



# ANNUAL REPORT 2017

Braskem 

# A YEAR OF TRANSFORMATION

In 2017, Braskem completed 15 years of a history full of achievements and several challenges. Always with an eye on the future, we have begun a new cycle. A new stage that consolidates our innovative and people-oriented way of working.

Although we are a young company, we have a solid growth strategy and corporate responsibility that allows us to continue to evolve as an important player in the global petrochemical industry.

On the next pages, learn about our main projects and results throughout the year, and see how we work in a manner committed to sustainability, innovation, and people development. [102-1](#)

Enjoy your reading



# HIGHLIGHTS FOR THE YEAR



Approval by the Board of Directors of investments of up to **USD 675 million** for the construction of the sixth Polypropylene (PP) production unit in La Porte, Texas.



Braskem completes **15 years**.



Braskem Labs becomes a platform with three programs focused on **innovative and sustainable business acceleration**.



**Approval** of our first human rights violations risk matrix, and its inclusion in the corporate risk matrix, monitored by our executives and the Board of Directors.



Consolidated **EBITDA reached BRL 12.3 billion**, up 7% over the previous year.



Creation of **three working groups** focused on each of the fronts where we operate: Gender, LGBT (Lesbian, Gay, Bisexual and Transgender), Race, and Ethnicity.



Record net income of **BRL 4 billion**.



**Record production** of Polyethylene, Polypropylene, Ethylene, Butadiene, and Gasoline.

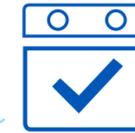


Implementation of the **Sustainable Procurement Tool**, which incorporates sustainability criteria into the selection of suppliers in procurement processes.

For the first time, we are part of CDP WATER's **"A List"** and for the second time, of the CDP CLIMATE's **A List**, which recognizes the **best publicly traded companies** in the world regarding environmental management.



Start of operations of the **new Ultra-High-Molecular-Weight Polyethylene (UHMWPE)** plant in the United States.



**The Industrial Complex in Mexico** completed its first full calendar year of operation with an average occupation rate of 88%.



Global Volunteer Program with the participation of over **359 Braskem professionals** from Brazil, Mexico, and the United States, and **497 outside volunteers**.



**Independent Management** of the Ethics Line Channel.



Continuity of the process to **improve Corporate Governance** and to reinforce Compliance initiatives through training, internal and external audits, assessment and monitoring of risks and controls.

# MESSAGE FROM THE BUSINESS LEADER 102-14

## CREATE VALUE FOR ALL

The year 2017 was a milestone for Braskem. Not only because we completed 15 years of a history highlighted by many achievements and learning opportunities, but also the beginning of a new growth cycle based on the desire to become an even more global and influential company in the petrochemical industry.

We believe in the power of people and encourage entrepreneurship to guide our actions. With our way of doing things, we define our people-oriented, forward-looking position, which cultivates solid relationships and creates value for all, offering sustainable solutions from chemicals and plastic. These characteristics were shaped into a new visual identity, celebrated on the company's 15<sup>th</sup> anniversary.

## GOVERNANCE AND COMPLIANCE

We continue to improve our global Compliance system in a meaningful and structured way, through various actions and initiatives that are ethical, integral, and transparent across the Company. In June 2017, our global agreement concerning the operation *Operação Lava Jato*, concluded in December, was finally approved, and we continue to collaborate with the authorities.

Likewise, our governance has undergone improvements. Our Board of Directors has increased the number of independent members, with renowned market experience and judgment capacity, to six out of a total of eleven members.



## In a year marked by the overcoming of challenges, Braskem presented solid results, posting a record net income of BRL 4 billion

### RECORD RESULTS, EFFICIENCY, AND GLOBALIZATION

The year 2017 demonstrated that we are on the right track implementing our geographic diversification strategy, greater balance on the scale of raw materials, and the continuous search for gains in operational efficiency. Our resilience and ability to face diverse scenarios have brought significant results to all shareholders.

In a year highlighted by overcoming challenges, Braskem presented soundness in its 2017 results, posting a record net income of BRL 4 billion, attributable to all shareholders. Consolidated EBIT-

DA reached BRL 12.3 billion last year, up 7% over the previous year. In US dollars, EBITDA reached a new historic level of USD 3.9 billion, a growth of 17%.

In 2017, Braskem repeated its excellent industrial performance, presenting significant records in production for some of its main products. The utilization rate of the cat crackers in Brazil was 94%, two percentage points higher than 2016, with record production of ethylene, butadiene, and gasoline.

Production of polyolefins in Brazil, both polyethylene and polypropylene, also hit its highest historical mark. In the US and Europe, the utilization rate was 97%. In Mexico, the Industrial Complex completed its first full calendar year in operation, and had an average occupancy rate of 88% in 2017.

On the commercial side, sales of Braskem resins totaled 3.5 million tons in the Brazilian market, a 4% increase

compared with 2016, with record sales of polyethylene. Braskem's share in the Brazilian market was 69% in 2017.

In the North American and European markets, sales reached 2.1 million tons of polypropylene, up 5% compared with 2016. In Mexico, polyethylene sales were 551,000 tons, and exports totaled 418,000 tons, resulting in total sales of 969,000 tons, an increase of 124%.

In this scenario, net consolidated revenue was BRL 49.3 billion, up 3% over 2016. Of this total, operations generated by international units and exports from Brazil accounted for 47% of revenue. In terms of dollars, Braskem's net revenue was USD 15.4 billion, up 12%.

From a strategic standpoint, the year was highlighted by the completion of the raw material flexibility project for producing up to 15% of ethylene using ethane as raw material at the petrochemical plant in Bahia. Ethane im-

ported by ship arrived at the port of Aratu at the end of November, enabling the first flex operation in Camaçari.

An important endorsement of our strategy came from the Board of Directors, which, in June, approved the construction of a new polypropylene (PP) plant at the La Porte complex in Texas. With an investment of up to USD 675 million, the project will add 450,000 tons per year of production, in line with the search for a more diverse raw material matrix and geographical expansion in the Americas.



## SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

We believe in responsible management. From the beginning, we have been committed to operating in accordance with principles of sustainable development and, as a signatory to the United Nations Global Compact since 2007, we actively participate in building the Sustainable Development Goals, principles that involve compliance with human rights.

This commitment brought us significant internal achievements and external recognition in 2017. For the first time, we are part of CDP WATER's "A List", which recognizes the best publicly traded companies in the world regarding management of the use of this natural resource (water) we were the only Brazilian and Latin American company to obtain the highest score in this *ranking*. In addition, we once again confirmed our participation in the 13th portfolio of B3's Corporate Sustainability Index (ISE), which recognizes Brazil's publicly traded

companies in managing sustainable development and gathers those with the best indicators in economic efficiency, environmental balance, social justice, and corporate governance.

In 2017, we continued to evolve our Diversity practices, with the formation of three working groups focused on each of the fronts where we operate: Gender, LGBTQIA (Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, and Asexual), Race, and Ethnicity. We also defined our first risk matrix on violations of human rights, facilitating the immediate inclusion of this aspect in the corporate risk matrix, monitored by our executives and the Board of Directors. Among the aspects addressed this year, we highlight our work with the logistics, ethanol, and recycling chains for the protection and promotion of human rights, as well as compliance and corporate ethics in our relationships.

## OUTLOOK

Global demand for petrochemical products continues to grow in a very healthy way, not only due to the competitive advantages of these products compared to other materials, but also thanks to the relevant flow of innovations that the industry has brought to the markets. In Brazil, in the medium and long term, the risk of the Brazilian economy's performance remains due to the political uncertainties raising the country's risk, especially given the lack of structural reforms. In addition, the global petrochemical market could be impacted by the trade war waged between the United States and China.

In this context, our strategy is based on the search for advances in productivity and competitiveness, while focusing on operational efficiency and cost leadership; in diversification of raw materials, increasing participation of gas and maintaining flexibility of assets; in expanding

**Our strategy is based on the search for advances in productivity and competitiveness, with a focus on operational efficiency**

the global *footprint* and strengthening Braskem's image and reputation among its Members, Clients, Suppliers, Society, and Investors, through advances in compliance, sustainability, innovation, and people management.

Finally, I would like to thank our Shareholders for their trust in Braskem, as well as our Clients, since this partnership is one of the forces that motivates us to pursue the path of excellence. Members, Partners, and Suppliers, I thank you for your dedication and competence, an essential contribution to our achievements and results, in favor of an ever more global Braskem.

# BRASKEM

## CHEMISTRY THAT TRANSFORMS.

We are a global, people-oriented company with a passion for service and a clear vision for the future



# 15 years of MAJOR TRANSFORMATION

The largest petrochemical company in the Americas, today we are the fifth largest in the world in terms of production capacity of thermoplastic resins (Polyethylene, Polypropylene, and Polyvinyl Chloride) and basic petrochemicals (such as Ethylene, Propylene, Butadiene, and others). Born from the integration of Brazilian petrochemical assets, we have taken important steps toward internationalization, and we are steadily advancing towards building a global company. This journey marked by achievements was only made possible thanks to the dedication and effort and the constant search for innovation through sustainable solutions along our 15-year history. <sup>[102-2]</sup>

2002



Braskem is formed by the merge of six Odebrecht Group companies and the Mariani Group, and began its activities as the largest petrochemical company in Latin America. In the same year, its shares were listed on the São Paulo Stock Exchange (currently B3) and New York (NYSE).

2006



Braskem acquires Politeño (third largest producer of polyethylene in Brazil) and launches the first Brazilian thermoplastic resin with nanotechnology, confirming its position as a leader in innovation in the sector.

2005



The Company becomes part of the Corporate Sustainability Index (ISE) of the São Paulo Stock Exchange (currently B3).

2004



Implementation of the Braskem Innovation Program, which encourages the development of projects with new technologies and applications, and signing of the Declaration on Cleaner Production, part of the United Nations Environment Program (UNEP).

2003



Braskem lists its shares on the Madrid Stock Exchange and reaches the rank of Most Valued Company on the New York Stock Exchange.

2007



Launch of the project to build a plant for the production of Green Polyethylene, Braskem's exclusive product made from renewable sources produced from sugarcane.

2008



Inauguration of the Paulínia (SP) unit in partnership with Petrobras, the Company's first greenfield project!  
<sup>1</sup> Term to determine the investment in a company still in its early stages

2009



Laying of the foundation stone of the Green Polyethylene plant in Triunfo (RS), and formation of the Braskem Idesa joint venture to produce Polyethylene in Mexico.

2012



In 10 years, Braskem reaches 36 industrial units and 7,600 Members. A PVC plant in Marechal Deodoro (AL), and a new butadiene plant in Triunfo (RS) were inaugurated.

2011



Acquisition of two plants in the United States and two in Germany for the production of Polypropylene.

2010



Acquisition of Quattor, start of production of Green Polyethylene on an industrial scale, and launch of the I'm green™ seal to be applied to products that use the raw material in its composition. The acquisition of the polypropylene assets from Sunoco Chemicals, in the United States, initiates the company's internationalization process.

2013

MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM

Braskem becomes part of the first portfolio of the Dow Jones Sustainability Index for emerging countries.

2014



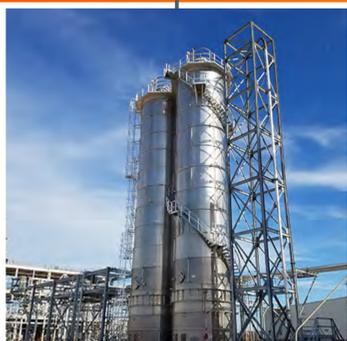
The Company is chosen by the American magazine Fast Company as one of the 50 most innovative in the world.

2015



Launch of Braskem Labs, a project to encourage entrepreneurs to develop innovative solutions for the plastics industry. First year as a sponsor of the Brazilian Paralympic track team.

2017



To celebrate its 15<sup>th</sup> anniversary, Braskem launches its new visual identity. Reinforcing the continuity of the petrochemicals global expansion cycle, the new Ultra-High-Molecular-Weight Polyethylene (UHMWPE) plant is inaugurated in La Porte, Texas.

2016



Inauguration of the Braskem Idesa Petrochemical Complex in Mexico. In partnership with Made in Space, Braskem takes its Green Polyethylene to the International Space Station. In addition, the Company becomes the first Brazilian representative to join CDP Climates' "A List"<sup>2</sup>.

<sup>2</sup> CDP is an international organization that assesses best business practices against climate change

## OUR WAY OF BEING BRASKEM

In 2017, Braskem completed 15 years of operation as an increasingly global company and recognized by clients in nearly 100 countries on all continents. To reflect this new cycle, we adopted a new visual identity.

This new identity expresses our values and commitments to all our stakeholders. It represents a global, people-oriented company with a passion for service and a clear vision for the future. This is what allows us to create value with our Clients, in order to improve people's lives. The design chosen contains important characteristics for Braskem, such as resilience, focus, and transparency. The symbol used resembles the letter "B" and forms an arrow, also indicating the Company strategy focused on the future. The colors blue and yellow represent aspects such as global scope, focus on sustainability, and the strength of human relations.

Motivated to look toward the future with the conviction that we must serve our market with responsibility and competence, keeping our inspiration high and our hearts open to the challenges ahead.

## BRAND MANIFESTO

### What is the chemistry of change?

For us, it's the combination of people who are passionate for the new and the unexpected. It is about creating bonds and working together to improve lives.

**We are Braskem**, a human-oriented company with the passion to transform. We are a team of believers, who share our knowledge to empower the ones around us. And we know that human connections are limitless.

**As individuals**, we are encouraged to think, speak up and take action. As a team, we share a spirit of collaboration and optimism. We are committed to serve and to **build strong ties with our clients and all stakeholders**.

### Sustainability is at the core of our company.

It's our way of generating real and positive transformation. For us, this is only possible with a bold, brave and bonding attitude, where relentless forward thinking is valued, always.

**We understand our role in the world:** To challenge our market with responsibility and competence, creating positive impacts for all. Most importantly, **we take pride in what we do**, keeping our inspiration up and our hearts open for the next challenges. After all, **this is the chemistry of change**.



# MAP OF OPERATIONS

16 regional offices

41 industrial units

Operations in 4 countries

- Industrial Units
- Basic Petrochemicals
- PVC and Chlorine Soda
- Polyethylene
- Polypropylene
- PE + PP
- GREEN PE
- UTEC
- Administrative Offices
- Administrative Headquarters
- Sales Offices
- Innovation and Technology

7,713 members

Clients in nearly 100 countries

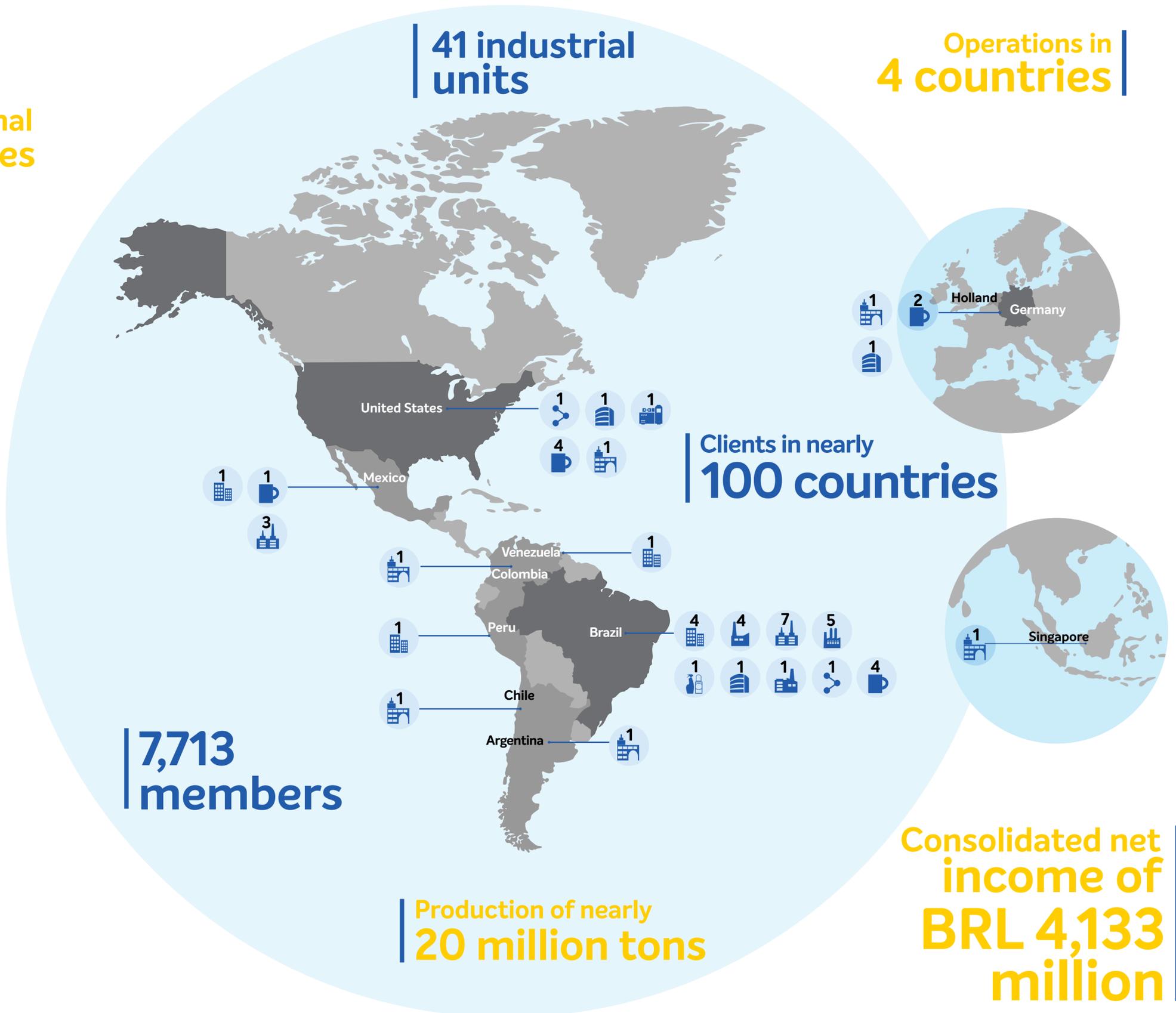
Production of nearly 20 million tons

Consolidated net income of BRL 4,133 million

## GLOBAL PRESENCE [102-4, 102-6, 102-7](#)

With an increasingly global performance, we have industrial operations in four countries (Brazil, United States, Mexico, and Germany), as well as 16 regional offices in the main global economic centers that serve our Clients in over 100 countries. The largest producer of thermoplastic resins (Polyethylene, Polypropylene, and Polyvinyl Chloride) in the Americas and producer of chemicals and basic petrochemicals, such as ethylene, propene, butadiene, among others,

we serve several markets, including food packaging, civil construction, industrial, retail, automotive, hygiene and cleaning, agribusiness, health, among other segments. Following our commitment to sustainability and innovation, we are also the main global manufacturer of biopolymers, with annual production capacity of 200,000 tons of I'm green™ Green Plastic, a Polyethylene produced from sugar cane ethanol, a source that is 100% renewable.



# BUSINESS MODEL

## Our Resources

## Activities



**FINANCIAL**  
NET EQUITY OF **BRL 5,690 MILLION**

**BRL 2.3 BILLION** INVESTED

GROSS DEBT OF **USD 7,649 MILLION**, 9% LESS THAN THE PREVIOUS YEAR



**NATURAL**

CONSUMPTION OF **3.98 m<sup>3</sup>/t** OF WATER AND **10.56 GJ/T** OF ENERGY PER TON PRODUCED

**BRL 13.1 MILLION** INVESTED IN ENVIRONMENTAL PROJECTS

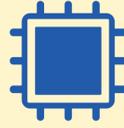


**HUMAN**

**7,713 MEMBERS**, 78% MEN AND 22% WOMEN

MORE THAN **BRL 21.2 MILLION** INVESTED IN TRAINING

INVESTMENT OF **BRL 99 MILLION** IN **323 HEALTH AND SAFETY** PROJECTS



**INTELLECTUAL**

INVESTMENT OF **BRL 167.5 MILLION** IN INNOVATION

**355 PROJECTS** TO DEVELOP NEW PRODUCTS AND PROCESSES

**29 NEW PATENT REQUESTS** AND **83 EXTENSIONS**



**MANUFACTURED**

**41 INDUSTRIAL PLANTS**, TOTALING AN ANNUAL PRODUCTION CAPACITY OF RESINS AND CHEMICALS OF **21,101 THOUSAND TONS**

**83% OF THE INDUSTRIAL UNITS** IN **STAGE 4** OF SEMPRE - ASSURED PERFORMANCE IN HSE



**SOCIAL**

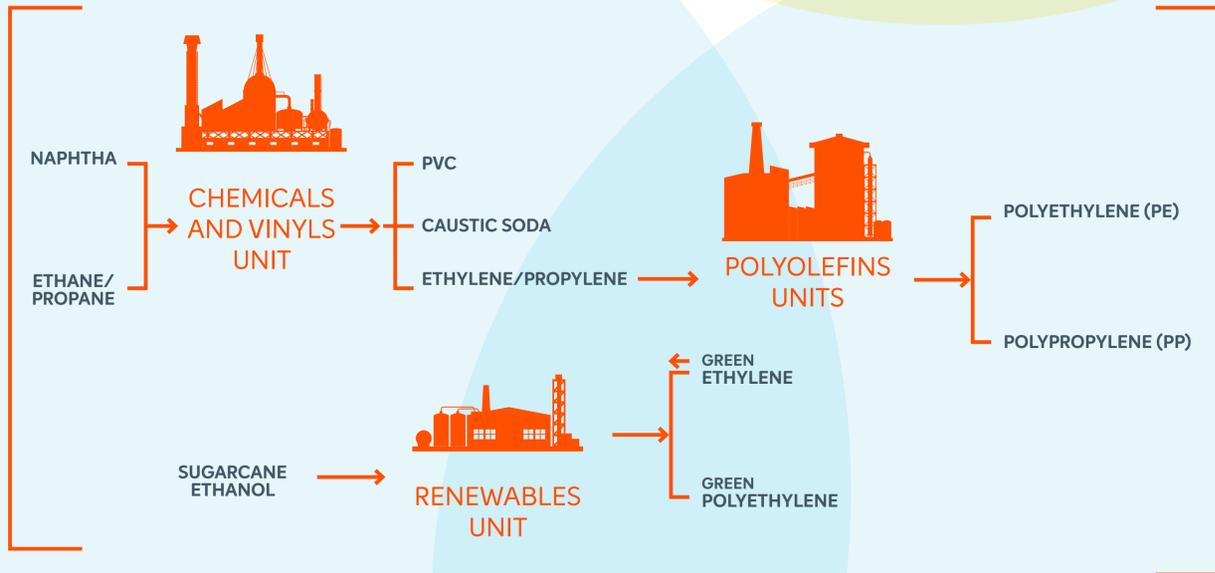
INVESTMENT OF **BRL 19.7 MILLION** IN **83 PROJECTS** IN THE COMMUNITIES

MORE THAN **856 PARTICIPANTS** IN THE PILOT PROJECT OF THE GLOBAL VOLUNTEER PROGRAM



**COSTS**

TOTAL COSTS OF **BRL 36.4 BILLION**, 4% OVER 2016, IN RAW MATERIALS, SALARIES AND BENEFITS, SERVICES AND OTHERS.



**REVENUE**

NET REVENUE OF **BRL 49.3 BILLION**, A **3% GROWTH** IN RELATION TO THE PREVIOUS YEAR

**NEGATIVE**

DIRECT EMISSIONS OF **10,182,558 tCO<sub>2</sub>e** (SCOPE 1) AND INDIRECT EMISSIONS OF **1,072,713 tCO<sub>2</sub>e** (SCOPE 2) - CARBON INTENSITY OF **0.573 tCO<sub>2</sub>e/t**

GENERATION OF **2.13 KG OF SOLID, LIQUID AND PASTY WASTE** PER TON PRODUCED

GENERATION OF **1.06 m<sup>3</sup>/t** OF LIQUID EFFLUENTS

**43** REPORTABLE ACCIDENTS, **14** OF WHICH WITH LOST TIME AND 29 WITHOUT LOST TIME

**6 TIER 1** AND **31 TIER 2** PROCESS ACCIDENTS RECORDED



**IMPACTS**

**POSITIVE**

**138 SUPPLIERS ENGAGED** IN THE CLIMATE AND WATER SUPPLY PROGRAMS

MORE THAN **1,278** PICKERS BENEFITED, **35** ASSOCIATED COOPERATIVES AND **14,000** TONS OF WASTE RECYCLED THROUGH SER+REALIZADOR

**14** LIFE CYCLE ASSESSMENT STUDIES

**25.7%** WATER REUSE

**35% REDUCTION** IN **TIER 1** ACCIDENT RATE AND **18%** IN **TIER 2** ACCIDENT RATE

## Creation of value



**INVESTORS / SHAREHOLDERS**

RECORD EBITDA OF **BRL 12.3 BI**, **7%** OVER 2016

RECORD NET INCOME OF **BRL 4.1 BILLION**

PROFIT OF **BRL 5.1 PER SHARE**



**CLIENTS**

GLOBAL SALES VOLUME OF **12.157 MILLION** TONS, CONSIDERING EXPORTS AND INTERNAL MARKET

SHARE INCREASE IN THE BRAZILIAN MARKET TO **69%**



**MEMBERS**

**7,438 MEMBERS** TRAINED

**213 LEADERS** TRAINED IN DEVELOPMENT PROGRAMS

**1.7%** VOLUNTARY TERMINATION RATE, THE SMALLEST IN THE LAST FOUR YEARS



**CIVIL SOCIETY**

MORE THAN **144,000** PEOPLE BENEFITED BY COMMUNITY PROJECTS

**1,222 ACTIONS** AND **18,786 ITEMS** COLLECTED THROUGH THE PILOT PROJECT OF THE GLOBAL VOLUNTEER PROGRAM

## Strategy for Sustainable Development

We believe that sustainable development should be a goal that is in line with business strategy. Therefore, we seek innovative solutions that interact with our vision of growth, creating value for our operations, increasing the reputation of our brand and – most importantly – continuously minimizing any environmental and social impacts caused by our activities.

Since 2002, when we started our activities, we have already invested approximately BRL 500 million in improving water, energy and operational efficiency of our production units and strengthened our commitment to economic growth, environmental preservation and social justice.

Within our vision of “improving people’s lives by creating sustainable solutions in chemistry and plastic,” we work with challenging goals set out in our 10 sustainable development macro goals (see chart

with the evolution of the goals on the next page) and projects aligned with the Sustainable Development Goals (ODS), defined by the United Nations (UN) in 2015. As a member of the Brazilian Network of the UN Global Compact, the Company made an active contribution to the construction of Sustainable Development Goals (ODS).

Our sustainability principles, incorporated into the operational and manufacturing processes of the Company’s products, also extend to projects carried out outside the company. These initiatives are conducted as part of voluntary commitments established by the Company and materialized through participation in forums and associations to streamline the process to transition to a competitive, responsible and inclusive low-carbon economy.

**102-12, 102-13**



### Human Rights

Human rights are basic rights inherent to all human beings, regardless of their gender identity, sexual orientation, race, nationality, social strata, religion, physical characteristics, or any other condition. According to the Universal Declaration of Human Rights, these rights include the right to life, liberty, freedom of speech and expression, the right to work and to education, the right to well-being, among many others. Consequently, they are not only social. Rights can be civil, political, economic, cultural, and even environmental.

We adopt internationally recognized human rights as the base for our sustainable development and we respect these rights in developing our business, including direct operations, joint ventures, and the value chain. This commitment is in line with the United Nations Guiding Principles on Businesses and Human Rights.

Respect and advocacy for human rights are responsibilities of all our Members and business partners, who must identify, prevent, and proactively mitigate the exposure to risks of violating human rights, in addition to remediating current impacts resulting from our operations, products, or from our business relations, pursuant to the code of conduct and guidelines approved, respectively, by the Board of Directors and the Executive Board.

Based on our risk matrix for violation of human rights, approved in 2017, our operations and those of our business partners can impact human rights. Therefore, Human Rights and their impacts will permeate the various sections of this report, in benefit of Compliance, Diversity, Health, Safety, Work Conditions, Environment, Post Consumption, Well-Being, and Local Traditions, among others. You can identify specific cases through the icon.

# Macro Goals for sustainable development

## SUSTAINABILITY ALIGNED WITH THE BUSINESS 102-12

Since our foundation, we have sought to align our growth strategy with processes and actions that minimize possible environmental and social impacts. With a focus on developing a sustainability strategy, we work with ten macro goals and targets set for 2020 – all linked to UN’s 17 Sustainable Development Goals (ODS). Based on a correlation process, 79 concrete contributions were identified in five goals most positively impacted by Braskem:

- 6** Clean Water and Sanitation
- 9** Industry, Innovation, and Infrastructure
- 11** Sustainable Cities and Communities
- 12** Responsible Consumption and Production
- 13** Climate Change

[www.braskem.com.br/sustainable-strategy](http://www.braskem.com.br/sustainable-strategy)

## 2020 GOAL

### SAFETY

To be among the benchmarks in chemicals, occupational, and process safety in the Global chemical Industry.

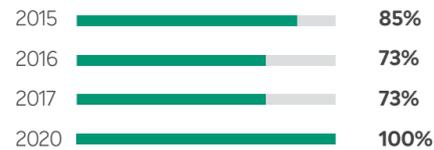
#### % OF THE GOALS ACHIEVED



### ECONOMIC AND FINANCIAL RESULTS

To be among the top three thermo-plastic resin producers in the world and ensure profitability that sustains business continuity while maintaining the Investment Grade rating in the three major international agencies.

#### % OF THE GOALS ACHIEVED



### POST CONSUMPTION

To be one of the five largest traders of PE and PP with recycled content in the world, among the petrochemical companies producing Polyolefins. And to become an important driver of growth of plastic recycling in Brazil, helping achieve the goals in the Sector Agreement on Packaging.

#### % OF THE GOALS ACHIEVED



### LOCAL DEVELOPMENT

To achieve the “excellent” reputation level in the Citizenship Dimension of RepTrak® Pulse, demonstrating that the Company is recognized by the community surrounding the facility and by society at large for its contribution to the improvement of human development.

#### % OF THE GOALS ACHIEVED



### WATER EFFICIENCY

To be among the benchmarks in the use of water resources in the global chemical industry in terms of water consumption and water reuse.

#### % OF THE GOALS ACHIEVED



### CLIMATE CHANGE

To be among the world’s best large chemical companies in intensity of Greenhouse Gas (GHG) emissions while maintaining the use of renewable raw materials.

#### % OF THE GOALS ACHIEVED



### DEVELOPMENT OF SOLUTIONS

To be recognized as a company that supports its clients in the development of environmental and social solutions using Chemistry and Plastics, reaching a “strong” reputation level through its products & services.

#### % OF THE GOALS ACHIEVED



### STRENGTHENING PRACTICES

To be among the business benchmarks in Brazil for its contribution to Sustainable Development. And as one of the global benchmarks in the sector for its contribution to Sustainable Development.

#### % OF THE GOALS ACHIEVED



### RENEWABLE RESOURCES

To be among the leading producers of chemicals and thermoplastic resins from renewable raw materials. And remain the world’s largest producer of thermoplastic resins from renewable sources.

#### % OF THE GOALS ACHIEVED



### ENERGY EFFICIENCY

To be among the best large chemical industries in the world in intensity of energy consumption and to be a major user of renewable energy sources.

#### % OF THE GOALS ACHIEVED



# GOVERNANCE AND COMPLIANCE

## TRANSPARENCY AND RESPONSIBILITY

For us, integrity and safety are at the heart of a valued, competitive, and successful company.

These are principles that guarantee the perpetuity of the business and our reputation in the market.





For Corporate Governance and Compliance, the year was highlighted by the consolidation of several initiatives focused on upgrading and improving processes. After the approval of the Compliance Policy by the Board of Directors, in 2016, we have been implementing a solid Compliance System, defining several policies and procedures, improvements in risk management, reinforcement of compliance, internal audits, adoption of internal controls, communication and training initiatives focused on continuous improvement that guide our ethical, integral and transparent operation.



