitor and improve our environmental performance. We are continually working at raising environmental awareness in our workplace and provide regular training to our employees on environmental issues.

Şişecam has 'Environmental and Energy Policy' that covers all our operations in Turkey and internationally and is shown in the following section. Indeed, a key element of our sustainability success to date has been that our Environmental and Energy Policy is embedded in every phase of our work processes and our environmental management system has been implemented in all our facilities in Turkey. Our approach is focused on our most material environmental impacts, which include energy, emissions and solid waste.

#### As a result, our efforts are centred on the following areas:

- Manufacturing techniques with reduced environmental effects
- Improvement of energy efficiency projects to increase climate change mitigation efforts
- Expansion of waste recovery and recycling
- Evaluation of fuel and raw material alternatives
- Responsible energy and resource management
- Use of natural gas whenever available and development of furnace designs to reduce emissions and other environmental risks.
- Treatment of wastewater and considering recycling opportunities





#### **ENVIRONMENTAL AND ENERGY POLICY**

Knowing that the sustainable growth, which we have placed in the main axis of our business, is only possible as long as we maintain the sustainable environmental and energy principles, we aim to:

- · Use natural resources efficiently, increase recycling and recovery rates,
- Consider energy efficient and environmentally friendly technologies while creating all processes starting from the designing phase,
- Develop and implement energy efficiency projects that will have a positive impact on climate change,
- Purchase products, services and technologies that provide energy efficiency to support high performance designs,
- Perform our production activities by implementing Environment and Energy Management Systems.

In this direction we declare and undertake:

- To comply with environmental and energy related legal and other requirements in force,
- To continuously enhance and improve our environmental and energy performance.
- To take the necessary precautions to reduce or eliminate the negative environmental impacts of our activities,
- To review pre-determined objectives and targets periodically and to provide required resources to achieve these goals and objectives,
- To increase awareness by providing understanding and embracement of our policy by our shareholders.

**GENERAL MANAGER** 

WE CARE FOR OUR ENVIRONMENT





#### **ENVIRONMENTAL MANAGEMENT SYSTEM**



OUR ENTIRE
PLANTS IN TURKEY HAVE
COMPLETED THE
ISO 14001
ENVIRONMENTAL
MANAGEMENT SYSTEM
CERTIFICATION PROCESS.

The aim at all \$isecam operations and activities is to monitor the environmental impacts and to work on improving them with the support of all our employees and stakeholders under our Environmental Management System (EMS). All group-wide activities are managed through Group EMS and our entire plants in Turkey have completed the ISO 14001 EMS certification process. \$isecam Group's Corporate Development and Sustainability Department reports to the CEO and reviews our environmental performance seeking to implement projects at a higher level.

This management oversight illustrates how our sustainability commitments, including those linked to the environment, are embedded in \$i\$ecam's business priorities.

At the operational level, each plant has at least one appointed environmental officer, usually an environmental engineer, who reports to the plant manager. These officers work closely with the Environmental Committees, which include officers from each production unit of the plant. Environmental issues are monitored and action plans are carried out based on the procedures established in each plant's EMS. Additionally, internal and sub-contractor audits are conducted by the monitoring body for preventive and corrective actions. The body reviews the status of issues and evaluates opportunities for improvement at the end of each year.



#### **ENVIRONMENTAL COMPLIANCE**

As mentioned in our Environmental and Energy Policy, our main business approach is centered on our license to operate and in full compliance with the environmental laws and regulations of the countries where we conduct business.

Şişecam closely follows the developments in EU environmental regulations and proactively shares its views concerning aspects related to the Group's production facilities through its memberships in relevant institutions and associations. In addition, Şişecam plays an active role within the environmental commissions of non-governmental organizations (NGOs) associated with the industry at both national (Istanbul Chamber of Industry, The Union of Chambers and Stock Markets of Turkey, Association of Turkish Construction Material Producers etc.) and international (Glass Alliance Europe, European Container Glass Federation, European Domestic Glass Committee etc.) levels.

Operating in an energy intensive sector, Şişecam Group operations are highly sensitive to a wide range of energy and environment related risks and opportunities. Therefore. Şişecam Group Risk Management Department has been following environmental issues and evaluating the associated potential risks and opportunities at both the company and asset levels. Subsequently, with the establishment of our Corporate

**ENVIRONMENTAL EXPENDITURES** 

In 2014, our environmental expenditures was TRY 30,624,535 in total, for Şişecam Group in Turkey and mainly represented capital investments for projects Development and Sustainability Department, energy and environmental efficiency started to be treated in a much more detailed way. In this respect, risk and opportunities affecting sustainable energy issues are considered for both new investments and existing

Identification and evaluation of risks and opportunities are applied by taking into account a wide range of factors including regulatory and market drivers, potential physical effects from climate change and strategic documents driven by legislations and international agreements.

The Risk Management Department of the Group liaises with the related managers of the production groups to identify and prioritize the potential risks in the defined period. Criteria for determining material risks and their prioritization include current or possible regulatory requirements, energy efficiency and security, global and regional regulations, and financial factors. The Environmental Management Department closely follows and evaluates the current and possible regulatory environment and keeps the related departments of the Group updated such as Risk Management, Finance and Investor Relations Management of developments and their potential implications.

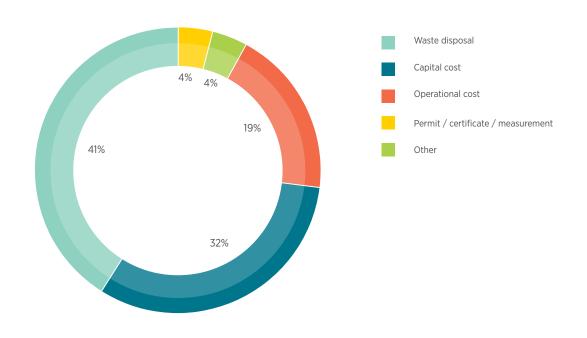
and treatment plants, operational costs of treatment plants, waste disposal, certification and measurement costs related to environmental management.



**OUR MAIN BUSINESS** APPROACH IS CENTERED ON **OUR LICENSE TO OPERATE** AND IN FULL COMPLIANCE WITH THE ENVIRONMENTAL LAWS AND REGULATIONS OF THE COUNTRIES WHERE WE CONDUCT BUSINESS.



IN 2014, OUR TOTAL **ENVIRONMENTAL** INVESTMENT AND **EXPENDITURES WAS** TRY 30 MILLION FOR ŞIŞECAM GROUP COMPANIES IN TURKEY.



#### **ENERGY MANAGEMENT SYSTEM**



WE PRIORITIZE ENERGY
EFFICIENCY IN EVERY AREA
OF OUR OPERATIONS, FROM
SUPPLY TO PRODUCTION
AND FROM DISTRIBUTION
TO SALES.

As one of our most material issues, it is our priority to minimize our environmental impact by improving energy efficiency and reducing energy consumption in our operations. This approach is essential for the sustainability of our business as well as the sustainability and welfare of the countries in which we operate.

Şişecam always places great importance on the realization of production with lower energy utilization

and on integrating energy efficiency into its corporate strategy. Reducing energy consumption and associated GHG emissions will continue to dominate the agenda of \$isecam for the foreseeable future, inspiring new project developments.

Related to energy efficiency and climate change, some significant investments and actions have been realized including the following:

- ◆ The Integration of Şişecam's Environmental and Energy Policy across all our affiliated entities
- The integration of energy management and carbon principles into Sisecam's corporate strategy
- ◆ Adaptation of ISO 50001 Energy Management System
- Implementation of online energy management software for the monitoring of energy performance of our plants
- Preliminary and comprehensive energy audits by a certified consultant
- ♦ Agreements for waste heat recovery installations that convert the thermal energy released from the furnace into electrical energy for Anadolu Cam Yenişehir San. A.Ş. and Trakya Cam San. A.Ş. Mersin plants
- Usage of energy efficient equipment (electric motors, pumps, fans and other production and auxiliary equipment)

We prioritize energy efficiency in every field of our operations, from supply to production and from distribution to sales.

Energy management and climate change are prioritized in our strategy. We are striving to achieve high levels of

production through low energy consumption and low GHG emissions. Consequently, we are systematically seeking measures to reduce our energy consumption during production while improving efficiency and quality. Examples of our energy saving achievements are shown in the following section.



#### **CASE STUDY:** Energy efficiency portal

Şişecam has established the Energy Efficiency Portal to help increase awareness of our Group. Going forward, all energy efficiency case studies and best practice examples will be available on the portal for this purpose.

Following the launch of our continous energy measurement and monitoring system, our companies will be able to monitor and manage all sources of energy consumption online. The sustainable energy measurement and monitoring project will allow supervision and expansion of all energy systems at the plants of the Group to a certain extent. The project is intended to be instrumental in establishing a standard model not just in terms of software, but also of plant infrastructure, while making the transition from manual measurements to a sustainable online measurement system. This will provide the opportunity for benchmarking and improvements, which are crucial for the implementation of strategic plans and minimization of energy costs.

#### **ENERGY PERFORMANCE**

As shown below, total direct energy consumption from our facilities in Turkey in 2014 was 56.3m GJ (2013: 54.2m GJ), representing an increase of 4.0% from 2013 despite a larger increase in production capacity. This was possible due to a range of energy and production efficiency initiatives, of which some case studies are included, as examples, in the following section of this report.

All sectors in which Sisecam operates are energy intensive. Natural gas, which amounts to almost 87% of our total energy use, is our main source of energy. The other main sources of energy use are purchased electricity (7%) and anthracite coal (6%). The energy intensity of our main products in 2014 was 8 GJ/ton concerning all glass types.



NATURAL GAS, WHICH **AMOUNTS TO ALMOST** 87% OF OUR TOTAL ENERGY USE, IS OUR MAIN SOURCE OF ENERGY.

#### DIRECT ENERGY CONSUMPTION BY FUEL (ALL VALUES IN GJ3)

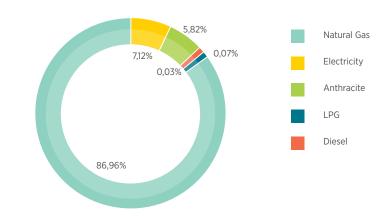
	Fuel	2013*	2014*
	Natural Gas	46,871,900	48,940,700
<b>B</b>	Electricity	3,934,600	4,010,600
	Anthracite	3,348,800	3,267,300
	LPG	42,000	39,700
	Diesel	36,500	19,400
	Total Energy	54,233,800 <sup>4</sup>	56,277,700

<sup>\*</sup> Oxyvit data for 2013 has been excluded from 2013 Sustainability Report data in order to show on a comparable basis to 2014.

<sup>3</sup> The following conversion factors were derived from Turkish Ministry of Energy and Natural Reources data for converting energy consumption figures into Gigajoules:  $Electricity 1 \, kWh = 3.6 \, MJ, \, Natural \, Gas \, 1 \, Sm^3 = 34.518 \, MJ; \, LPG \, 1 \, kg = 46.0 \, MJ, \, Diesel \, 1 \, kg = 44.0 \, MJ, \, Coal \, 1 \, ton = 27,842 \, MJ.$ 

<sup>4</sup> G4-22: The data have been restated for 2013 to have a common basis for comparison of values with 2014 data.

#### TOTAL ENERGY CONSUMPTION IN 2014 BY FUEL



#### TOTAL ENERGY CONSUMPTION BY FUEL AND BUSINESSES (ALL VALUES IN GJs)

	Business	Flatglass	Glassware	Glass Packaging	Chemicals	Şişecam Group
	Natural Gas	11,344,600	4,786,200	5,607,000	27,202,900	48,940,700
4	Electricity	1,243,800	823,900	1,194,700	748,200	4,010,600
	Anthracite	-	-	·	3,267,300	3,267,300
(8)	LPG	200	39,500	·	-	39,700
	Diesel	7,000	9,200	-	3,200	19,400
	Total	12,595,600	5,658,800	6,801,700	31,221,600	56,277,700

Through Şişecam's focus on energy efficiency and reducing energy consumption, the group has already achieved substantial reductions in energy as explained in the following section. With energy saving projects a total of 16.3 million kWh of electricity and 4 million Sm<sup>3</sup> of natural gas was saved in 2014. The annual carbon emissions reduction achieved by the energy saving

projects has been estimated as 14,400 tCO<sub>2</sub>.

In 2014, Şişecam continued to bolster its technology, secure increased productivity and further expand its innovative, high quality and broad product range through new generation glass furnaces and modernization investments.

#### **ENERGY EFFICIENCY PROJECTS**

The audits commenced within the scope of the plan for determining the energy efficiency levels of the production facilities under Şişecam Group are being carried out by an independent audit company authorized by the Ministry of Energy and Natural Resources. Audits have been completed and applications that will provide energy savings have been determined.

Projects that relate to reducing energy consumption and GHG emissions in our glass melting furnaces as well as waste heat recovery and "best practices" resulting from the combination of new furnace designs, simulations, field implementations and constant monitoring of furnaces are always our priority.

Our recent waste heat recovery projects are focused on providing security of energy supply by allowing plants to produce their own electricity. This system is called an Organic Rankine Cycle (ORC) which utilises the furnace waste heat calorific value and generates electrical power. This electricity generation system which is planned to be installed in one float glass plant and two glass container plants, will provide approximately half of the electrical energy demand of the float glass plant and a quarter of container glass plant, reducing electrical energy supply risk.

As glass production is an energy intensive industrial process, melting glass in high efficiency furnaces is of utmost importance for lowering both production costs and environmental emissions. Engineers and researchers at Şişecam's Science and Technology Center synthesize results of numerical simulations with applications stemming from latest developments in combustion and materials science along with actual operation experience to develop novel energy efficient furnaces.