### COMMITMENT

In just one year, we increased by 23% our performance in the integrity indicators defined and measured by Instituto Ethos, demonstrating our commitment to improving our practices and managing our business in a sustainable and responsible manner.

For us, working in accordance with applicable laws, regulations, policies and best practices became a fundamental principle. For Braskem, effective compliance represents an intangible asset in the protection and strengthening of the Business. **102-16**



Our Code of Conduct is translated into all the languages of the countries where Braskem operates, and can be viewed on the Company's intranet and website ([www.braskem.com](http://www.braskem.com)).



### GLOBAL TRAINING ON THE CODE OF CONDUCT

In 2017, we strengthened our awareness of our Compliance Policy and globally carried out our online training on the Code of Conduct.



To learn more about our structure, principles, and Corporate Governance model, visit [www.braskem.com.br/corporate-governance](http://www.braskem.com.br/corporate-governance) or our Investor Relations website at [www.braskem.com.br/corporate-governance](http://www.braskem.com.br/corporate-governance) **102-18, 102-23**



### Independent Board of Directors

In June 2017, three new independent Board Members were elected to join the Company's Board of Directors. With this change, today the group consists of six independent members with renowned experience in the market out of a total of 11 Members. Since 2015, Braskem's Board of Directors formed by professionals with renowned experience in the market and in aspects related to strategy and corporate governance exceeds 90%.



To learn about the structure of our Board and Departments, visit [www.braskem-ri.com.br/councils-and-board](http://www.braskem-ri.com.br/councils-and-board)

**STRENGTHENING** 103-2, 103-3

Reporting directly to the Board of Directors since its creation in the first half of 2016, our Compliance Department is formed by four areas: Internal Controls, Risk Management, Compliance, and Internal Audit. Compared with the previous year, the department reinforced its personnel structure. In addition to relying on people responsible for Compliance for the United States, Europe, and Mexico, the department tripled the number of professionals in our team, going from eight (in 2016) to 27 members.

The commitment of the area is to disseminate the culture of compliance across the company, whether through online or classroom training, workshops, engagement campaigns among other initiatives. After training senior management in 2016, the process to disseminate policies, guidelines, and other information across Braskem was the main focus of activities in 2017. One of the highlights was the mandatory requirement for 100% of the Members to retake the training course on the Code of Conduct.



**COMPLIANCE  
STRUCTURE**

**2016: 8 Members**

in Brazil also catering to the needs of local plants

**2017: 27 people**

from 5 different nationalities, which favors diversity, reinforces this topic in each location where we operate, and gives it global dimension.



**SPECIFIC  
TRAINING**

**9 classroom** training courses and **303 Members** trained



**TRAINING ON ETHICS, INTEGRITY,  
AND TRANSPARENCY<sup>3</sup>**

**5 classroom** training courses and **246 Members** trained

<sup>3</sup> This training began in 2016 and was completed in 2017.



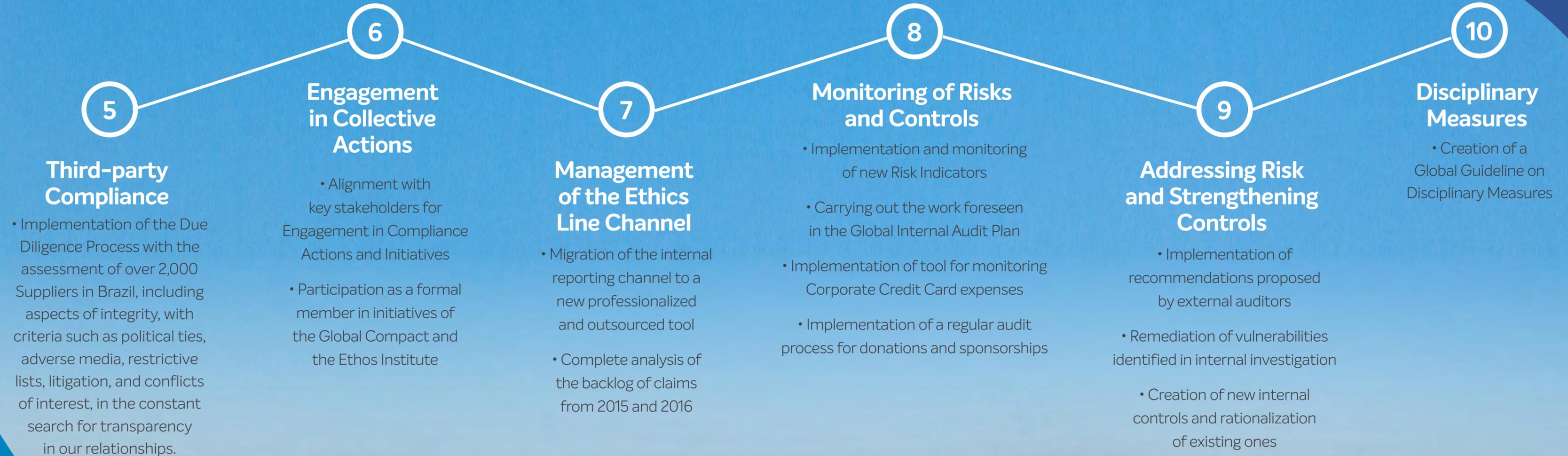
**COMPLIANCE MEASURES** 103-2, 103-3

With ten structured measures in the Prevention, Detection, and Remediation pillars, in 2016 we developed a robust Compliance Improvement Program, comprised of 162 initiatives to improve the environment. Throughout 2017, we

put the Program into practice and completed 81 of these initiatives. In all, 119 initiatives have already finished. The remaining medium- and low-priority projects will be addressed throughout 2018.

**Main  
deliveries  
in 2017**







## Commitment

In addition to its internal policies, Braskem is a member of the UN Global Compact, and participates in the Anti-Corruption Working Group of the Brazil Network of the Global Compact, and is a member of the Ethos Institute's Corporate Pact for Integrity and Against Corruption, participating in the Integrity Working Group. In these groups, Braskem follows bills regarding the fight against corruption and other changes.

## RISK ASSESSMENT

In our review of Compliance processes, efforts were made to establish a robust Risk Management procedure to identify, understand, and respond to risks that could impact the Company's strategic goals. This new process ensures that decision makers have timely access to sufficient information, increasing the likelihood of reaching their goals and reducing risks to acceptable levels. It also seeks to preserve the shareholders' tangible and intangible assets, the safety of people, and the integrity of the environment and communities by improving decision-making processes and properly handling risks and negative impacts arising from their occurrence.

In 2016, this work focused on assessing compliance risks, and managed to globally identify priority areas with greater exposure and, consequently, apply the necessary mitigation measures. In 2017, the work gained a new dimension by incorporating, in a more structured way, the strategic, financial, and operational risks, in addition to the regulatory risks evaluated in the previous year.

In 2017, the Compliance area promoted 88 risk assessment workshops conducted globally, involving 234 leaders in work to identify, analyze, and prioritize risks. In addition, we defined *heat maps*<sup>4</sup> and *ranking* of priority risks for each business area, in each region, and a consolidated, global view of Braskem's priority risks.

With these views, it is possible to work in a structured way to prevent the materialization of risks, and help organize the redirection of the Crisis Management process and build Business Continuity Plans.

## INTERNAL AUDIT

Our Internal Audit area is focused on increasing and protecting organizational value, providing independent and objective assessment of processes, verifying compliance

and effectiveness. Its main responsibilities are to ensure that activities and processes are in compliance with our internal policies and external regulatory standards, independent verification of the effectiveness of the controls, proposing improvements, support Braskem's risk management, and identify the opportunity to reduce costs and gain efficiency.

Establishing internal audit processes is among the various actions structured to strengthen our governance practices. With the first global plan approved in December 2016, we turned our attention to improving controls through 13 projects in all locations.

## REVISED DOCUMENTATION

To bring even greater agility and transparency, and strengthen the reliability of our processes, we reformulated Braskem's documentation structure. We began reviewing approximately 150 documents, including Policies, Procedures, and Guidelines. This company-wide initiative, involving several areas, also includes an improvement project for the online tool where all of the Company's normative documentation is archived.



<sup>4</sup> Representation of data in the form of a map or diagram where data values are shown as colors.



**RESPONSIBILITY OF ALL**

In order to understand the Members' view regarding concepts of Compliance, as well as their understanding of the Company's policies, we conducted a global internal survey from March to May 2017, which was attended by over 2,800 Members from Brazil, the United States, Mexico, and Germany. The survey also sought to give us a more realistic view of team expectations, building processes and communication channels based on the opportunities identified. In early 2018, we conducted a new survey to evaluate the results of the actions implemented in 2017, with data that will help us verify new needs for improvement.

WHO IS RESPONSIBLE FOR ENSURING COMPLIANCE AT BRASKEM?

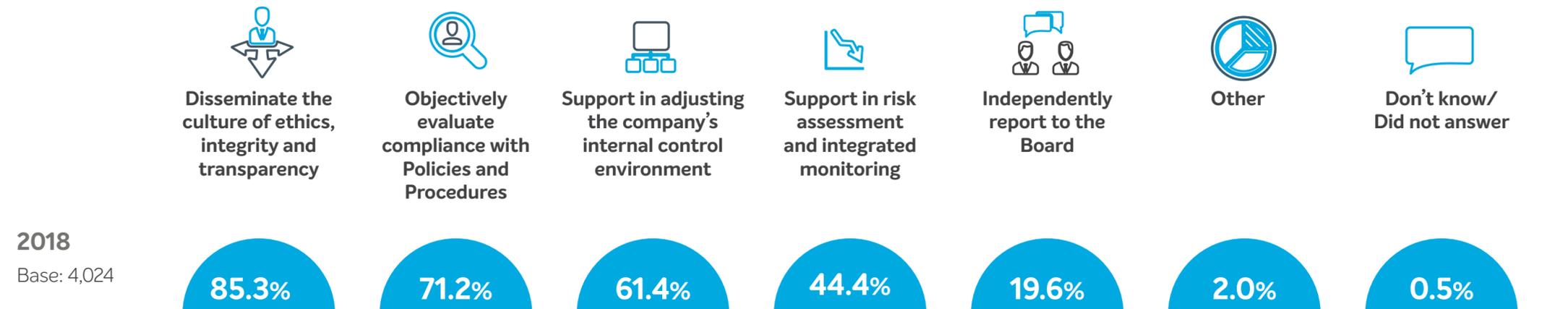


2018\*

Base: 4,024

\* The results refer to the 2017 initiatives.

WHAT ARE THE TOP THREE PRIORITIES OF THE COMPLIANCE AREA?



2018

Base: 4,024



### NEW ETHICS LINE CHANNEL [102-17, 103-2, 103-3, 406-1](#)

Going forward with the plans to advance the reporting channel, we launched our Ethics Line Channel to provide all our audiences with even more secure communication for reporting behaviors deemed unethical. With the outsourcing of this service, and a new independent team trained to receive and assess reports received<sup>5</sup>, we have made the channel more professional, effective, impartial, and credible. Internally, our Compliance team assumed the responsibility for investigating the reports registered on the channel.

In operation since April 2017, all incoming calls are answered personally and with more personal treatment, without the use of recordings. In addition to the *online* channel, telephone service is available 24x7, and is conducted in each country's language (Brazil, USA, and Mexico), with the exception of Germany, where reports are received in English.

All reports are given a call number so that the complainant can follow the progress of the analysis until it is complete.

This modernization also allows us to contact the person anonymously if further clarification is needed on the case. In addition, a new procedure of handling complaints and test protocols by subject were developed in order to make the work more robust and more reliable.

In 2017, the cases investigated were presented during the five meetings of the Ethics Committee. Specific cases of greater relevance were presented at the meetings of the Compliance Committee. Due to the internal communication actions on the new Ethics Line Channel, we had a record number of cases filed, jumping from 107 in 2016 to 177 in 2017. In addition, of the investigations closed in 2017, 23% were considered to be unfounded, and 77% were considered to be founded, of which 25 reparatory measures were recommended by Compliance. Of the reports filed in 2017, 64% of the complainants were anonymous and 36% identified themselves.

<sup>5</sup>The ICTS partner company is now responsible for managing the first report from complainants. Learn more at [www.icts.com.br](http://www.icts.com.br) (in Portuguese).

### Main results of the Ethics Line Channel in 2017

Of the cases opened in periods prior to 2017, a total of 48 had their investigations closed in the year.

These cases were presented during the 5 meetings of the Ethics Committee in 2017. 11 cases were considered to be founded (magnifying glass on Human Rights\*: 2 mobbing cases in Brazil), which resulted in the following reparatory measures:

- 2 terminations of Members.
- 3 formal warnings.
- 2 creations/adjustments of controls.

177 cases opened in 2017

Of these, 88 were analyzed in 2017, pointing out that all cases are always presented at meetings of the Ethics Committee. 20 cases were considered to be founded (magnifying glass on Human Rights\*: 1 case of abuse of power, 1 of discrimination, 1 of sexual harassment and 2 of mobbing in Brazil, and 1 of mobbing in Mexico). As a result of the cases deemed to be founded, the following reparatory measures were indicated by Compliance:

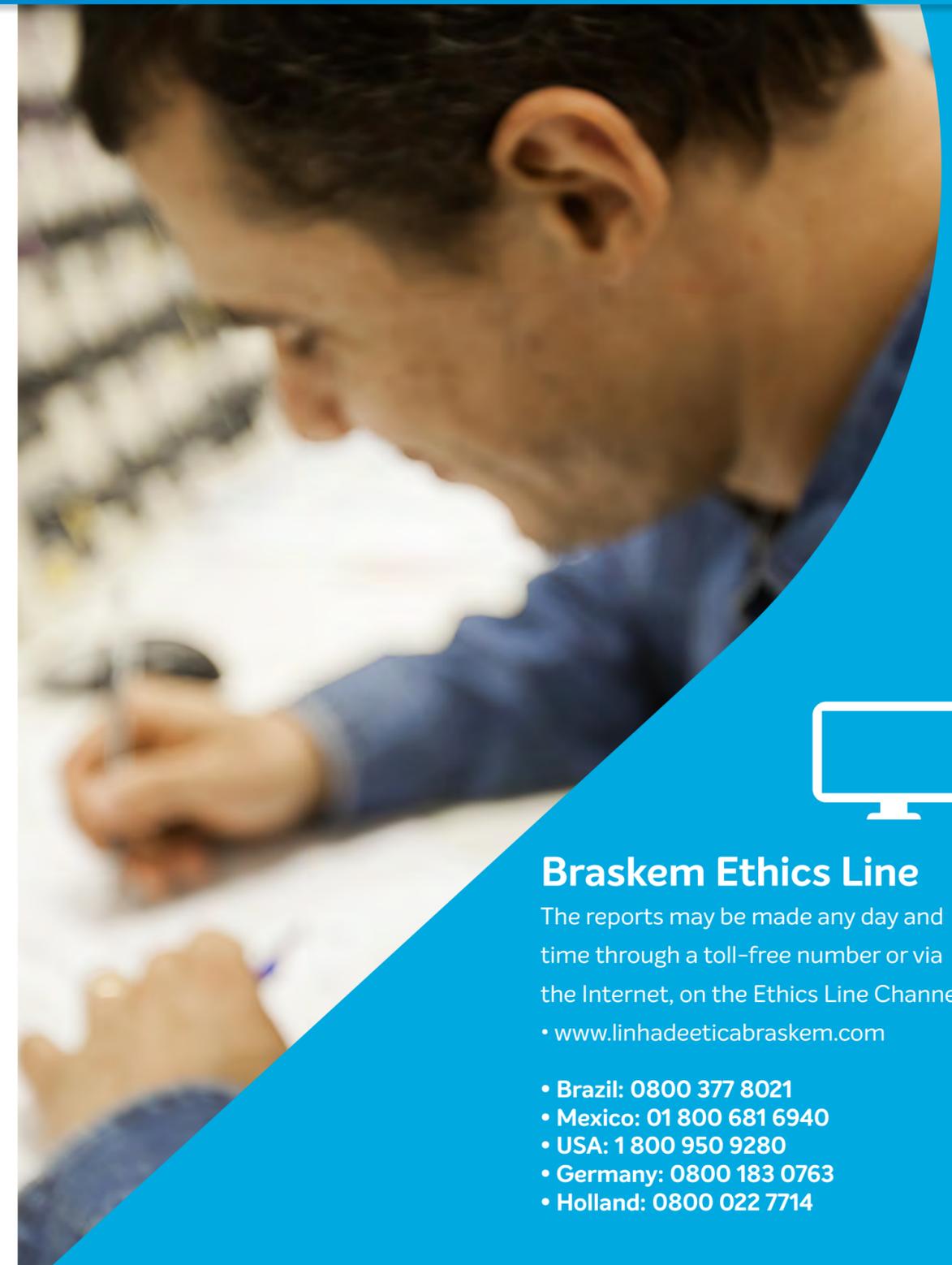
- 1 terminations of Members
- 3 creations/adjustments of controls
- 5 oral warnings/feedbacks
- 3 Partner employees dismissed
- 1 cancellation of contract with Partner

64 cases opened in 2017 began the year 2018 under investigation.

Of the 64 cases from 2017 that began the year 2018 under investigation (magnifying glass on Human Rights\*: 7 are cases of harassment in Brazil and Mexico). The last meeting in 2017 was held on 10/31/2017. All actions after that date will be disclosed in the 2018 Annual Report.

Support to victims: Braskem has improved its performance in benefit of victims. In 2017, for example, we had a case of threat to a Member who received personal security services hired by the company until this person's workplace was changed to another state in Brazil.

\* Focus on cases of discrimination, harassment, and abuse of power.



### Braskem Ethics Line

The reports may be made any day and time through a toll-free number or via the Internet, on the Ethics Line Channel:

• [www.linhadeeticabraskem.com](http://www.linhadeeticabraskem.com)

- Brazil: 0800 377 8021
- Mexico: 01 800 681 6940
- USA: 1 800 950 9280
- Germany: 0800 183 0763
- Holland: 0800 022 7714

# BUSINESS PERFORMANCE

**RECORD RESULT IN A  
CHALLENGING SCENARIO**  
We demonstrated our resilience  
and ability to face diverse  
scenarios, bringing significant  
results to all shareholders.





In 2017, we repeated our excellent industrial performance, presenting significant production records of some of our main products.

Despite the many challenges, we ended 2017 with a record EBITDA both in terms of Brazilian reais and US dollars: BRL 12,334 million and USD 3,872 million, representing, respectively, an increase of 7% and 17% compared with the previous year. A result that has been achieved due to our strategy focused on international presence, diversifying raw materials, constant improvement of operational efficiency,

In **2017**, Braskem recorded consolidated net income of **BRL 4,133 million**. Reinforcing the Company's global presence, **47%** of our consolidated net revenue (ex-resale of naphtha and condensate) was generated in international markets.

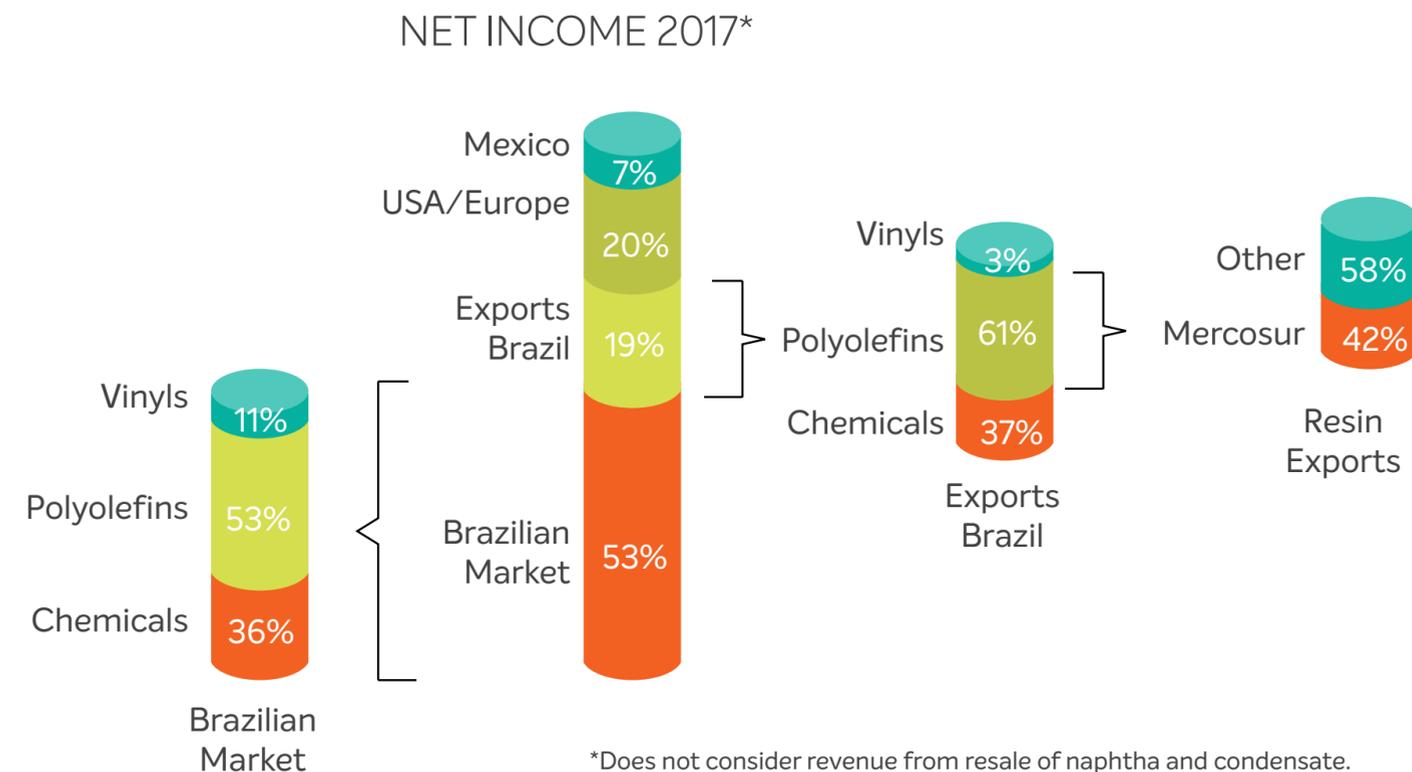
competitiveness, and Governance and Compliance standards.

This advancement can be explained mainly by the higher volume of sales in Mexico due to the higher spreads in the international chemicals market, expanded capacity, and increase in sales volume from the units in the United States and Europe, due to the higher volume of sales in the Brazilian market and the capital gain of USD 88 million from the disposal of quantiQ.

In the year, the Company's free cash generation was BRL 2,46 million, up 9% from 2016. Corporate leverage mea-

sured by the Net Debt/EBITDA ratio in dollars was 1.91x at the end of 2017. Braskem retained its investment grade by Standard & Poor's (BBB) and by Fitch Ratings (BBB) and above sovereign risk

by the three major risk classification agencies (S&P, Fitch, and Moody's). The reports are available on the Investor Relations website [www.braskem-ri.com.br](http://www.braskem-ri.com.br). [102-9, 201-1, 103-2, 103-3](#)



**VALUE ADDED STATEMENT (VAS)**

Our global performance allowed for, at the end of 2017, a total value-added distributed of over BRL 14.5 million. This total, 38% higher than the previous year, reflects our contribution to the economy of the locations where we operate and our financial return to society.

STATEMENT OF VALUE ADDED (all amounts in thousands of reais)

|                                                       | CONSOLIDATED        |                     | PARENT COMPANY      |                     |
|-------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|
|                                                       | 2017                | 2016<br>ADJUSTED    | 2017                | 2016<br>ADJUSTED    |
| <b>Revenues</b>                                       | <b>58,000,752</b>   | <b>52,429,423</b>   | <b>45,303,874</b>   | <b>39,775,501</b>   |
| Sales of goods, products and services                 | 57,958,099          | 55,930,688          | 45,351,039          | 42,711,853          |
| Other (expenses) revenues, net                        | 1,202               | (3,437,060)         | (82,722)            | (2,867,482)         |
| Provisions for credits of doubtful debtors            | 41,451              | (64,205)            | 35,557              | (68,870)            |
| <b>Inputs acquired from third parties</b>             | <b>(41,147,077)</b> | <b>(39,909,905)</b> | <b>(34,116,843)</b> | <b>(31,662,604)</b> |
| Costs of products, goods and services sold            | (38,845,377)        | (37,802,247)        | (32,523,499)        | (30,222,548)        |
| Materials, energy, third-party services, and other    | (2,237,835)         | (2,019,390)         | (1,539,920)         | (1,353,186)         |
| Loss of asset values                                  | (63,865)            | (88,268)            | (53,424)            | (86,870)            |
| Gross value added                                     | 16,853,675          | 12,519,518          | 11,187,031          | 8,112,897           |
| Depreciation, amortization, and depletion             | (2,928,855)         | (2,683,100)         | (1,880,065)         | (2,052,972)         |
| Net value added produced by the Company               | 13,924,820          | 9,836,418           | 9,306,966           | 6,059,925           |
| <b>Value added received in transfer</b>               | <b>652,527</b>      | <b>720,407</b>      | <b>2,996,197</b>    | <b>1,618,945</b>    |
| Equity income                                         | 48,832              | 30,078              | 2,450,872           | 986,493             |
| Financial income                                      | 603,630             | 690,122             | 545,262             | 632,452             |
| Other                                                 | 65                  | 207                 | 63                  |                     |
| <b>Total value added for distribution</b>             | <b>14,577,347</b>   | <b>10,556,825</b>   | <b>12,303,163</b>   | <b>7,678,870</b>    |
| <b>Personnel</b>                                      | <b>1,421,214</b>    | <b>1,267,513</b>    | <b>1,018,832</b>    | <b>765,684</b>      |
| Direct remuneration                                   | 1,147,158           | 986,940             | 801,083             | 564,067             |
| Benefits                                              | 212,815             | 218,110             | 154,876             | 140,879             |
| FGTS (government severance fund)                      | 61,241              | 62,463              | 62,873              | 60,738              |
| <b>Taxes, fees and contributions</b>                  | <b>4,232,072</b>    | <b>3,018,046</b>    | <b>3,511,778</b>    | <b>2,246,826</b>    |
| Federal                                               | 2,214,611           | 1,288,179           | 1,569,651           | 732,051             |
| State                                                 | 1,995,068           | 1,703,249           | 1,928,530           | 1,502,420           |
| Municipal                                             | 22,393              | 26,618              | 13,597              | 12,355              |
| <b>Remuneration of third-party capital</b>            | <b>4,790,740</b>    | <b>7,000,463</b>    | <b>3,689,563</b>    | <b>5,077,832</b>    |
| Financial expenses (exchange rate variation)          | 4,545,979           | 6,755,962           | 3,487,287           | 4,888,738           |
| Leases                                                | 244,761             | 244,501             | 202,276             | 189,094             |
| <b>Remuneration of own capital</b>                    | <b>4,133,321</b>    | <b>(729,197)</b>    | <b>4,082,990</b>    | <b>(411,472)</b>    |
| Retained earnings in the accounting period            | 3,074,114           | (438,331)           | 3,074,114           | (442,430)           |
| Dividends                                             | 1,000,000           |                     | 1,000,000           |                     |
| Non-controlling shareholding interest in subsidiaries | 50,331              | (317,725)           |                     |                     |
| Results from discontinued operations                  | 8,876               | 26,859              | 8,876               | 30,958              |
| <b>Total value added distributed</b>                  | <b>14,577,347</b>   | <b>10,556,825</b>   | <b>12,303,163</b>   | <b>7,678,870</b>    |

 For more information about the financial statements presented, including the financial entities considered in the consolidated numbers, visit: [www.braskem-ri.com.br/annual-reports](http://www.braskem-ri.com.br/annual-reports) **102-45**

## STEPS TO GLOBALIZATION

As part of the evolution of Braskem's position, and focused on operating as an increasingly global company, in 2017 we changed the nomenclature of our Business Units and adopted a language more consistent with the market. The purpose of this initiative is to facilitate the understanding of each of our segments of operation, informing about the products and geographic reach of each Unit.

- Basic Petrochemicals and Vinyls Unit: now called the Chemicals and Vinyls Unit (formed by the Small Chemicals and Vinyls Companies)
- Polyolefins, Renewables, and Europe Unit: new Polyolefins Unit South America and Europe (formed by the Small Companies of Polyethylene South America, Polypropylene South America, Renewables, Polyolefins Exports, and Polyolefins Europe).
- North America Unit: becomes Polyolefins Unit North America (includes the Small Companies Polypropylene North America, UTEC, and Braskem Idesa).

## BRAZIL

The gradual recovery of the economy and GDP growth in 2017 have already brought positive results for the industrial activities in Brazil, and consumption recovery due to the increase in purchasing power of families. In line with this market expansion, we had a total sales volume of 33,486 thousand tons in the year, with increase in market share of PE, PP, and PVC to 69% and an EBITDA of BRL 8,675 million.

Demand for resins in the Brazilian market reached 5.1 million tons, 4% higher than in 2016, due to the higher level of activity, mainly in the packaging, automotive, agriculture, retail, and electronics sectors. Our sales volume in the Brazilian market totaled 3.5 million tons, 4% more than in 2016. We highlight the sales of PE in Brazil, which increased by 5%, the Company's record. Resins exports totaled 1.5 million tons, 11% below 2016, due to prioritizing the Brazilian market, given the higher demand.

From a strategic standpoint, the year was marked by completion of the raw material flexibility project that al-





**Our focus at the Brazilian units remained on operational and commercial efficiency**

lows flexibility for the production of up to 15% of ethylene using ethane as raw material at the petrochemical plant in Bahia. Imported Ethane arrived at the Company's furnaces at the end of November, with Braskem's first *flex* operation in Camaçari.

Our focus at the Brazilian units remained on operational and commercial efficiency, on serving the Brazilian market, on ensuring exports of the volume not sold in this market, especially for Mercosur, and on finalizing the investment to provide greater flexibility to the operation of the cat cracker in Bahia.

**CHEMICALS**

Focused on adopting a language more consistent with its market, our Basic Petrochemicals Segment had its name changed to Chemicals. The total annual production capacity of Ethylene of the industrial units is 3,952 thousand tons. Of the total ethylene produced by the Chemicals units, approximately 80% is transferred for consumption in the Company's Polyolefins and Vinyls units. The segment's annual production capacity of Propene totals 1,585 thousand tons, of which 65%, on average, is transferred for consumption in the Company's Polyolefins segment. The unit's main products, Ethylene, Propene, Cumene, Gasoline, Benzene, Toluene, and Paraxylene accounted for nearly 80% of the net revenue for Chemicals in 2017.



**Strategic management for the environment**

At the beginning of 2017, Braskem acquired 63.7% of Cetrel, a strategic environmental management company for the operation of the Camaçari Petrochemical Complex in Bahia. With a relevant role in managing our environmental processes in the region, the Company treats and disposes effluents and industrial waste, conducts environmental monitoring and supplies water for industrial use, meeting not only Braskem's needs but also the needs of nearly 100 clients at the industrial complex. The acquisition is intended to make our industrial operations even safer and more reliable, and is in line with our strategy of strengthening the petrochemical operation.



### Ethane in production

Our Chemicals Unit in Camaçari (Bahia) began the operations using imported to produce basic chemicals, which increases our share of ethane-based production to 20% in Braskem's raw material matrix in Brazil. BRL 380 million was invested in the technological adaptation of the unit, in the interconnection pipeline, and in the adaptation of the logistics infrastructure at the Aratu Port Terminal in Candeias, Bahia.

The Chemicals segment owns and operates four petrochemical complexes – Camaçari (BA), Triunfo (RS), São Paulo (SP), and Rio de Janeiro (RJ), where olefins, aromatics, and utilities are produced.

| Financial Overview (BRL million)   | 2017 (A) | 2016 (B) | VAR. (A) / (B) |
|------------------------------------|----------|----------|----------------|
| Net revenue                        | 25,179   | 25,063   | 0%             |
| COGS                               | (20,530) | (20,248) | 1%             |
| Gross profit                       | 4,649    | 4,814    | -3%            |
| Gross Margin                       | 18%      | 19%      | 0 p.p.         |
| SG&A                               | (773)    | (680)    | 14%            |
| Other Operating Revenue (Expenses) | (197)    | (410)    | -52%           |
| EBITDA                             | 4,809    | 4,910    | -2%            |
| EBITDA Margin                      | 19%      | 20%      | 1 p.p.         |
| Net Revenue (USD billion)          | 7,891    | 7,242    | 9%             |
| EBITDA (USD billion)               | 1,510    | 1,415    | 7%             |



### Alternative sources

Our unit in Duque de Caxias, Rio de Janeiro (RJ), received its first shipment by sea from the United States, of 4,500 tons of ethane. The ship brought raw material from shale gas as part of the agreement with Enterprise Products, a North American company with which we entered into an agreement to supply ethane. The project is part of Braskem's strategy to make its petrochemical production more flexible with alternative sources of raw materials.

## POLYOLEFINS

The Polyolefins segment consists of 18 Polyethylene (PE) and Polypropylene (PP) plants in Brazil, including the production of Green Polyethylene made from renewable raw material. The industrial operations include PE and PP plants located in the petrochemical complexes in Triunfo, Camaçari, Rio de Janeiro, Greater São

Paulo, Cubatão and Paulínia, with total production capacity of 3.055 million tons of PE, of which 200,000 tons are of green PE, and 1,850 thousand tons are of PP. As of the first quarter of 2017, the UTEC business that until then was part of the Polyolefins segment, became part of the United States and Europe segment.

**The segment consists of 18 Polyethylene (PE) and Polypropylene (PP) plants in Brazil, including the production of Green Polyethylene**

| <b>Financial Overview (BRL million)</b> | <b>2017 (A)</b> | <b>2016 (B)</b> | <b>VAR. (A) / (B)</b> |
|-----------------------------------------|-----------------|-----------------|-----------------------|
| Net revenue                             | 19,650          | 20,307          | -3%                   |
| COGS                                    | (15,572)        | (15,981)        | -3%                   |
| Gross profit                            | 4,079           | 4,326           | -6%                   |
| Gross Margin                            | 21%             | 21%             | - 1 p.p.              |
| SG&A                                    | (1,322)         | (1,285)         | 3%                    |
| Other Operating Revenue (Expenses)      | (178)           | (199)           | -11%                  |
| EBITDA                                  | 3,001           | 3,291           | -9%                   |
| EBITDA Margin                           | 15%             | 16%             | - 1 p.p.              |
| Net Revenue (USD billion)               | 6,157           | 5,850           | 5%                    |
| EBITDA (USD billion)                    | 943             | 935             | 1%                    |





## VINYLS

The Vinyls segment consists of the industrial and commercial operations of the PVC, chlorine, and caustic soda units, as well as other products such as hydrogen and sodium hypochlorite. The industrial operations involve three PVC plants located in the Camaçari and Alagoas

Petrochemical Complex, and two chlorine soda plants, also located in the Camaçari and Alagoas Petrochemical Complex. The Company's annual production capacity of PVC is 710,000 tons and the annual production capacity of caustic soda is 539,000 tons.

| Financial Overview (BRL million)   | 2017 (A) | 2016 (B) | VAR. (A) / (B) |
|------------------------------------|----------|----------|----------------|
| Net revenue                        | 3,067    | 3,016    | 2%             |
| COGS                               | (2,606)  | (2,815)  | -7%            |
| Gross profit                       | 461      | 201      | 129%           |
| Gross Margin                       | 15%      | 7%       | 8 p.p.         |
| SG&A                               | (163)    | (237)    | -31%           |
| Other Operating Revenue (Expenses) | (163)    | (72)     | 127%           |
| EBITDA                             | 454      | 241      | 88%            |
| EBITDA Margin                      | 15%      | 8%       | 7 p.p.         |
| Net Revenue (USD billion)          | 962      | 870      | 11%            |
| EBITDA (USD billion)               | 143      | 69       | 108%           |

## UNITED STATES AND EUROPE

The average price of propene in the American Gulf (USG) was USD 986/t, up 30% from the previous year, as a result of the increase in exports and the lower inventory levels of this product. In this scenario, the PP spread in the United States was USD 585/t, 17% lower than in 2016.

Despite this scenario, our operations in the United States and Europe yielded significant results in 2017, with an EBITDA of USD 647 million (BRL 2,063 million), 7% lower than the EBITDA recorded in the previous year. This result was mainly achieved by the Company's strategy to ensure operational and commercial efficiency, recording a 97% utilization rate of the units and taking advantage of market opportunities given the strong demand for PP in these markets.

The utilization rate was 97%, which was 3 p.p. below 2016 due to a revised production capacity. Even so, production in the United States and Europe was 5% higher, the Company's historical record. There were also record sales, with 5% growth, mainly due to the increase in capacity in United States plants in late 2016, Germany in early 2017, and strong demand for PP in these regions.

| <b>Financial Overview (USD million)</b> | <b>2017 (A)</b> | <b>2016 (B)</b> | <b>VAR. (A) / (B)</b> |
|-----------------------------------------|-----------------|-----------------|-----------------------|
| Net revenue                             | 3,087           | 2,548           | 21%                   |
| COGS                                    | (2,324)         | (1,750)         | 33%                   |
| Gross profit                            | 763             | 798             | - 4%                  |
| Gross Margin                            | 25%             | 31%             | - 6 p.p.              |
| SG&A                                    | (183)           | (145)           | 26%                   |
| Other Operating Revenue (Expenses)      | (7)             | (21)            | - 68%                 |
| EBITDA                                  | 647             | 698             | - 7%                  |
| EBITDA Margin                           | 21%             | 27%             | - 6 p.p.              |
| Net Revenue (USD billion)               | 9,854           | 8,896           | 11%                   |
| EBITDA (USD billion)                    | 2,063           | 2,474           | -17%                  |





**Solidarity in times of crisis**

In August 2017, tropical storm Harvey made land-fall in Texas, causing major flooding and power outages in areas near the Braskem plant in the city of La Porte. The first category 4 hurricane to hit the state in 56 years, the event shut down two of our five PP plants for lack of power, left service providers and logistics unable to perform their duties, and prevented dozens of Members' families from returning to their homes.

This unexpected event – as the hurricane was not expected to hit the region with so much force – led us to take emergency measures in order to assist the teams and their families and preserve the integrity of the plants. As a result, we kept a boat in operation in order to help rescue people who were trapped in their homes, assisted with hotel reservations for those who could not return to their homes, and provided power generators, water, and food to ensure the well-being of people. This was crisis management organized by the Members themselves, who decided to assist in critical activities to endure that moment.

In January 2017, we began operating our new Ultra High Molecular Weight Polyethylene (UHMWP) plant in La Porte, Texas. In addition to strengthening our position as one of the world's largest UHMWP producers, the new plant represents another milestone in Braskem's growth strategy in North America, enabling us to serve clients in North America and Europe with even greater efficiency.

Marketed under the UTEC brand, the UHM-

WP was developed and produced using the Company's proprietary technologies. This polymer has excellent mechanical properties, such as high abrasion resistance, impact resistance, and low friction coefficient. It is eight times lighter than steel and ten times more durable than High Density Polyethylene (HDPE), and is indicated for applications in the automotive and transportation, electronics, fiber and textile, and industrial sectors, among others.

 To learn more, visit [www.braskem.com/utec](http://www.braskem.com/utec).



**Growth with focus on Clients**

In June 2017, our Board of Directors approved the investment of as much as USD 675 million for the construction of a new Polypropylene (PP) production facility in the city of La Porte, Texas. This investment will further strengthen our leadership in the production of this thermoplastic resin in the United States, where the company already owns five other PP industrial units.

As part of our internationalization strategy, the new plant will contribute to meeting the growing demand of our Clients. The new Braskem plant will have a production capacity of 450,000 tons of polypropylene per year and will occupy part of the company's 800,000 sqm complex in the region. In this way, the new plant will use the existing support infrastructure, benefiting from the connection to receive raw material, the railroad network, the central control room, testing facilities, and others.

The project should positively impact economic activity in the region, employing nearly 1,000 people during the development and construction phases, and creating another 50 job openings when the plant begins operating. The project is expected to be completed in the first quarter of 2020.

 To learn more, visit [www.braskem.com.br/usa/delta](http://www.braskem.com.br/usa/delta)



### MEXICO

The year 2017 marked the first calendar year of complete operation of the Braskem Idesa Industrial Complex in Mexico, a period already highlighted by production and operational stability. From a commercial standpoint, there was very significant progress penetrating Mexico's domestic market, with significant levels of market share. In exports, the major focus was on more strategic markets with better margins in the United States and Europe.

In the year, the EBITDA recorded by the Mexican unit totaled USD 623 million, recording an 88% average operating rate for the PE plants. Our focus was on the production stability of the Petrochemical Complex, on the increase in sales in the Mexican market, consolidating the relationship with local clients, and on exports with synergy with Braskem's operations in other regions.



The operation of Braskem Idesa has been changing the Mexican market for thermoplastic resins. Since a significant portion of the Mexican market is supplied from abroad, Braskem Idesa has already sold 65% of its production to the domestic market, helping the country reduce its dependence from abroad. Given the greater product availability, total sales volume of PE was 124% higher than 2016. Exports, in turn, were 81% higher, with an increase in the share of more profitable markets such as Europe and the United States, due to the increased product portfolio and greater coordination with US and European sales teams.

Among the key points for our success in this first year is the entire knowledge transfer process from Braskem Brazil to Mexico, carried out by a team focused on the project during the first months of operation. This was a decisive factor toward qualifying the local workforce, both for operations and maintenance. With this result, we have already initiated the process to downsize the Brazilian team, which, of the 100 people in the first month of operation now has approximately 30. It is expected that, in 2018, this number will drop to 14 Brazilians, out of a total of 790 local Members.



| <b>Financial Overview (BRL million)</b> | <b>2017 (A)</b> | <b>2016 (B)</b> | <b>VAR. (A) / (B)</b> |
|-----------------------------------------|-----------------|-----------------|-----------------------|
| Net revenue                             | 1,128           | 474             | 138%                  |
| COGS                                    | (657)           | (344)           | 91%                   |
| Gross profit                            | 472             | 131             | 261%                  |
| Gross Margin                            | 42%             | 28%             | 14 p.p.               |
| SG&A                                    | (90)            | (68)            | 31%                   |
| Other Operating Revenue (Expenses)      | 9               | 0               | 11,948%               |
| EBITDA                                  | 623             | 163             | 282%                  |
| EBITDA Margin                           | 55%             | 34%             | 21 p.p.               |
| Net Revenue (USD billion)               | 3,601           | 1,587           | 127%                  |
| EBITDA (USD billion)                    | 1,987           | 530             | 275%                  |

# INNOVATION

## ALIGNMENT AND GLOBAL IDEAS

Braskem was born with innovation as a part of its business strategy. For our Members, thinking beyond the basics and focusing on developing unique products and solutions for the market is now a transformation tool that helps the world and the Company – evolve.



## X-RAY OF INNOVATION

In addition to strengthening existing business, today, innovation plays a key role in our current flow towards creating new products, new solutions, and building the chemicals of the future, effectively supporting the sustainable development of business, society, and the environment.

As a global player in the sector and continuing the process to globalize the Company, in January 2017 the innovation areas in Brazil and the United States merged to form a single international team focused on developing projects aligned with Braskem's growth strategy. The initiative intensified the exchange of information and experiences among countries, creating a synergy process that will be the backbone of the Company's internationalization strategy in the Americas.

This new dynamics of global operation in innovation allows Braskem to leverage the best from each region. One such example is the Company's relationship with leading universities in the United States, among them the Massachusetts Institute of Te-

chnology (MIT), through the Industrial Liaison Program<sup>6</sup>, and the opportunity to expand knowledge in advanced metabolic engineering processes, with a new team structured in the United States, where research in this field is more advanced<sup>7</sup>.

In addition, in order to strengthen the alignment between researchers and technology engineers at all our units in the world, every two years we hold a conference to share experiences, stimulate the generation of ideas, and more thoroughly learn about ongoing projects and research. In 2017, the third edition was attended by 240 people, and 120 studies were presented, in addition to two international speakers.

<sup>6</sup>MIT Industrial Liaison Program (ILP): <http://ilp.mit.edu>

<sup>7</sup> Consists of manipulating the metabolism of organisms in order to optimize genetic and regulatory processes in cells to increase production of a given substance.





In 2017..

**355** projects to develop new products and processes

**BRL 167.5** million invested

**29** new patent requests and **83** extensions. Currently, the Company has **501** active documents, of which **199** patents were granted.

**440** Clients received support from the Technology and Innovation Center in Brazil (over **23,000** analyses carried out) and **65** in the United States (about **17,000** analyses)

Innovative solutions

TECHNOLOGICAL COOPERATION

In December 2017, we began a partnership with Haldor Topsoe – a Danish company and a global leader in catalysts and science of surfaces – in order to develop a pioneering solution of monoethylene glycol (MEG) from sugar, i.e. from renewable sources of raw material. MEG is one of the components in the production of PET, an important resin in the textile and packaging sectors and widely used to produce bottles. The project will focus on converting sugar into resin at a single industrial unit, significantly reducing the cost of production. The partnership includes the construction of a demonstration unit in Denmark, scheduled to begin operations in 2019.

THE FUTURE WITH SMART PACKAGING

How about having a package at home that shows you if a product is still good for consumption? It may also help identify dates in very small font, which often blur over time. Braskem is already developing a solution in packages that, through a change in color, shows the quality and the state of conservation of various products, from food to cosmetics. The product is still being tested, but the devel-

opment of this technology carried out in partnership with the North American University of Clemson and the Federal University of Rio Grande do Sul (UFRGS) will help detect the change in the environment inside the packaging, a sign that the food may be deteriorating. The forecast is that in about three years this product will already be available on the shelves for consumers.

HIGH PERFORMANCE

Specially developed to produce high performance foams, Braskem Amppleo is a polypropylene resin with High Melt Strength properties, able to withstand temperatures up to 100°C without deforming. In addition to being fully recyclable, the product allows for the production of versatile foams with the possibility of developing applications for the automotive, industrial, civil construction, packaging, and appliances markets. Research to develop this resin was conducted at the Braskem Innovation and Technology Center at the Triunfo Petrochemical Complex in Brazil and the Pittsburgh Innovation Center in the United States.



## RESISTANCE AND FLEXIBILITY

With strong mechanical strength, transparency, and productivity, our solutions using polyethylene (PE) resins to produce shrinkfilm, of the Braskem Proxess family are mainly utilized in the food and beverage markets to protect cargo, to guarantee integrity and safety in transport, storage, and distribution. Braskem FlexusCling, specially developed for the extrusion of stretch film, stands out for its high load retention and excellent performance, even at low temperatures, as well as impact and puncture resistance. Today, the market for shrink and stretch films is responsible for consuming between 20 and 25% of the volume of polyethylene in the flexibles segment in Brazil.

## GLOSS AND FINISHING

Focusing on the cosmetics, hygiene, and cleaning and food markets, rigid polyethylene from the Braskem Rigeo Lumios family provides increased surface gloss, offering better package finishing. With intense and vibrant colors, the resin gives the product greater visibility on the shelves.

## SOLAR POWER

The partnership with Ciel et Terre Brasil allowed for the expansion of the Hydrelío® technology for floating solar power generation. Solar panels on floats may be applied on a wide variety of water surfaces. Among the benefits of its use are freeing up land, reducing costs of connection to the network by using existing electrical infrastructures, increasing solar productivity due to the natural cooling of the system by the water surface, simpler and less expensive maintenance, and others.

## Extending limits

Always focused on offering innovative solutions that are aligned with Client needs, we constantly invest in modernizing our laboratories and the Technology and Innovation Center (CTI). In 2017, the Triunfo unit (Brazil) inaugurated a complete rotomolding laboratory, which will be used to develop new solutions, perform productivity analyses, technical comparisons between materials, and portfolio grades. The investment was BRL 1.7 million.

In addition, Triunfo's CTI advanced its research on materials for 3D printing, creating solutions, especially for the project developed in partnership with Made in Space, a leading North American company in 3D printer development for operating in zero gravity, and NASA supplier.

In 2016, we expanded our borders and took Green Plastic I'm green™ to the International Space Station (ISS). Now, with the new solutions developed by Braskem, beginning 2018 the astronauts will be able to use a machine to recycle packaging and plastic objects, capable of further expanding the autonomy and sustainability of future missions.

Part of the "Printing the Future" project will be the first commercial plastic recycling operation in the history of space missions. The machine consists of a plastic grinding and extrusion system, producing a filament suitable for the 3D printer, which may be used again to print tools and other plastic materials.



## Entrepreneurship platform

Braskem Labs is an entrepreneurial platform with programs focused on accelerating innovative and sustainable business and on meeting the challenges of society and of our businesses.

### LEARN MORE

 **Braskem Labs Scale:** acceleration program carried out in partnership with ACE, which, since 2015, has accelerated over 40 companies. It seeks more mature entrepreneurs, whose solutions are innovative, contain plastic or chemicals, and have social and environmental impact. Of the 10 companies selected in the 2017 edition, 60% received investment or are in advanced conversations. As a way to contribute to the advancement of the Sustainable Development Goals, as of 2018 all projects selected should make clear how they will cause positive impacts in the SDGs aligned with its proposal.

 **Braskem LabsChallenge:** Braskem LabsChallenge: Braskem's challenge program, through which the company's areas may launch challenges for the start-up ecosystem. Those selected will be able to run a pilot project in Braskem's industrial units or administrative areas. With challenges from the Logistics and Services to Personnel areas, the first round included 130 registered startups and presented 15 proposals for pilot projects to be implemented. The program is carried out in partnership with the innovation consulting firm Innoscience.

 **Braskem Labs Ignition:** acceleration for startups in the validation phase of their business model.

 To learn more about the Braskem Labs Platform, visit [www.braskemlabs.com/labs/home-en](http://www.braskemlabs.com/labs/home-en)

## More sustainable cycles

Evaluating the life cycle of a product has become an increasingly essential tool for monitoring and reducing the environmental impacts caused by our business. This assessment includes Braskem's entire value chain – from extracting the raw material to disposing of the product – and evaluates all the benefits that our solutions may bring to developing a strategy – and world – that is increasingly sustainable.

Since 2005, we have used the methodology known as Life Cycle Assessment (LCA), which now has over 57 studies completed and seven ongoing. Recently, the process began to be tested in industrial areas, to better support decision-making in various actions, and in our Client chain, and the discussion about raw material composition and product evaluation in the Procurement area.

In order to reinforce the importance of the LCA process, Braskem is part of the Brazilian Entrepreneurial Network for Life Cycle Assessment, a joint initiative of companies and institutions that in 2017 became a Civil Society Organization of Public Interest (OSCIP), which includes the participation of over 40 companies from various sectors, such as Boticário, Natura, Duratex, Basf, ArcelorMittal, and others. Through this initiative, we seek to mobilize companies, coordinate governments, and educate consumers to incorporate the LCA as a tool to determine the sustainability of a product.

Among the highlights of 2017 is a study proving that plastic is a viable and sustainable alternative for the paint packaging market. In addition to being more practical, easier, safer, lighter, and more resistant, plastic buckets make it easier to reuse and recycle packaging, reduce packaging mass by 20% (allowing for more efficient transportation), and decreases environmental impact by 30%.



**In 2017 alone,  
Braskem  
completed 14  
new LCA studies.**



## LESS POLLUTION



**Results** showed that replacing **5%** of the annual market of traditional paint containers with plastic buckets would reduce **CO<sub>2</sub>** emissions by the equivalent of removing all cars from the city of São Paulo for one hour.

## Externalities

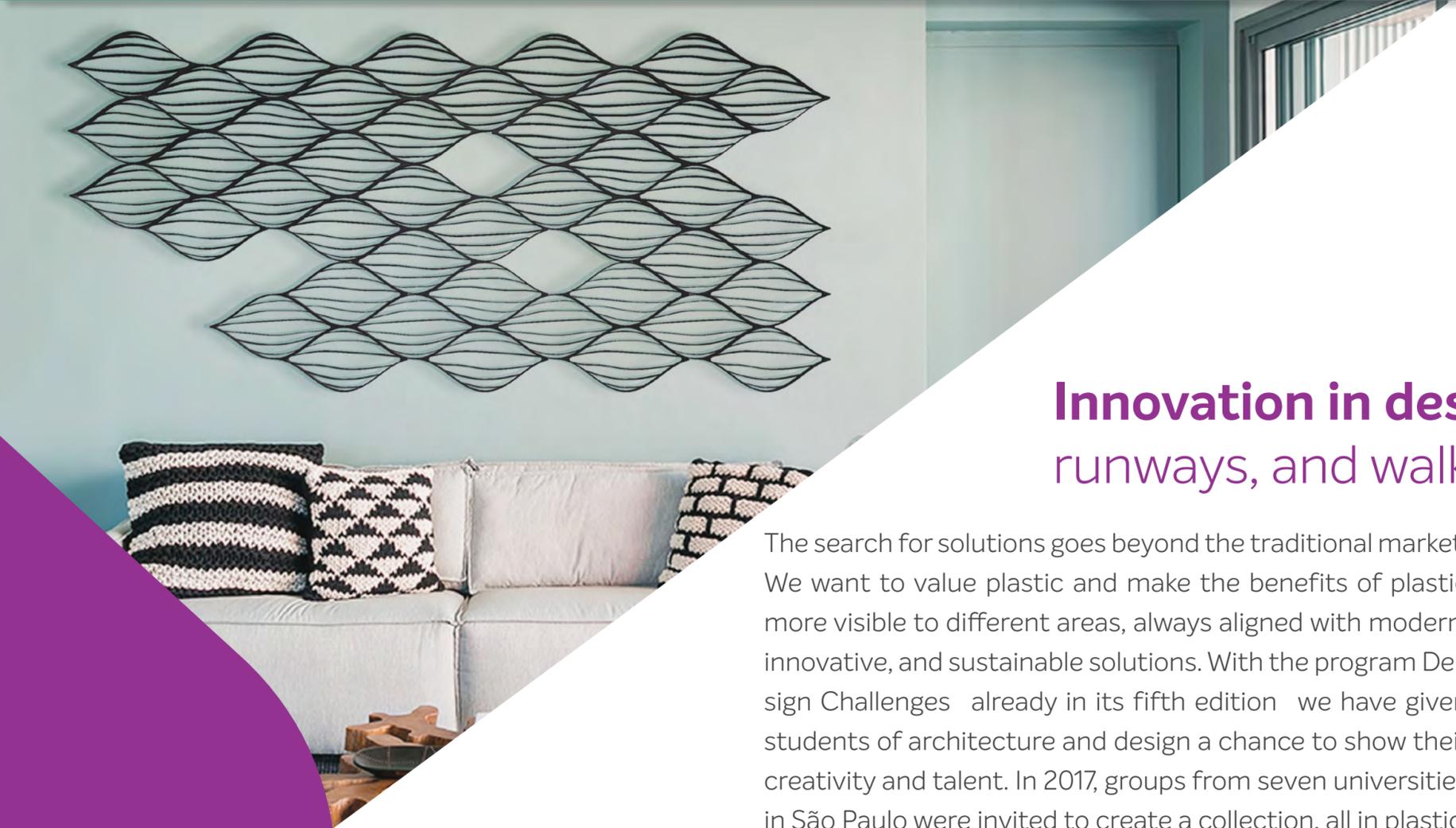
Another intense project during the year was an externalities study focused on packaging of perishable products. Today, packaging accounts for nearly 40% of the consumption of plastics and 80% is discarded after a single use. On the other hand, about 1.3 billion tons of food go to waste each year and packaging is fundamental to its protection. In seeking to balance the positive and negative impacts of this chain, the British company Trucost carried out a study to calculate the total cost of packaging (normal costs plus negative externalities) and compare it with the benefit they bring by reducing food waste. Three type of food normally packaged in plastic were evaluated: yogurt, rice, and meat.



**Yogurt:** The use of plastic in packaging generates a benefit by preventing waste four times greater than the cost of producing the plastic and its final disposal.

**Rice:** uses only two grams for each packaged kilo, 43 times more efficient than selling in bulk.

**Meat:** The use of plastic is 148 times more economical than if the product were sold without wrapping.



## Innovation in design, runways, and walkways

The search for solutions goes beyond the traditional market. We want to value plastic and make the benefits of plastic more visible to different areas, always aligned with modern, innovative, and sustainable solutions. With the program Design Challenges already in its fifth edition we have given students of architecture and design a chance to show their creativity and talent. In 2017, groups from seven universities in São Paulo were invited to create a collection, all in plastic, of floors, floating walls, and coatings.

After two months of training and mentoring, the best collection of products was from the Mauá Institute of Technology, winner of the 5th edition with a concept inspired by biomimicry, a contemporary architecture current that seeks sustainable solutions in nature, allowing for more organic forms. The project will be analyzed and detailed for commercialization by the company Atex, Braskem's client and partner in this edition.



Another initiative of great importance to Braskem was the renewal of the sponsorship of the Brazilian Paralympic Track Team for four more years. Through this initiative, we will assist in developing and technically preparing participants for the upcoming national and international competitions, such as the South American Games in Argentina in 2018, and the Parapan American Games and the World Championship in 2019, as well as the Tokyo Paralympics in 2020).

Since 2015, we have supported the Brazilian team, an action that is strongly aligned with our belief that chemicals and plastic improve people's lives. For the parathletes, this improvement goes even further, since plastic has a practical application in prostheses, making them lighter and more comfortable. The sponsorship will benefit 31 athletes and 12 guiding athletes on the Brazilian team, divided between the main and juvenile teams in the track and field events.



### GREEN FASHION AND 3D

Plastic can also be seen as a trend in the fashion world. And that's what the partnership between Braskem and the brand À La Garçonne showed in the last edition of São Paulo Fashion Week. Bracelets and buttons used in the collection were produced through 3D printing using Green Plastic a proposal aligned to the concepts of environmental preservation, recycling, upcycling, and reuse.

# STAKEHOLDERS

## INSPIRING RELATIONSHIPS

Members, Communities, and Business Partners. Every day, the people who make up our main stakeholders are responsible for the development and sustainable growth that we are seeking for the future of Braskem.



## Members 103-2, 103-3

We are a Company focused on the human being and promoting the development of our Members, constantly seeking innovation to better meet the needs of all our stakeholders. To this end, we believe in the potential of all our professionals, and we work so that everyone remains motivated to overcome market challenges with courage, ethics, and daring.

### MODERN AND READY FOR THE FUTURE

For many, the chemical industry is still something unknown and far from the actual needs of people in their everyday lives. But we believe in our Belief and Purpose, that we are focused on creating solutions that will improve people's lives. So why not start at home?

After facing a period of major internal and external challenges in recent years, we began the year 2017 with a positive restlessness, and a search for more modern people management models to strengthen the engagement of Members and attract new people to the future of Braskem.

To this end, we developed our Employee Value Proposition (EVP), with the idea of understanding changes in society, its



### Most beloved company

We rank fifth among the 50 companies most beloved by its Members according to the Love Mondays ranking, a platform that receives spontaneous and anonymous evaluations from employees about professional satisfaction with organizations.

impacts on the work environment and, with this, invite all our Members to express their expectations and what they value in our Company for the future. We conducted interviews with Leaders in all locations, analyzed the results of over 5,000 spontaneous responses by Members all over the world, and held focus group sessions with over 300 Members and market professionals in the countries where we are present. The result was beginning to build our Value Proposition, representing our commitment to people. With this proposition, we would like to promote the satisfaction and pride of belonging to all Members, who are at the heart of our growth strategy.



## OUR VALUE PROPOSITION

Consisting of seven pillars, the Value Proposition can be experienced every day through relationships between people, our purpose, career and development opportunities, recognition and rewards practices, and other initiatives, and will work as a guideline for evolving our practices and processes.



### You are the protagonist

Relationships based on trust and autonomy are the key to transformation. Here you are encouraged to make a difference, every day.



### Challenge and be challenged

We are inspired to question common opinion and challenge each other. So we are always evolving and learning.



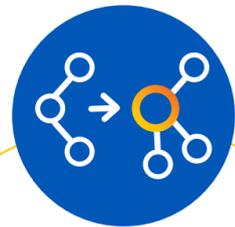
### Co-create your ideas

Innovation comes to life when working as a team. Do you have an idea? Share. Connect. Make it happen



### Build Your Own Path

We believe there are many paths to success. And you will always be encouraged to walk your own.



### Grow with us

Here the growth opportunities are great. Be part of an ethical, transparent, and prosperous company that always seeks to go further.



### Feel proud of what you do

Participate in sustainable solutions that improve people's lives. With an innovative attitude, your work benefits society and the planet.



### You're free to be yourself

At Braskem, diversity and respect are essential. Here you are valued for being who you are and the opportunities are the same for everyone. No exceptions.

## The freedom to be who you are

In November 2017, as part of this major cultural and organizational transformation project, we launched for all Members an initiative that had a major impact on people's daily lives: the free *dress code*. That is, professionals no longer need to follow the dress code to which the corporate world is accustomed with suits, ties, high heels, and, social attire—allowing our Members to dress in the way that suits them best.

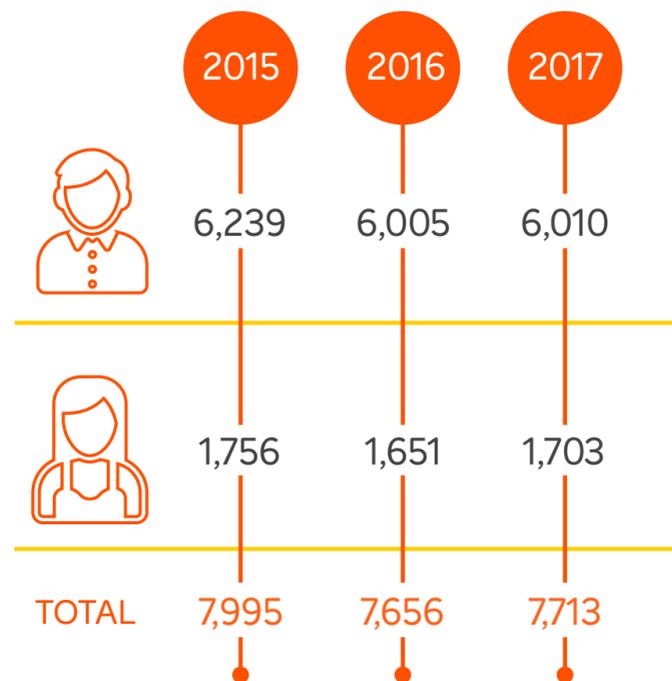
In industrial areas, it is still mandatory to follow specific HSE guidelines regarding uniforms and protective equipment. However, in the plant offices and administrative areas, Members, visitors and third parties may wear any type of clothing—always keeping in mind that it is still important for attire to be appropriate to job commitments and to use common sense.

Although simple, this action was an important step to valuing individual expression as part of our workday, with a lighter work environment, open to diversity and individuality.



**WHO WE ARE?**

TOTAL NUMBER OF MEMBERS  
(WORLDWIDE) 405-1



MEMBERS BY EMPLOYMENT TYPE AND WORK REGIME (2017) 102-8

|                 |           | BRAZIL | UNITED STATES | GERMANY | MEXICO | INTERNATIONAL OFFICES | TOTAL |
|-----------------|-----------|--------|---------------|---------|--------|-----------------------|-------|
| Employment type | Permanent | 5,981  | 699           | 167     | 785    | 60                    | 7,692 |
|                 | Temporary | 15     | 0             | 6       | 0      | 0                     | 21    |
| Work regime     | Full time | 5,991  | 696           | 163     | 785    | 60                    | 7,695 |
|                 | Part time | 5      | 3             | 10      | 0      | 0                     | 18    |

RATIO OF SENIOR MANAGEMENT HIRED WITHIN THE LOCAL COMMUNITY **202-2**

|                       | 2015 | 2016 | 2017 |
|-----------------------|------|------|------|
| Brazil                | 52%  | 53%  | 56%  |
| USA                   | N/D  | N/D  | N/A  |
| Germany               | 63%  | 67%  | 67%  |
| Mexico                | 21%  | 26%  | 29%  |
| International offices | 38%  | 0%   | 0%   |
| Grand Total           | 49%  | 49%  | 51%  |

\* Members of senior management are Members from grades 3 to 10 that have direct reports (managers, directors, vice presidents, and president). To calculate the number of leaders from the local community (born in the same state where they work), we used the number of leaders in senior management positions versus the place of birth, with the exception of the United States, which does not have this information (for legal reasons). This indicator is monitored for all countries where Braskem operates, those with industrial units and those with only commercial offices.