Two recently designed and erected end fired regenerative furnaces are among the top 10% globally of the most thermally efficient furnaces on the "Celsian Online Benchmark 2014"5. We are now focused on developing furnace designs that can reduce energy consumption to the vicinity of the theoretic limit of 3 GJ/ton in the near future.

Design improvements were realized at float furnaces through up-to-date implementations, and 10% improvement in energy consumption was attained at a float furnace with a capacity of 925 tons/day as compared with the Group's other furnaces.

Within the scope of the international collaborative project CRAFTEM (Carbon Reduction by Auxiliary Firing Technique for Glass Melter), which is led by R&TD and co-executed with Sisecam Flat Glass Business and funded under the EU Framework Program FP-7, it has been established that there is potential for 1-2% reduction in energy and GHG emissions, 15-20% in NOX emissions based on the studies for NOx reduction and energy performance enhancement.

Funded under the EU LIFE+ Program, a separate project carried out at oxyfuel furnace in Bulgaria is aimed at securing 9% energy saving by way of preheating the oxygen and natural gas supplied to the furnace by making use of the energy from waste gases. Under this project, the work in relation to the deployment of primary and secondary heat exchangers was completed, and the procurement was initiated.

Some examples of our energy efficiency projects and best practices are LED lighting installations, high efficiency motor replacements, supply of new generation compressors, fans and pumps. ISO 50001 Energy Management Standard and local Energy Efficiency Law 5627 are taken as a reference point for energy surveys for the detection of energy saving potential.

#### **CASE STUDY: LED Lighting Retrofitting**

The replacement of the current lighting system to LED lighting systems is among the largest retrofitting projects in Turkey. 52% energy savings were realized by changing 5,923 fixtures. Longer life of LED fixtures will also avoid a significant amount of future lightbulb waste.

A project for expanding LED lighting retrofitting to all Şişecam Group is underway. As part of the first step, 23,772 fixtures are to be replaced. The project has a payback period of approximately 1.5 years and energy savings between 50-60% will be realized.



**ENERGY SAVINGS WERE REALIZED BY CHANGING** 5,923 FIXTURES THROUGH THE LED LIGHTING RETROFITTING PROJECT.

<sup>5</sup> Celsian Online Benchmark - 2014: 3,790 MJ/ton actual energy consumption





AS A FIRST IN TURKEY BOTH
IN TERMS OF SCALE AND
NUMBERS INVOLVED, THE
HIGH EFFICIENCY MOTOR
REPLACEMENT PROJECT IS
EXPECTED TO SAVE
5%
ENERGY CONSUMPTION.

#### CASE STUDY: High efficiency motor and new generation compressors

Processes that can be improved with respect to energy use are constantly reviewed at all the manufacturing facilities of the Group, which operates in energy-intensive industries. Accordingly, projects for electric engines, compressors, lighting equipments, pumps and blowers were completed during 2014. All phases of the projects have been optimized and evaluated technically and economically by experts at \$i\$, ecam plants. The increase in efficiency that will be attained through these projects is anticipated to be instrumental in saving significant energy from 2015 onwards.

A first in Turkey both in terms of scale and numbers involved, the high efficiency motor replacement project is expected to save 5% energy consumption. By referencing energy audits, 461 motor replacements with total installed power amounting to 41 MWs are being considered. The project has a payback period of approximately 1.5 years.

The replacement of old generation compressors with new ones is planned for 23 compressors and 18 of them have already been installed by 2015. Further potential energy savings projects and installations on pumps and fans are also underway.



#### AWARD: The Most Successful Industrial Plant Award Goes to Trakya Yenişehir Cam Sanayii A.Ş.

Trakya Yenişehir Cam Sanayii A.Ş. was rewarded with 'The Most Successful Industrial Plant' award in the scope of Industry Energy Efficiency Project (SANVER 2013), organized by the general directorate of Renewable Energy department of the Ministry of Energy and Natural Resources. Trakya Yenişehir Cam Sanayii A.Ş. has also received an award in the 'Increasing Industrial Energy Efficiency' category with its 'Energy from Waste Heat Project'.

Global trends such as climate change, rapid population growth, urbanization, economic development and more middle-class consumers are driving increasing global demand for both renewable and non-renewable natural resources. While the world's supply of non-renewable resources is technically finite, new technologies continue to impact the future supply picture by allowing access to formerly hard-to-reach reserves of non-renewable resources such as oil and mineral reserves. At the same time, natural resources must be more effectively managed, including from an environmental impact perspective in order to help secure future supply. Against this backdrop, glass, after an initial energy-intensive manufacturing process, can be an important part of the solution as a material that can be repeatedly re-used and recycled and that is based on readily available raw materials. Furthermore, we have already implemented many projects, and have many others underway, that focus on improving energy efficiency and reducing energy consumption and associated greenhouse gas (GHG) emissions in the initial energy-intensive manufacturing process. As one of our most material areas, we have already developed and implemented systematic policies and processes to measure, monitor and improve our energy management performance. In addition to energy, Sisecam is also aware of its broader environmental footprint and has been taking concrete steps to measure and improve its performance. For example, in 2014, Şişecam was 1 of only 41 companies in Turkey that reported on its greenhouse gas (GHG) emissions and climate change strategies to the CDP Climate Change Program. Şişecam was one of the best performing companies in Turkey and was awarded a Disclosure Score of 85% and a Performance Score Level B.



Serdar Gençer Chief Corporate Development and Sustainability Officer

#### **GREENHOUSE GAS (GHG) EMISSIONS**

Due to the energy-intensive nature of our business and sector, policies that focus on addressing risks and opportunities posed by climate change are of critical importance to our company. During the reporting period, we continued to reassess our production activities in terms of energy efficiency and increase the range of resource-efficient products that provide environmental benefits. As illustrated through the

case studies in this report, we have projects underway in production that are focused on increasing energy efficiency and the use of recycled glass as an input material to reduce GHG emissions. In terms of our products, we have projects that focus on reducing the impact of our products and their associated GHG emissions.

#### TÜBİTAK - GHG REDUCTION PROJECT

As the most important sector representative Şişecam Group worked with the Turkish Ministry of Science, Industry and Technology and the Scientific and Technological Research Council of Turkey (TUBITAK) in 2013-2014 on a project related to the Greenhouse

Gas Reduction Potential of Turkish Industry. ("An Assessment of Technology Requirements in the Industry and Determination of Greenhouse Gas Reduction Potential within the Frame of Climate Change").



ŞİŞECAM HAS RESPONDED ANNUALLY TO CDP CLIMATE CHANGE PROGRAM, THE MOST PROMINENT INITIATIVE IN BUSINESS TO COMBAT CLIMATE CHANGE, SINCE 2011.



#### **CASE STUDY: CDP**

Şişecam has responded annually to CDP Climate Change Program, the most prominent initiative in business to combat climate change, since 2011 and responded to CDP Supply Chain Program since 2012. Under this framework, the Group reports on issues such as its climate change strategy, approach to risk management and governance, targets on energy, carbon emission and climate change and amount of carbon emissions generated from its operations. Şişecam is one of the 41 Turkish companies that responded to CDP in 2014. The disclosure covers the Group's glass and non-glass manufacturing facilities in Turkey and glass manufacturing facilities in Bulgaria. With a disclosure score of 85% and a performance score in the Level B Band and it has been rated at a high level according to the score released by CDP, indicating an excellent understanding and management of the issues related to climate change.

#### TOTAL GHG EMISSIONS IN 2013-2014 (ALL VALUES IN tCO<sub>2</sub>)

		2013*				2	014	
	sco	PE I	SCOPE II	TOTAL	sco	OPE I	SCOPE II	TOTAL
Category	Raw Material Sourced CO <sub>2</sub> Emission	Fossil Fuel Sourced CO <sub>2</sub> Emission	Electricity CO <sub>2</sub> Emission	Total CO <sub>2</sub> Emission	Raw Material Sourced CO <sub>2</sub> Emission	Fossil Fuel Sourced CO <sub>2</sub> Emission	Electricity CO <sub>2</sub> Emission	Total CO <sub>2</sub> Emission
Total	815,900	2,637,700	524,500	3,978,100	834,200	2,749,500	528,000	4,111,700

<sup>\*</sup> Oxyvit data for 2013 has been excluded 2013 Sustainability Report data above in order to show on a comparable basis to 2014.

Climate Change is prioritised in our strategy and as one of our most material issues we monitor our GHG emissions and are taking measures to reduce them. In 2014 our GHG emissions from our facilities in Turkey totalled 4.1 million  $tCO_2e$ , which comprised a total of 3.6 million  $tCO_2e$ ,

principally from Natural Gas, and 0.5 million  ${\rm tCO}_2$  from purchased electricity. Sisecam has applied the widely used international conversion factors from the IPCC 5<sup>th</sup> assessment report and IEA emission factors for year 2012 as shown below.

#### TOTAL GHG EMISSIONS BY BUSINESSES IN 2014 (ALL VALUES IN $tCO_2$ )

_			2014		
		SCOPE I		SCOPE II	TOTAL
Category	Raw Material Sourced CO <sub>2</sub> Emission	Fossil Fuel Sourced CO2 Emission	Total Scope 1	Electricity CO <sub>2</sub> Emission	Total CO <sub>2</sub> Emission
Flatglass	277,600	636,900	914,600	165,800	1,080,400
Glassware	40,000	271,700	311,700	109,800	421,500
Glass Packaging	135,200	314,600	449,700	159,300	609,000
Chemicals	381,400	1,526,300	1,907,700	93,100	2,000,800
Şişecam Group	834,200	2,749,500	3,583,700	528,000	4,111,700



#### WASTE MANAGEMENT

While all recyclable wastes resulting from processes are recycled through recycling facilities within the framework of the Group's approach in relation to sustainability and transparency, other wastes are disposed of at licensed facilities. In all markets where we operate, we act in compliance with the current legislation governing the recovery of packaging materials.

All recyclable waste from our processes was returned to the production process from recycling plants, while other types of waste were responsibly and transparently disposed of by licensed waste contractors. We focus on eliminating waste wherever possible and sending the least amount of waste possible to landfill. Most of our waste generated is recycled.

Şişecam facilitates the recycling of packaging materials in the domestic market and complies fully with regulations in all our markets. In 2014, 44% of the packaging materials that Sisecam Group companies supplied to the market in 2013 was collected and recovered and in total, over 11,000 tons of paper, cardboard, plastic and composite packaging were recycled. As part of our waste recycling initiatives, we collaborate with authorized organizations, such as ÇEVKO (Foundation for Environmental Protection and Reuse of Packaging Waste) and TÜKÇEV (Consumer and Environmental Education Foundation) and support awareness raising activities aimed at students, as well as recycling projects.

We strongly support the recycling of glass as an infinitely recyclable material. We are working with our stakeholders and sponsoring projects to provide efficient and effective solutions to recycling as the following case study shows.



ALL RECYCLABLE WASTE FROM OUR PROCESSES WAS RETURNED TO THE PRODUCTION PROCESS FROM RECYCLING PLANTS.



#### **CASE STUDY: "Glass and Glass Again"**

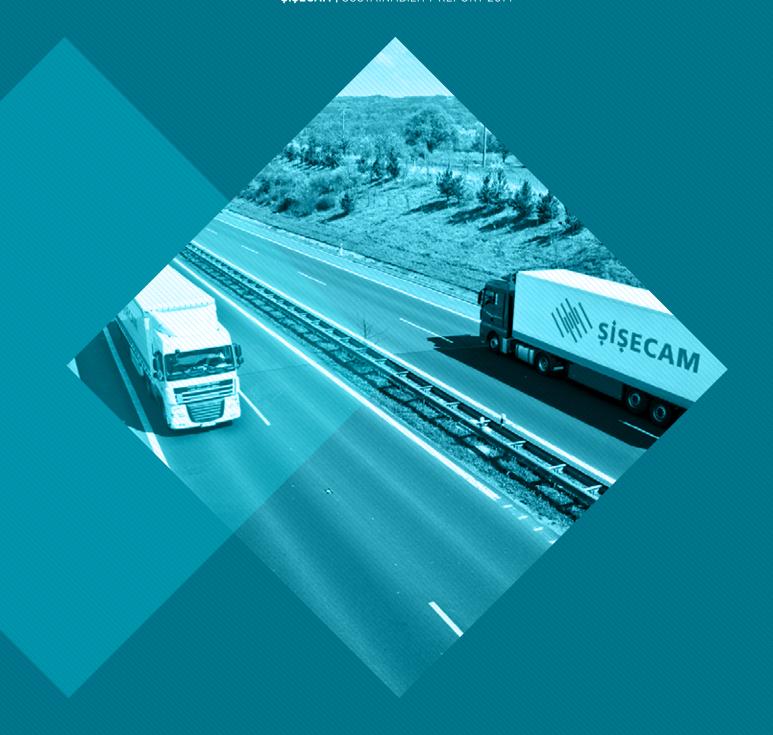
As an organization that ensures the recycling of glass waste and is aware of its responsibilities towards society and the environment, we have started the project 'Glass and Glass Again' ('Cam Yeniden Cam'), which has the goal of increasing glass recycling rate in Turkey to 60% by 2020 for a better world for future generations. The main purpose of the project is to create social change in behavior to help achieving the transition to an "environmentally friendly society".

In order to develop glass recycling infrastructure, the number of new bottle banks deployed across the country from the start of the project by the end of 2014 had reached 8,900.

Additionally, we plan to launch further activities to help raise awareness on benefits and importance of glass recycling amongst the community in the coming period. By the end of 2014, a total of 163,000 primary school students were educated about glass recycling. Our goal is to reach 260,000 students by the end of 2018.