RATIO BETWEEN THE LOWEST SALARY COMPARED WITH THE LOCAL MINIMUM WAGE\* **202-1**

|                          | 2015 | 2016 | 2017 |
|--------------------------|------|------|------|
| Alagoas                  | 1.5  | 1.5  | 1.5  |
| Bahia                    | 1.6  | 1.6  | 1.6  |
| Brazil<br>Rio de Janeiro | 2.2  | 2.2  | 2.1  |
| Rio Grande do Sul        | 1.8  | 1.8  | 1.8  |
| São Paulo                | 1.7  | 1.8  | 1.7  |
| United States            | 2.9  | 3.1  | 3.1  |
| Germany                  | 2.0  | 2.0  | 2.0  |
| Mexico                   | 3.6  | 3.5  | 3.6  |

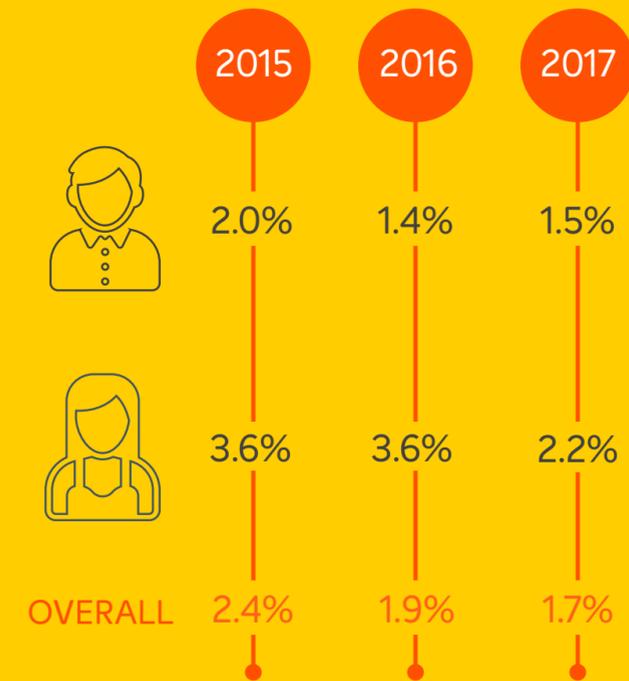
\* The calculation method used considers the lowest salary paid by Braskem using the Hay table (a table of salaries and wages established by Braskem) valid until December using 85% of the range in Brazil and Mexico (lowest percentage of the range that varies between 85 and 115) and 80% of the range in the United States and Germany (smallest percentage of the range that varies between 80 and 120) of the smallest wage compared with the local minimum-wage that is established through local bargaining agreements, for Brazil, and the local minimum wage for non-unionized Members. At all locations, Braskem offers Members salaries above the minimum wage in the region.



**HISTORICAL RATE** 401-1

In 2017, we recorded a historical rate with the Company's lowest voluntary turnover in the last four years. An index monitored since 2009, the voluntary termination rate was 1.7% globally and 1.1% in Brazil. We believe that the good working environment contributed strongly to this positive result, reinforced by the actions built based on the result of the Environmental Survey carried out in 2016. In addition, in 2017, the number of people hired (535) surpassed that of people dismissed (429). And, following the rate of the last two years, the turnover ratio of women hired was again higher than that of men 9.6% versus 6.2%.

**VOLUNTARY TERMINATION RATE**



**DIVERSITY** 405-1

For us, respecting diversity means respecting people as they are, valuing differences to create an environment of collaboration, coexistence, and development. For this reason, the Company has been working to become increasingly inclusive and welcoming, guaranteeing everyone equal opportunities through the Diversity & Inclusion program. In addition to the actions developed cross-sectionally, in other words, addressing the aspect of diversity as a whole, we have actions structured over five work fronts focused on the inclusion and empowerment of historically minority groups. The fronts are: Gender Equity, Race and Ethnicity, LGBTQIA (Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, and Asexual), People with Disabilities, and Social and economic (socially vulnerable people), each with its own specific strategy and objectives.

**We revised our recruitment and selection directive in order to align the criteria and guidelines with promoting diversity at Braskem**



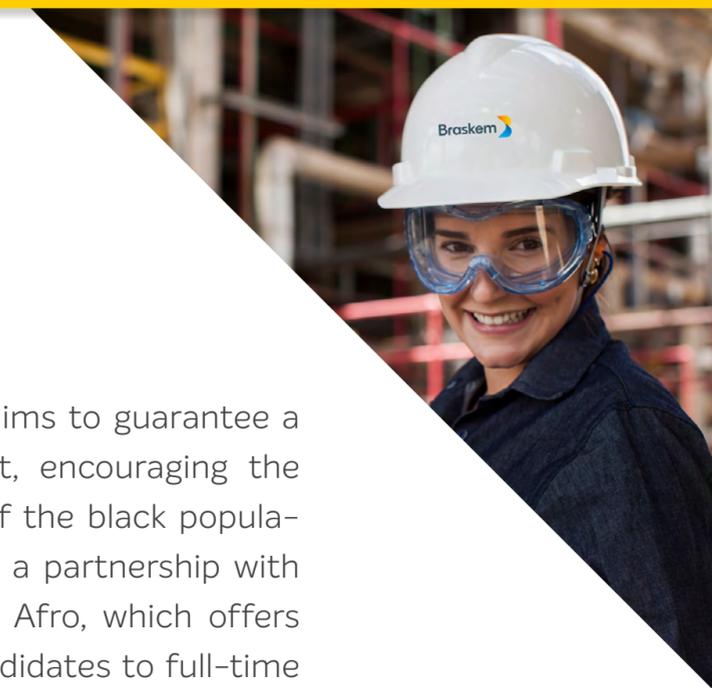


Our actions are guided by the initiatives to which we are signatories, and that offer guiding work principles. On the front concerning gender, we are guided by the Women’s Empowerment Principles of UN Women and the Global Compact; in Race and Ethnicity, we follow the Pro-Equity Program of Gender and Race of the Brazilian Federal Government; and in LGBTQIA, we are guided by the principles of the Business and LGBT Rights Forum, an initiative to which we were the first large Brazilian company to become a signatory.

When we talk about cross-sectional actions on diversity, we focus mainly on communication and on promoting train-

ing and engaging Leaders and Members in the topic. We conduct training in the areas of People & Organization, Communication, Marketing, and Sustainable Development. The topic was also included in leadership development programs and in the programs for interns and recently graduated. Annually, we hold the Braskem Forum on Diversity and Inclusion, an action conducted in all regions and, in 2017, we presented the topics of unconscious bias and the importance of promoting empathy. We have in place a structured communication campaign and a logo that represents all our action fronts through colors, also portraying our intention toward continuous inclusion.

**In order to make the program more democratic and explore its potential through collaboration, we created the Diversity and Inclusion Working Groups on three different fronts: Race and Ethnicity, Gender, and LGBTQIA. With a total of ninety members, the role of group is to support the development of actions in the Diversity & Inclusion program, and to act as multipliers**



### GENDER EQUITY

The gender equity front aims to promote equal opportunities and empowerment of women. Our main focus is to increase the number of women in leadership positions, in industrial positions, and in innovation and technology. One of the concerns on this front is thinking about how the gender issue intersects with race, sexual orientation, gender identity, and social vulnerability. We have in place actions structured in four pillars of action: Women’s Career, Maternity and Paternity, Health and Safety, and Communities and Procurement. In addition to the structural issues, three versions of the Braskem Women’s Forum were held throughout Brazil, addressing topics that contribute to empowering women and breaking gender stereotypes, and we offered career workshops focused exclusively on women. Also in 2017, in partnership with UN Women, teacher training in the Board of Education in Camaçari (Bahia) on the course entitled “*O valente não é violento*” (in loose translation: “Being brave doesn’t mean being violent”) was given to support eliminating violence against women and girls in the region.

### RACE AND ETHNICITY

The Race and Ethnicity front aims to guarantee a racism-free work environment, encouraging the inclusion and empowerment of the black population. Among the initiatives are a partnership with the consulting firm *Empregue Afro*, which offers support in attracting black candidates to full-time positions and internship programs, with Zumbi dos Palmares College.

### LGBTQIA

The LGBTQIA front aims to make Braskem an increasingly inclusive place where each person may be who they really are. The elimination of any form of homophobia and transphobia is a major concern. Therefore, we always make our position clear and the topic is addressed in all cross-sectional actions on diversity. At Braskem, we offer equal benefits and recognize all forms of family structure. We also participated in “Out and Equal” with the LGBTQIA working group, and we were the first Brazilian company signatory to the Business and LGBT Rights Forum.

## STRATEGIC INDICATORS

Monitoring indicators is one of the strategies of the Diversity & Inclusion program.

### Brasil



**22% women**, of which  
**25% are in leadership positions**



**29% are black Members**,  
of which **13% are in leadership positions.**

In Mexico, the United States, and Germany, the Diversity & Inclusion program is in the early stages of development.



To learn more about our diversity processes, visit [www.braskem.com.br/diversity](http://www.braskem.com.br/diversity)

### DEVELOPMENT BASED ON CHALLENGES AND THE LEADER-SUBORDINATE RELATIONSHIP 404-3

We believe that the development of our Members is fundamental to the Company's growth and perpetuity. Therefore, all professionals participate annually in a performance management cycle in which their performance is evaluated and monitored based on the goals of the Program of Action (PA) agreed upon with their Leader. All Members follow an individual program, a requirement to receive their variable compensation linked to the achievement of goals and alignment with the Company's Culture.

Throughout the cycle, the evolution of results is monitored and, if necessary, new directions are defined. The evaluation considers the Member's contribution to the organization in quantitative terms (Agreed Upon Results - Calculated Portion), and the alignment to the Culture (Assigned Portion), evaluated through the Culture Competencies.

Performance and development processes for Members are strongly based on challenges and the relationship between Leader and Subordinate. Composed of four stages (Planning/

Pact, Monitoring, Evaluation, and Judgment), the performance management cycle identifies opportunities for development to be included when planning the challenges for the following year or in the Plan for Education for Work, which includes actions supporting Continuing Education and recommendations for corporate programs. In addition, in this process, the Leader also assesses the Member's next steps in a clear, fair, impartial manner, aligned with the Company's goals and culture.



**JOINT GROWTH** 404-3

Training and developing our professionals is part of our strategy. We believe in the potential of our Members, and seek to invest in planned growth with educational and leadership preparation projects. In 2017 alone, over BRL 21.2 million was invested in training 7,438 Members worldwide.

Developing and attracting people to support Braskem’s planned growth is at the heart of the People & Organization strategy. Throughout 2017, the Company continued to implement several programs focused on integrating, developing, and training Members and in preparing and educating leaders through various development actions.

Among the main actions are the Operator Training Program, which was attended by 92 Members, the Technical Skills Development Program, which involved 96 Maintenance Team Members and 60 engineers, and the Educator Leaders Development Program trained 84 leaders in Brazil, 72 in the United States, and 57 other people through distance education on the Leaders’ Self-Development Platform and the LMS Platform. In addition, 691 Leaders in Brazil, Mexico, USA, and Europe were evaluated in the People and Succession Planning process, which ensures succession planning for the Company’s strategic positions.

**STARTING A CAREER** 401-1

Developing the potential of those who choose Braskem as the place to take their first steps in the job market is also part of our belief in the future and in our capacity for innovation. When beginning at Braskem, young adults have intense contact with the everyday life of a global company, and get involved in projects and initiatives that ensure their professional maturity. In addition, we have in place several internal training programs, as well as programs developed with entities such as SENAI (National Industrial Learning Service), technical education schools, and universities.

Braskem was the winner of the Top Ser Humano ABRH RS (Top Human Being - ABRH RS) award, with the case “Change Management at the PE5-Slurry plant improved work environment and productivity” in the Organization category, and was recognized in the United States (Philadelphia and Pittsburgh) as one of the “Top Workplaces to Work For.”





We were recognized by the publication **Guia Você S/A among “The Best Companies to Start a Career”** voted by an audience of young adults (born after 1991).

- **Young Partner Programs:** over 13,000 enrolled and 205 opportunities offered to university students. Committed to promoting diversity, the initiatives carried out in 2017 resulted in an increase of 15 p.p. in the number of interns hired from January to March who declared themselves as blacks and pardos, and in the gender front, 54% of interns hired were women. Regarding recent graduates, the program included 31 former interns as junior analysts and/or junior engineers. Participants had the opportunity to dialogue with more experienced leaders and to expand their knowledge of the business through three modules that addressed: organization, business tasks, and Client.

- **Technical Internship:** focused on training future members of the technical areas of Maintenance, HSE, and Laboratory, the program lasts one year and offers students from technical courses a rich practical experience in their work area, as well as a development trail, which supports day-to-day operations. In 2017, we opened 97 new positions for technical internships at all Brazilian locations where Braskem has industrial operations: Mauá (SP), Paulínia (SP), Duque de Caxias (RJ), Triunfo (RS), Maceió (AL), and Camaçari (BA).

- **Operator Training:** to support the renewal of our team of operators, in 2017 we opened 96 positions for trainees who, for six months, experienced in practice what they learned at educational institutions. Of these, 59 (61%) were employed as trainee operators. In addition, SENAI opened 11 classes of the Technical Course in Petrochemicals in the Brazilian states where Braskem has industrial plants. The program content was built in partnership with the institution and meets industry demands, and now includes the appropriate technical training to prepare new chemical and petrochemical process operators. Today, we already have 346 students enrolled in SENAI, whose completion of the training is scheduled for 2018/2019. New classes should be opened annually.

- **Associates (USA):** the 2015 group was concluded, and six young adults presented their final projects to the leaders and were hired as Members. The group that began in 2016 started the second period of the program, nine young adults presented the first version of the project carried out during the program and two of them were hired as Members. The 2017 class started with five young adults who completed their training on first Six Sigma.

## COMPETITIVE STRATEGY

Braskem has in place a Remuneration Policy with a competitive strategy compared to the market, based on the premises of: transparency for Members, internal relativism, ensuring the balance between Members regarding job maturity, the size of the challenge of the action program, and individual skills, external relativism, comparing salary surveys and global benchmarks, and individual growth aimed at obtaining and surpassing agreed upon results.

The Remuneration Strategy is guaranteed by the daily management of the Leader-Subordinate relationship, where Members are rewarded based on meritocracy and the achievement of results agreed upon annually, the latter regarding the Profit Sharing Program Short-Term Incentive whose differential is in measuring each Member's evaluation and the Company's performance.

As a complement to the Fixed and Variable Remuneration Strategy, we offer, to all Members regardless of job category,

benefits such as: Health and Dental Plans, Private Pension, Life Insurance, Maternity and Paternity Leave, Meal Voucher; and others. [401-2](#)

For the Members of units in Brazil who intend to retire, we offer the option of participating in the *Horizontes* program, which, for one year, prepares and supports professionals and their families for the post-career transition process. The Horizontes program consists of an e-learning module and a three-day classroom module, totaling 24 hours of training. It has two fundamental pillars:

- **Reflection on life and career:** awareness process for this new upcoming phase in life.
- **Knowledge management:** to ensure the continuity of the Company's business, through a structured knowledge transfer process acquired by the member throughout his or her career that is important for Braskem's succession process. [404-2](#)



**TRADE UNION RELATIONS** [102-41, 403-4](#)

Braskem recognizes labor unions as entities that legally represent the Members. Based on this premise, dialogue and understanding are the preferred way to solve possible labor and union conflicts. In this way, we seek to maintain an open and constant dialogue with the various trade union representatives in the regions and countries where we operate.

In Brazil, in particular, the Labor and Trade Union Relations area is responsible for conducting negotiations on Collective Bargaining Agreements and Conventions, which address economic, social, health, safety, and environmental issues and working conditions. This collective bargaining is con-

ducted annually or on specific dates in each region where the Company is present.

The area supports the Company's leaders, training them in labor and social security matters, so that they may better manage their teams, minimizing and quickly solving possible conflicts.

In other countries, freedom of expression, workers' option for union association, and above all, the establishment of bipartite commissions and committees (of worker and company representatives) are also respected for training and monitoring, especially on issues related to health, the environment, and other topics of interest.

|                                                        | <b>BRAZIL</b> | <b>UNITED STATES</b> | <b>GERMANY</b> | <b>MEXICO</b> | <b>INTERNATIONAL OFFICES</b> | <b>TOTAL</b> |
|--------------------------------------------------------|---------------|----------------------|----------------|---------------|------------------------------|--------------|
| Members covered by collective agreements               | 5,928         | 60                   | 0              | 327           | 0                            | 6,315        |
| Total number of Members                                | 5,996         | 699                  | 173            | 785           | 60                           | 7,713        |
| Percentage of Members covered by collective agreements | 99%           | 9%                   | 0%             | 42%           | 0%                           | 82%          |



## Communities 203-1, 103-2, 103-3

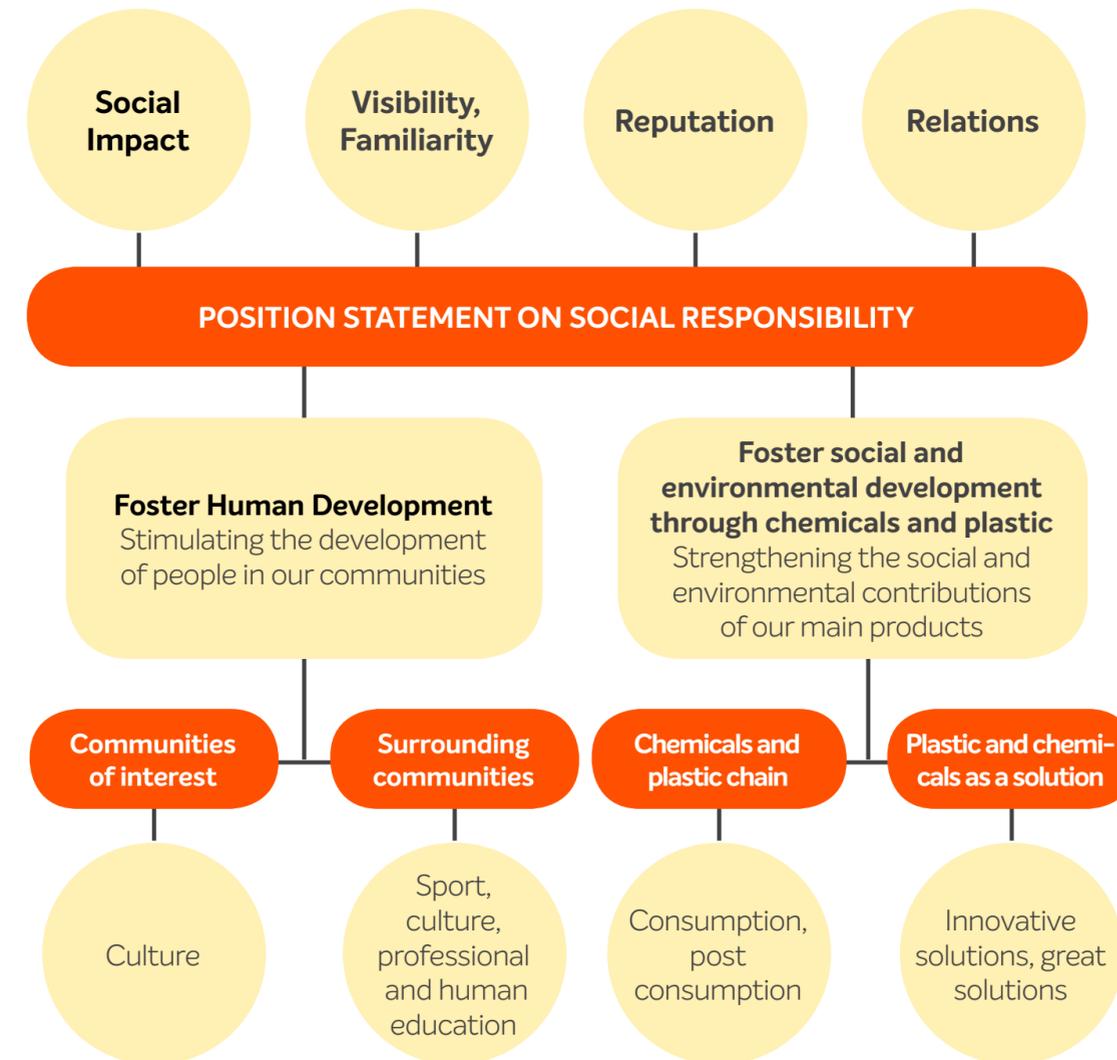
We believe it is our duty to contribute to the regions where we operate, respecting the environment and creating value and well-being for everyone. In this way, we work guided by pillars that direct our actions and initiatives with the communities and other stakeholders: human development as well as social and environmental development.

We understand our role in the world and, with our Members, we seek to make a difference. In 2017, we reformulated all social responsibility projects so that we could act more effectively in the communities. Each has been individually revised to further address the social needs of the regions surrounding our operations.

### HOW WE STRUCTURE OUR CAUSES

The purpose of our work with the Communities is to improve people's lives by creating sustainable solutions through chemicals and plastic. In this way, we defined four strategic objectives that guide our projects: generate social impact, strengthen our reputation, get closer to our stakeholders, and increase the visibility and familiarity of our actions. In addition, we seek to link our projects with topics that are increasingly strategic for Braskem: recycling, encouraging innovation, and environmental education reinforcing existing initiatives and establishing new partnerships in the regions where we operate.

### Strategic Objectives



### GLOBAL SCENARIO



<sup>8,9</sup> Amount considers projects, sponsorships and donations.



**ADVANCING COMPLIANCE PRACTICES IN DONATIONS** 203-1

In 2017, we took an important step with the launch and implementation of the Sponsorships and Donations Procedure and Guideline in Brazil. With it, we revised the entire process for selecting,

assessing, and approving proponents and their respective projects, and included a phase after completion of the project for rendering of accounts and verification. During the year, 100% of the donation processes were evaluated according to the new guideline. The control tools are being implemented in other countries, and should be consolidated in 2018. This new guideline specifies the relevant aspects for the Company: economic and social development, environment, ethics and technical, and commercial. Through the Guideline, we have clear direction – in a global manner of the path we want to follow in our social and environmental responsibility practices.

**GENERATING POSITIVE IMPACTS** 413-1

Through our projects, we seek to generate positive social impact and strengthen the relationship with the communities surrounding our operations. In 2017, we benefitted over 144,000 people in different areas of activity, at all our locations<sup>10</sup>, emphasizing education, culture, and sports. Some of the main projects were:

**Global Volunteering Program**

We believe that corporate volunteering simultaneously contributes to the development of individuals, business, and society. For this reason, one of the highlights of the year was the pilot project of the Global Volunteering Program, which surprised us with the participation of a significant number of Members. With the theme “Serving together to improve people’s lives,” over 359 Braskem professionals from Brazil, Mexico, and the United States, and 497 guest volunteers (family and friends of Members) participated in a collaborative competition with limited duration, collecting over 18,000 items.

The Volunteering Program formed 74 teams in Brazil, USA, and Mexico. Each team chose an institution near the Braskem operations to carry out volunteer work. The activities conducted by the volunteers were based on Braskem’s 10 Macro Goals for Sustainable Development. At the end of the Program, the top three teams in each country won recognition and organizations received a donation of goods and products.

<sup>10</sup> 100% of countries with significant operations (industrial units).



- 74** teams formed
- 856** participants in Mexico, USA, and Brazil
- 4.7%** of Members engaged
- 1,222** volunteer actions carried out in NGOs in the communities surrounding Braskem units (operational and offices)
- 4,550** hours worked
- 18,786** items collected
- 91%** would participate again in 2018

With a total investment of BRL 550,000, this pilot project showed that it is possible to carry out a global social responsibility program that suits the needs of each region.



### RELATIONSHIP OF TRUST

In Mexico, Braskem Idesa continuously works on the relationship with the three communities (Pollo de Oro, Nahualapa, and Lazaro Cárdenas) around its industrial operation. Eighty visits are conducted every month with the purpose of disseminating and integrating residents into social programs such as Community Health and Safety, Social Investment and Stakeholder Relations.

This constant presence was instrumental to strengthen our relationship with the Lazaro Cárdenas Community in November 2017 during suspected air contamination. Government and industrial entities such as Civil Protection and CLAM (Local Committee of Mutual Assistance) confirmed normality of the operation.



### PLASTIANGUIS

In Mexico, we launched the “Plastian-guis” project, volunteer work carried out by over 50 Members that promoted the collection of recyclable plastic waste in the city of Nanchital in exchange for baskets of food staples. The six tons collected during the event were sent to a local recycling cooperative. The initiative carried out in partnership with the National Association of the Chemical Industry (ANIQ) mobilized the local community, which contributed to the environment and provided items of the basket of food staples in exchange for waste collected.

### Transformar Agora

In a partnership with NGO Atina, in 2017 we started the project called *Transformar Agora* (Transforming Now) in State Public Schools Professora Maria Josefina Kuhlmann Flaquer, Luís Washington Vita, and José Daniel da Silveira in the ABC Paulista region (Brazil). The initiative stimulates the search for activities that benefit the school community, providing high school youth with the opportunity to conceive projects that may be applied

to improve daily life in schools and their community, allowing them recognize themselves as agents of change.

The program’s methodology seeks to value the social context of the community and stimulate a protagonist role and empowerment of young people, so that they feel capable of transforming their reality. The students involved were divided into groups and participated in workshops to develop projects that may be applied in the

community and in schools, which voted on the best idea to represent it in a panel held at Braskem, including community leaders and educators. The project *Mega Ação Solidária* (Mega Solidarity Action), conceived by students from the Luís Washington Vita school to collect clothes, food, and other items for donation, was the big winner. But several other projects had great success in schools and will continue in 2018.



**Ser+realizador** 301-3

In line with one of our most strategic topics, recycling, *Ser+realizador* is a project in place in all regions where we have operations in Brazil, and works together with waste sorting cooperatives. The goal of the project is to promote social inclusion and the social and economic development of waste pickers and cooperatives, by promoting the development of the national recycling chain. In addition, the project's mission is to foster recycling of post-consumer waste in the country.

In 2017, we hired the cooperative called *Mãos Verdes* as the national manager of the program, seeking to unify management and ensure better interaction with the public sector. The compa-

ny has been Braskem's partner for several years in the *Todos Somos Porto Alegre* project, and will now manage Braskem's five regions of operation.

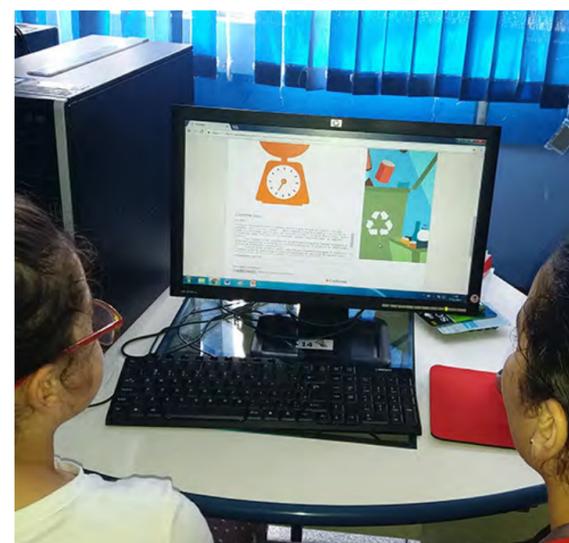
Throughout the year, 1,278 pickers and 35 cooperatives benefited from technical advice, training, equipment, and infrastructure. The decrease in numbers compared with the previous year is due to a process to reposition the program, which now operates in regions surrounding Braskem. With a smaller scope, we managed to work closer to each picker, resulting in a deeper and more lasting process of change.

In 2017, the total invested in the project was BRL 1,966,508.50.

|                               | 2015   | 2016   | 2017   | GOAL   |
|-------------------------------|--------|--------|--------|--------|
| Pickers benefitted            | 3,538  | 3,444  | 1,278  | 1,255  |
| Pickers trained               | 1,117  | 858    | 326    | 497    |
| Pickers with increased income | 960    | 787    | 531    | 789    |
| Volume sorted (t)             | 25,703 | 30,824 | 14,352 | 27,116 |



**DECENT WORK AND POST-CONSUMER**



There are environmental and social impacts associated with post-consumer plastic waste. In order to mitigate these impacts, Braskem has in place the *ser+realizador* project and the WeCycle platform that conduct preventive audits in 100% of recyclers and supplier waste sorting cooperatives, guaranteeing recycled plastic raw material with quality, traceability, process regularity, and socially and environmentally responsible operations throughout the recycling cycle.

**Edukatu**

Since 2013, Edukatu a project developed through a partnership between Braskem and the Akatu Institute has helped disseminate concepts about conscious consumption and sustainability to teachers and students of elementary education in Brazil. The online platform has already reached over 100,000 people over the last five years, and 20,148 children and teachers have followed the learning tracks.

In 2017, Edukatu improved its performance through cooperation agreements signed with the Municipal Boards of Education, reaching over 80 schools in Greater São Paulo, and 2,538 people engaged in the learning tracks. In addition, the project website surpassed the 2.6 million view mark and was cited in nearly 700 media articles. The investment for the year was BRL 230,000.00.

|                                  | 2015   | 2016   | 2017   | GOAL   |
|----------------------------------|--------|--------|--------|--------|
| Total number of participants     | 20,795 | 28,441 | 38,773 | 40,700 |
| Total number of teachers engaged | 669    | 1,605  | 2,586  | 1,980  |
| Total number of students engaged | 6,558  | 11,172 | 17,562 | 14,600 |



### Instituto Fábrica de Florestas (IFF)

The IFF (Forestry Factory Institute) works toward the expansion, recovery, maintenance of green areas, and integrated environmental education in the states of São Paulo, Rio de Janeiro, and Bahia (Brazil). The project was developed with the surrounding communities. Today, the organization empowers residents to collect seeds, produce and plant native seedlings and maintain planted areas. The IFF is maintained by Braskem, Cetrel – Odebrecht Ambiental and the Industrial Development Committee of Camaçari (Cofic), in Bahia (Brazil).

In 2017, investment in the program reached BRL 730,000.00. Included in this amount is the donation of BRL 250,000 to the creation of an institutional documentary video of the project in webseries format for the Internet and smartphone, maintenance of the website, and the creation and maintenance of pages on YouTube and Facebook. These communication materials aim to increase the dissemination of Ecoparque Sauípe and attract new visitors.

|                    | 2015    | 2016   | 2017   | GOAL   |
|--------------------|---------|--------|--------|--------|
| Seedlings produced | 116,572 | 88,407 | 55,009 | 70,000 |
| Seedlings planted  | 39,206  | 46,628 | 47,428 | 33,100 |
| People trained     | 1,064   | 1,036  | 1,421  | 750    |
| People impacted    | 16,739  | 27,506 | 22,883 | 15,000 |

 To learn more about our actions with Communities, visit [www.braskem.com.br/communities](http://www.braskem.com.br/communities)



### TRADITIONAL PEOPLES

The participatory fishing monitoring program, which has been tested and implemented in the communities on the island of Ilha de Maré since 2015 by the Global Maré Institute, with the support of Braskem, is an innovative fishery management tool that annually empowers 100 fishermen to live their traditional way of life. This innovative tool has made it possible to create collective spaces for discussion that protect and improve local knowledge on fishing, and promote synergy among local residents who depend on the quality of artisanal fishing. This synergy resulted in the creation of the Institute of Artisanal Fishing, whose headquarters were inaugurated in April 2018.