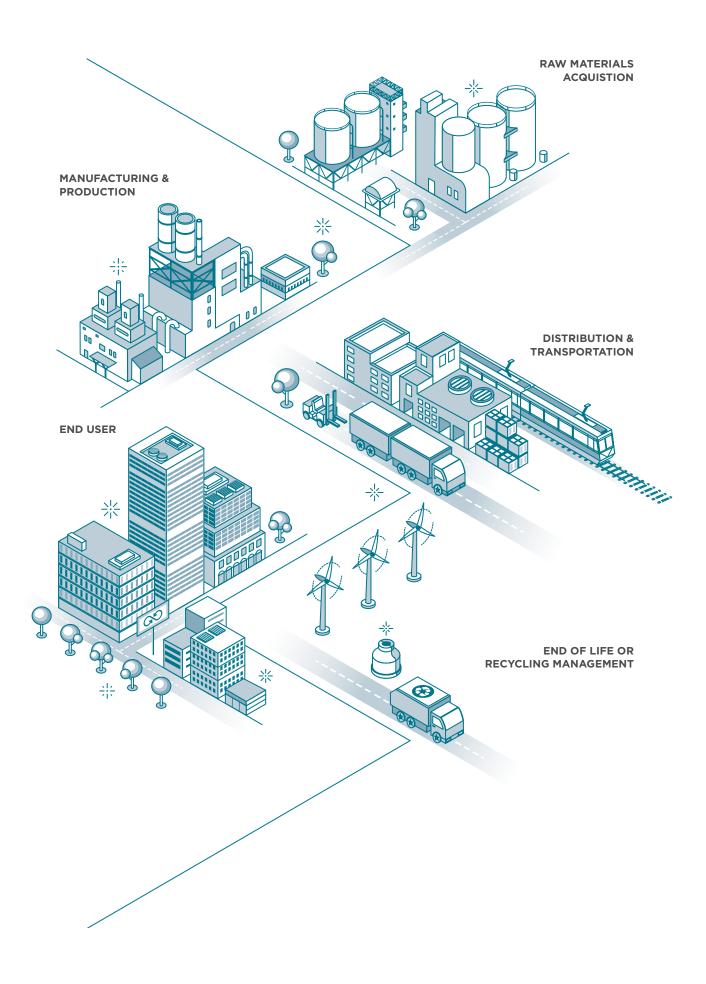


IN ORDER TO DEVELOP **GLASS RECYCLING** INFRASTRUCTURE. THE NUMBER OF NEW **BOTTLE BANKS DEPLOYED** ACROSS THE COUNTRY FROM THE START OF THE PROJECT BY THE END OF 2014 HAD REACHED 8,900.



# Supply Chain

- Best Practise Projects in Supply Chain
- Sustainable Raw Material and Energy Supply



#### **BEST PRACTICE PROJECTS IN SUPPLY CHAIN**

#### SUPPLY CHAIN COCKPIT PROJECT

Supply Chain Cockpit System is an ERP (enterprise resource planning) integrated online system that enables the display and analysis of Şişecam Businesses' (Flat Glass, Glassware, Glass Packaging and Chemicals) supply chain costs such as logistics, warehouse, foreign trade and labor costs. All Groups' Supply Chain parties determined SCOR® (Supply Chain Operations Reference) based performance metrics and applied them to the Cockpit platform.

The project aimed to bring benefits to production groups by reducing excessive costs and increasing communication between Groups as well as centralization. As a result, a more accessible, visible

and integrated platform has been created. The ability to overview 4 Businesses' supply chain costs reveals \$iṣecam's position in working towards a more centralized future.

The first facility of the Cockpit System soon became visible. Since all logistics costs can be monitored instantaneously and in detail, all the hidden supply chain costs can be easily revealed. As an outcome of the Supply Chain KPI Cockpit Project, the opportunity of Centralized Transportation on some routes is taken. According to this opportunity, Şişecam Group derived a remarkable profit in 2014 by reducing logistics costs.

#### **ŞİŞECAM NETWORK OPTIMIZATION**

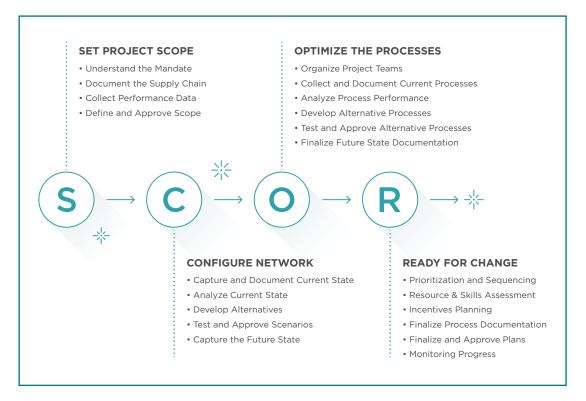
The objective of this project is to design a strategic network with minimized logistics costs, which satisfies customer service levels during distribution and production operations executed by the Group companies. In this project, which covers raw materials, packaged materials, semi-finished and finished goods flows, all transportation models were simulated both individually and collectively as railroad, maritime and intermodal scenarios.

To sustain outcomes of the Network Optimization, according to suitable routes determined as a result of the project, railroad and maritime transportation prices are evaluated periodically in order to seize price advantages.

Warehouse size and locations were also analyzed in depth to minimize cost and  ${\rm CO_2}$  emissions caused by unnecessary movements.



#### **SCOR® PROJECT**



As Şişecam, we put SCOR® - Supply Chain Operations Reference model into practice for all our subsidiary companies in 2014. SCOR® is a comprehensive set of framework organizing business processes, performance metrics, practices and people skills. All relevant Şişecam supply chain process owners went through an intensive SCOR training held by the creator of the framework SCC (Supply Chain Council), one of the world's largest unbiased nonprofit supply chain organizations that improves supply chains through research, benchmarking and publications. Business leaders, academia and global enterprises gain valuable insights, information and actionable data through SCC's unrivaled supply chain network, frameworks and resources. SCOR model is not only a globally accepted structure and guideline for process management system but also a diverse compilation of best practices. The model itself leads the business processes and all fields of application to a better working and more effective operation.

One of the first projects managed according to SCOR methodology, aimed to decrease procurement and inventory costs and reduce procurement lead times. All procurement and inventory related SCOR techniques were reviewed and applied to achieve the project goals. The process analyses, defining performance metrics and project structure were operated according to SCOR framework, which resulted in leaner and more efficient procurement processes. With the help of the new methodology, reduced lead times and remarkable gains on inventory levels were obtained successfully in a very short period.

#### SUSTAINABLE RAW MATERIAL AND ENERGY SUPPLY

#### SUSTAINABLE RAW MATERIAL SUPPLY

The primary mission of the Soda San. A.Ş. and Mining Companies of Şişecam, which operate within the Chemicals Group in Turkey and abroad, is to plan and supply the raw material requirements of Şişecam's glass and fiber glass factories in accordance with medium and long term development strategies and raw material resources and maintain sustainable production.

Camiş Madencilik A.Ş., a subsidiary of Şişecam Group, was established in 1988 and aims to supply raw materials to Şişecam's glass and fiber glass plants. The mining activities of Şişecam Group actually started with its first glass production where the first mining licence was obtained in Yalıköy – İstanbul in 1932. For many years, the mining activities of the company have been carried out as a strategic business of Şişecam and were brought together under Camiş Madencilik A.Ş. in 1988. Camiş Madencilik A.Ş has 19 plants in Turkey, 10

of which are processing plants with a capacity of 3.1 million tons of end product and 9 of which are crushing and screening plants with a capacity of 4.2 million tons, in ceramic, glass and fiber glass quality raw materials.

Soda San. A.Ş., a subsidiary of Şişecam Group, was founded in 1969 to produce soda, one of the main raw materials of the glass industry. Soda Sanayii is a reliable supplier with a large manufacturing capacity, high product quality, and an extensive marketing network, which not only supplies Turkey's demand and has a strong position in international markets. The Company is continuously improving its production technologies and is able to draw on Şişecam's expertise in R&D activities of more than 30 years. Soda Sanayii is focussed on developing products with high added value (for more information please see the 2014 Sustainability Report and 2014 Annual Report of Soda San. A.Ş.).



#### SUSTAINABLE ENERGY SUPPLY

Glass and soda ash manufacturing are energy intensive processes, involving the melting of raw materials at high temperatures. In order to establish and stabilize the high temperature requirement in the glass furnaces and soda ash process, the constant feed of high capacity energy is a necessity. Thus, energy supply and costs become issues of utmost importance, in terms of sustainability.

Sisecam Enerji A.Ş. specializes in the Turkish Energy Market. Operating as Şişecam's energy headquarters, Şişecam Enerji A.Ş. seeks to supply lowest electricity and natural gas costs to Şişecam Group; through providing its own energy at hand or dealing with other energy suppliers in the business to meet the demand. In addition, Şişecam Enerji A.Ş. aims for long-term, risk free dealings for Şişecam Group.



## Innovation

- Research and Technological Development
- Sustainable Products

#### RESEARCH AND TECHNOLOGICAL DEVELOPMENT



OUR SCIENCE AND **TECHNOLOGY CENTER** HAS CONDUCTED COST **REDUCTION OF 38** PRODUCTION/PRODUCTION TECHNOLOGIES. **44 NEW PRODUCTS** AND TECHNOLOGIES AND COMMERCIAL INTRODUCTION OF 10 PRODUCT/PRODUCTION AND ANALYSIS TECHNOLOGIES.

With the goal to become one of the top three companies in the global glass industry, Şişecam Group's sustainable growth and high performance aspirations necessitate strong research and development. Science and Technology Center (STC) leads the research and technological development within the whole Şişecam Group that has been a pioneer corporate R&D in Turkey. Through the investments in 2014, the ratio of Şişecam Group's research and technological development expenditures to total sales has increased to 1.42%.

The LEED (Leadership in Energy and Environmental Design) GOLD Certified ŞİŞECAM STC building has a covered area of 9.400 m2. Starting from basic research up to the pilot scale production trials all activities are provided in 27 expert laboratories with contemporary infrastructure. With 155 full-time expert researchers, 35 percent with an academic background higher than a bachelor's degree, ŞİŞECAM Science and Technology Center is re-registered as "R&D Center" at its new location in 2014, according to "Supporting Research and Development Activities, Law No. 5746" by Republic of Turkey, Ministry of Science, Industry and Technology, and fully eligible to receive all related benefits, exemptions, discounts and support.

Şişecam Group's R&TD (Research and Technological Development) activities are carried out by both central and the individual manufacturing groups with a broad perspective at the corporate level with; acknowledgement of common approach, recollection and methodology and the added value increases with the recognition of collective knowledge, skills,

competence, infrastructure and hardware, productivity and efficiency

The R&TD activities are organized under three divisions that are in coordination and interaction with each other. The first shell refers to cost and technology optimization relative to Sisecam's existing products and production technologies. The second shell comprises research carried out in those areas close to Sisecam's own products and production technologies; and the third shell covers R&TD research into products and production technologies that fall within the scope of Sisecam's future "transformation areas" in line with the roadmap of the international glass industry.

These activities conducted in 2014 contributed to the cost reduction of 38 product/production technologies and infrastructure supplies, 44 new products and technologies and commercial introduction of 10 product/production and analysis technologies developed in laboratory scale.

Believing that efficient use of our country's resources for R&TD can be achieved through university - industry cooperation, Şişecam, while carrying out joint projects with universities and institutions in Turkey that work on glass science and technology (12 institutions in 2014) and through collaboration with internationally respected research institutes, combines the knowledge, knowhow and competencies generated in pre-competition international cooperation with common intellect.



#### **Innovative Products and Technologies**

As the usage of energy-efficient materials in the architecture, automotive and energy sectors has steadily increased, Şişecam develops glass products that provide optimum solutions to heating, cooling, lighting and renewables for diverse climate zones.

- Through laboratory and pilot-scale studies; a new generation of high-performance temperable heat and solar control glass products which improve energy efficiency and reduce CO, emissions, were included in Şişecam Flat Glass' product portfolio.
- Temperable low-e 70/50 performance product, which is compliant with the layer configuration of TRC Cool Plus 62/44T product, was included in the product portfolio of Bulgaria Coating Line in order to fulfill Şişecam Flat Glass' demand
- Furthermore, the coated product for architectural applications having a performance in the 70/40 range has been developed in the laboratory, and designed to be manufactured at Sisecam Flat Glass Bulgaria Plant.
- Bendable coating was developed for heated athermic, laminated windshields for cars, which acquired the performance capability expected by the automotive industry.
- Electrochromic and thermochromic glasses serve as another great opportunity for \$isecam to introduce energysaving breakthroughs in the market. Within the scope of the project supported by TEYDEB (Technology and Innovation Funding Programs Directorate) electrochromic window systems that act as a dynamic filter and control for heat and light is being developed. From the international inorganic thermochromics-organic electrochromic project carried out with Washington University (U.S.A.) and in cooperation with TUBITAK-NSF a triple co-sputter coating device that will blend different materials and add a thermochromic feature, as well as the infrastructure that can measure optical changes under heat exposure has been gained, and thus a fully-equipped laboratory which possesses coating and measurement capabilities has been put into service through these two projects.
- In addition to the new coated products, new products offering different optical performances and colors were designed, manufactured, and supplied to the market for architectural and automotive applications through batch coloring. One of these products is the deep smoke-colored privacy glass designed for the automotive industry which improves cooling efficiency by providing solar control and a patent application was filed.



#### Renewables

In addition to sustainable buildings, Sisecam focuses on innovative products that enhance the usage of renewables.

The project funded by the Turkish Ministry of Science, Industry and Technology and conducted in collaboration with GÜNAM (Middle East Technical University Centre for Solar Energy Research and Applications) is aimed at applying the new generation nanoscale patterned glasses to photovoltaic solar cells and the resulting technology will be introduced to the glass industry.



AS THE USAGE OF ENERGY-**EFFICIENT MATERIALS** IN THE ARCHITECTURE. **AUTOMOTIVE AND ENERGY** SECTORS HAS STEADILY INCREASED, WE DEVELOP **GLASS PRODUCTS THAT** PROVIDE OPTIMUM SOLUTIONS TO HEATING, COOLING, LIGHTING AND RENEWABLES FOR DIVERSE CLIMATE ZONES.



IN THE "ENERGY EFFICIENCY **BENCHMARK" STUDY** CONDUCTED BY AN INDEPENDENT RESEARCH AND DEVELOPMENT COMPANY, WHICH **COVERED MORE THAN** 120 INTERNATIONAL **GLASS PACKAGING** MANUFACTURING FURNACES. ONE OF OUR **GLASS PACKAGING FURNACES RANKED AMONG** THE TOP 5 FURNACES AMONG ITS PEERS.



TO ENSURE A SUSTAINABLE FUTURE. WE ATTACH IMPORTANCE TO CONTINUITY OF INTELLECTUAL PROPERTY.

#### **Energy Efficient Production**

In relation with Şişecam Group's corporate energy strategy, R&TD projects and studies provide a significant decrease in the level of energy consumption and related GHG emissions of glass furnaces.

- Within the scope of the international collaborative project CRAFTEM (Carbon Reduction by Auxiliary Firing Technique) and the scope of the international collaborative project CRAFTEM (Carbon Reduction by Auxiliary Firing Technique).for Glass Melter), which is led by R&TD and co-executed with Şişecam Flat Glass and funded under the EU Framework Program FP-7, it has been established that there is potential for 1-2% reduction in energy and GHG emissions, 15-20% in NOX emissions based on the studies for NOx reduction and energy performance enhancement.
- Design improvements were realized at float furnaces through up-to-date implementations, and 10% improvement in energy consumption was attained at a float furnace with a capacity of 925 tons/day as compared with Şişecam Group's other furnaces.
- In the "energy efficiency benchmark" study conducted by an independent research and development company, which covered more than 120 international glass packaging manufacturing furnaces, one of our glass packaging furnaces ranked among the top 5 furnaces among its peers.
- Funded under the EU LIFE+ Program, a separate project carried out at oxyfuel furnace in Bulgaria is aimed at securing 9% energy saving by way of preheating the oxygen and natural gas supplied to the furnace by making use of the energy from waste gases. Under this project, the study in relation to the deployment of primary and secondary heat exchangers was completed, and the procurement was initiated.

#### **Sustainable Knowhow and Expertise**

To ensure a sustainable future, Şişecam attaches importance to continuity of intellectual property.

- Organized in cooperation with the Training Department, the first edition of the Glass Technology Training held in 2014 was attended by 26 engineers with 1 to 5 years of experience and working in manufacturing, quality or maintenance units. The training program laid the foundations for the educational mobilization that will turn out to be the future's "Glass Academy".
- During 2014, one European Patent application and two Turkish Patent applications have been granted. In addition to the patents granted, two Turkish Patent and three PCT (Patent Cooperation Treaty) applications have been filed. An application has been filed for TUBITAK 1602 Patent Support Program and incentives have been obtained for five Turkish and three PCT patent applications.
- R&TD experts authored four chapters of the Glass Industry Roadmap second edition published in 2014, which is a cooperative effort of the International Commission on Glass that steers the world glass industry and in which Sisecam takes part actively.

#### **Sustainable Environment**

Şişecam Group addresses the environmental performances of the Group Companies, and "monitors and improves" them through the activities of the R&TD.

- In addition to routine emission and air quality measurements, continuous experimental work is carried out to reduce pollution. In 2014, performance analysis and measurements were carried out in order to help improve treatment efficiency.
- In 2014, the International Commission of Glass (ICG) Technical Environmental Committee meeting was held in Istanbul at the invitation of Şişecam, with participation of St. Gobain, Pilkington, NSG Group, AGC FGE, GE (General Electric), Schott, St. Gobain, HVG, St. Gobain Isover, GTS, British Glass, Guardian and SSV (Stazione Sperimentale Del Vetro).



#### AWARD: Green Building Award to the Şişecam Science & Technology Center

The Şişecam Science and Technology Center, received an award in the 3<sup>rd</sup> International Green Buildings Summit, organized on the 20 & 21st of February by the Turkish Green Building Council. Şener Oktik, Chief Research and Technological Development Officer accepted the 'Golden' award provided for the Science and Technology Center in Çayırova.

#### SUSTAINABLE PRODUCTS

#### **Sustainable Buildings**

Because of the strong linkage between windows and energy efficiency, the flat glass sector offers great potential for greenhouse gas reduction and climate change mitigation. With coatings applied on the glass surface, flat glass becomes an insulation material with heat and solar control, maximizing buildings' energy efficiency.

Long before sustainability became the mainstream, this concept was already directing our portfolio toward attractive growth spaces. Our long history of designing breakthrough and sustainable products is evidenced by our Low-E coated double glazing products. Since 1995, our products that provide advanced thermal insulation and solar control have allowed Turkey to save \$9 billion in its energy expenses for heating and cooling.

#### Low-Emissivity (Low-E) Glass

Isıcam Sinerji is the brand of Şişecam Flat Glass' double glazing unit which is manufactured with Low-E glass. Without sacrificing from transparency and natural day light, the brand keeps the heat inside in winter, reduces heat losses 50% compared to the double glazing unit and saves fuel consumption.





AWARD: Sisecam Flat Glass' new product temperable Low-E coated (heat control) glass "Isicam Sinerji T" was awarded as the façade material of 2014.

Şişecam Flat Glass, which continues developing new and innovative products with high performance through intensive R&D studies, won the 'Façade Material of the Year' award with its 'Isıcam Sinerji T' product in the 'Façade Material/System' category at the '2014 Roofing and Façade Materials Awards', which was held for the 4th time in 2014. This was the second consecutive year that Şişecam Flat Glass won the award. The product reduces heat losses without compromising from daylight, transparency and plays an active role in environmental protection.

#### Solar Control Glass

Solar Control Glass, restrains the excess luminosity of the sun, controls transmission of solar energy inside and reduces cooling expenses. Şişecam Flat Glass' Solar Control Glass Tentesol and Tentesol Titanium have various colors and performances. Isicam units, where solar control glass and Low-E coated glass used together, reduces heat losses and provides energy efficient glazing.

#### Thermal Insulation and Solar Control Glass

Thermal Insulation and Solar Control Glass provides more effective insulation in winter by decreasing heat loss by 50% compared to a traditional DGU unit. During summer, this decreases solar energy transmission by 40%, leading to reduction in cooling expenses.

#### Renewables

In addition to its contribution to sustainable buildings, flat glass also plays an important role in the generation of solar power through solar panels. Şişecam Flat Glass has been engaging in business activities related to this field.

As for wind energy, our Chemicals Group produces glass fiber that is used as a main component of many largescale wind turbine blades because of its durable and lightweight characteristics.

#### For Lightweight Vehicles

Glass fiber is also instrumental in helping to achieve energy and climate goals in the automotive sector. For example, studies have shown that a 10% reduction in vehicle weight can reduce fuel consumption by 5% to 8%., whilst reducing vehicle weight by 100 kg brings a CO<sub>2</sub> emissions reduction of up to 12.5 g/km. The use of glass fiber composites is one of the major solutions for lightweight vehicles.



#### **Eco-friendly Mirror**

Şişecam Flat Glass has adopted a process in its production of mirrors that minimizes emissions and waste generation. TRC Flotal E, its eco-friendly mirror brand, has a completely lead-free top coat and less than 0.5% wet base coat. This usage of lead-free paint in mirror production cuts waste as evidenced by TRC Flotal E's dramatic wastewater reduction and drop in sludge generation by up to 40%.



#### Solar Control Glasses in Autoglass

It should be noted that the use of air conditioning in vehicles can generate up to 20% extra fuel consumption. Glazing with advanced solar control properties substantially reduces heat build-up inside vehicles and therefore either reduces the need for air

conditioning or helps considerably lower the load on the unit. It has the potential to improve overall fuel consumption efficiency by 2% and in some cases up





# Occupational Health and Safety

- ♦ Occupational Health and Safety Policy
- ♦ Occupational Health and Safety Management System



AS AN INDUSTRIAL GROUP WITH 19 PRODUCTION PLANTS AND MORE THAN 12,000 EMPLOYEES IN TURKEY, WE RECOGNIZE THE IMPORTANCE OF OCCUPATIONAL HEALTH AND SAFETY (OHS) TO OUR

BUSINESS.

#### OCCUPATIONAL HEALTH AND SAFETY POLICY

As an industrial group with 19 production plants and more than 12,000 employees in Turkey, we recognize the importance of Occupational Health and Safety (OHS) to our business. Our overarching safety goal is to eliminate potential risks that could cause harm to our employees. Any occupational accident or injury is a serious issue not only for our company but also for our industry and to the economy as a whole.

Moreover, a healthy and safe working environment is also a prerequisite to helping achieve efficiency and productivity in the workplace. As such, we consider the design of our processes and enhance our emergency response capabilities to minimize the risk of accidents as well as investing in new technologies and innovation to help facilitate an incident-free workplace.

Through the coordination of the Group's Industrial Relations Directorate, there is a focus on continuous

improvement in the working environment and conditions as well as on promoting a conscious health and safety culture.

Offering efficient guidance on a healthy and safe working environment is a matter of priority for Şişecam Group. We follow a systematic approach for health and safety and undertake a wide range of initiatives in order to avoid accidents and injuries.

Şişecam's aim is to ensure safety in every aspect of our operations. In line with this, we adopt a stringent Occupational Health & Safety (OHS) Policy and a number of pertinent strategies to create a safe work environment for our employees. The Occupational Health and Safety Policy for Şişecam was revised in 2014 and subsequently published for use at all national and international workplaces of Şişecam. This updated OHS Policy is shown in the following section.







#### OCCUPATIONAL HEALTH AND SAFETY POLICY

We aim to achieve every stage of our operations in a safe and healthy working environment. In line with this objective, as a part of our responsibility to create healthy individuals as well as manpower, we adopt strategies

- To prevent occupational accidents and occupational diseases by determining the necessary measures to implement and be implemented,
- To make risk assessments by the participation the employees and to reach the acceptable risk levels,
- To use the safe equipment and appropriate technologies for a healthy and safe working environment,
- To ensure the participation of our stakeholders each level of the organization in the improvement of occupational health and safety practices,
- To constitute Occupational Health and Safety culture and turn it into a lifestyle.

In this direction, we declare and undertake:

- To meet the relevant standards and requirements in the field of legal obligations for Occupational Health and Safety,
- To increase our performance and our processes with a proactive approach on the continuous improvement on Occupational Health and Safety,
- To continue improving the education and activities of our employees and sub-contractors / suppliers to their employees, visitors, interns for adopting the principles of OHSAS.

GENERAL MANAGER

WE THRIVE AND DEVELOP TOGETHER





### OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM



WE BELIEVE THAT
PROMOTING A CULTURE
OF HEALTH AND SAFETY IS
VITAL TO OUR SUCCESS IN
ACHIEVING OUR GOAL
OF REDUCING THE
INCIDENCE RATE OF WORK
ACCIDENTS.

Şişecam Group has set a high standard of OHS performance and formalized policies since 1989. In order to create consistency across the Group as well as comparability of performance with our peers, we strive to ensure the majority of our plants use

the Occupational Health & Safety Advisory Services (OHSAS) 18001 Standard. Since 2006, we have implemented OHSAS 18001 Occupational Health and Safety Management Standards Systems in 90% of our production plants in Turkey.

#### **OHS TRAINING**

Şişecam believes that promoting a culture of health and safety is vital to our success in achieving our goal of reducing the incidence rate of work accidents. For this reason, and in order to go beyond the requirements of national legislation, Sisecam provides regular OHS training sessions to all employees that cover the following topics:

#### **General Issues**

- ◆ Information regarding labor legislation
- Legal rights and responsibilities of employees
- Commercial cleaning and layout
- Legal consequences of occupational accidents and diseases

#### **Technical Issues**

- ◆ Chemical, physical, ergonomic risk factors
- Manual lifting and carrying
- ◆ Flash, explosion, fire and fire protection
- ◆ Safe use of work equipment
- Work with display screen equipment
- Electricity, hazards, risks and precautions

#### **Health Issues**

- Causes of occupational disease
- Principles of disease prevention and protection techniques
- Biological and psychosocial risk factors
- First aid
- Implementation of the technical principles of the causes and prevention of occupational accidents
- Safety and health signs
- ◆ Use of personal protective equipment
- General rules of occupational health and safety and security culture
- Evacuation and rescue.

During 2014, all Şişecam and affiliated group employees working at Şişecam Headquarters received Basic Occupational Health and Safety Training, which was coordinated by the Industrial Relations Department. In addition, First Aid Teams were set up, comprising Şişecam Group Headquarters, Information and Technology Center employees, who were provided with Basic First Aid Training. All OHS specialists working at Şişecam Group received Energy Isolation, Lock Out/Tag Out (LOTO) Systems Training. Initiated in 2013, Behavior-Oriented Occupational Health and Safety training was given to all middle managers who are working at production plants in Şişecam, and efforts aimed at building on the OHS culture continued.



Project team members gave user training at the headquarters and at the plants in relation to the Occupational Accidents Analysis and Corrective/ Preventive Action Tracking System, which was prepared in 2013 and to be used by end users starting from January 2014. Having gone live, the system was improved in line with the feedback received, and started to be used actively and efficiently. In line with the modified occupational accidents analysis system, the annual Occupational Health and Safety Rewarding System was revised in view of occupational accident frequency, occupational accident severity and the best practices regarding occupational health and safety at plants.

As in 2013, activities were organized at Sisecam plants in Mersin during the National Occupational Health and Safety Week in May. The theater play themed occupational health and safety, which was specific to Sisecam culture and glass manufacturing, was staged starting from the national occupational health and safety week, and later in the year at Şişecam Group's plants.