Monitoring also provides satisfactory data for emancipatory environmental education, where social players are responsible for identifying problems and recommending possible solutions. From this, the work in schools is strengthened with the itinerant Environmental Tent, sharing with children knowledge from the traditional population of which they are part. In 2017, a total of 125 children were educated by 6 trained local agents.





## Suppliers 103-2, 103-3, 308-1, 414-1

Our suppliers are an essential part of our production chain, and are key to maintaining our ability to create value. Thus, through a decentralized management structure with areas responsible for analyzing expenses, assessing the quality of products and services and compliance with the Code of Conduct, we closely follow the work developed with these partners, seeking attitudes in line with our ethical, social, and safety principles.

In addition to following our Corporate Policy, the Third Party Code of Conduct is inspired by widely accepted documents ranging from the UN Universal Declaration of Human Rights to the procedures recommended by the International Labor Organization (ILO) and the laws and regulations of countries where Braskem operates.

We also believe that we actively participate in facing the challenges regarding the labor practices of our partners, influencing this aspects by requiring specific documentation, signing the Code of Conduct (which includes aspects such as business integrity, human rights, and labor practices), in addition to completing an evaluation form on sustainability practices.

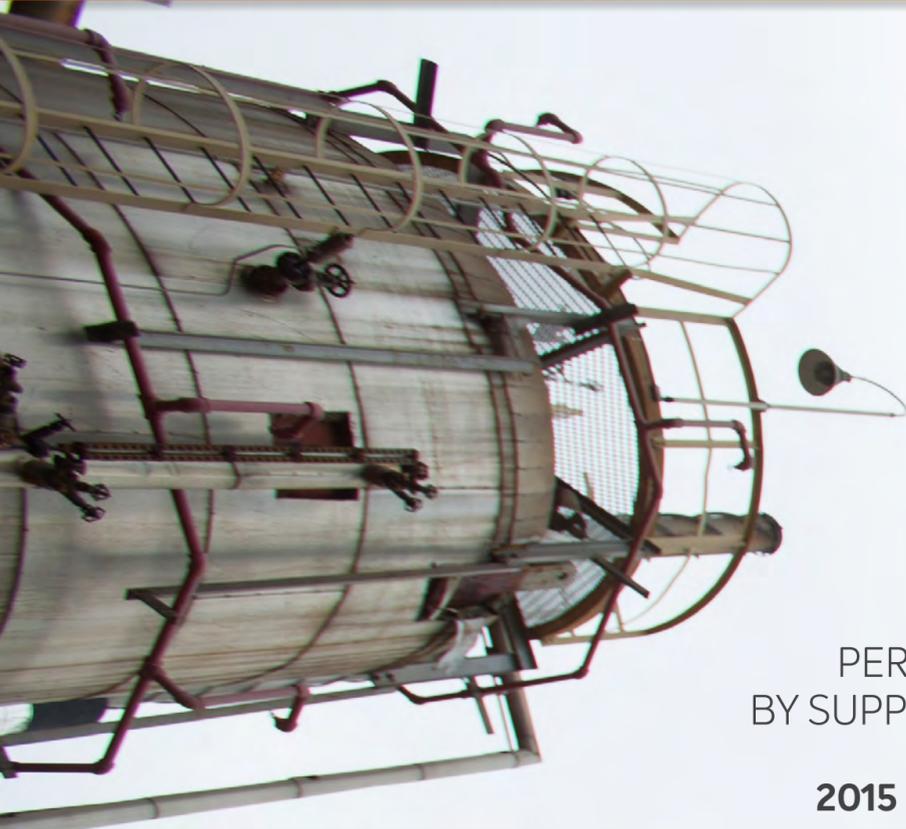
## Prioritizing actions

We evaluate practices that protect and promote Human Rights in our operations and in the operations of our Suppliers chain in accordance with the UN Guiding Principles on Businesses and Human Rights. As a result, we prepared our first potential Human Rights violations matrix in 2017, facilitating the immediate inclusion of this aspect in the corporate risk matrix that is monitored by our executives and/or our Board of Directors.

This matrix guided us to prioritize our actions, ensuring the construction of assertive action plans capable of readjusting four elevated risks to become moderate risks in 18 months. One of the aspects covered this year was our work in the logistics chain to protect children and adolescents from sexual exploitation.

 [www.braskem.com.br/ethics-line](http://www.braskem.com.br/ethics-line)

The Third Party Code of Conduct is available for download at [www.braskem.com.br](http://www.braskem.com.br) > Suppliers



PERCENTAGE OF PURCHASES BY SUPPLIERS BY COUNTRY\* 204-1

|               |          | 2015 | 2016 | 2017 |
|---------------|----------|------|------|------|
| Brazil        | Domestic | 64%  | 76%  | 71%  |
|               | Foreign  | 36%  | 24%  | 29%  |
| United States | Domestic | 99%  | 99%  | 93%  |
|               | Foreign  | 1%   | 1%   | 7%   |
| Germany       | Domestic | 96%  | 94%  | 97%  |
|               | Foreign  | 4%   | 6%   | 3%   |
| Mexico        | Domestic | -    | 84%  | 75%  |
|               | Foreign  | -    | 16%  | 25%  |



MAIN SUPPLIERS CATEGORIES

**Ethanol:** this product, as well as its Suppliers, has one of the most rigorous management processes at Braskem in order to guarantee a resin with quality and social and environmental responsibility throughout its production cycle. That is why, in 2016, we launched our Responsible Ethanol Purchasing Program, which has two pillars: Compliance and Excellence. Its goal is to guarantee compliance with mandatory requirements and to improve the desired parameters: slash and burn, biodiversity, and best environmental, human rights, and labor practices.

**Fossil raw materials:** strategic for Braskem, suppliers of fossil raw materials account for our largest share of expenditures. Among the products in this category are naphtha, condensate, ethane, propane, and LRH in Brazil, ethylene and propene in the United States and Germany, and ethane in Mexico.



\*To calculate this indicator, we considered as "local" domestic suppliers, and locations with significant operations are the countries that have industrial units.

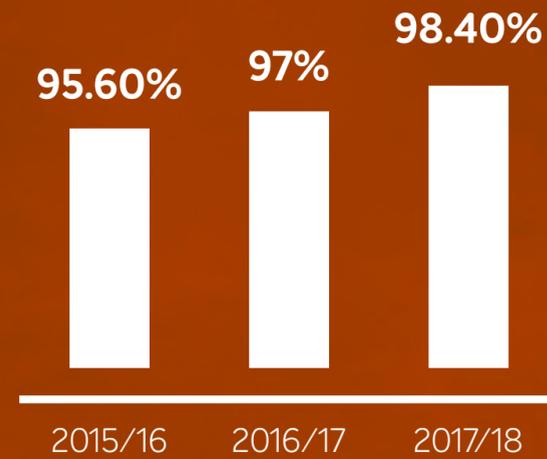


### Ethanol Supplier Management

Ethanol Supplier Management has two pillars: Compliance and Excellence. The former establishes the mandatory requirements and the latter indicates the desired parameters for continuous improvement. In 2017, Braskem purchased 99.5% of ethanol produced by suppliers formally committed to these requirements and parameters, and only 0.5% SPOT suppliers. SPOT purchases are limited to 20% of the total purchased annually, a practice adopted in order to train new suppliers. Beginning 2018, SPOT suppliers will sign the Third Party Code of Conduct.

To ensure compliance, 100% of committed suppliers, and a sample from their sugarcane suppliers are audited by third parties every two years. In 2017, Control Union audited 88% of its supplier plants, which demonstrated the continuous annual evolution of their partners.

### % COMPLIANCE



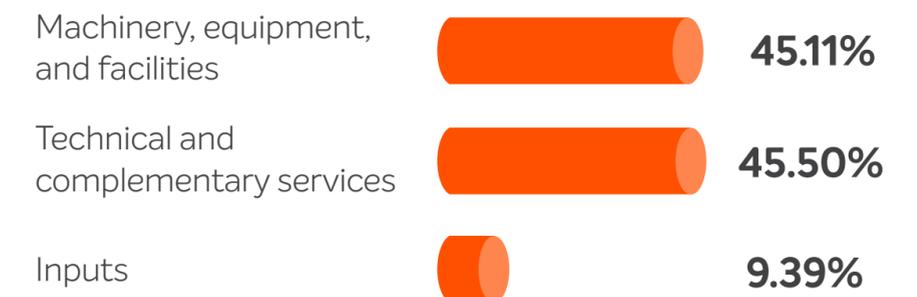
Of cases of non-compliance, none violate human labor rights (such as slave or child labor, lack of employment agreement, working hours, etc.) or ownership rights (all have proven ownership or right to use the land, unchallenged by third parties). This demonstrates that the negative image of agricultural activity involving slave labor and social injustice is not a reality for our qualified partners.

### PROCUREMENT 102-9

The Procurement area is responsible for hiring services (industrial and corporate), purchasing direct materials (inputs), and indirect materials (MRO) and equipment, with the main objective of providing resources competitively to industrial plants and administrative areas to ensure continuity of operations and perpetuity of the business. The main goals of the area are related to financial gains from negotiation, Supplier delivery deadlines, efficiency, and compliance of procurement processes.

In 2017, the Procurement area took an effective step towards globalizing its processes, with all Procurement teams from Mexico and the United States reporting to the department located in the office in São Paulo, Brazil. In this way, we gain in efficiency through a more strategic view of operations and of the needs for inputs, materials, and equipment. In the same year, we also implemented a Global Procurement Policy that will help align processes and integration, bringing more synergy to our business.

### PERCENTAGE OF SUPPLIERS BY TYPE OF SERVICE



## RESPONSIBLE MANAGEMENT

103-2, 103-3, 308-1, 414-1

To ensure an increasingly robust, responsible, and reliable Supplier management process, we have in place tools such as Supplier Radar. In 2017, given the economic scenario, the use of the tool was reinforced, helping to identify, in advance, companies that are more exposed to labor, economic, and Health, Safety, and Environment risks. An action plan was established for Suppliers classified as critical and high risk, in order to act preventively and minimize possible impacts. The Supplier Radar is published quarterly, evaluating nearly 80 Suppliers each cycle.

Another tool is the Supplier evaluation process. This evaluation generates the Supplier Performance Index (IDF), applied to all companies considered critical after evaluating the Sustainability criteria. The index includes criteria for Quality, QM (history of non-conformities), Punctuality, HSE, Finance,

and Compliance. The non-conformities identified are handled through an action plan involving users, Suppliers and the Procurement area.

In 2017, the Procurement area also continued to support the CDP Supply Chain program, which requests our Suppliers to report their greenhouse gas emissions, as well as the risks and opportunities related to this aspect and the strategy to ensure improved management. In 2016, Braskem Idesa (Mexico) joined the program, expanding its participation in 2017. Today, we are seeking to engage our partners in the topics of Climate and Water, structuring a more thorough critical analysis of their performance. In the year 2017, we were recognized twice: on the “A List” of the CDP Supply Chain Climate, and when we ranked 29th among the companies with the best supplier engagement strategy in the world, out of the 3,300 evaluated by the CDP.

## Sustainable Procurement

Braskem is in the pilot phase of implementing the Sustainable Procurement Tool, which enables the company to incorporate sustainability criteria in the selection of Suppliers in procurement processes. The tool allows for a comparative analysis of suppliers’ maturity according to established criteria, which include environmental and human rights issues on water consumption, generation and disposal of waste and effluents, health and safety at work and in our surroundings, as well as Governance, Guarantee of Proper Working Conditions, and other topics.

Another project, completed in December 2017 and in line with the area’s Sustainable Development planning, was the production chain focused on improving Suppliers, in partnership with Sebrae in Rio de Janeiro. Fifteen micro- to medium-sized companies were selected. Eight of them completed the entire process, and received specialist training in the Business Management, Finance, Quality, Documentation, and Corporate Strategies modules. At the end of the project, with over 700 hours dedicated to training, there was evolution in the management indicators of their business. In this way, Braskem contributes to increasing the universe of suppliers in the communities in which it operates.



## LOGISTICS

Working together with the Health, Safety and Environment (HSE) team, our Logistics area seeks to ensure compliance with all social and environmental requirements critical to operations when contracting transport, terminals, and other logistics services. We follow the evaluation methods based on Braskem's performance assessment system, vetting<sup>11</sup>, and ABIQUIM's System for the Evaluation of Safety, Health, Environment, and Quality (SASSMAQ).

In 2017, Safety of Processes in Logistics contin-

ued the structured program to study risks involving six new products whose operations are classified as medium risk, based on volume transported and their level of hazard. All products of medium and high risk were evaluated, totaling over 23 products and involving the analysis of over 597 routes, 23 carriers, six loading and unloading areas, the configurations of highway equipment, and 12 ships that haul these products. We also conduct HSE-specific inspections at nine marine terminals based on in-

ternational standards such as the CDI-t<sup>12</sup> (Chemical Distribution Institute)<sup>13</sup> to identify risks and establish preventive control barriers. At our own terminals, through responsible performance and risk analysis in operations, we maintained the SEMPRE Stage 3 certification, implementing the actions for improvement identified with the goal of achieving Stage 4 certification in 2018.

All hiring of import, export, coastal shipping, and inland shipping vessels follows international safe-

ty standards based on the vetting criteria and recommendations determined by the Oil Companies International Marine Forum (OCIMF). In 2017, we conducted 650 vetting assessments for 355 trips, hauling 4.6MM tons of liquids and gases.

<sup>11</sup> Formal and thorough examination (usually conducted by a specialist) prior to granting approval or release.

<sup>12</sup> <https://www.cdit.nl/psp/cdit.home>

<sup>13</sup> <http://cdi.org.uk/>



We maintain partnerships with major risk managers in Brazil and we hire most of our road freight of non-hazardous products (resins) with electronic trackers. For hazardous products, 100% of the freight must be tracked, work with a fully-owned fleet and drivers with a direct employment relationship with the carriers. Specifically in the case of propylene, in addition to tracking 100% of the freight, telemetry is required on board the vehicles.

To ensure safety, we also hold periodic meetings with our service providers, ensuring that everyone is up-to-date with our internal Health, Safety, and Environment processes, and conduct annual audits at carrier headquarters, which include assessment and planning of the corrective actions required for those with a below-expected result in the Supplier Performance Index (IDF). It is worth mentioning that we also have a contract with Suatrans<sup>14</sup>, a leader in response to chemical and environmental road emergencies in Brazil.

It is important to point out that the areas responsible for managing Braskem's logistics activities work

pursuant to relevant programs that promote road safety, among which the following stand out:

- **Olho Vivo na Estrada:** created by ABIQUIM in partnership with ABICLOR, the purpose of this program is to prevent, through driver awareness, unsafe behavior when transporting hazardous products. *Olho Vivo na Estrada* is part of a risk management system and its goal is to fully eliminate road accidents involving chemicals.
- **Transportadora da Vida:** program of the Trade Union of Carrier and Logistics Companies (SETCERGS), which certifies cargo transport companies that carry out actions with a greater emphasis on safety.
- **Na-Mão-Certa:** program developed by OSCIP Childhood Brazil, which works to influence the agenda for protecting children and adolescents in the country, whether in partnership with companies, civil society, or the government. The role of the organization is to ensure that aspects related to sexual abuse and exploitation guide public and private policies, offering information, solutions, and strategies for different sectors of society.

<sup>14</sup> www.suatrans.com



Braskem continues with its efforts to find creative ways to reduce this indicator, such as the use of closed circuits for transporting resins, sharing vehicles with other shippers, as well as promoting more sustainable modes of transportation. Finally, we seek to prevent our businesses from being affected by Brazil’s infrastructure bottlenecks, so we have been working on developing logistics alternatives, such as coastal shipping<sup>15</sup> and rail transportation modes still underdeveloped in the country, especially when compared to Mexico and the United States.

Today, the area works on different projects that are part of “Logistics 2020,” which range from automating various processes, to increasing storage efficiency and optimizing the logistics network of the resins business and the “Athena,” which focuses on restructuring chemical and vinyl logistics processes, progressing with increased efficiency, new logistics models, optimizing and maximizing assets, automating the logistics chain, and more.

<sup>15</sup> Navigation between ports in the same country or at small distances on coastal waters.



### Third-Party Work Conditions

Braskem renovated the work environments available for third-party activities in its units’ logistics areas. Among the improvements are a women’s locker room, renovated pantry, redefined layout with new furniture, air conditioning, and window tints. Such improvements have provided more visual, acoustic, and thermal comfort, eliminating occupational hazards, and ensuring greater motivation, well-being, and productivity for 14 fixed contractors and about 50 temporary workers who circulate daily through these spaces.

### Decent and socially responsible work

Braskem supports Childhood Brazil in fighting child sexual abuse and exploitation in logistics operations. In 2017, we were recognized for the second consecutive year by actions carried out in the *Na Mão Certa* Program, a Childhood Brazil initiative that, in partnership with Braskem, coordinated the joining of ABIQUIM. In addition, we raised awareness of 778 truck drivers, 25 carriers, and 18 factories, fulfilling our strategy of contributing to building a solidarity protection network on the roads. In 2018, we will include the ports in this goal.

It is also important to improve the truck driver’s working conditions and the quality of the stopping and rest areas, as well as reduce waiting time. Thus, they avoid entering communities and finding themselves in situations involving prostitution and the use of alcohol. Thus, in 2017, we launched the portal for scheduling road shipments, we influenced the improvement of the infrastructure of a Logistics Hub and two warehouses, and approved 12% of the fuel stations inspected by the risk management company Buonny during the year. These advances also improved the logistics operations, as well as safety and comfort for truck drivers.



## Clients

Our Clients deserve the best we have to offer. With this in mind, we seek to build unique and effective solutions together, to create value and foster the development of our entire chain. We work in an integrated manner, always seeking to combine our innovation initiatives with the development of solutions in partnership with our Clients. In this way, all Members are encouraged to perceive these needs and make correct and responsible decisions, creating a dynamic and engaging environment that gives everyone a sense of belonging and pride.

### Among our main initiatives are:

**PICPlast:** a Braskem initiative in partnership with the Brazilian Plastic Industry Association (ABIPLAST). The Plastic Chain Incentive Plan (PICPlast) has three fronts: promoting the export of manufactured products, fostering competitiveness and industry innovation, and promoting the advantages of plastic. In 2017, the total invested surpassed BRL 30 million. Among the actions conducted in the year, we highlight PlastCoLab, an open and free maker space set up in the city of São Paulo that for two weeks offered experi-

ences related to innovation, creativity, and knowledge, always associated with the versatility and transformation potential of plastic. In the three years of the program, over 1,000 people participated in training and market development initiatives, BRL 160 million was invested in the export incentive program, and over eight million people were impacted by the actions promoted by the advantages of plastic.

**Maxio® Seal:** this seal serves one of our main growth pillars innovation. With it, we identify and develop resins that result in several gains for clients, such as lower energy consumption, greater productivity in the production process, and reduced weight of the final product, significantly reducing production costs and environmental impacts. In 2017, the highlight was PG480 resin, available to the raffia market. The resin was designed to be applied in very high speed equipment, guaranteeing greater stability during production and an increase in raffia manufacturing capacity, with gains of up to 15% in productivity.

**Visio Program:** through this initiative, we encourage sharing of knowledge and experiences with our Clients and the development of exclusive projects and solutions that meet specific demands. With advantages such as promoting

competitiveness, the search for new business, and management focused on business improvement, in 2017, the program worked in partnership with 55 Clients, on over 80 initiatives implemented throughout the year.



### GOLD CLASS

We maintained our gold class assessment in supplying to clients on the Ecovadis evaluation platform. Today, we are among the 3% top performers on the platform in the chemical industry. The goal of the platform is to develop practices of corporate social responsibility through its influence in the global supply chains.



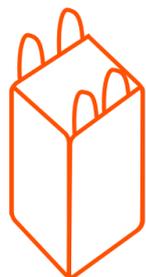
To learn more about the platform, visit [www.ecovadis.com/us/](http://www.ecovadis.com/us/)



**CIRCULAR ECONOMY**

In order to reaffirm our commitment to developing sustainable solutions in the plastic chain, in 2017 we created the Wecycle Recycling & Platform area. With this, we want to strengthen our strategic position and leverage initiatives, businesses, and sustainable solutions related to the circular economy of plastic.

This new area, part of the Polyolefins Unit in South America and Europe, is responsible for the development of products with post-consumer recycled content, process qualification, and technical reliability, focusing on creating value for post-consumer waste and on the recycling chain, strengthening partnerships with clients, recyclers, and brand owners.



**FIRST ON THE MARKET**

In 2017, we launched the first polypropylene and polyethylene resins made from recycled post-consumer waste content, with production volumes that can reach 50 tons per month. WCL H 1003 BBM polypropylene is produced from the annual recycling of nearly 120,000 big bags and WCL L004 SCV polyethylene is produced after the annual recycling of 2.4 million used and discarded bags in our Distribution Centers. WCL R703 PCW is produced from domestic post-consumer waste from blown polyethylene packages.



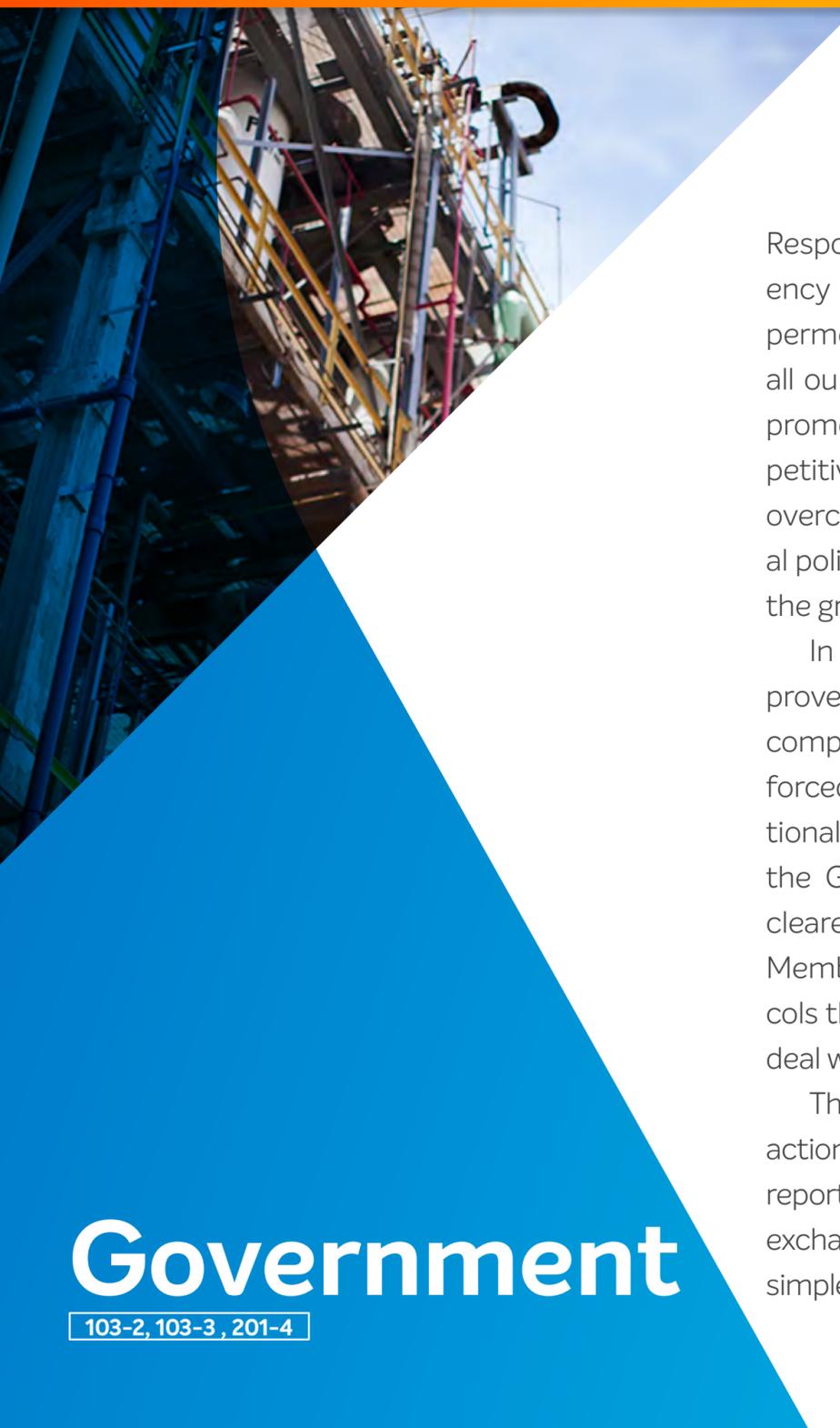
**VALUING WASTE**

A partnership with the GPA Group enables the recycling of approximately 60 tons of plastic per year for the production of new packaging of Qualitá stain remover, an exclusive brand marketed in Extra and Pão de Açúcar supermarket chains. This initiative, which is part of the Wecycle platform, will use the materials discarded at the stations installed at Pão de Açúcar stores, which are donated to partner cooperatives. Once sorted, the plastic is sent to a recycler that makes the resin, composed of 70% recycled material and 30% virgin polyethylene. The resin is then sold to a company that processes plastic, which will produce the product packaging and fill approximately ten thousand units of product per month.



**PLASTIC ON THE MOVE**

In a partnership with the Brazilian bicycle manufacturer Muzzicycles, we enabled the use of post-consumer Wecycle resin, from cooperatives supported by the Platform, in Muzzi bicycle frames, an innovative technology developed in Brazil by Juan Muzzi, its owner. Currently, Muzzicycles has the capacity to produce 132,000 bicycle frames a year, representing the recycling of 150 tons of plastic waste, keeping this material from being disposed. Each frame contains about three pounds of plastic, 30% of which is recycled. Some of the advantages of plastic frames are resistance and impact absorption characteristics of polyethylene – and the lifetime warranty for use.



Responsibility, integrity, and transparency in relationships are aspects that permeate activities and initiatives with all our stakeholders. We seek to actively promote dialogue to defend the competitiveness of our production chain and overcome challenges related to industrial policy and infrastructure still affecting the growth of Brazil.

In the last two years, due to the improvements in our governance and compliance processes, we have reinforced several practices in our operational model with trade associations and the Government. Today we have even clearer and more widespread rules for all Members regarding controls and protocols that must be followed whenever we deal with these stakeholders.

Through a tool on our intranet, all interactions with public agents are mandatorily reported, creating a record-base for email exchanges, meetings, and participants a simple way to add more transparency to

all our activities in this sector. In addition, in 2017 we developed a new guideline with clear rules and procedures for any type of relationship with the government that came into effect in early 2018.

Among the issues that are part of our discussion agenda is *Reintegra*, a government program that aims to return to certain segments of exporters a percentage of the taxes levied on the production chain of goods sold abroad. In 2017, this percentage went from 0.1% to 2%, and for the year 2018, the 2% rate was maintained.

Tax incentives on ICMS (VAT) granted by the State of Alagoas through the Program of Integrated Development of the State (Prodesin), with the purpose of promoting the implementation and expansion of industries in Alagoas, changed its rules in 2016. The recovery of the market in 2017 allowed the incentive, which is considered as a reducer of taxes on sales, to be optimized.

| BRL thousands                                                                                | 2015  | 2016 | 2017  |
|----------------------------------------------------------------------------------------------|-------|------|-------|
| Total tax incentives/credits*                                                                | 173.9 | 87.5 | 274.4 |
| - PRODESIN - ICMS                                                                            | 71.6  | 78.8 | 95.7  |
| - REINTEGRA                                                                                  | 102.3 | 8.7  | 178.7 |
| Grants for investments, research, and development, and other relevant types of concessions** | -     | -    | 427.7 |
| FINEP                                                                                        | -     | -    | -     |
| FINEP Award                                                                                  | -     | -    | -     |
| ECAs (financial aid from credit and export agencies)***                                      | -     | -    | 427.7 |

\* Tax incentives/credits: restitution of federal taxes by the Reintegra program and ICMS tax incentives, granted by the Government of Alagoas, through the Integrated Development Program of the State of Alagoas – Prodesin.

\*\* Grants for investments, research, and development: awards and financing by FINEP for innovation projects.

\*\*\* Financial assistance from ECAs [and export and credit agencies]: risk insurance operation with Nippon Export and Investment Insurance (NEXI- Japanese agency) for investment in maintenance and in the butadiene project.

# Government

103-2, 103-3, 201-4

# HEALTH, SAFETY, AND ENVIRONMENT

## POSITIVE TRANSFORMATIONS

We believe that our commitment to sustainable development is essential for growth and business sustainability. That's why we are challenged every day to make our operations more efficient, with less and less impact on people and the environment.





We are a company that looks to the future and to the opportunities that may be created through innovation and work that is increasingly more geared toward human beings. For this reason, taking care of the well-being of our Members, the communities around our plants, and the environment is our way of generating positive, concrete transformations.

We are also always looking for innovative and creative ideas that enable us to develop and deliver intelligent, unique solutions and improving the reliable performance of our plants becomes a key factor for operational continuity. And that is how we developed SEMPRE in 2013, our Integrated Health, Safety, and Environment System that helps us reinforce a risk prevention culture based on discipline and respect for established safety processes and procedures.

The process takes into account the unit's profile and its main risks when setting annual goals for progression. In 2017, one hundred percent of planned audits were carried out. Following our evolution history, 83% of the industrial units reached Stage 4 in SEMPRE Assured Performance HSE. This represents a significant evolution compared with 2016, when the result was 40%.

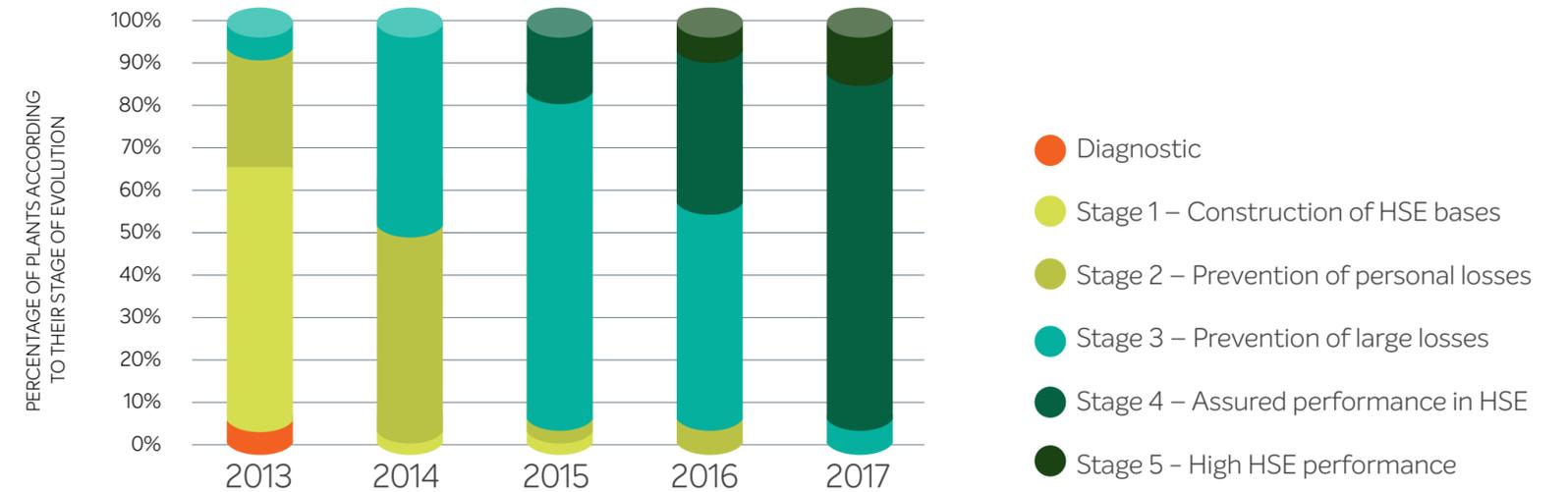
resents a significant evolution compared with 2016, when the result was 40%.

All audits were performed in an integrated manner, including requirements of the Management System, Programa Atuação Responsável® (Respon-

sible Action Program), and Management of Process Safety Barriers. The units were submitted to a safety culture evaluation to help them strengthen the Preventive Culture established by Braskem.