In addition to those, plays about OHS and Personal Protective Equipment (PPE) were put on stage, which encouraged the use of personal protective equipment and prizes were distributed to motivate the employees.

A painting competition was organized for the children of the Group blue collar employees in a bid to point out that occupational health and safety culture is applicable not only to workplace but to life in general, and to propagate this culture socially.

A committee made up of occupational safety specialists working at Şişecam headquartersand affiliated groups was set up to prepare an OHS handbook, which will be used at Şişecam workplaces. Addressing basic occupational health and safety topics and regulatory requirements so as to cover all production and working areas, the handbook was printed by early January 2015 and started to be handed out to employees with in





A CENTRAL OHS
EXPERT SERVES AS THE
COORDINATING BODY,
PROVIDING SUPPORT
ON OHS-RELATED
DEVELOPMENTS,
INCLUDING CHANGES IN
REGULATION, TRAINING
COURSES.

#### MANAGERIAL REVIEW OF HEALTH AND SAFETY

Through visible leadership and engagement, we believe that we can increase our ability to mitigate health and safety risks. By conducting regular reviews and consultations between management and production plants, we are able to consistently monitor performance, provide any needed support for program implementation and respond to safety issues together with production plant workers.

The resulting reports that were written include: monitoring and observation of results in the plants and were shared with the Risk Management Department, Internal Audit Department and related Human Resources Departments.

All plants of \$i\$ecam subsidiary companies employ OHS units that comprise an Occupational Health and Safety Expert, Workplace Physician and Medical Personnel, who serve under the Plant Manager. Companies and plants carry out their own internal OHS activities and monitor their results. Also in each plant there is an OHS Committee, which includes a management representative, support units and worker representatives. All employees at each plant are represented by the members of the OHS Committee. We comply with the local law<sup>6</sup> on the minimum numbers of committee representatives.

A central OHS Expert serves as the coordinating body, providing support on OHS-related developments, including changes in regulation, training courses,

meetings and special events, among others. Additionally, the central unit carries out annual OHS measurement and monitoring activities in plants and issues reports of their results.

The current Workplace Accidents Analysis Tracking program has been improved to adapt to \$iṣecam's everevolving and changing structure, and a new Corrective & Preventive Actions (CAPA) system has been established to ensure more thorough measurement of workplace accidents.

Integrated with SAP, the CAPA system is available to all workplaces and units, including the management and sales centers and provides capabilities to track and control workplace accidents in a systematic manner.

Aside from tracking and preventive measures, these projects enable \$i\secam to disclose accurate data and generate reports. This reporting protocol enables \$i\secam to provide clear and transparent communications to employees and managers.

Further, we formed a Workplace Accidents Evaluation Commission to reduce work-related incidents using root-cause analysis. The Commission evaluated each workplace accident caused by "Intervention to Working Machines", "Being Crushed between Two Objects" and "Glass Punctures". The Commission report containing case studies and recommendations was disseminated to our plants.

#### INJURIES AND LOST DAYS

The company's OHS performance indicators for 2014 are shown below. From all of Şişecam's facilities in Turkey and headquarters, there were a total of 687 accidents that resulted in injury but no fatalities of either Şişecam employees or third-party workers. In all cases where there were injuries or near misses, investigations were undertaken to understand the root-cause and to help avoid any further accidents.

Total lost days for Şişecam's workforce in Turkey were 7,591 days (2013: 10,231 days). In addition, there were a total of 336 recorded near miss incidents relating to Şişecam employees in Turkey in 2014 and a further 107 from third-party workers.



TOTAL LOST DAYS FOR \$1\$ECAM'S WORFORCE IN TURKEY DECREASED 26%
IN 2014 IN COMPARISON TO 2013.

#### INJURY DATA FOR TURKEY FACILITIES AND HEADQUARTERS IN 2014

Male	Male Female Total E		Third-party Total Employees workers		Injury Rate*
686	1	566	121	687	16

<sup>\*</sup> Injury rate<sup>7</sup> calculated as: (Total injuries x 1.000.000) / Total worked man hours

<sup>6</sup> The Law on Occupational Health and Safety No. 6331 ("Law No.6331"), which governs the health and safety standards to be adopted by employers in Turkey and was published on 30 June 2012.

<sup>7</sup> Injury rate: The frequency of injuries relative to the total time worked by the total workforce in the reporting period.

#### STRONG INDUSTRIAL RELATIONS

At \$i\text{secam}, we respect and support our employees' right to join a union. We have relations with five trade unions in various branches of businesses under the

coordination of our Industrial Relations Directorate in Turkey. Our goal in our Industrial Relations Vision is:

- To increase competitiveness and efficiency by developing industrial relations in a balanced way within the framework of Group policies,
- To maintain industrial harmony in the workplace based on trust and dialogue with trade unions,
- To undertake the promotion of health and safety at work in line with our "people first" philosophy.

Industrial relations at Şişecam Group are carried out with five related trade unions in three business lines, which are coordinated by the Group's Industrial Relations Directorate under the Human Resources Department.

As a result of the negotiations on the 24<sup>th</sup> Term Group Collective Bargaining Agreement with Trade Union for 10 workplaces affiliated to Şişecam Group, an agreement was executed following a 7-day strike. The agreement will remain in force for three years.

The percentage of employees covered by our collective labor agreements was 63% in 2013 and 2014. It should be noted that, among our blue collar employees, the share of workers having joined a union was 97% as at the end of the reporting period.

#### **REGULATION AND COORDINATION WORKS**

The Industrial Relations Directorate has coordinated meetings to inform employees about recent changes in labor legislation and occupational health and safety regulations in 2014 as in previous years. In the coordination meetings, relevant industry updates and problems encountered were discussed as well as determining a Group approach to confront any problems.

The statements about rules, legislations and regulations were continuously shared with employees in 2014.

Plant Managers in Turkey and HR Executives were given

a training course about collective labor agreements. Feedback was shared with them about the present status and operation. Collaborative meetings continued to maintain effective cooperation between the employees and the employer.

There were many meetings held in 2014 related to strengthening relations and communication and a peaceful working environment in the company with labour union representatives and blue collar employees. Additionally, there were many joint activities organized with unions other than technical meetings. The following points are examples of some of the activities:

- All blue collar employees, some of them being union members, were given a company email address to strengthen relations.
- Informative news about the activities organized is screened at plant cafeterias to create a broader awareness
  of the company agenda and organizations amongst employees.
- ◆ Tree planting took place with the participation of company authorities, employees and Petrol-İş Union executives in Soda Sanayii A.Ş.

There were many activities and trainings held in the Occupational Health and Safety Week, with the participation of all employees from Mersin region (Anadolu Cam Sanayii A.Ş., Paşabahçe Cam Sanayii

A.Ş., Trakya Cam Sanayii A.Ş. and Soda Sanayii A.Ş. plants) and Kristal-İş and Petrol-İş Union executives. A protective equipment-themed painting contest was organized for employees' children.



## Human Resources

- Our Workplace
- Policies and Career Advancement Programs
- Diversity and Inclusion

#### **OUR WORKPLACE**

Şişecam's success depends on our employees. While developing, incorporating, and retaining the best talent, Şişecam's priority is to provide a happy, safe

and motivating workplace where our employees can develop their full potential.

ONE OF OUR MAIN GOALS IN THE WORKPLACES IS TO PROVIDE OUR **EMPLOYEES WITH A** NON-DISCRIMINATORY WORKPLACE THAT MEETS THE STANDARDS OF NATIONAL AND INTERNATIONAL WORKPLACE RIGHTS POLICIES.

#### Our main goals in the workplace are:

- To provide our employees with a non-discriminatory workplace that meets the standards of national and international workplace rights policies,
- To protect the rights of employees to unionize,
- To continue to be a leading company which employs only the best practices in occupational health and safety in all our workplaces,
- To provide a fair and pleasant place for our employees to work.



#### POLICIES AND CAREER ADVANCEMENT PROGRAMS



WE STRONGLY BELIEVE THAT THE SUCCESS OF ŞIŞECAM DEPENDS ON OUR MOST VALUABLE ASSET - OUR EMPLOYEES.

We strongly believe that the success of Sisecam depends on our most valuable asset - our employees. To recruit the best talent, foster a culture of innovation and generate a favorable work atmosphere, we offer competitive compensation and benefits, including educational allowance and bonuses as well as annual vacation days, parental leave and marriage leave.

We also conduct regular performance reviews and training sessions to help build a solid foundation for our employees. Our leadership and development programs, which are articulated in the following section, are designed to help our employees thrive, build on their existing abilities and gain new skills.

#### **GLOBAL LEADERSHIP PROGRAM**

This is a comprehensive and high-priority program that aims to build the most critical competencies for highperformance culture at the leadership level.

#### Intended results are:

- ◆ Developing a global leader profile for Şişecam,
- Defining required leader and employee competencies and behaviors in a high-performance culture,
- Developing the communication plan for deploying the leadership model,
- Designing internal competency trainings for managers and e-learning for employees.

#### **LEARNING & DEVELOPMENT PROGRAMS**

Available to all levels of white-collar and bluecollar employees in Turkey under the umbrella of Şişecam Akademi, the common objective of these programs is to equip the participants with the right set of competencies and skills necessary to lead the organization to the realization of its strategic goals. In line with this objective, the main activities of the learning & development department can be summarized as follows: assessing the training and development needs at an individual level in terms of organizational competencies and occupational/technical skills; managing and updating a comprehensive learning & development catalogue; selecting and customizing

the appropriate learning & development tools from the right resources; monitoring the impact of the activities and engaging in corrective action when necessary through constant feedback; and introducing new and innovative topics to the organization, which in turn contributes to the development of intellectual know-

In 2014, total training hours for employees in Turkey amounted to 147.043 man-hours. 98.222 man-hours for white-collar employees and 48,821 man-hours for blue-collar employees.

	Management			Staff			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2014	699	2,450	3,149	120,666	23,228	143,894	121,365	25,678	147,043
2013	967	1,652	2,619	87,960	22,939	110,899	88,927	24,591	113,518



TOTAL TRAINING HOURS OF THE STAFF INCREASED 30% IN 2014 WITH RESPECT TO 2013.

AVERAGE NUMBER OF HOURS OF TRAINING BY GEN	DER AND EMPLOYMENT CATEGORY (HOURS PER EMPLOYEE)
AVERAGE NOTICER OF HOURS OF TRAINING BY GEN	JER AND EMPLOTMENT CATEGORT (HOURS PER EMPLOTEE)

		2014	2013
By Gender	Male	11.0	8.3
	Female	21.6	22.0
Farada and Catalana	Blue-collar	6.1	4.2
Employment Category	White-collar	23.3	20.4
Average Training Hours per Emplo	oyee	12.1	9.6

#### **EMPLOYEE ENGAGEMENT**

Our employees' skills, motivations and commitments to \$isecam help drive successful achievement of our goals and raise the bar for greater improvements; thus, we highly value our employees' opinions. As articulated in the following sections, we seek their opinions on strengths, weaknesses and opportunities in many aspects of our work environment through several mechanisms.

We conduct an Employee Engagement and Satisfaction Survey bi-annually, followed by a periodic Pulse Survey conducted in the year between. Based on the Survey results, action plans are developed and followed by the parties concerned. According to the results of the Survey of 2013, internal communication was determined as a focus area and there have been several new initiatives on the area since (e.g. we developed a social club for our employees where they have the opportunity to attend a diverse range of activities across the Company).

# \*

WE SEEK OUR EMPLOYEES'
OPINIONS ON STRENGTHS,
WEAKNESSES AND
OPPORTUNITIES
IN MANY ASPECTS OF OUR
WORK ENVIRONMENT
THROUGH SEVERAL
MECHANISMS.

#### **ŞİMDİ! SOCIAL ACTIVITIES CLUB**

In 2014, Şişecam Social Activities Club was launched to ensure that employees' time at the work place is enjoyable, for improving communication, sharing and synergistic environments and for turning employee happiness into productivity. Within this framework,

various activities and projects were realized with the support of volunteer employees from trips to theater plays, from office parties to tournaments and from aid campaigns to discount deals.

#### SUGGESTION DEVELOPMENT SYSTEM

A Suggestion Development System was introduced in order to ensure the collection and appraisal of Group employees' innovative suggestions, adding value in line with Group strategy and objectives. This system involves the approval of incoming suggestions by the Suggestion Reception Team, evaluation by the Suggestion Evaluation Team, and the monitoring of

the whole process in an electronic environment. The purpose of the Suggestion Development System is to gather suggestions that add value, assess them in a reliable fashion, and implement any practicable suggestions in order to reap any financial return and/or process optimization benefits.

#### PERFORMANCE MANAGEMENT

Responsible for expanding the success of our performance culture and increasing organizational readiness, the Performance Management System works hand in hand with the vision, mission and strategies of \$iṣecam Group. Started by the Group in 2010, the Balanced Score Card system is aligned with individual targets. In line with this, our success-

based performance culture is being converted into a success-based corporate culture. The purpose of the Performance Management System is to create value for employees and to ensure that the value created by employees serves the development and sustainability targets of Sisecam.

#### **CAREER DEVELOPMENT**

Sisecam offers opportunities for all employees to develop their careers through an integrated preplanning of organizational and employee needs. Both the expectations of the individual and the requirements of the organization are addressed in the Career Development Plan, as part of the annual Performance Management System.

Moreover, strategic career maps, Group-based career and succession plans, are developed based on the data from the Performance Management System. In addition, employee competencies are reviewed at external Assessment Centers, where blue-collar and white-collar employees participate before being considered for promotion. If any development areas are identified in the process, development plans are prepared that match the needs of the individual.

Performance evaluation and career development systems are in place at \$isecam for both blue-collar and white-collar staff. A regular performance and career development assessment of the preceding year is implemented for all staff without exception.

In implementing this system, managers objectively and sensitively assist the development of their staff. The employee is always informed of the results following the evaluation in what is a confidential process.

Performance and career development reviews are applicable for all white-collar employees.

# \*

ŞİŞECAM OFFERS
OPPORTUNITIES FOR ALL
EMPLOYEES TO
DEVELOP THEIR CAREERS
THROUGH AN INTEGRATED
PREPLANNING
OF ORGANIZATIONAL AND
EMPLOYEE NEEDS.

#### **RECOGNITION & REWARD SYSTEM**

Şişecam Employee Recognition and Rewarding System is the acknowledgement of an individual or team's

behavior, effort and accomplishments that support the organization's goals and values.

- Recognition: In our recognition system, we grant spot awards to our employees who have achievements and
  exemplary behaviors to let them know that their work is valued and appreciated. We also congratulate our
  employees on their special days such as birthdays, marriages and promotions to build a supportive work
  environment.
- Rewarding: We have three main rewarding categories:
  - I. Stars of the Year: According to the Rewarding system at \$isecam, projects that excel in providing business-oriented solutions, such as improving the efficiency and effectiveness of \$isecam's processes and reinforcing \$isecam's brand value are granted an award in this category.
  - II. Occupational Health and Safety: Şişecam companies are granted an award In "Occupational Health and Safety Award" category according to their Accident Frequency Rate and Accident Severity Rate. In addition, The Best Practice in Occupational Health and Safety is selected and awarded with 'The Best Execution in Occupational Health and Safety Award' in that category.
  - III. Special Award: In "Special Award" category, employees or initiatives for cultivating positive work relations, pursuing sustainability endeavors, and developing a constructive work environment are granted an award.



PROJECTS THAT EXCEL IN PROVIDING
BUSINESS-ORIENTED SOLUTIONS, SUCH AS IMPROVING THE EFFICIENCY AND EFFECTIVENESS OF \$IŞECAM'S PROCESSES AND REINFORCING \$İŞECAM'S BRAND VALUE ARE GRANTED AS "STAR OF THE YEAR" AWARD.

#### FLEXIBLE WORKING FLEXTIME

We started up the "Flexible Working Hours (Flextime)" at the beginning of 2015, which is a variable work schedule, in contrast to traditional work arrangements requiring employees to work a standard 8 a.m. to 5 p.m. day.

Under flextime, employees can start working in between 07:00-09:00 and normal daily working hours have to be completed at the latest by 19:00. We aim to establish a healthy work-life balance and improve their motivation while allowing employees to coordinate their working hours.

#### **FLEXIBLE BENEFITS**

We started up the Flexible Benefits Program at the beginning of March, 2015. Flexible plans allow employees to choose the benefits they want or need from a package offered by Sisecam. Our Flexible benefit package includes variable health insurance plans for employees and their families and life insurance for this year

#### **EMPLOYER BRANDING**

To increase the Employer Branding Image of Sisecam, we plan yearly campus activities e.g case studies, interview simulations, tea-talks with managers, etc. Case studies include team work of students on various topics. Students try to give a solution to given situation and at the end they make a presentation about it. We plan participate in these case studies with some of our managers, so they would be able to observe students naturally. In addition, successful students may be awarded with internship opportunities, which can increase the applications to these activities as well.

The aim of Interview Simulations is for the students to experience different types of interviews, such as one-to-one and group interviews. In addition, this activity introduces students to a good type of interviewer as well as a bad interviewer. The aim of questions and the expectations behind these questions are also at the target of this activity. After the examples, the Human Resources Department gives feedback to students.

Tea-talks with managers allow students to listen and experience the managers' career paths which can enhance their point of views on different career paths.



#### STRUCTURED LONG-TERM INTERNSHIP PROGRAM

The long-term internship program aims to hire successful students as interns in a long-term period; so we can observe their performance as well as teaching

them our culture and the different service lines of our business.

#### COMMON LANGUAGE PROGRAM

The main purposes of the program is strengthening the interaction of management teams, supporting the effectiveness of \$i\secam and developing role model approaches in the transformation process.

#### "WE ARE ŞİŞECAM" MEETINGS

The main purpose of these meetings is to spread \$i\text{secam Values to all \$i\text{secam employees}. Meetings were completed in Turkey, Bosnia and Bulgaria and will be held in the other countries. Within the scope of the activities aimed at disseminating the values to large audiences, "We Are Part of the Şişecam Family" workshops were organized in and out of Turkey in 2014.

#### **DIVERSITY AND INCLUSION**



TWO OF THE CORE VALUES OF OUR ORGANIZATION:

WE EXHIBIT A FAIR AND TRANSPARENT MANAGEMENT APPROACH.

WE RESPECT DIFFERENCES.

We recently revisited the \$isecam Corporate Values to incorporate our employee strategy. Two of the core values of our organization implicitly acknowledge the importance of diversity and inclusion to our business.

We performed a company-wide online employee survey, the results of which we integrated into \$i\text{secam}\$ policies and values. As presented in the Values section under Corporate Governance of this report, two of our core values are:

- We exhibit a fair and transparent management approach.
- We respect differences.

A fundamental value at \$i\$, ecam, "We respect differences" guides us to take an inclusive approach in considering the diverse insights at our company. By harnessing the knowledge and perspectives of our diverse workforce, we are well-positioned to bring the necessary improvements to our workplace, generate innovative solutions and strengthen our reputation as a global leader.

Consistent with this value, Şişecam reaffirms its commitment to equal opportunity with the value "We

exhibit a fair and transparent management approach." We strive to create an inclusive workplace and ensure that HR processes such as recruitment, career development and training are free of discrimination. Accordingly, no HR policies or procedures indicate any difference between male and female employees at Sisecam.

Details of our employee profiles (gender, age and employment category) along with new hires and leavers data are shown below.

#### EMPLOYEE PROFILE BY AGE AND GENDER

2013*

Category	Age	Male	Female	Total	Male	Female	Total
Manager	under 30	1	0	1	0	1	1
	30-50	163	52	215	140	48	188
	over 50	81	11	92	95	10	105
	Total	245	63	308	235	59	294
Staff	under 30	2,404	437	2,841	2,290	382	2,672
	30-50	8,207	668	8,875	8,086	658	8,744
	over 50	150	21	171	158	20	178
	Total	10,761	1,126	11,887	10,534	1,060	11,594
Total Workforce		11,006	1,189	12,195	10,769	1,119	11,888

<sup>\*</sup> Oxyvit data for 2013 has been excluded from the 2013 Sustainability Report data in order to show on a comparable basis to 2014.

#### NEW EMPLOYEE HIRES IN 2014 BY AGE AND GENDER

#### 2014

Category	Age	Male	Female	Total
	under 30	1	1	2
Number of Managers	30-50	8	3	11
hired during the reporting period	over 50	8	0	8
	Total	17	4	21
	under 30	678	169	847
Number of Staff hired	30-50	280	58	338
during the reporting period	over 50	53	1	54
	Total	1001	228	1239

#### EDUCATION LEVEL OF ŞİŞECAM EMPLOYEES IN TURKEY

2013

Education Level of Employees	White-	Blue-Collar	Total	White-Collar	Blue- Collar	Total
	Collar		_			_
Graduated from high school and under	1,274	6,414	7,688	1,348	6,341	7,689
Associate degree	569	1,388	1,957	550	1,280	1,830
Graduated from university and above	2,469	81	2,550	2,290	79	2,369
Total Employees	4,312	7,883	12,195	4,188	7,700	11,888



THE BOARD WAS COMPRISED OF 2 FEMALE MEMBERS AND 7 MALE MEMBERS.



PERCENTAGE OF **FEMALE MANAGERS** WAS



**AVERAGE HOURS** OF TRAINING PER EMPLOYEE WAS 12.1 IN 2014 (2013: 9.6 HOURS).



47 FEMALE EMPLOYEES WERE ENTITLED TO TAKE MATERNITY LEAVE AND ALL DID. 43 (91%) HAVE SUBSEQUENTLY RETURNED TO WORK.



# Corporate Social Responsibility

- Environment
- Education
- Culture
- Sports

Şişecam places high importance on corporate social responsibility and investing in local communities. Areas of focus within our approach include supporting the environment, education, culture and sports as explained in the following sections.

# **ENVIRONMENT**

#### PROJECT FOR THE PROTECTION OF KAZANLI SEA TURTLE POPULATION

Endangered sea turtles have been known to be using the beach in a district of the Mersin province as an egg-laying site for hundreds of years. Launched in 2007 by Soda Sanayii A.Ş., the Kazanlı Project has proven to be instrumental in the preservation of the endangered "Caretta Caretta" and "Chelonia Mydas" sea turtle species and their nesting areas, while raising awareness of this issue among the local population. The project is intended to provide a social contribution and benefit to the socio-cultural and socioeconomic life in the region through eco-tourism that may be generated by the presence of the endangered sea turtles in theregion. The greatest contribution to the "Kazanlı Sea Turtles Project" has come from young volunteers and students of the Biology Department of Mersin University. Besides these young volunteers who have taken part in the development of the project, meetings are organized to encourage active participation of new volunteers in the initiative. In 2014, the oscillation that needed to be observed in the total number of sea turtle nests continued, and the number of nests increased consistently.



# FORESTATION

Areas between 5,000 to 10,000 square meters within the sites of Sisecam plants are allocated to forestation, and Şişecam Memorial Forests are brought to life in all regions where Şişecam have operations. Camiş Madencilik A.Ş. boasts a Şişecam Memorial Forest that has reached 368 decares in a culmination of forestation efforts initiated in 2000 in the Yalıköy area, where its pit and facilities are located. Tree planting activities initiated in 2006 by Soda Sanayii A.Ş. in the Mersin region are organized annually for the purpose of determining forest sites and planting trees in these sites. As a result of the efforts taken in this framework, the families of current and retired employees planted nearly 3,000 saplings in 2014. Thanks to the sapling planting activities launched in the Cankurtaran region, Denizli Cam Sanayii ve Ticaret A.Ş. created a mini forest with grown trees on an area of three decares. In addition, approximately 6,000 trees and saplings have been planted in the plant site, 50% of which is covered by green spaces.





AREAS BETWEEN 5,000 TO 10,000 SQUARE METERS WITHIN THE SITES OF SISECAM PLANTS ARE ALLOCATED TO FORESTATION. AND ŞIŞECAM MEMORIAL **FORESTS ARE BROUGHT TO** LIFE IN ALL REGIONS WHERE SISECAM HAVE OPERATIONS. 8,900
BOTTLE BANKS WERE
DONATED AND
437,100 TONS
OF GLASS PACKAGING
WASTE WAS RECYCLED IN
THE PROJECT.



RECYCLING PROJECTS OF SISECAM GLASS PACKAGING RESULTED WITH REDUCTION IN CARBON EMISSIONS WHICH IS EQUAL TO REMOVING 157,000 CARS OFF THE ROADS.

#### PROJECT "GLASS AND GLASS AGAIN"

Launched in 2011 by Sisecam Glass Packaging in cooperation with the ÇEVKO (Foundation for Environmental Protection and Reuse of Packaging Waste) and local administrations, the project "Glass and Glass Again" is one of the most comprehensive

sustainability and social responsibility initiatives in Turkey. Aiming to change social behavior and support the move towards a recycling society, the project is carried out with the primary objectives of;

- Raising awareness on glass packaging recycling and helping build an informed community,
- Improving the collection infrastructure for glass packaging waste,
- Modernizing the glass packaging waste collection and processing facilities and separating glass packaging waste from municipal waste before landfilling.

Between 2011 and 2014, training in glass recycling was provided to 163,000 primary school students, 8,900 bottle banks were donated and 437,100 tons of glass packaging waste was recycled in the project. This resulting reduction in carbon emissions was equal to that of removing 157,000 cars off the roads, and the energy saved thanks to recycling reached a level that would cover the heating and hot water needs of 18,000 dwellings. In addition, cooperation was established with 94 local municipalities in 13 cities, and support was extended to raise awareness among society, improving collection infrastructure and modernizing glass recycling facilities. During 2014, a total of 3,750 bottle banks were donated to selected districts in

Istanbul, Ankara, İzmir, Mersin, Denizli, Muğla, Kocaeli, Edirne, Kırklareli, Manisa, Aydın, Adana and Tekirdağ. Of these, 2,900 had 900 liter capacity and 850 had 1,200 liters capacity. Furthermore, bottle bank collection vehicles were donated to Beyoğlu, Şişli and Marmaris and Zeytinburnu municipalities. Special bottle banks are being designed to fullfill the needs of restaurants and hotels which heavily generate glass packaging waste. During the reporting period, most of the bottle banks were set up at heavily-visited locations such as shopping malls, main streets, city squares; and activities to raise awareness on recycling were carried out, during which various project mascots were used and presents were given away.



AWARD: Anadolu Cam San. A.Ş. gets Sustainability Award with 'Glass and Glass Again' project.

Anadolu Cam San. A.Ş. gets the Sustainability Award with its 'Glass and Glass Again' project in the 2014 Corporate Social Responsibility Awards organized by the Turkish Confederation of Employer Associations (TİSK) with EU's support. The project which has prevented 390,000 tons of glass or 1.6 billion glass bottles to go to waste certified its success with this award.



# **EDUCATION**

#### **ENVIRONMENT AND ENERGY WORKSHOP**

and sustainability Environment strategies. opportunities for collaboration, potential projects and previous practices were discussed in the Environment and Energy Workshop organized by the Corporate Development and Sustainability Department.

The Environment and Energy Workshop organized by the Corporate Development and Sustainability Department was held in Istanbul Fuat Paşa Hotel. The workshop started with Serdar Gencer, Chief Corporate Development and Sustainability Officer's speech with around 60 attendees. Presentations about 2014 environment and sustainability strategy, opportunities for collaboration, best practices in the fields of potential projects and implementations were presented in the first day of the workshop.