103-2, 103-3, 413-2

### EVOLUTION IN THE IMPLEMENTATION OF SEMPRE



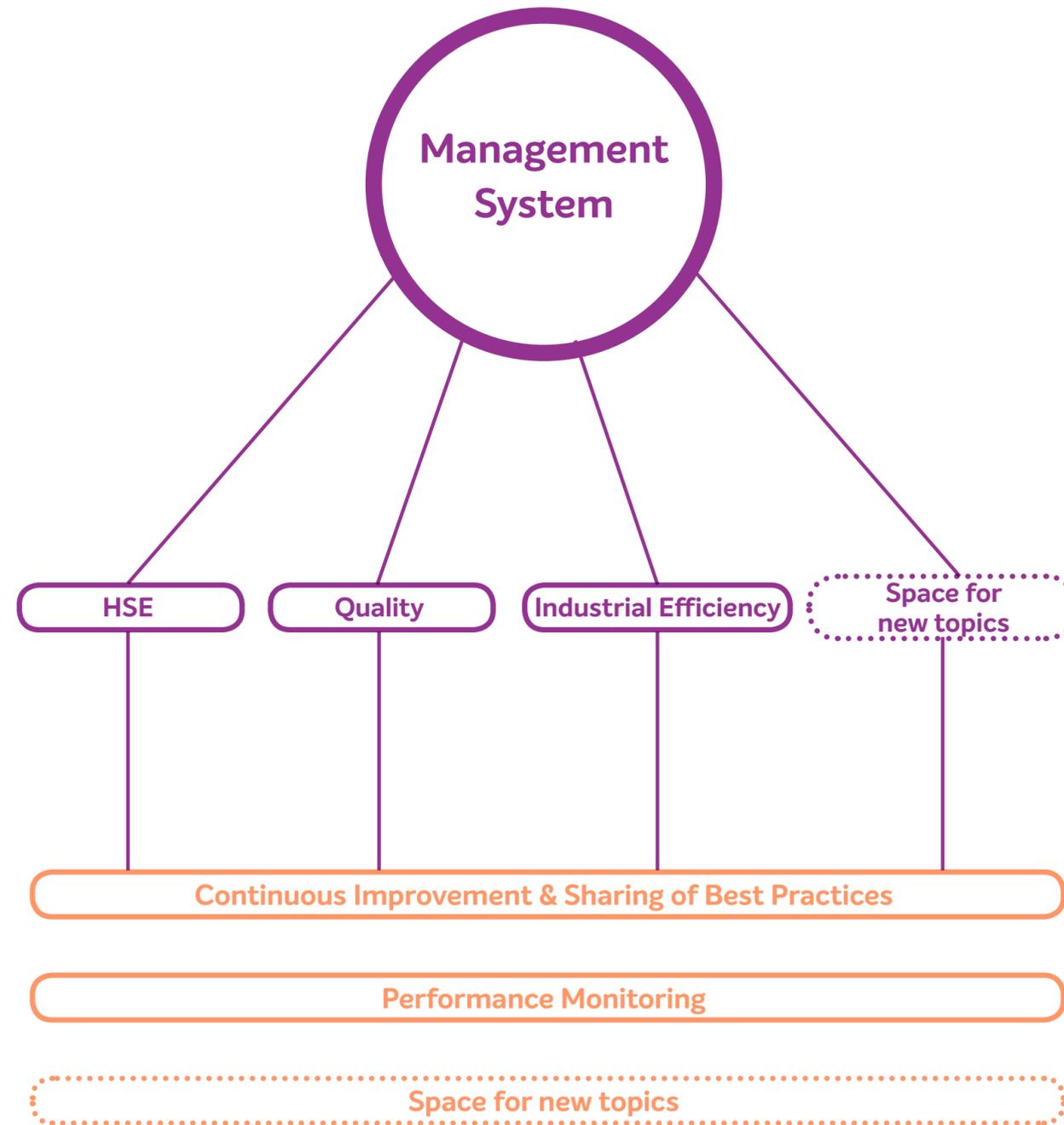
Note: In 2018, the focus is on implementing the Intelius Integrated Management System.

**GLOBAL, SIMPLIFIED, AND ALIGNED** 103-2

Focused on globalization and the sustainability of our business performance, we integrate our internal standards, incorporating and improving the requirements of SEMPRE, of Quality, and Industrial Excellence into a single management system: Intelius.

A management model composed of a set of guidelines and international best practices, Intelius is clearly correlated with our strategy of sustainability and continuous improvement. A development of the current management system, it will act as a standard documentation, quality, productivity, health, safety, and environment model for all Braskem’s production units worldwide. At the same time, it will be able to incorporate new elements according to the needs and characteristics of the business.

Today, the Intelius HSE pillar has 53 mandatory global standards. In addition, its organizational dynamics allows for the modular incorporation of future needs, and facilitates the addition of new work topics whenever necessary.



Like SEMPRE, the success of this initiative is directly associated with our operators. We believe in shared responsibility, so all teams in our production unit receive constant training and clear information regarding the goals through daily meetings with management. In this way, everyone becomes a protagonist, developing solutions for process safety and managing our ecoindicators.

**Strengthening practices** 103-3

For the 13<sup>th</sup> consecutive time, Braskem has been part of the ISE portfolio (B3 Corporate Sustainability Index), which recognizes Brazil’s best publicly traded companies in management of sustainable development. Our permanence in the index reflects our commitment to best practices in HSE, Corporate Governance, Social Responsibility, Economic and Financial Management, and Environmental Preservation. The new ISE portfolio is formed by 38 shares from 34 companies representing 15 sectors and totaling BRL 1.31 trillion in market cap.

## Investments and gains in environmental protection 103-2

Our business strategy involves continuous improvement planning in all environmental protection processes relating to risk of accidents involving processes or products. These investments are variable and happen according to the goals of the period, migrating from one dimension to another according to the main needs detected maintaining relative balance in order to generate positive impacts in all HSE aspects.

In 2017, the amounts invested in these initiatives were reduced compared with 2016, mainly due to reduced provision for environmental

damages. These amounts vary according to the needs of the Company's plants and units, according to maintenance schedules, recertification, business strategy, and other reasons. In 2016, as a result of improved quality of the diagnoses leading to a longer period of planning of remediation processes, we increased disbursements to treat contaminated areas, causing the need to adjust the amounts provisioned. In 2017, after adjustments in budget, the amounts returned to levels of operating costs for remediation of liabilities.

### Highlights in bioeconomics

Once again we were highlighted by ranking 36<sup>th</sup> among the "50 Hottest Companies in the Advanced Bioeconomy 2017," the largest news website on biofuels. The ranking is formed based on the evaluation from international experts in the sector, and on votes from subscribers. In 2017, for the first time, it was possible to vote through social networks.

| Type of expense (BRL millions)                   | 2015                          | 2016  | 2017  |       |
|--------------------------------------------------|-------------------------------|-------|-------|-------|
| Investments in HSE                               | Workplace safety              | 65.6  | 51.4  | 7.5   |
|                                                  | Process safety                | 13.0  | 25.9  | 87.6  |
|                                                  | Health                        | 4.7   | 2.8   | 3.9   |
|                                                  | Environment                   | 31.1  | 23.8  | 13.1  |
|                                                  | Total                         | 114.4 | 103.9 | 112.1 |
| Expenditure for treatment of effluents and waste | Treatment of liquid effluents | 50.5  | 51.1  | 52.6  |
|                                                  | Waste Management              | 42.7  | 55.3  | 57.2  |
|                                                  | Total                         | 93.2  | 106.4 | 109.8 |

| Type of expense (BRL millions)                                              | 2015 | 2016  | 2017  |
|-----------------------------------------------------------------------------|------|-------|-------|
| Emission management                                                         | 8.1  | 7.9   | 8.8   |
| Environmental licenses                                                      | 1.1  | 1.0   | 1.0   |
| Depreciation                                                                | 46.0 | 46.0  | 46.0  |
| Provision for recovery of environmental damages (environmental liabilities) | 65.8 | 182.6 | 102.5 |
| Other environmental management costs                                        | 66.6 | 59.7  | 48.9  |



Our management model for Health, Safety, and Environment issues also involves monitoring savings and costs avoided through the improvement projects developed by the area. The avoided costs recorded are basically the processes that do not need to be paid, which varies a lot year after year. These gains remained at the same levels as in 2016, but it is important to note that the reduction in gains observed from GHG initiatives occurred because most of the amounts are already included in energy efficiency projects and initiatives.

It should be noted that our energy consumption is predominantly thermoelectric, so projects involving improvements in energy efficiency also positively impact reduction of emissions and avoided costs. In 2017, this avoided cost was 61% higher than in the same period in 2016.

In total, this work resulted in gains of BRL 247.5 million<sup>16</sup> in operations in Brazil, the United States, Germany, and now Mexico. **103-3**

<sup>16</sup> Avoided costs through management of health, safety, and environment.

AVOIDED COSTS – MANAGEMENT OF HEALTH, SAFETY, AND ENVIRONMENT

**103-3**

| Dimension (BRL millions) |                     | 2015         | 2016         | 2017         |
|--------------------------|---------------------|--------------|--------------|--------------|
| Safety                   | Workplace safety    | 0.6          | -3.4         | 2.5          |
|                          | Process Safety      | -27.0        | 17.1         | 4.6          |
| Health                   | Occupational Health | 19.0         | 23.3         | 7.1          |
|                          | Waste Generation    | 13.5         | 6.7          | 2.4          |
|                          | Water consumption   | 7.2          | 4.6          | 8.8          |
| Environment              | Effluent Generation | 6.2          | 2.1          | 4.4          |
|                          | Energy consumption  | 116.8        | 134.9        | 217.7        |
|                          | GHG Emissions       | 0.0          | 67.0         | 0.6          |
|                          | Common Impact       | 0.0          | 0.0          | 0.0          |
| HSE                      | Management          | 0.5          | 0.1          | 0.0          |
| <b>TOTAL</b>             |                     | <b>136.8</b> | <b>252.4</b> | <b>247.5</b> |

## Occupational Health and Safety 103-2, 103-3, 403-2<sup>17</sup>

In 2017, there was no record of any new cases or grievance of occupational disease. As part of continuous improvement, Braskem continued strengthening its global alignment and standardized identification and evaluation of occupational illness.

To reinforce prevention of new occurrences especially serious accidents that may lead to death, which occurred in 2016 we developed a new safety plan that was cascaded worldwide, after studies that searched for opportunities for improvement in all our processes of loading and unloading products. In addition, we are conducting a global awareness campaign so that our Members are always alert and focused, in order to avoid potential accidents.

In 2017, the frequency of accidents with and without lost time (CAF + SAF), considering Members and Third Parties per million hours worked, showed an increase of 27% compared with the previous year, mainly due to contractor performance and routine tasks. The same happened with the Frequency Rate of Accidents with Lost Time, considering Members and Partners per million hours worked, with a 36% increase. The Severity Rate of Accidents with Lost Time dropped considerably (85%). The decrease in

the severity rate is significant and reflects the continued emphasis on operational discipline for high risk activities or activities that are life critical.

### NUMBER OF ACCIDENTS X 1MM/MHW

|                                     | 2013 | 2014  | 2015  | 2016   | 2017  |
|-------------------------------------|------|-------|-------|--------|-------|
| Accident frequency rate (SAF + CAF) | 1.04 | 0.97  | 0.68  | 0.8    | 1.02  |
| Accident frequency rate (CAF)       | 0.39 | 0.14  | 0.26  | 0.24   | 0.33  |
| Severity rate                       | 64.7 | 12.53 | 43.32 | 164.17 | 24.44 |
| Number of fatal accidents           | 0    | 0     | 0     | 1      | 0     |

A highlight in 2017 was the prevention of incidents during loading and unloading of hazardous materials, based on the monitoring of performance in 2016 (fatality) and critical analysis. A global standard was developed for loading and unloading hazardous materials. In addition, several strategic HSE initiatives were developed in 2017 to

include the Intelius global management system Braskem and Human Reliability. Intelius will establish a global platform for Braskem's governance and HSE requirements. The human reliability processes were compared internally and externally in 2017 as part of the development of the Company's human reliability strategy.



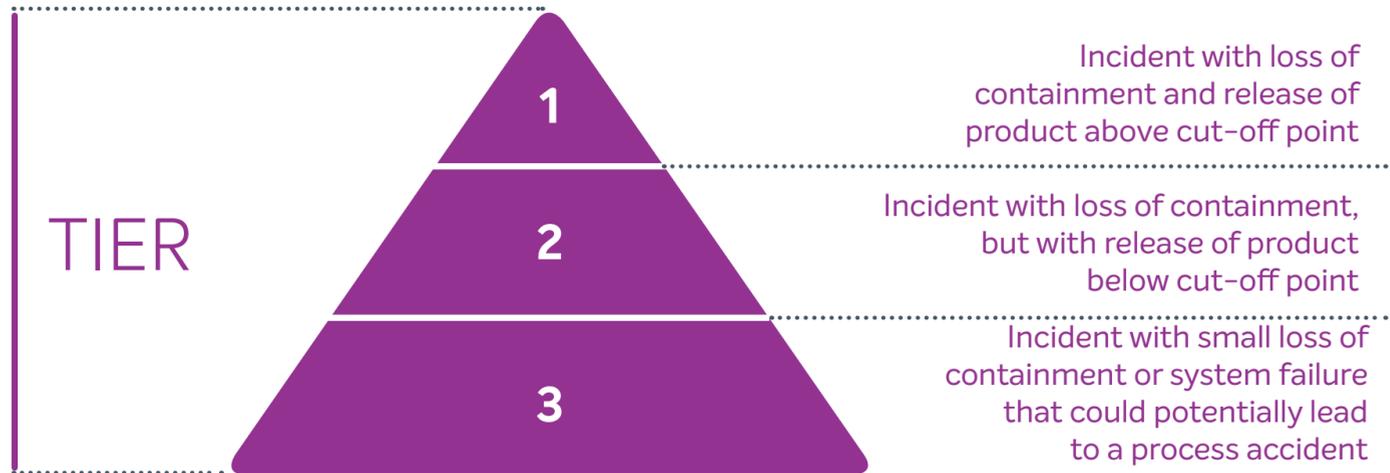
<sup>17</sup> Absenteeism rate: in 2017, the concept and calculation of this indicator were revised, and an interface was created to capture the indicator via Dashboard. In 2018, we will begin the capture, and the target will only be defined after the capture has evolved and the results have been analyzed.



## Process Safety

413-2, 103-2, 103-3

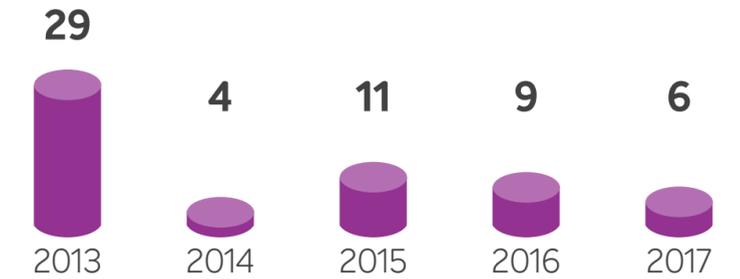
A result of our teams' and leadership's commitment, in 2017 we once again reduced the occurrence of TIER 1 and TIER 2 events (including process accidents). This demonstrates a visible and continuous evolution of our actions toward previous assessments that involve management and mitigation of potential risks and awareness of all concerning the importance of safety procedures to ensure increasingly efficient processes.



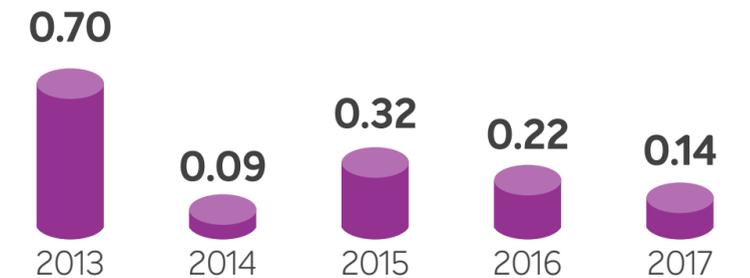
Seeking continuous improvement in process safety, we set global and per unit goals for the accident rates classified in TIER 1 and TIER 2. The goals are monitored monthly and are re-defined each year according to Company and market performance. In 2017, the global goal for TIER 1 frequency rate was 0.17, and 0.12 in 2018. The global TIER 2 goal was 0.80 in 2017, and 0.70 in 2018. For per unit goals, each location adopts the same value as the TIER 1 global goal, and calculates its TIER 2 goal by considering the global goal value and its history.

In 2017, we recorded six TIER 1 events (three less than the previous year), with a rate of 0.14 per million hours worked (36% less than 2016) – a number compatible with the best benchmarks in process safety from companies in the American chemicals sector (0.34 as the average benchmark of American companies in 2016).

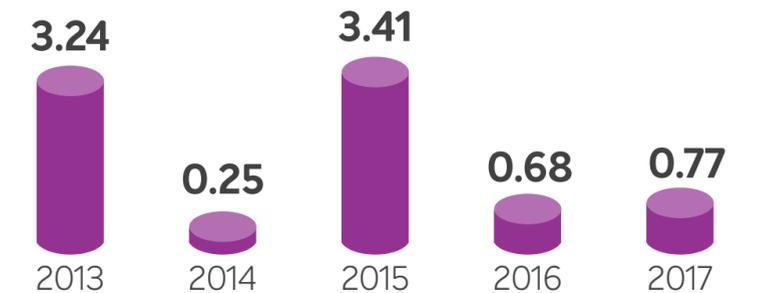
### TIER 1 - NUMBER OF ACCIDENTS



### TIER 1 - RATE OF ACCIDENTS (NUMBER OF ACCIDENTS X 1MM/MHW)



### TIER 1 - SEVERITY RATE

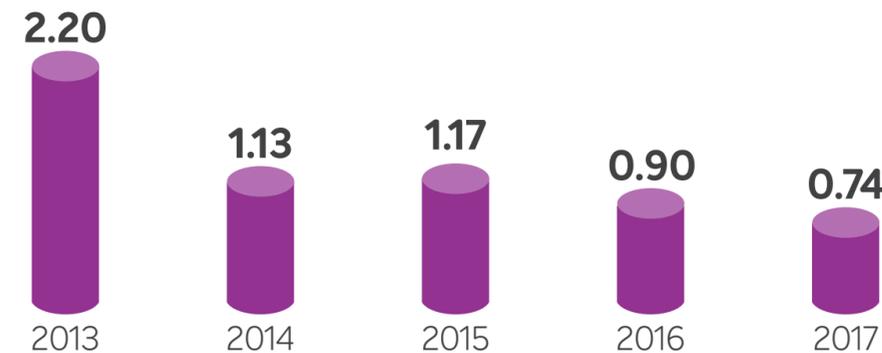


Tier 2 events also follow a downward trend, down from 37 records in 2016 to 31 in 2017. The accident rate per million hours worked dropped from 0.90 to 0.74, down 18%.

TIER 2 - NUMBER OF ACCIDENTS



TIER 2 - RATE OF ACCIDENTS (NUMBER OF ACCIDENTS X 1MM/MHW)

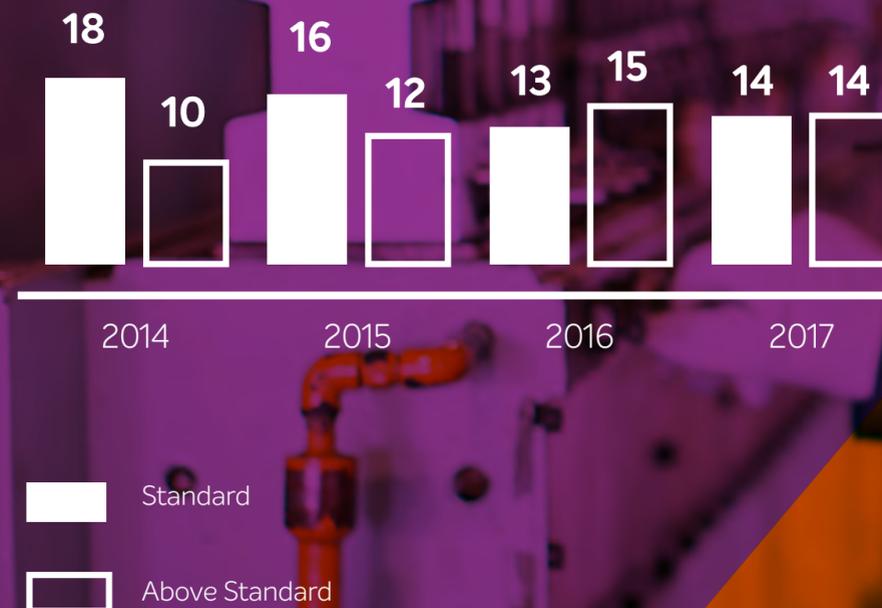


Regarding Tier 3 events, considered small events or incidents, there has been an increase in the number of occurrences in recent years. However, this increase is a result of an improvement in the registration system, a stronger process safety culture, and the Members' commitment to reporting any type of diversion that causes a loss of primary containment, seeking to reduce the number of small events through the critical analysis of small occurrences.

Risk Rating

Always focused on the continuous improvement of our processes and the safety of our plants and Members, in 2017 we continued to advance our Risk Rating results at the audited units. Of the 14 plants that were audited by the insurance company in 2017, all increased their scores compared to those obtained in 2016. Today, all plants meet the international standard at the "Standard" level, with half of them at "Above Standard." It is worth noting that Braskem does not have a goal for this indicator.

PLANTS THAT HAVE ACHIEVED THE INTERNATIONAL STANDARDS "STANDARDS" AND "ABOVE STANDARD" - RISK RATING



New risk matrix

Throughout the year 2016, the organization promoted a thorough review of its risk matrix, with global alignment in all its business units worldwide, and based on a global benchmark in risk acceptability criteria. The new matrix was put into practice in 2017. This was Braskem's first truly global work, which required all units to review their greatest risks in a more rigid, structured manner, associated with the new global risk matrix, allowing for greater integration with principles of health, safety, and the environment. This new matrix is also accompanied by a new risk assessment management system, which continuously monitors whether all risks are being duly mitigated. Today, the matrix also reflects several intangible, reputational risks that may have an impact on Braskem's image before its Clients work that positions Braskem as a global benchmark in the industry.

## Product Safety 103-2, 103-3, 416-1, 416-2, 417-1, 417-2

Product safety is very much in line with Braskem’s continuous evolution. That is why in 2017 we conducted a new international benchmark process in order to further reinforce the structure of resources and systems in the area. As a result, we have expanded our team’s dedication to issues such as regulation of application and the review of all new FISPQ<sup>18</sup> (Emergency Forms) for the chemicals inventory that were readjusted in Brazil. The products that will be evaluated regarding impact on health and safety are defined periodically. In 2017, the focus was on inputs used in dyes, food, and healthcare, and there were no cases of non-compliance with regulations that resulted in a fine or penalty.

<sup>18</sup> In the United States, the Company uses the Material Safety Data Sheet (MSDS) and Safety Data Sheet (SDS), as required by the Occupational Safety and Health Administration (OSHA) and the relevant EU directive (REACH).

Another important point in 2017 was the structuring of two new systems: an online platform allowing the visualization of raw materials in real time, and an emergency communication channel associated with global exports. Based in the United States, this system stores all information about our products and works as a primary service for our clients around the world. It is worth mentioning that every year we carry out audits related to product, information services, and labeling non-compliance at our plants around the world, and in 2017, as in previous years, there were no cases reported.

**In 2017 we conducted a new international benchmark process in order to further reinforce the structure of resources in the enforcement and revision of regulations.**



## Water Efficiency

103-2, 103-3, 303-1, 303-3, 306-1

With the supply crises increasingly frequent in the country, water is becoming a scarce resource. So, responsible water use and conservation is also increasing. Since 2002, we have invested BRL 280 million in water efficiency projects and to treat effluents for reuse in our operations. We are aware that industry consumes about 20% of the water used in the world and, with this in mind, we work continuously to improve our processes with innovation and the search for sustainable development. Among our various initiatives, we highlight the Aquapolo Project, at ABC Paulista. In partnership with Sabesp, the project broadened Braskem's water reuse index in the region to 97% of the total. Another example of success is the start of

### Twice on the A List

For the first time, Braskem is listed on CDP WATER's "A List," which recognizes the best publicly traded companies in the world regarding management of the use of the natural resource water. We were the only Brazilian company to obtain the highest score in the Climate (for the second consecutive time) and Water (this for the first time) rankings, an achievement that positions us among the 25 companies, in the universe of 2,452 companies evaluated worldwide, to get the A score in both rankings, simultaneously. Today we are part of the select group of 1% of the companies in the world that joined the "A-List" of CDP Climate and CDP Water in 2017.

operations of the Mexico Complex, with a reuse system inherent to the original project design. In 2017, a total of 17% of the water consumed at the Complex was reused water.

Over the last two years, we have studied the risk of water scarcity at eight watersheds, four of which were completed in 2016, and the other four in 2017. These studies allowed us to

map the operations that are in areas with potential risk of water shortage today and until the year 2040. With this, it is possible to plan how to best address risks and opportunities identified, invest in risk areas, and extend this benefit to our value chain (Clients and Suppliers) in the search for alternative supply sources. The percentage of water reuse exceeded the

target of 25% set for 2020 and, for the first time, we are part of CDP WATER's "A List," which recognizes the best publicly traded companies in the world regarding management of the use of the natural resource water.



For more information, go to [www.cdp.net](http://www.cdp.net), in Search Responses.

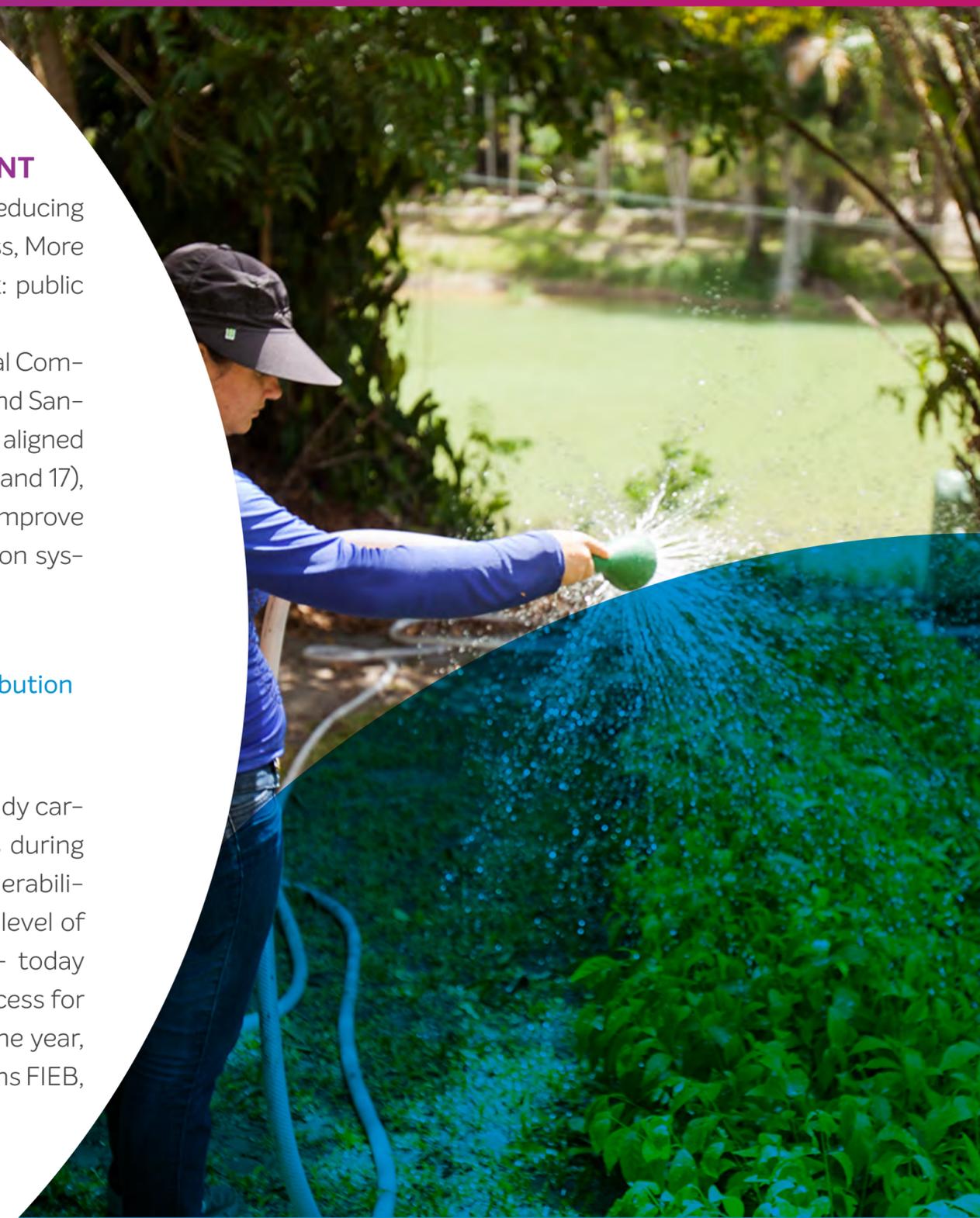
**SMALLER LOSS, MORE WATER MOVEMENT**

In order to encourage concrete actions toward reducing waste in the distribution system, the “Smaller Loss, More Water” Movement structured two areas of work: public policies and engagement.

Initiative of the Brazil Network of the UN Global Compact, led by Braskem and Sanasa (Water Supply and Sanitation Company in Campinas), the movement is aligned with the Sustainable Development Goals (SDG 6 and 17), and seeks the commitment of public agents to improve the water management and the urban distribution system in the country.

The loss of **treated water** during distribution reaches an average index of **38%**.

In 2017, we promoted development of the study carried out by Instituto Trata Brasil on “Water loss during distribution as an aggravating factor to the vulnerability of watersheds.” The study highlights that the level of physical water losses in distribution systems – today and in the future – represents a risk to water access for all users of the watersheds. Published in the same year, the study was disclosed in the industry federations FIEB, FIESP, and FIRJAN.

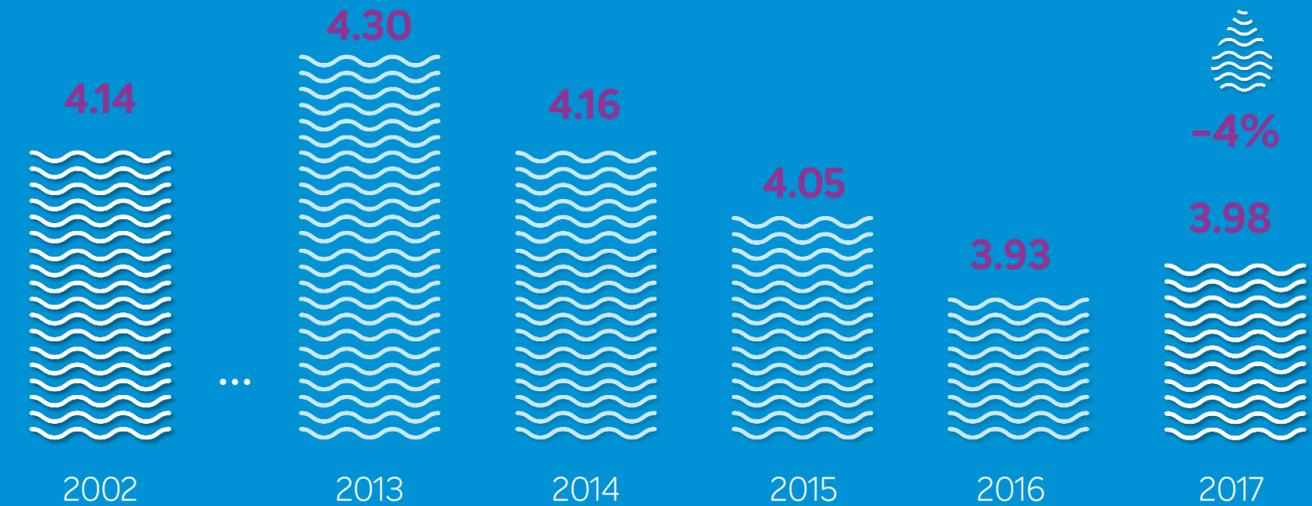


**CONSUMPTION**

In 2017, water consumption (3.98 m<sup>3</sup>/t) increased by 1.4% over the previous period, but still 2.5% below the goal set for the year. This increase was due to Braskem Idesa being included in the Braskem ecoindicators, and the quality of the water captured for use in that unit causes greater consumption. Water quality impacts the number of times it may be recirculated in cooling processes. The worse the quality, the lower the number of

recycles and, consequently, the greater the water consumption. Water recirculation in cooling processes concentrates substances during this cycle. The purer the water used, the more cycles can be performed and the less water replacement will be required. In addition, several factors contributed to improving the Company’s performance in water consumption, such as adjustments and improvements in cooling tower cycles, implementation of measures to reduce consumption due to the water crisis, minimization of losses, and elimination of leaks.