Subjects including an energy database, renewable energy projects, process waste water, packaging, materials, extending ongoing projects to all facilities, ensuring coordination among projects and other relevant subjects were discussed during the workshops. The opinions and feedback from participants were evaluated and materialized according to sustainability materials including environmental performance, energy efficiency and social aspects.

On the second day of the workshop, a session for Environmental Engineers was held with the participation of central administration and the environmental responsible from the production groups. The topics included monitoring and reporting of GHG Emissions, internal continuous emission measuring systems andupdates on legislations for hazardous waste transport. There were also discussions on how the recently established 'Environment and Energy Policy' would be implemented at all facilities as well as specific issues and solutions that the plants faced concerning environmental management systems

In the energy workshop organized the same day, an interactive presentation was held by the business partners on projects implemented so far. The topics discussed included the management and roll-out of energy efficiency projects, the organization of committees for discussing energy issues and measurement, planning and implementation practices. The workshop was attended by technical experts from various plants and positions.



**ENVIRONMENT AND** SUSTAINABILITY STRATEGIES. OPPORTUNITIES FOR COLLABORATION. POTENTIAL PROJECTS AND PREVIOUS PRACTICES WERE DISCUSSED IN THE ENVIRONMENT AND ENERGY WORKSHOP. ORGANIZED BY THE CORPORATE DEVELOPMENT AND SUSTAINABILITY DEPARTMENT.

#### **GLASS SYMPOSIUM**

Şişecam's 29th Glass Symposium was held with the attendance of 22 national and international universities. The symposium, themed 'Glass and Coating That Adds Value to Glass', was held at Kadir Has University, Cibali Campus with 305 attendees in November 7, 2014 by Şişecam Research and Technological Development Department.

Ahmet Kırman, Vice Chairman and CEO of Şişecam and made the opening speech and Research and Technology Development President Prof. Şener Oktik provided details about Sisecam and its 2020 vision. Prof. Tetsuji Yano from Tokyo Institute of Technology and Prof. Allan Matthews from Sheffield University joined as key speakers. Prof. Tetsuji Yano talked about innovative glass melting techniques and its energy efficiency benefits whereas Prof. Allan Matthews shared information about various coating technologies.



ŞİŞECAM'S 29<sup>TH</sup> GLASS SYMPOSIUM WAS HELD WITH THE ATTENDANCE OF 22 NATIONAL AND INTERNATIONAL UNIVERSITIES



# **CULTURE**

#### SERCE HARBOUR GLASS WRECK DOCUMENTARY

Within the framework of Şişecam Group's vision of sustainable growth and the importance it attaches to environmental values, the "Glass and Glass Again" documentary was broadcast in 2014, which provides an account of the discovery of the Serçe Harbour Glass Wreck that presents critical finds with respect to underwater archeology, glass manufacturing and recycling. The Serçe Harbour Shipwreck was excavated by a team of Turks and Americans led by Prof. George Bass known as the father of underwater archeology at Serçe Harbour near Marmaris 35 years ago, and

the finds included two tons of broken glass nuggets and about one ton of broken glass, as well as glass items. Known around the world as Glass Wreck, the ship is regarded as one of the world's most important wrecks both due to its load and the substantial part of its body that survived until today. The sunken ship and its contents are on display in the Bodrum Museum of Underwater Archeology under the care of Şişecam since 1985. The documentary, "Glass and Glass Again", is intended to tell the story of the Glass Wreck and the unlimited recyclability of glass to broader audiences.



#### ANTIQUE GLASS WORKS COLLECTION

Şişecam's collection of 527 antique glass works, collected as a culmination of a lengthy and diligent effort to preserve cultural values, is registered with the Istanbul Archeological Museums. The collection is on display in a special hall in the Şişecam headquarters.

The Glass Hall of the Bodrum Museum of Underwater Archeology was opened in 1985 to visitors from around the world, under the sponsorship and patronage of Sisecam.

#### HISTORY-CULTURE-GLASS COLLECTIONS

As part of Şişecam Group's mission to preserve and pass on our cultural heritage to future generations, the first of the History-Culture-Glass collections reflecting the historical and cultural background of Anatolia through glass artworks was presented in 1999. A total of 414 limited edition items of artistic value have been produced under the glass collections so far. 2013

marked the addition of the Zevk-i Selim Collection to the series, which previously covered 11 collections - Ottoman, Islamic Glass, Çeşm-i Bülbül (Nightingale's Eye), Mosaics, Beykoz, Anatolian Civilizations, Blue and White on Glass, Words of Art on Glass, Patience and Reconciliation, Alliance of Civilizations, Mystery of 7, Ashura, Istanbul and the Talking Coins.







# **SPORTS**

#### **SISECAM CAYIROVA SPORTS CLUB**

The Çayırova Sports Club, which was founded by Sisecam under the name of Çayırova Sailing Sports Club, commenced operations at Çayırova Sports Facilities in 1982 with the objective of attracting young people into sport and contributing to the physical and moral development of the youth through sports. The Club obtained federated club status from the General Directorate of Youth and Sport in 1984.

With a team of approximately 100 athletes and managers, the Club serves young athletes and those striving to be athletes in the disciplines of sailing, rowing and canoeing and trains national athletes who have achieved successful results in various branches.





# ROWING

Şişecam Çayırova Sports Club women's rowing team ranked third in the 2014 Adults Turkey Championships. The Club also claimed the team championship in the Junior Girls' category, second spot in the Young Women's and Little Girls' categories, and the third place in the Junior Men's category in the Turkish Youth

Championships. In the Turkey Cup races, the Club's rowers took first place in the Junior Girls' category and the second place in the Young Women's and Junior Men's categories. The Club was placed fourth in the Junior Girls' category at the Balkan Championships.

#### **SAILING**

The Club's four Optimist and four Laser sailors obtained ranking scores in the  $1^{\rm st}$  Regional Cup Sailing Races and qualified to participate in the Ministry of Youth and Sports Championship Finals. In the  $2^{\rm nd}$  Regional Cup Races, four sailors earned ranking points and took part

in the Federation Cup Championship Finals, while one sailor ranked second in this respective category and won the silver medal. Our athletes notched up a major achievement by claiming the championship in the U23 category in the 2014 Pirat Turkey Championships.

#### CANOEING

During the Spring Cup Calm Water Canoeing Races, our canoeists claimed two first places in the young women's category, a third place in the women's, and third place in the little women's categories, thus capturing the second place trophy in the young women's event. The athletes won the championship trophy in the Canoe Ocean Racing Spring Cup.

At the Calm Water Canoeing Turkey Championships, the athletes won six second spots and five third spots. At the Canoe Ocean Racing Turkey Championships Races, the athletes won the Turkey championship. At the International Race De Pas Calais races held in France, one athlete on the Turkish National Team ranked first, third and fourth in various categories.

# PARTICIPANTS FROM ŞİŞECEM BECAME WORLD CHAMPION IN TABLE TENNIS CATEGORY AT THE CORPORATE GAMES

Istanbul Corporate Games, the most extensive corporate sports organization in Turkey, is organized for sports-lovers and was held between 23<sup>rd</sup> and 25<sup>th</sup> of March for the 12<sup>th</sup> time. Şişecam joined the organization with 72 sportsmen. Participants from Şişecam won 11 medals: 2 gold, 5 silver and 4 bronze in their respective categories. At corporate level, Şişecam collected the highest points and finished first in table tennis category. Murat Varlı and Seyhan Torun, who finished first in their categories in table tennis, attended the World Championship which was organized between 26<sup>th</sup> and 30<sup>th</sup> of June. Varlı became the World Champion and Torun finished third in the Games. Varlı and Torun won second place in the Mix Couples category and honoured Şişecam in the World of Corporate Games.





GRI G4 Index



## GENERAL STANDARD DISCLOSURES

Standard Disclosure	Description	Reference	External Assur ance (Yes / No)
	STRATEGY	AND ANALYSIS	
G4-1	Statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	Letter from the Chairman, page 4; Letter from the Vice Chairman and CEO, page 6	No
	ORGANIZAT	IONAL PROFILE	
G4-3	Name of the organization	Türkiye Şişe ve Cam Fabrikaları A.Ş.	No
G4-4	Primary brands, products and services	Şişecam: an Introduction, page 8	No
G4-5	Location of HQ	Istanbul, Turkey	No
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	Şişecam: an Introduction, page 8	No
G4-7	Nature of ownership and legal form	Group's Organizations and Nature of Operations, page 10	No
G4-8	Markets served	Worldwide exports to 150 countries Regional distribution of international sales:  Europe: 64% Americas: 8% Asia + Oceania: 9% Africa + Middle East: 19%	No
G4-9	Report the scale of the organization, including:	Şişecam: an Introduction, page 8	No
G4-10	Workforce breakdown	Diversity and Inclusion, page 68	No
G4-11	Percentage of total employees covered by collective bargaining agreements	Strong Industrial Relations, page 61	No
G4-12	Organization's supply chain	Supply Chain, page 44	No
G4-13	Significant changes during the reporting period	For significant changes to the structure of the company during the reporting period, please refer page 201 in Sisecam 2014 Annual Report. (http://www.sisecam.com.tr/en/investor-relations/annual-activity-reports/)	No
G4-14	Precautionary approach principle	Our Environmental Approach, page 31	No
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	Approach to Standards and Organizations, page 28	No
G4-16	Memberships of associations and national or international advocacy organizations maintained at the organizational level	National and International Memberships, page 29	No

	IDENTIFIED MATERIAL A	SPECTS AND BOUNDARIES	
G4-17	Scope of consolidated financial statements and omissions to the scope	Sisecam has operations in 13 countries. For all entities included in consolidated financial statements, please refer to Appendix 1 at page 85. For more detailed information on all entities, please refer to Sisecam 2014 Annual Report, pages 87 to 89. The sustainability information in this report covers all operations in Turkey, with the exception of Oxyvit Kimya Sanayii ve Ticaret A.Ş. and Omco İstanbul Kalıp Sanayii ve Tic A.Ş. due to their structures as joint ventures.	No
G4-18	Process for defining the report content and the Aspect Boundaries and how the organization has implemented the Reporting Principles for Defining Report Content.	Approach to Materiality, page 27	No
G4-19	Identified Material Aspects	Approach to Materiality, page 27	No
G4-20	For each material Aspect, report the Aspect Boundary within the organization	Approach to Materiality, page 27	No
G4-21	For each material Aspect, report the Aspect Boundary outside the organization	Approach to Materiality, page 27	No
G4-22	Effect of any restatements of information provided in previous reports, and the reasons for such restatements	Restatements have been indicated in the report in the following sections: Direct Energy Consumption by fuel, page 37; Total GHG Emissions in 2013-2014, page 42; Employee Profile by Age and Gender, page 68.	No
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries.	No significant changes.	No
	STAKEHOLDE	R ENGAGEMENT	
G4-24	List of stakeholder groups engaged by the organization Approach to Stakeholders, page 23		No
G4-25	Basis for identification and selection of stakeholders with whom to engage	Approach to Stakeholders, page 23	No
G4-26	Approach to stakeholder engagement	Approach to Stakeholders, page 23	No
G4-27	Key topics and concerns that have been raised through stakeholder engagement	Approach to Stakeholders, page 23	No
	REPOR	T PROFILE	
G4-28	Reporting period	1 January 2014 - 31 December 2014	
G4-29	Date of most recent previous report	1 January 2013 - 31 December 2013	
G4-30	Reporting cycle	Annual	
G4-31	Contact point for questions regarding the report or its contects	Dilek Bolcan Environmental Manager dbolcan@sisecam.com +90 (212) 350 3968	
G4-32	"In accordance" option, GRI content index, external assurance report	This year's report is prepared in accordance with GRI G4 reporting standards to "Core" level, and obtained the GRI Materiality Disclosures Service. The GRI content index can be found in pages 78 to 84. We haven't obtained external assurance for this year's report.	
G4-33	Organization's policy and current practice with regard to seeking external assurance for the report	We have not obtained external assurance for our second G4 report. However, we prepared all our data accordingly and with the vision to obtain external assurance in the future	
	GOVE	RNANCE	
G4-34	Governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	Risk Management and Internal Audit Activities, page 18 and Human Resources, page 62	No
	ETHICS AN	ID INTEGRITY	
G4-56	Organization's values, principles, standards and norms of	Ethics and Code of Conduct, page 19	No

#### SPECIFIC STANDARD DISCLOSURES

Standard Disclosure	Description	Page	Omissions	External Assuranc (Yes / No
		CATEGORY: ECONOMIC		
		ASPECT: ECONOMIC PERFORMANCE		
G4-DMA	Generic Disclosures on Management Approach	Şişecam: an introduction, page 8	-	No
G4-EC1	Direct economic value generated and distributed	Financial Performance, page 11	-	No
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Environmental Compliance, page 35	-	No
G4-EC4	Financial assistance received from government	Sustainable Knowhow and Expertise, page 52	-	No
		ASPECT: MARKET PRESENCE		
G4-DMA	Generic Disclosures on Management Approach	Şişecam: an introduction, page 8	-	No
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	The total number of senior <sup>8</sup> management at significant locations <sup>9</sup> of operation in Turkey was 71 with 100% hired from the local community for 2014.	-	No
		CATEGORY: ENVIRONMENTAL		
		ASPECT: ENERGY		
G4-DMA	Generic Disclosures on Management Approach	Our Environmental Approach, page 31	-	No
G4-EN3	Energy consumption within the organization	Energy Performance, page 37	-	No
G4-EN5	Energy intensity	Energy Performance, page 37	-	No
G4-EN6	Reduction of energy consumption	Energy Performance, page 37	-	No
G4-EN7	Reductions in energy requirements of products and services	Energy Efficiency Projects, page 39	-	No
		ASPECT: EMISSIONS		
G4-DMA	Generic Disclosures on Management Approach	Greenhouse Gas (GHG) Emissions, page 41	-	No
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	Greenhouse Gas (GHG) Emissions, page 41	-	No
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	Greenhouse Gas (GHG) Emissions, page 41	-	No

<sup>8</sup> In Şişecam, senior management is defined as directors and all the the positions above the directorate level.

<sup>9</sup> Sisecam defines local community and significant locations of operations as Turkey.

		ASPECT: PRODUCTS AND SERVICES		
G4-DMA	Generic Disclosures on Management Approach	Sustainable Products, page 53	-	No
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Sustainable Products, page 53	-	No
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	Waste Management, page 43	-	No
		ASPECT: COMPLIANCE		
G4-DMA	Generic Disclosures on Management Approach	Environmental Compliance, page 35	-	No
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	In 2014, there were no significant fines or non-monetary sanctions for non-compliance with environmental laws and regulations.	-	No
		CATEGORY: SOCIAL		
	SI	JB-CATEGORY: LABOR PRACTICES AND DECENT WORK		
		ASPECT: OCCUPATIONAL HEALTH AND SAFETY		
G4-DMA	Generic Disclosures on Management Approach	Occupational Health and Safety, page 55	-	No
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	Human Resources, page 62	-	No
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and saftey programs	100%, Managerial Review of Health and Safety, page 60	-	No
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	Human Resources, page 62	-	No
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	Managerial Review of Health and Safety, page 60	-	No
G4-LA8	Health and safety topics covered in formal agreements with trade unions	Strong Industrial Relations, page 61	-	No
		ASPECT: TRAINING AND EDUCATION		
G4-DMA	Generic Disclosures on Management Approach	Learning & Development Programs, page 64	-	No
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Learning & Development Programs, page 64	-	No
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	\$işecam offers the following learning programs to its employees:  • Competence Based T&D Programs  • Professional Development Programs  • Development Programs for Computer Skills  • Language Courses  • Long-term training and development programs for Glass School/Sales & Marketing School  • Distant learning through e-learning platform  • Obligatory/Legal trainings (Trainings for Health&Safety, First-Aid, Emergency etc.)	-	No

G4-DMA	Generic Disclosures on Management Approach	Occupational Health and Safety, page 58	-	No
		SUB-CATEGORY: PRODUCT RESPONSIBILITY  ASPECT: CUSTOMER HEALTH AND SAFETY		
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	There were no preliminary surveys, investigations or lawsuits in 2014 for Şişecam Group.	-	No
G4-DMA	Generic Disclosures on Management Approach	Compliance with the Law and Legislation, page 19	-	No
		ASPECT: COMPLIANCE		
G4-S07	Total number of legal actions for anti competitive behavior, anti-trust and monopoly practices and their outcomes	There were no preliminary surveys, investigations or lawsuits in 2014 for Şişecam Group.	-	No
G4-DMA	Generic Disclosures on Management Approach	Compliance with the Law and Legislation, page 19	-	No
		ASPECT: ANTI-COMPETITIVE BEHAVIOR		
G4-S05	Confirmed incidents of corruption and actions taken	There were no incidents of corruption in the reporting period.	-	No
G4-S04	Communication and training on anti- corruption policies and procedures	Ethics and Code of Conduct, page 19	-	No
G4-SO3	Total number and percentage of operations asessed for risks related to corruption and the significant risks identified	Ethics and Code of Conduct, page 19	-	No
G4-DMA	Generic Disclosures on Management Approach	Ethics and Code of Conduct, page 19	-	No
		ASPECT: ANTI-CORRUPTION		
		SUB-CATEGORY: SOCIETY		
G4-HR3	Total number of incidents of discrimination and corrective actions taken	There were no incidents of discrimination during the reporting period.	-	No
G4-DMA	Generic Disclosures on Management Approach	Ethics and Code of Conduct, page 19	-	No
		ASPECT: NON-DISCRIMINATION		
		SUB-CATEGORY: HUMAN RIGHTS		
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	1/1	-	No
G4-DMA	Generic Disclosures on Management Approach	In Sisecam Group, allocation of salaries and benefits only differ in relation to the scope, experience and skills related to the requirements of the job and job related criteria. There is no discrimination against gender, religion, language, race/ethnicity or disability.	-	No
	A	SPECT: EQUAL REMUNERATION FOR WOMEN AND MEN		
64-LA11	regular performance and career development reviews, by gender and by employee category	Policies and Career Development, page 64	-	No

G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	100 %	-	No
G4-PR2	Total number of incidents of non- compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	There were no incidents of non-compliance with regulations and voluntary codes during the reporting period.	-	No
		ASPECT: CUSTOMER PRIVACY		
G4-DMA	Generic Disclosures on Management Approach	Risk Management and Internal Audit Activities, page 18	-	No
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	There were no substantiated complaints during the reporting period.	-	No
		ASPECT: COMPLIANCE		
G4-DMA	Generic Disclosures on Management Approach	Compliance with the Law and Legislation, page 19	-	No
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	There were no significant fines for non-compliance with laws and regulations during the reporting period.	-	No

 $Appendix-List\ of\ all\ entities\ included\ in\ the\ organization's\ consolidated\ financial\ statements\ or\ equivalent\ documents.$ 

## **FLAT GLASS BUSINESS**

Subsidiaries	Nature of business	Country of registration
Trakya Cam Sanayii A.Ş.¹	Production and sales of flat glass, auto glass and processed glass	Turkey
Trakya Yenişehir Cam Sanayii A.Ş.	Production and sales of flat glass, coated glass, laminated glass, and patterned glass	Turkey
Çayırova Cam Sanayii A.Ş.	Commercial activity	Turkey
Trakya Polatlı Cam Sanayii A.Ş.	Production and sales of float glass	Turkey
Trakya Glass Bulgaria EAD²	Automatic production and sales of float glass, Glassware, automotive glass, home appliances and mirror, coated glass, laminated glass	Bulgaria
Trakya Cam Investment B.V.	Finance and investment company	Netherlands
TRSG Autoglass Holding B.V.	Finance and investment company	Netherlands
Trakya Investment B.V.	Finance and investment company	Netherlands
TRSG Glass Holding B.V.	Finance and investment company	Netherlands
Trakya Glass Rus AO <sup>3</sup>	Production and sales of float glass	Russia
Automotive Glass Alliance Rus AO <sup>3</sup>	Production and sales of automotive glass	Russia
Automotive Glass Alliance Rus Trading 000	Importing and sales services	Russia
Trakya Glass Rus Trading OOO	Importing and sales services	Russia
Glasscorp S.A.	Production and sales of automotive glass and home appliances	Romania
Fritz Holding GmbH <sup>4</sup>	Holding services	Germany
Richard Fritz Spol S.R.O.	Glass encapsulation production and sales services	Slovakia
Richard Fritz Prototype+Spare Parts GmbH	Glass encapsulation production and sales services	Germany
Richard Fritz Kft	Glass encapsulation production and sales services	Hungary
Joint Ventures	Nature of business	Country of registration
HNG Float Glass Limited	Production and sales of float glass, mirror and processed glass (home appliances, sand-blasted glass, double glazing unit)	India
Associate	Nature of business	Country of registration
Saint Gobain Glass Egypt S.A.E.	Production and sales of float glass	Egypt

# GLASSWARE BUSINESS

Subsidiaries	Nature of business	Country of registration
Paşabahçe Cam Sanayii ve Tic. A.Ş.	Automatic production and sales of glassware	Turkey
Paşabahçe Mağazaları A.Ş.	Retail sales of glassware	Turkey
Camiş Ambalaj Sanayii A.Ş.	Production and sales of paper packaging	Turkey
Denizli Cam Sanayii ve Tic. A.Ş.¹	Production and sales of soda and hand-made crystal ware	Turkey
Paşabahçe Investment B.V.	Finance and investment company	Netherlands
OOO Posuda	Automatic production and sales of glassware	Russia
Paşabahçe Srl⁵	Sales and marketing services	Italy
LASS PACKAGING BUSINESS		
Subsidiaries	Nature of business	Country of registration
Anadolu Cam Sanayii A.Ş.¹	Production and sales of glass packaging	Turkey
Anadolu Cam Yenişehir Sanayi A.Ş.	Production and sales of glass packaging	Turkey
Anadolu Cam Eskişehir Sanayi A.Ş.	Production and sales of glass packaging	Turkey
Anadolu Cam Investment B.V.	Finance and investment company	Netherlands
Balsand B.V.	Finance and investment company	Netherlands
000 Ruscam Management Company	Finance and investment company	Russia
OOO Ruscam Glass Packaging Holding	Production and sales of glass packaging	Russia
OOO Ruscam	Production and sales of glass packaging	Russia
OOO Ruscam Glass <sup>6</sup>	Production and sales of glass packaging	Russia
OAO Ruscam Pokrovsky	Production and sales of glass packaging	Russia
OOO Ruscam Sibir	Production and sales of glass packaging	Russia
CJSC Brewery Pivdenna	Production and sales of glass packaging	Ukraine
Merefa Glass Company Ltd.	Production and sales of glass packaging	Ukraine
JSC Mina	Production and sales of glass packaging	Georgia
Joint Ventures	Nature of business	Country of registration
Omco İstanbul Kalıp Sanayii ve Tic. A.Ş.	Production and sales of moulds	Turkey
000 Balkum	Sand extraction and sales	Russia
Associate	Nature of business	Country of registration
OAO FormMat	Sand extraction and sales	Russia

Electricity Production And Sales

Turkey

Camiş Elektrik Uretim A.Ş.

# **CHEMICALS BUSINESS**

Subsidiaries	Nature of business	Country of registration
Soda Sanayii A.Ş.¹	Production and sales of soda ash and chromium chemicals	Turkey
Cam Elyaf Sanayii A.Ş.	Production and sales of glass fiber	Turkey
Camiş Elektrik Üretim A.Ş.	Production and sales of electricity	Turkey
Camiş Madencilik A.Ş.	Production and sales of raw materials in glass	Turkey
Madencilik Sanayii ve Tic. A.Ş.	Production and sales of raw materials in glass	Turkey
Şişecam Bulgaria EOOD	Soda sales	Bulgaria
Cromital S.p.A	Chromium and chromium subproducts	ltaly
Camiş Egypt Mining Ltd. Co.	Sand mining and sales	Egypt
Şişecam Soda Lukavac D.O.O.	Production and sales of soda	Bosnia & Herzegovina
Şişecam Chem Investment B.V.	Finance and investment company	Netherlands
Joint Ventures	Nature of business	Country of registration
Oxyvit Kimya Sanayii ve Tic. A.Ş.	Production and sales of Vitamin-K	Turkey
Rudnik Krecnjaka Vijenac D.O.O.	Production and sales of lime stone	Bosnia & Herzegovina
Associate	Nature of business	Country of registration
Solvay Şişecam Holding AG	Finance and investment company	Austria

# **OTHERS**

Subsidiaries	Nature of business	Country of registration
Camiş Limited	Foreign purchasing services	England
Şişecam Sigorta Aracılık Hizmetleri A.Ş.	Insurance agency	Turkey
Şişecam Dış Ticaret A.Ş.	Exportation of group products	Turkey
Şişecam Enerji A.Ş. <sup>7</sup>	Storage and sales of natural gas and electricity trade	Turkey
SC Glass Trading B.V. <sup>8</sup>	Import and sales services	Netherlands

1 The shares of the aforementioned subsidiaries have been publicly traded on the Borsa Istanbul A.Ş. ("BIST"), formerly named as Istanbul Stock Exchange ("ISE"). The first trading dates respectively are as follows:

Subsidiary Name	First Trading Date
Türkiye Şişe ve Cam Fabrikaları A.Ş.	3 January 1986
Anadolu Cam Sanayii A.Ş.	3 January 1986
Denizli Cam Sanayii ve Tic. A.Ş.	3 July 1987
Trakya Cam Sanayii A.Ş.	5 November 1990
Soda Sanayii A.Ş.	20 April 2000

As of 31 December 2014, Türkiye Şişe ve Cam Fabrikaları, Trakya Cam Sanayii A.Ş., Anadolu Cam Sanayii A.Ş. and Soda Sanayii A.Ş. are traded in BIST-30, BIST-50 and BIST-100 respectively. Denizli Cam Sanayii ve Tic A.Ş. is traded in BIST-ALL SHARES national index.

The "Corporate Governance Rating Report" was prepared in the scope of corporate governance compliance rating agreement signed between Türkiye Şişe ve Cam Fabrikaları A.Ş. and Saha Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A.Ş. ("SAHA"). In the report, the Company was rated with 9.28 out of 10, where SAHA used the new methodology which was based on the "Corporate Governance Principals" published in January 2014 by CMB. The breakdown of the rating based on four weighted main section is as follows:

Main Secitons	Weighht	Note
Shareholders	25%	94.57
Public Disclosure and Transparency	25%	94.7
Stakeholders	15%	95.51
Board of Directors	35%	88.96
Average Rating	100%	92.78

- 2 This company has a production line operating under glassware segment
- 3 The legal title of Trakya Glass Rus ZAO was changed as Trakya Glass Rus AO; Automotive Glass Alliance Rus ZAO was changed as Automotive Glass Alliance Rus AO on 11 December 2014.
- 4 Richard Fritz, Inc., Fritz Beteilingungs GmbH and Richard Fritz GmbH & Co. KG were merged with Fritz Holding Gmbh on 21 September 2014.
- 5 The company was established on 24 November 2014 with the purpose of providing sales and marketing services to the glassware companies.
- 6 The legal title of OOO Ruscam Kuban was changed as OOO Ruscam Glass on 28 March 2014.
- 7 The minority shares of Dost Gaz Depolama A.Ş., subsidiary operating under chemicals segment, were acquired by the Company on 14 April 2014 and the legal title of the company was changed as Şişecam Enerji A.Ş. on 26 May 2014.
- 8 The company was established on 22 August 2014 with the purpose of providing import and sales services to \$isecam Group companies.

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