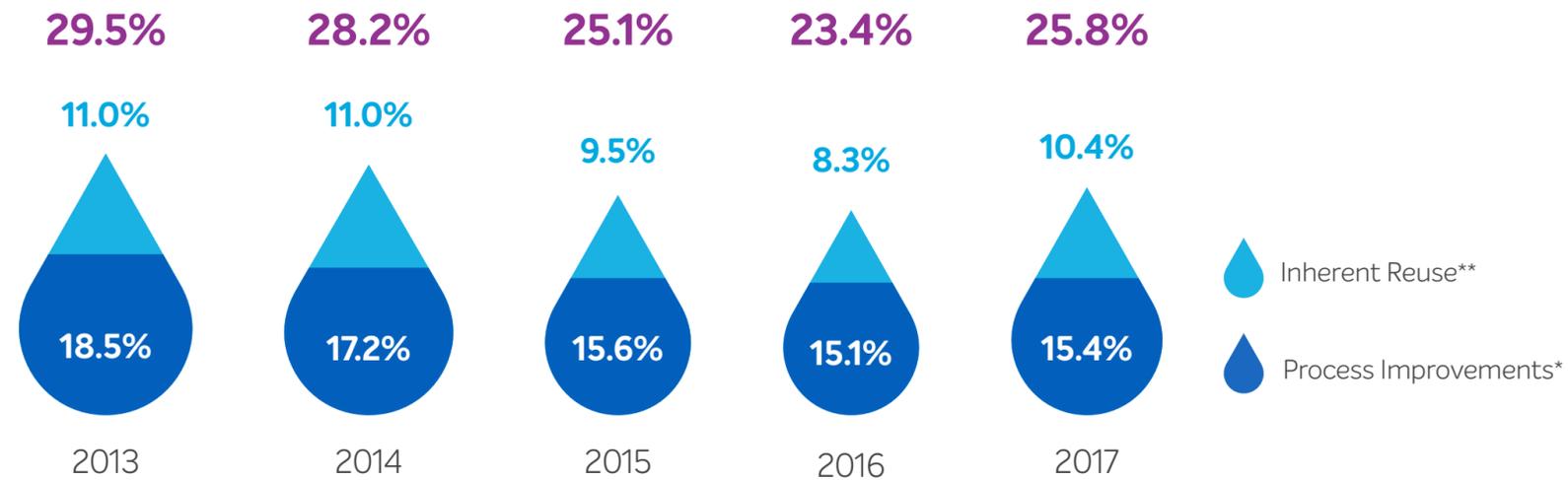
WATER CONSUMPTION – m<sup>3</sup>/t



**REUSE**

Today, we have in place a series of projects and goals linked to reducing water consumption, and we constantly carry out evaluations to avoid any impacts from a possible water shortage. Among the main initiatives are improvement processes for the reuse of water from the production units, a percentage that has been growing over the last three years. In 2017, a total of 25.8% of all water consumed in our operations came from reuse processes, 15.4% of which resulted from process improvement (investment) and 10.4% from original plant operation (born with the plant design).

WATER REUSE



\*Reuse in Process Improvements is all that comes from modifications at current units, including or improving processes.

\*\* Inherent reuse is everything that was born with the industrial unit and is part of the original plant process.



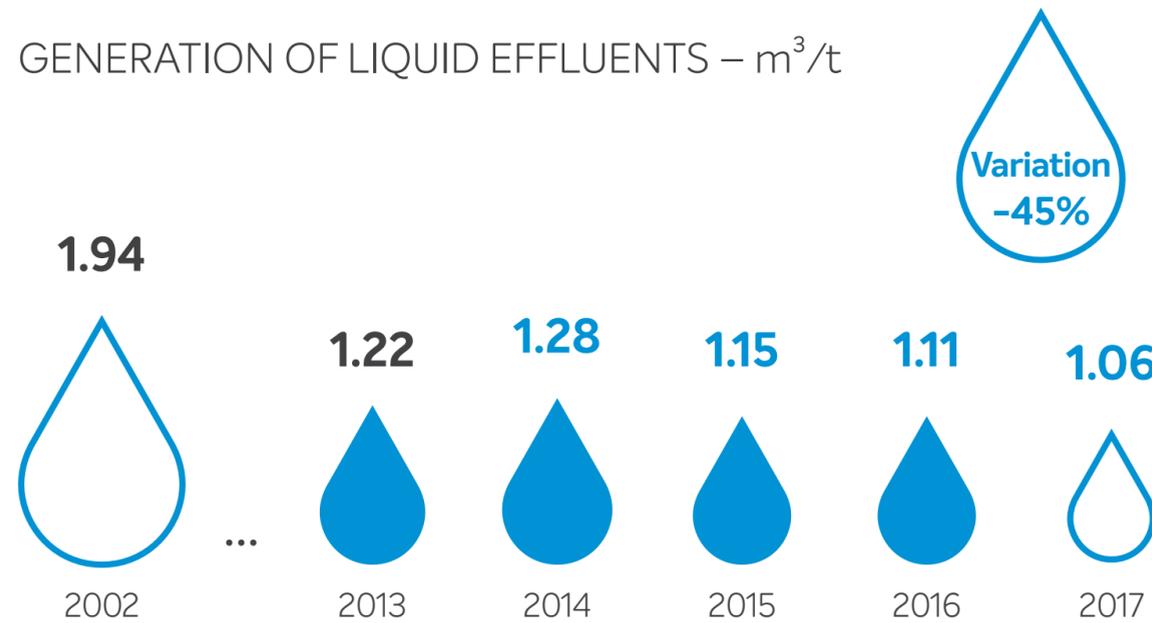


**EFFLUENTS**

Our eco-efficiency in generating liquid effluents (1.06 m<sup>3</sup>/t) improved by 4.2% compared with 2016, and was 7.9% better than the goal for 2017, our best historical result for the third consecutive year, demonstrating the effectiveness of the actions taken to improve the Company's water efficiency. The greatest impacts on this result were the low rainfall rates in some regions, reduced blowdown<sup>19</sup> due to improvements in cooling tower concentration cycles, and scheduled shut-downs for maintenance and cleaning.

<sup>19</sup> Blowdown is the water intentionally wasted to avoid the concentration of impurities during the continuous evaporation.

GENERATION OF LIQUID EFFLUENTS – m<sup>3</sup>/t



**More innovation. Less waste.**

Since September 2017, our factories have been using new technology that allows us to reduce the consumption of water by thousands of liters per month. Installed in bathrooms, the Piipee is a device that saves up to 75% of water in toilets bowls. The device uses a biodegradable additive, removing odor and color from urine, avoiding the need to flush the toilet.

It is estimated that, on average, 7 to 20 liters of drinking water are wasted down the drain when toilet is flushed. The innovation implemented by the Company significantly reduces this consumption. In 2016, the project was part of our entrepreneur acceleration program – Braskem Labs Scale. Piipee – the company responsible for developing the solution – estimates that the technology has the potential to save over 60 million liters of water and over BRL 722,000 per year in all of Braskem's plants in Brazil.

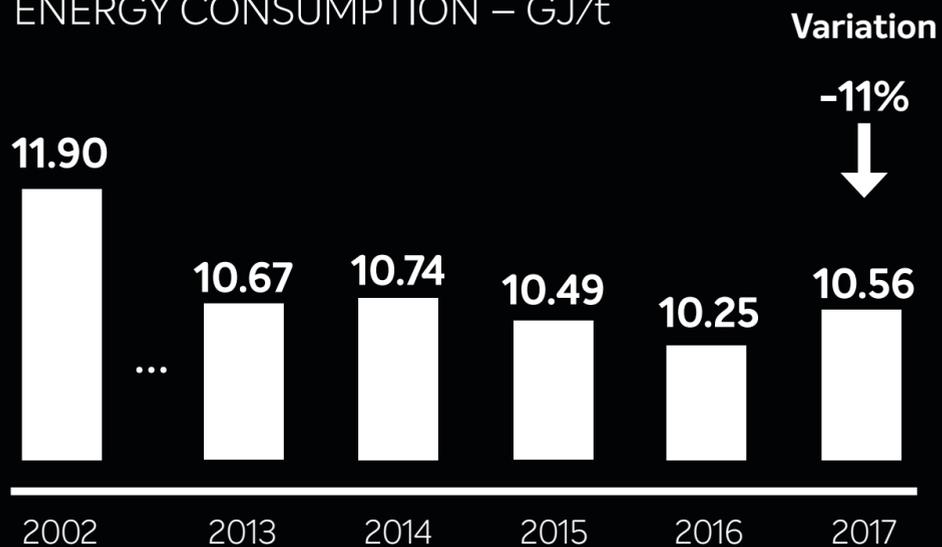
# Energy Efficiency

103-2, 103-3, 302-1, 302-3, 302-4

The same way that we seek to reduce our impacts on water consumption, we work every day in search for innovative and sustainable solutions (from an environmental and economic standpoint) that help improve efficiency and reduce the energy consumption of our production units. In 2017, our energy consumption (10.56 GJ/t) increased 3.0% compared with 2016, but was 2.4% better than the goal for 2017. The increase in the indicator was due to Braskem Idesa (Mexico) being included in our ecoindicators, and intensity of energy consumption at the new plant is higher than the Braskem average.

In Brazil, the initiative that presented the most gains was implemented in PE 4 (Rio Grande do Sul), which, with reduced decompositions in tubular technology high-pressure polyethylene plants, had a gain of BRL 68.8 million. And, through furnace optimization, UNIB 2 (Rio Grande do Sul) reduced its energy consumption by 938,591 GJ.

ENERGY CONSUMPTION – GJ/t



## Initiatives toward process improvement

## Economic gain (BRL millions)

|                                                                                                        |              |
|--------------------------------------------------------------------------------------------------------|--------------|
| Improvements in production processes (except furnaces) and sales of electricity (in millions of reais) | 104.3        |
| Furnace optimization                                                                                   | 71.2         |
| Reduction in steam consumption                                                                         | 35.3         |
| Boiler and turbine improvements                                                                        | 9.6          |
| <b>TOTAL</b>                                                                                           | <b>220.4</b> |





### ENERGY MATRIX

In recent years, we have seen an increase in the share of natural gas in our energy matrix due to the start and stabilization of Braskem Idesa operations, a major consumer of this fuel. In 2017

in particular, we saw a decrease in the share of other external fuels in the energy matrix, also influenced by the increase in consumption of natural gas at Brazilian units due to market opportunities.

#### PERCENTAGE OF CONSUMPTION BY TYPE OF ENERGY IN TERMS OF TOTAL CONSUMPTION

|                                                        | 2013  | 2014  | 2015  | 2016  | 2017  |
|--------------------------------------------------------|-------|-------|-------|-------|-------|
| Electrical                                             | 9.9%  | 10.2% | 9.0%  | 9.0%  | 9.9%  |
| Natural gas                                            | 8.9%  | 13.0% | 16.0% | 20.0% | 22.4% |
| Other external fuels (mainly oil and coal)             | 4.8%  | 5.2%  | 5.5%  | 6.0%  | 4.7%  |
| Residual internal fuels from the petrochemical process | 76.3% | 71.6% | 68.8% | 65.0% | 62.9% |

The percentage of renewable energy consumption in Braskem's energy matrix is strongly influenced by the operation of the Brazilian electricity system. The increasing operation of thermoelectric plants in Brazil has reduced this indicator.

#### PERCENTAGE OF RENEWABLE ENERGY CONSUMPTION IN TERMS OF TOTAL ENERGY CONSUMPTION

|  | 2013  | 2014  | 2015  | 2016  | 2017  |
|--|-------|-------|-------|-------|-------|
|  | 9.39% | 7.17% | 8.26% | 7.44% | 7.60% |

## Waste Management 103-2, 103-3, 301-1, 301-2, 306-2

We believe that continuous investment in renewable raw materials and correct management of all waste generated in our production process is essential to the maintenance and sustainable development of our business. That's why we maximize reuse at all of our industrial plants through a process known as chain return the equivalent to internal recycling. For the future, we are investing in energy and chemical recycling.

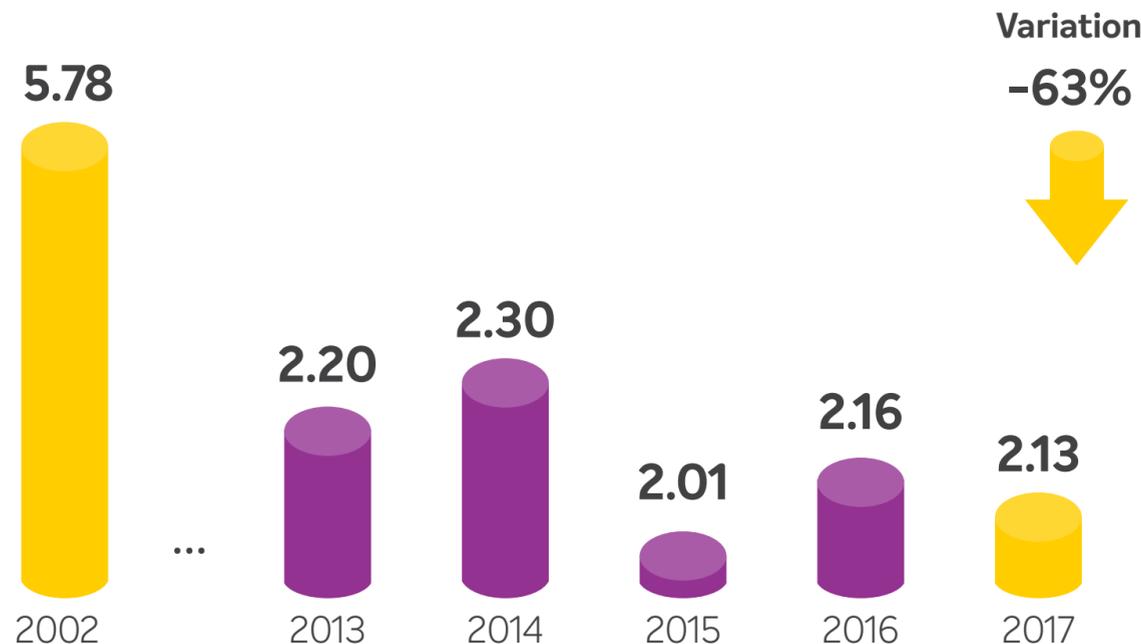
Some of the main non-renewable direct materials used by Braskem are naphtha, condensate, ethane, propane, LRH, and sodium chloride. We also use ethanol made from sugarcane to produce ethylene from a renewable source, thereby reducing our demand for non-renewable resources.

We have strict goals for total waste generation (hazardous and non-hazardous waste) that are defined and

adjusted annually for a period of five years. In 2017, the generation of solid, liquid and sludge waste (2.13 kg/t) was reduced by 1.4% compared with 2016, and was 4.5% better than the goal for

2017. This good result was due to plant initiatives toward discovering new ways to reuse waste, changes in treatment, and improvements in cleaning and maintenance processes.

WASTE GENERATION – kg/t



| Waste Allocations (t)        | 2013          | 2014          | 2015          | 2016          | 2017          |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Recycling                    | 19,858        | 7,930         | 4,628         | 7,371         | 6,830         |
| Recovery (including energy)  | 3,169         | 5,424         | 3,975         | 7,247         | 6,370         |
| Sanitary/industrial landfill | 11,152        | 21,493        | 2,804         | 9,146         | 8,980         |
| On-site storage              | 187           | 748           | 1,859         | 1,303         | 455           |
| Incineration                 | 17,263        | 20,408        | 1,713         | 8,423         | 8,199         |
| Reuse                        | 290           | 238           | 739           | 482           | 505           |
| Composting                   | 306           | 662           | 274           | 475           | 299           |
| Underground waste injection  | 8,568         | 7,960         | 0             | 1,931         | 1,756         |
| Other*                       | 9,650         | 5,000         | 3,700         | 17,022        | 5,258         |
| <b>TOTAL</b>                 | <b>70,443</b> | <b>69,863</b> | <b>19,692</b> | <b>53,400</b> | <b>38,652</b> |

\* Other: autoclave, vacuum thermal demercuration, co-processing of waste in clinker rotary kilns for cement manufacture, soil decontamination by thermal desorption



## Climate Change 103-2, 103-3, 201-2, 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7

Studies conducted by scientists at the Intergovernmental Panel on Climate Change (IPCC) show that a “carbon neutral” society will be needed as early as this century in order to keep climate change at acceptable levels. We believe that the companies play an essential role in mitigating and adapting to the effects of climate change. Therefore, being among the best of the world’s major chemical industries in terms of greenhouse gas (GHG) emission intensity and an important GHG emissions sequester due to the use of renewable raw materials are initiatives that are part of our macro goals for sustainable development.

In 2017, the macro goal for climate change had already evolved 100% compared to the goal set for 2020.

For the 7<sup>th</sup> consecutive year, Braskem’s most recently published GHG emissions inventory was awarded the Gold category in the Brazilian GHG Protocol Program.

For the second consecutive time, we are part of CDP CLIMATE’s “A List”.

For the sixth consecutive time, Braskem has been selected to be part of the Efficient Carbon Index (ICO<sub>2</sub>) portfolio of B3 (Brazil).

In line with our strategy to contribute to strengthening this agenda in the business network, since 2008 we have integrated the Brazilian Network Committee of the Global Compact and, since 2013, the LEAD group of the Global Compact, in addition to being part of the Green Industry Platform initiatives of UNIDO, and Caring for Climate of the Global Compact. We also actively participated in the Companies for Climate initiative, a business platform created by the Getúlio Vargas Foundation (FGV) Center for Sustainability Studies and, in 2017, we began to coordinate the Technical Group on Energy and Climate of the Brazilian Network of the UN Global Compact.

Also in 2017, we began three pilot studies with GVces, the first to construct our MACC (Marginal Cost Reduction Curve), searching for low carbon investment options, the second in the adaptation plan, testing the methodology of climate risk management during the partnership and engagement stages; and the third for economic valuation of ecosystem services, focusing on water resources.

 For more information, go to [www.cdp.net](http://www.cdp.net), in Search Responses.

### CARBON PRICING

To manage risk and identify opportunities regarding carbon pricing, in 2016 we implemented an internal valuation system (shadow price method) that is part of our investment decision-making process. Used for the second year in operations in Brazil, these criteria supported the 2018 investment portfolio decision. In the current effectiveness monitoring phase, the results were analyzed, making it possible to verify the adequacy of the initial value defined for

the price of carbon due to the fulfillment of the objective, which is to stimulate new projects with positive impacts, that is, reduced emissions.

After standardizing the investment process in global operations, the tool was configured for use in all units in the countries where the Company operates today the focus is on preparing the teams in Mexico, USA, and Germany to begin using the methodology utilizing the lessons learned in Brazil.



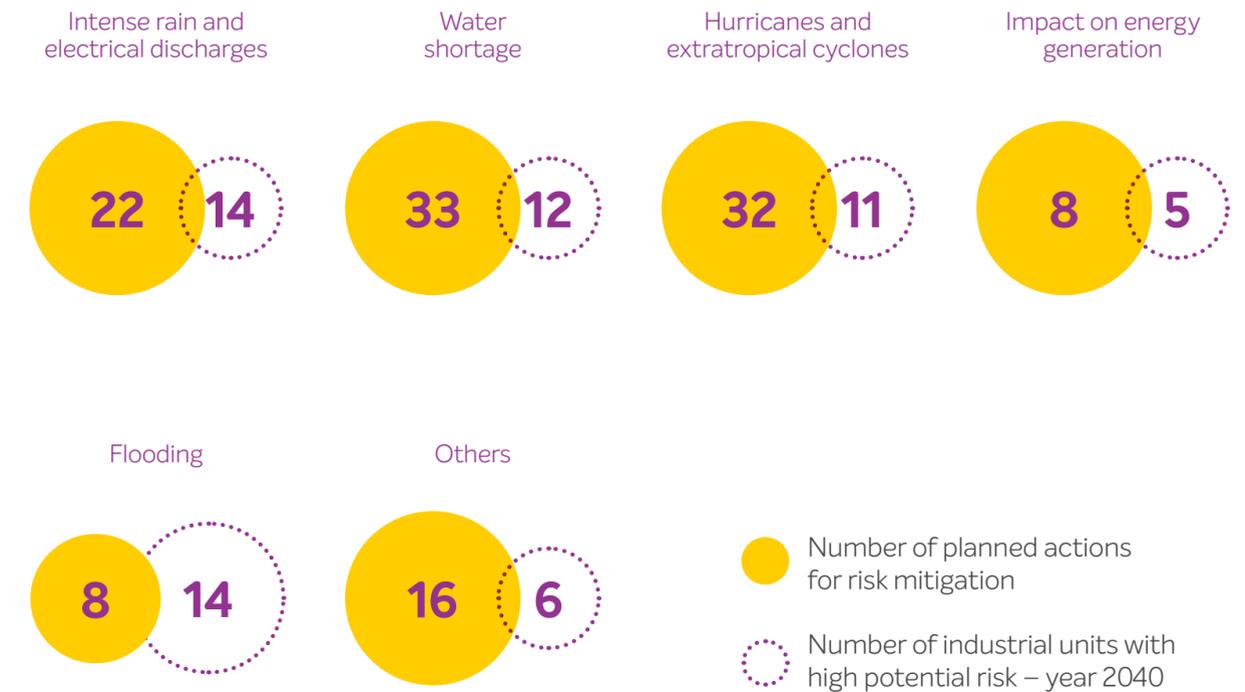
It is worth mentioning that Braskem also participates in Emission Trading Simulation (SCE) initiatives in Brazil and Mexico, a constructive experiment in the carbon market for debate and generation of knowledge, expanding the contribution of companies to proposals directed toward the government.

### ADAPTING TO CLIMATE CHANGE

After identifying and prioritizing potential climate opportunities and risks in all operations in Brazil, an adaptation plan was created with actions to mitigate or reduce all potential climate risks classified as “high.” For international operations in the United States, Germany, and Mexico, the main potential scenarios and impacts were validated, as were the respective mitigation actions for the most relevant risks. There are currently 33 defined actions or actions in progress in Brazil, the main ones related to water scarcity, floods, impact on energy generation, and hurricanes and extratropical cyclones.

Braskem monitors the implementation of this plan by means of indicators using the Getúlio Vargas Foundation (FGV-SP, Brazil) Sustainability Studies Center methodology as a benchmark. We are currently developing a pilot program with FGV focused on the implementation phase

### EVENT/CLIMATE IMPACT

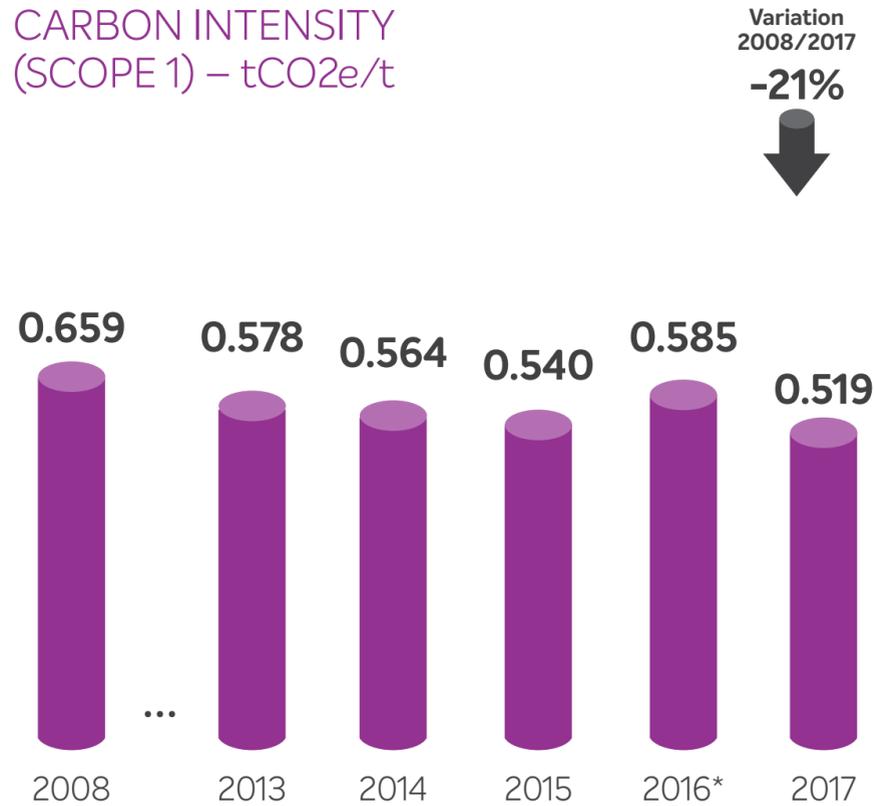


of the plan, seeking to consolidate the method for developing partnerships and engaging several public and private stakeholders involved in adaptation actions.

### GHG EMISSIONS INVENTORY

Our corporate inventory of GHG emissions takes into account all categories in Scopes 1, 2, and 3 in 100% of operations. In 2017, we reduced our Scope 1+2 emission intensity indicator. This reduction was mainly due to initiatives to mitigate emissions, among which energy reduction/recovery projects and operational optimization were highlighted. This is the best Scope 1+2 emissions intensity indicator in the historic series, achieving in advance Braskem's 2020 GHG emissions intensity goal.

### CARBON INTENSITY (SCOPE 1) – tCO<sub>2</sub>e/t



\*Mexico's emissions are included in this amount.

Our corporate inventory of emissions takes into account all categories in Scopes 1, 2, and 3 in 100% of operations.



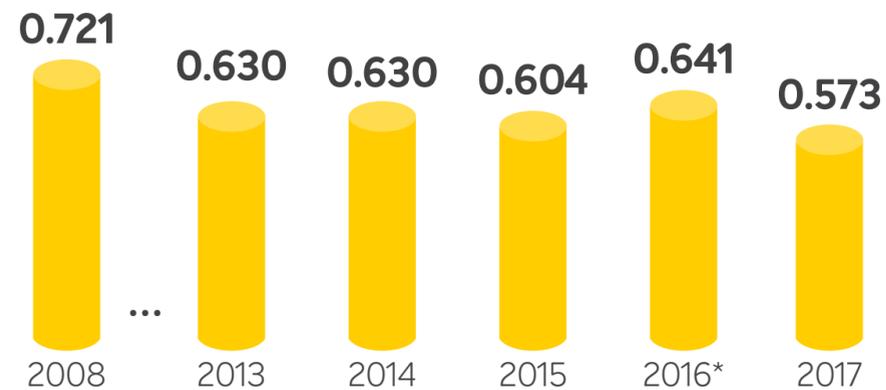
With the start of the new plants in Mexico in 2016, the results of Scope 1 and Scope 2 emissions for 2017 showed a reduction after stabilization of the Mexican operations. Braskem is evaluating the change in the base year and its medium and long-term goals.

Total emissions related to Scope 1<sup>20</sup> was 10,182,558 tCO<sub>2</sub>e. Scope 2<sup>21</sup> emissions were altered due to the approximately 11% increase in the average national CO<sub>2</sub> grid emission factor in 2017, reaching 1,072,713 tCO<sub>2</sub>e. With its electricity suppliers, Braskem seeks statements of the purchase of renewable energy in order to reduce Scope 2 emissions from part of the energy obtained by bilateral contracts.

<sup>20</sup> Direct GHG emissions  
<sup>21</sup> Indirect emissions through the purchase of electricity

CARBON INTENSITY (SCOPES 1 AND 2) – tCO<sub>2</sub>e/t

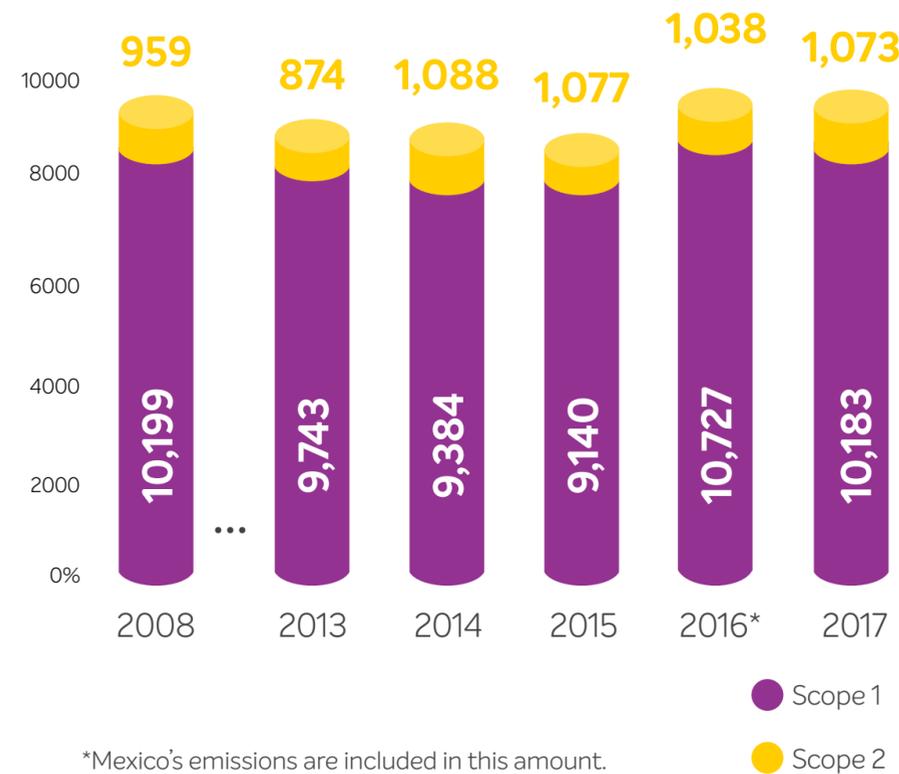
Variation 2008/2017 **-21%**



\*Mexico's emissions are included in this amount.

GHG EMISSIONS (SCOPE 1 AND 2) – ktCO<sub>2</sub>e

Variation 2016/2017 **-4%**



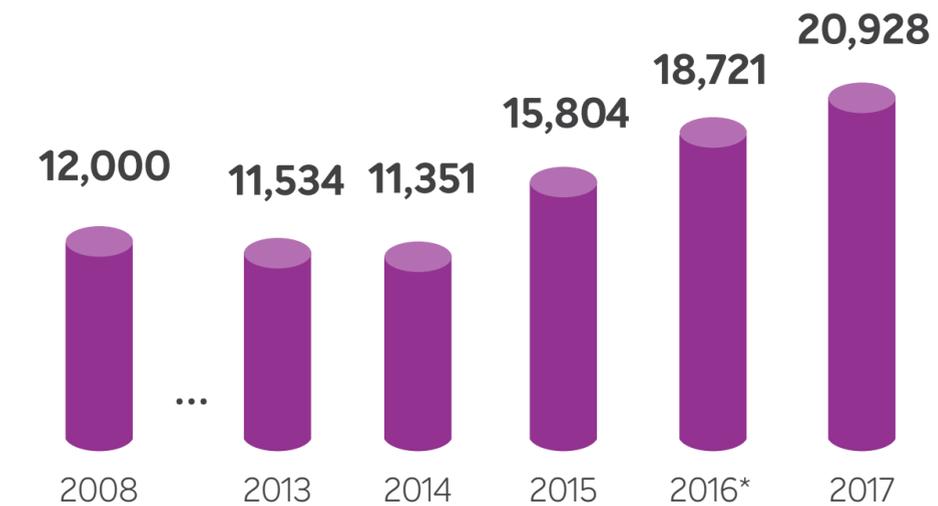
\*Mexico's emissions are included in this amount.

Scope 3<sup>22</sup> emissions were impacted mainly by the broadening of the chemical inputs reported in Category 1 – Goods and Services purchased, and by the expansion of data reported on the transportation of finished product paid by Braskem.

<sup>22</sup> Other indirect GHG emissions

GHG EMISSIONS (SCOPE 3) – ktCO<sub>2</sub>e

Variation 2016/2017 **12%**



\*Mexico's emissions are included in this amount.

Initiatives to reduce emissions

We work steadily on the search for solutions to reduce the various impacts that our operations may cause. Regarding greenhouse gas emissions, the main initiatives in 2017 were related to the reduction and/or recovery of energy and operational optimization (such as reducing loss, modifying operating conditions, and cleaning equipment). In Duque de Caxias, we highlight the development of an action plan to increase the reliability of industrial plants, in order to reduce GHG emissions associated with production shutdowns.

Read the Braskem inventories on the Public Registry database of the Brazilian GHG Protocol Program: [registropublicodeemissoes.com.br](http://registropublicodeemissoes.com.br) (in Portuguese).



### CARBON CREDITS IN THE CORPORATE VEHICLE FLEET

We have been conducting our GHG emissions inventory in Scope 3 (indirect emissions) since 2011. Over the years, we have significantly evolved actions to engage our chain and identify initiatives to reduce these emissions with the support of areas such as Procurement, Logistics, Personnel Services, Information Technology, raw

material acquisition, and others.

In 2017, we began participating in an initiative to generate carbon credits by replacing gasoline with ethanol in our fleet of corporate vehicles. This action, conducted by the Sustainable Development and Personnel Services team, guarantees the generation of carbon credits if the ethanol supply

exceeds 95% in volume of the fleet supply mix.

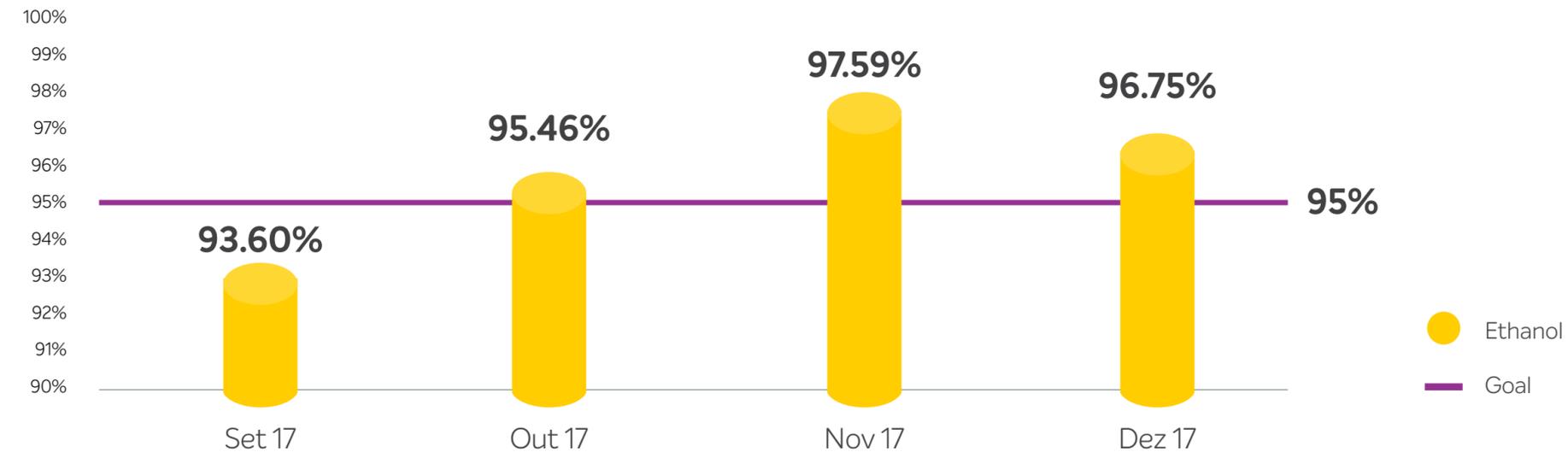
Braskem became eligible for the monitoring stage of this initiative when it reached ethanol supply over the required percentage (95%) in October. This achievement opens up the prospect of getting our first carbon credits in history as early as 2018.

### EMISSIONS IN LOGISTICS

In 2016, the Logistics area of the Polyolefins Business Unit, along with the Sustainable Development area, created a tool enabling practical and rapid measurement of Greenhouse Gas Emissions in the logistics transport of finished products.

In 2017, Braskem continued to monitor emissions from the logistics transport of finished products. For the year, we highlight the implementation of a monthly monitoring system for Greenhouse Gas (GHG) Emission indicators, carried out by the Sustainable Development area, in addition to the inclusion of the calculation of the increase and reduction of emissions in logistics initiatives. From now on, with the historical results from 2016 and 2017, actions will be taken towards a critical analysis and future identification of actions to reduce emissions.

### EVOLUTION OF THE ETHANOL SUPPLY INDICATOR IN THE FLEET



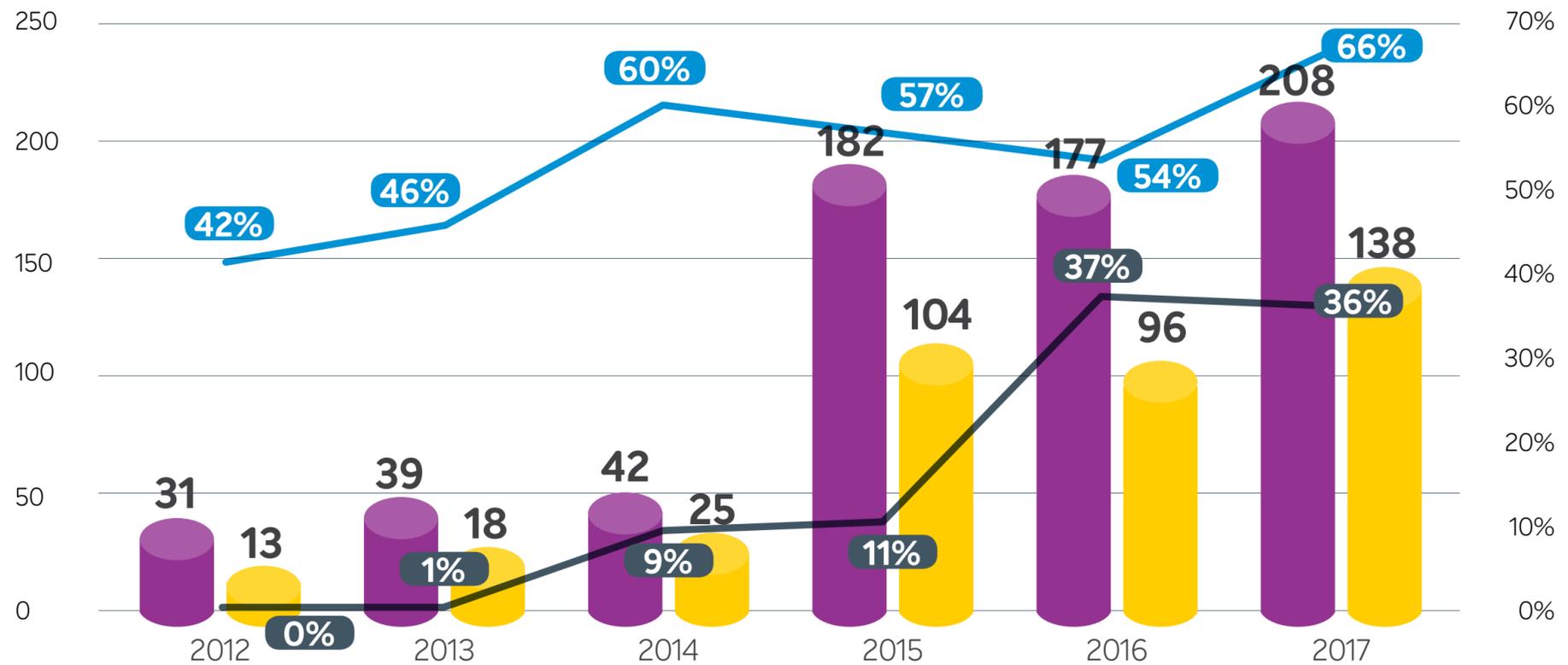
## SUPPLIER ENGAGEMENT IN CLIMATE CHANGE

For six years, we have developed, with suppliers, volunteer engagement initiatives focused on sustainability. In addition to helping us understand the impacts of our chain, this work is a way to positively influence our stakeholders on issues such as climate and water management.

To this end, we develop some initiatives annually with the support of the CDP Supply Chain program, such as awareness actions, incentive to developing and reporting emissions inventory, and identifying risks and opportunities. We then use the data reported by our Suppliers in order to evaluate their evolution and improve the management involving one or both companies, improve our relationship with these Suppliers, and increase the network of companies involved in sustainable actions.

As a result, in 2017, there was an increase in the number of Suppliers invited and engaged in the Climate and Water Supply programs. Due to the expansion of Braskem's Scope 3 report, it is noted that despite the increase in the percentage of Suppliers engaged through the program, the percentage of Scope 3 coverage remained stable.

SUPPLIER ENGAGEMENT - CLIMATE CHANGE



● Number of Suppliers invited  
● Number of Suppliers engaged

— % of Supplier adherence  
— % coverage of Scope 3



**OTHER EMISSIONS** [305-6, 305-7](#)

In addition to greenhouse gases, we also manage the emission of other types of substances associated with our production, such as nitrogen oxides (NO<sub>x</sub>) and sulfur oxides (SO<sub>x</sub>), Volatile Organic Compounds (VOCs), and others. In general, in 2017 they remained at the same levels. Special highlight for reduced SO<sub>x</sub> emissions, mainly impacted by coal burning below plan in Rio Grande do Sul.

EVOLUTION OF OZONE DEPLETING SUBSTANCES (ODS) EMISSIONS

| ODS*                      | 2013  | 2014 | 2015 | 2016 | 2017 |
|---------------------------|-------|------|------|------|------|
| Tons of CFC-11 Equivalent | 180.5 | 48.6 | 55.3 | 3.0  | 1.7  |

\* Not reported in the period.

EVOLUTION OF EMISSIONS OF SO<sub>x</sub>, NO<sub>x</sub>, AND OTHER SIGNIFICANT SUBSTANCES - t

| Emission *                 | 2013   | 2014   | 2015     | 2016  | 2017    |
|----------------------------|--------|--------|----------|-------|---------|
| NO <sub>x</sub>            | 12,157 | 11,421 | 9,546    | 9,651 | 10,509  |
| SO <sub>x</sub>            | 6,582  | 11,509 | 4,503    | 3,137 | 3,779   |
| Volatile Organic Compounds | 2,707  | 3,881  | 3,808    | 6,139 | 6,811** |
| Particulate Matter         | 1,547  | 1,225  | 911      | 860   | 911     |
| Toxic Air Pollutants ***   | 549    | 97     | 652**    | 531   | 677     |
| Other ****                 | 6,108  | 6,190  | 14,495** | 4,145 | 4,746   |

\* The methodologies used are recommended by state environmental agencies. Where there is no measurement, estimates (emission factors) based on recognized methods, such as AP-42 from USEPA, are used.

\*\* The plants have been broadening their assessments. This explains the increase in these parameters.

\*\*\* Includes Toxic Air Pollutants and HAP

\*\*\*\* Includes total hydrocarbons and carbon monoxide.

Even with the start of operation of Braskem Idesa in Mexico, and with the respective increase in production, there is stability and even a downward trend in the emission of some pollutants.

# SUMMARY OF GRI CONTENT STANDARDS



# Summary of GRI content standards 102-55

| GRI Standard                       | Disclosure                                                            | Page and/or disclosure                                                                                                                                                                                                                                                                                                                                                                             | Principles of the Global Compact |
|------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>GENERAL DISCLOSURES</b>         |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |
|                                    | 102-1 - Name of the organization                                      | 2                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |
|                                    | 102-2 - Activities, brands, products and services                     | 8                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |
|                                    | 102-3 - Location of headquarters                                      | 102                                                                                                                                                                                                                                                                                                                                                                                                |                                  |
|                                    | 102-4 - Location of operations                                        | 10                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
| GRI 102:<br>general<br>Disclosures | 102-5 - Ownership and legal form                                      | Braskem was formed in August 2002 by the merge of six Odebrecht Group companies and the Mariani Group. We are a publicly traded corporation with several industrial units in Brazil, the United States, Germany, and Mexico (through a joint venture with Idesa). Visit <a href="http://www.braskem-ri.com.br/ownership-structure">www.braskem-ri.com.br/ownership-structure</a> for more details. |                                  |
|                                    | 102-6 - Markets served                                                | 10                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
|                                    | 102-7 - Scale of the organization                                     | 10                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
|                                    | 102-8 - Information on employees and other workers                    | 45                                                                                                                                                                                                                                                                                                                                                                                                 | 6                                |
|                                    | 102-9 - Supply chain                                                  | 62                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
|                                    | 102-10 - Significant changes to the organization and its supply chain | There was no significant change during the period covered by the report.                                                                                                                                                                                                                                                                                                                           |                                  |

| GRI Standard                       | Disclosure                                                    | Page and/or disclosure | Principles of the Global Compact                                                                                                                                                                                                                                  |
|------------------------------------|---------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | 102-11 - Precautionary Principle or approach                  |                        | As a principle and in accordance with the Health, Safety, Environment, Quality, and Productivity Policy, Braskem does not produce, handle, use, market, transport, or dispose of any product if unable to do so safely, with a minimum impact on the environment. |
| GRI 102:<br>general<br>Disclosures | 102-12 - External initiatives                                 | 12, 13                 |                                                                                                                                                                                                                                                                   |
|                                    | 102-13 - Participation in associations                        | 12                     |                                                                                                                                                                                                                                                                   |
|                                    | 102-14 - Statement from senior decision-maker                 | 4 a 6                  |                                                                                                                                                                                                                                                                   |
|                                    | 102-16 - Values, principles, standards, and norms of behavior | 15                     | 10                                                                                                                                                                                                                                                                |
|                                    | 102-17 - Mechanisms for advice and concerns about ethics      | 21                     | 10                                                                                                                                                                                                                                                                |
|                                    | 102-18 - Governance structure                                 | 15                     |                                                                                                                                                                                                                                                                   |
|                                    | 102-23 - Chair of the highest governance body                 | 15                     |                                                                                                                                                                                                                                                                   |

| GRI Standard                 | Disclosure                                                          | Page and/or disclosure                                                                                                                                                                                                                                                                                                                                             | Principles of the Global Compact |
|------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                              | 102-40 - List of stakeholder groups                                 | Members (including Company leaders), Funders, Clients, Suppliers, Academia, Local Stakeholders (NGOs, Community, Trade Entities), Opinion Formers (Government, Press), and the General Public. Visit <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a> for more details.                          |                                  |
|                              | 102-41 - Collective bargaining agreements                           | 54                                                                                                                                                                                                                                                                                                                                                                 | 3                                |
| GRI 102: general Disclosures | 102-42 - Identifying and selecting stakeholders                     | The identification and selection of our stakeholders for engagement was based on groups that play a role of influencers, enablers, impacting, and benefited by the relationship with the Company. Visit <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a> for more details.                       |                                  |
|                              | 102-43 - Approach to stakeholder engagement                         | We periodically evaluate our relevant aspects in order to support our strategy to contribute to sustainable development. The most recent evaluation occurred in 2013, and will be renewed in 2018. Visit <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a> to learn about our materiality matrix. |                                  |
|                              | 102-44 - Key topics and concerns raised                             | <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a>                                                                                                                                                                                                                                                 |                                  |
|                              | 102-45 - Entities included in the consolidated financial statements | 25                                                                                                                                                                                                                                                                                                                                                                 |                                  |

| GRI Standard                                      | Disclosure                                                        | Page and/or disclosure                                                                                                                                                | Principles of the Global Compact |
|---------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                   | 102-46 - Defining report content and topic Boundaries             | <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a>                                                    |                                  |
|                                                   | 102-47 - List of material aspects                                 | <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a>                                                    |                                  |
|                                                   | 102-48 - Restatements of information                              | There was no significant change during the period covered by the report.                                                                                              |                                  |
|                                                   | 102-49 - Changes in reporting                                     | There was no significant change during the period covered by the report.                                                                                              |                                  |
|                                                   | 102-50 - Reporting period                                         | January 1 to December 31, 2017.                                                                                                                                       |                                  |
| GRI 102: general Disclosures                      | 102-51 - Date of most recent report                               | 2016                                                                                                                                                                  |                                  |
|                                                   | 102-52 - Reporting cycle                                          | Annual                                                                                                                                                                |                                  |
|                                                   | 102-53 - Contact point for questions regarding the report         | 102                                                                                                                                                                   |                                  |
|                                                   | 102-54 - Claims of reporting in accordance with the GRI Standards | This report was prepared in accordance with GRI Standards: Core option.                                                                                               |                                  |
|                                                   | 102-55 - GRI content index                                        | 94 a 101                                                                                                                                                              |                                  |
|                                                   | 102-56 - External assurance                                       | The external assurance, performed by KPMG, occurs at the request of the Leaders and is part of the set of annual goals of those responsible for preparing the report. |                                  |
| <b>MATERIAL TOPICS</b>                            |                                                                   |                                                                                                                                                                       |                                  |
| <b>ECONOMIC PERFORMANCE</b>                       |                                                                   |                                                                                                                                                                       |                                  |
| <b>Macro Goal: Economic and Financial Results</b> |                                                                   |                                                                                                                                                                       |                                  |
| GRI 103: Management Approach                      | 103-1 - Explanation of the material aspect and its Boundaries     | <a href="http://www.braskem.com.br/material-issues-assestement">www.braskem.com.br/material-issues-assestement</a>                                                    |                                  |
|                                                   | 103-2 - The management approach and its components                | 24 a 34                                                                                                                                                               |                                  |
|                                                   | 103-3 - Evaluation of the management approach                     | 24 a 34                                                                                                                                                               |                                  |

| GRI Standard                         | Disclosure                                                                             | Page and/or disclosure                         | Principles of the Global Compact |
|--------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| GRI 201: Economic performance        | 201-1 – Direct economic value generated and distributed                                | 24                                             |                                  |
|                                      | 201-2 – Financial implications and other risks and opportunities due to climate change | 86 a 92                                        | 7                                |
|                                      | 201-4 – Financial assistance received from government                                  | 69                                             |                                  |
| <b>MARKET PRESENCE</b>               |                                                                                        |                                                |                                  |
| <b>Macro Goal: Local development</b> |                                                                                        |                                                |                                  |
| GRI 103: Management Approach         | 103-1 – Explanation of the material aspect and its Boundaries                          | www.braskem.com.br/material-issues-assestement |                                  |
|                                      | 103-2 – The management approach and its components                                     | 43 a 54                                        |                                  |
|                                      | 103-3 – Evaluation of the management approach                                          | 43 a 54                                        |                                  |
| GRI 202: Market Presence             | 202-1 – Ratios of standard entry level wage by gender compared to local minimum wage   | 46                                             | 6                                |
|                                      | 202-2 – Proportion of senior management hired from the local community                 | 46                                             | 6                                |
| <b>INDIRECT ECONOMIC IMPACTS</b>     |                                                                                        |                                                |                                  |
| <b>Macro Goal: Local development</b> |                                                                                        |                                                |                                  |
| GRI 103: Management Approach         | 103-1 – Explanation of the material aspect and its Boundaries                          | www.braskem.com.br/material-issues-assestement |                                  |
|                                      | 103-2 – The management approach and its components                                     | 55 a 59                                        |                                  |
|                                      | 103-3 – Evaluation of the management approach                                          | 55 a 59                                        |                                  |
| GRI 203: Indirect Economic Impacts   | 203-1 – Infrastructure investments and services supported                              | 55 a 56                                        |                                  |

| GRI Standard                                  | Disclosure                                                                              | Page and/or disclosure                                         | Principles of the Global Compact |
|-----------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------|
| <b>PROCUREMENT PRACTICES</b>                  |                                                                                         |                                                                |                                  |
| <b>Macro Goal: Local development</b>          |                                                                                         |                                                                |                                  |
| GRI 103: Management Approach                  | 103-1 – Explanation of the material aspect and its Boundaries                           | www.braskem.com.br/material-issues-assestement                 |                                  |
|                                               | 103-2 – The management approach and its components                                      | 60 a 66                                                        |                                  |
|                                               | 103-3 – Evaluation of the management approach                                           | 60 a 66                                                        |                                  |
| GRI 204: Procurement Practices                | 204-1 – Proportion of spending on local suppliers                                       | 61                                                             |                                  |
| <b>ANTI-CORRUPTION</b>                        |                                                                                         |                                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                         |                                                                |                                  |
| GRI 103: Management Approach                  | 103-1 – Explanation of the material aspect and its Boundaries                           | www.braskem.com.br/material-issues-assestement                 |                                  |
|                                               | 103-2 – The management approach and its components                                      | 16 a 18                                                        |                                  |
|                                               | 103-3 – Evaluation of the management approach                                           | 16 a 18                                                        |                                  |
| GRI 205: Anti-corruption                      | 205-3 – Confirmed incidents of corruption and actions taken                             | There were no confirmed cases of corruption during the period. | 10                               |
| <b>ANTI-COMPETITIVE BEHAVIOR</b>              |                                                                                         |                                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                         |                                                                |                                  |
| GRI 103: Management Approach                  | 103-1 – Explanation of the material aspect and its Boundaries                           | www.braskem.com.br/material-issues-assestement                 |                                  |
|                                               | 103-2 – The management approach and its components                                      | 16 a 18                                                        |                                  |
|                                               | 103-3 – Evaluation of the management approach                                           | 16 a 18                                                        |                                  |
| GRI 206: Anti-competitive Behavior            | 206-1 – Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | Nothing to report. Braskem does not have any such process.     |                                  |

| GRI Standard                           | Disclosure                                                    | Page and/or disclosure                         | Principles of the Global Compact |
|----------------------------------------|---------------------------------------------------------------|------------------------------------------------|----------------------------------|
| <b>MATERIALS</b>                       |                                                               |                                                |                                  |
| <b>Macro Goal: Renewable resources</b> |                                                               |                                                |                                  |
| GRI 103:<br>Management Approach        | 103-1 - Explanation of the material aspect and its Boundaries | www.braskem.com.br/material-issues-assestement |                                  |
|                                        | 103-2 - The management approach and its components            | 58, 71 a 74, 85                                |                                  |
|                                        | 103-3 - Evaluation of the management approach                 | 58, 71 a 74, 85                                |                                  |
| GRI 301:<br>Materials                  | 301-1 - Materials used by weight or volume                    | 85                                             | 7, 8                             |
|                                        | 301-2 - Recycled input materials used                         | 85                                             | 8                                |
|                                        | 301-3 - Reclaimed products and their packaging materials      | 58                                             | 8                                |
| <b>ENERGY</b>                          |                                                               |                                                |                                  |
| <b>Macro Goal: Energy efficiency</b>   |                                                               |                                                |                                  |
| GRI 103:<br>Management Approach        | 103-1 - Explanation of the material aspect and its Boundaries | www.braskem.com.br/material-issues-assestement |                                  |
|                                        | 103-2 - The management approach and its components            | 71 a 74, 83 a 84                               |                                  |
|                                        | 103-3 - Evaluation of the management approach                 | 71 a 74, 83 a 84                               |                                  |
| GRI 302:<br>Energy                     | 302-1 - Energy consumption within the organization            | 83 a 84                                        | 7, 8                             |
|                                        | 302-3 - Energy intensity                                      | 83 a 84                                        | 8                                |
|                                        | 302-4 - Reduction of energy consumption                       | 83 a 84                                        | 8, 9                             |

| GRI Standard                                  | Disclosure                                                                                                                            | Page and/or disclosure                                                                                        | Principles of the Global Compact |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>WATER</b>                                  |                                                                                                                                       |                                                                                                               |                                  |
| <b>Macro Goal: Water efficiency</b>           |                                                                                                                                       |                                                                                                               |                                  |
| GRI 103:<br>Management Approach               | 103-1 - Explanation of the material aspect and its Boundaries                                                                         | www.braskem.com.br/material-issues-assestement                                                                |                                  |
|                                               | 103-2 - The management approach and its components                                                                                    | 71 a 74, 79 a 82                                                                                              |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                                                         | 71 a 74, 79 a 82                                                                                              |                                  |
| GRI 303: Water                                | 303-1 - Water withdrawal by source                                                                                                    | 79 a 82                                                                                                       | 7, 8                             |
|                                               | 303-3 - Water recycled and reused                                                                                                     | 79 a 82                                                                                                       | 8                                |
| <b>BIODIVERSITY</b>                           |                                                                                                                                       |                                                                                                               |                                  |
| <b>Macro Goal: Strengthening of practices</b> |                                                                                                                                       |                                                                                                               |                                  |
| GRI 103:<br>Management Approach               | 103-1 - Explanation of the material aspect and its Boundaries                                                                         | www.braskem.com.br/material-issues-assestement                                                                |                                  |
|                                               | 103-2 - The management approach and its components                                                                                    | 71 a 74                                                                                                       |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                                                         | 71 a 74                                                                                                       |                                  |
| GRI 304:<br>Biodiversity                      | 304-2 - Significant impacts of activities, products, and services on biodiversity                                                     | In 2017, there were no significant impacts on biodiversity (valid for Mexico, where this aspect is material). | 8                                |
|                                               | 304-4 - IUCN Red List species and national conservation list species with habitats in areas affected by the organization's operations | Two species (Ceratozamia miqueliana and Zamia loddigesii).                                                    | 8                                |
| <b>EMISSIONS</b>                              |                                                                                                                                       |                                                                                                               |                                  |
| <b>Macro Goal: Energy efficiency</b>          |                                                                                                                                       |                                                                                                               |                                  |
| GRI 103:<br>Management Approach               | 103-1 - Explanation of the material aspect and its Boundaries                                                                         | www.braskem.com.br/material-issues-assestement                                                                |                                  |
|                                               | 103-2 - The management approach and its components                                                                                    | 71 a 74, 86 a 92                                                                                              |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                                                         | 71 a 74, 86 a 92                                                                                              |                                  |

| GRI Standard          | Disclosure                                                                                                        | Page and/or disclosure | Principles of the Global Compact |
|-----------------------|-------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------|
| GRI 305:<br>Emissions | 305-1 - Direct (Scope 1) GHG emissions                                                                            | 86 a 92                | 7, 8                             |
|                       | 305-2 - Energy indirect (Scope 2) GHG emissions                                                                   | 86 a 92                | 7, 8                             |
|                       | 305-3 - Other indirect (Scope 3) GHG emissions                                                                    | 86 a 92                | 7, 8                             |
|                       | 305-4 - GHG emissions intensity                                                                                   | 86 a 92                | 8                                |
|                       | 305-5 - Reduction of GHG emissions                                                                                | 86 a 92                | 8, 9                             |
|                       | 305-6 - Emissions of ozone-depleting substances (ODS)                                                             | 86 a 92                | 7, 8                             |
|                       | 305-7 - Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions | 86 a 92                | 7, 8                             |

**EFFLUENTS AND WASTE**

**Macro Goal: Safety**

|                                 |                                                               |                                                |   |
|---------------------------------|---------------------------------------------------------------|------------------------------------------------|---|
| GRI 103:<br>Management Approach | 103-1 - Explanation of the material aspect and its Boundaries | www.braskem.com.br/material-issues-assestement |   |
|                                 | 103-2 - The management approach and its components            | 71 a 74, 79 a 82, 85                           |   |
|                                 | 103-3 - Evaluation of the management approach                 | 71 a 74, 79 a 82, 85                           |   |
| GRI 306:<br>Effluents and waste | 306-1 - Water discharge by quality and destination            | 79 a 82                                        | 8 |
|                                 | 306-2 - Waste by type and disposal method                     | 85                                             | 8 |

**ENVIRONMENTAL COMPLIANCE**

**Macro Goal: Strengthening of Practices**

|                                 |                                                               |                                                |  |
|---------------------------------|---------------------------------------------------------------|------------------------------------------------|--|
| GRI 103:<br>Management Approach | 103-1 - Explanation of the material aspect and its Boundaries | www.braskem.com.br/material-issues-assestement |  |
|                                 | 103-2 - The management approach and its components            | 16 a 18, 71 a 74                               |  |
|                                 | 103-3 - Evaluation of the management approach                 | 16 a 18, 71 a 74                               |  |

| GRI Standard                         | Disclosure                                                     | Page and/or disclosure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Principles of the Global Compact |
|--------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| GRI 307:<br>Environmental Compliance | 307-1 - Non-compliance with environmental laws and regulations | Nothing to report. We had assessments during the period, both environmental and regulatory; however, the Company was not definitively ordered to pay fines or to comply with non-monetary sanctions during the period in question. For the purpose of this report, the same materiality criteria used in the Reference Form established by the Brazilian Securities and Exchange Commission ("CVM") was adopted, pursuant to CVM Instruction 480/2009 BRL 60 million. For environmental issues, the amount of BRL 10 million was considered. | 8                                |

**SUPPLIER ENVIRONMENTAL ASSESSMENT**

**Macro Goal: Strengthening of Practices**

|                                               |                                                                       |                                                |   |
|-----------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------|---|
| GRI 103:<br>Management Approach               | 103-1 - Explanation of the material aspect and its Boundaries         | www.braskem.com.br/material-issues-assestement |   |
|                                               | 103-2 - The management approach and its components                    | 71 a 74, 60 a 66                               |   |
|                                               | 103-3 - Evaluation of the management approach                         | 71 a 74, 60 a 66                               |   |
| GRI 308:<br>Supplier Environmental Assessment | 308-1 - New suppliers that were screened using environmental criteria | 60 a 66                                        | 8 |

**EMPLOYMENT**

**Macro Goal: Economic and Financial Results**

|                                 |                                                               |                                                |  |
|---------------------------------|---------------------------------------------------------------|------------------------------------------------|--|
| GRI 103:<br>Management Approach | 103-1 - Explanation of the material aspect and its Boundaries | www.braskem.com.br/material-issues-assestement |  |
|                                 | 103-2 - The management approach and its components            | 43 a 54                                        |  |

| GRI Standard                          | Disclosure                                                                                                 | Page and/or disclosure                                                                                                                                                                                                                                                                                                                                                                      | Principles of the Global Compact |
|---------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| GRI 103: Management Approach          | 103-3 - Evaluation of the management approach                                                              | 43 a 54                                                                                                                                                                                                                                                                                                                                                                                     |                                  |
|                                       | 401-1 - New employee hires and employee turnover                                                           | 47, 51 a 52                                                                                                                                                                                                                                                                                                                                                                                 | 6                                |
|                                       | 401-2 - Benefits provided to full-time employees that are not provided to temporary or part-time employees | 53                                                                                                                                                                                                                                                                                                                                                                                          |                                  |
| GRI 401: Employment                   | 401-3 - Parental leave                                                                                     | In Brazil, we track the number of maternity leaves and the percentage of termination up to one year after returning from the leave. In 2017, of the 69 Members who took maternity leave, 61 remained in the company after one year, a return rate of 88%. The paternity leave indicator is not monitored. In other countries where we have operations, this indicator is not yet monitored. | 6                                |
| <b>OCCUPATIONAL HEALTH AND SAFETY</b> |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                             |                                  |
| <b>Macro Goal: Safety</b>             |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                             |                                  |
| GRI 103: Management Approach          | 103-1 - Explanation of the material aspect and its Boundaries                                              | www.braskem.com.br/material-issues-assestement                                                                                                                                                                                                                                                                                                                                              |                                  |
|                                       | 103-2 - The management approach and its components                                                         | 71 a 74, 75                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
|                                       | 103-3 - Evaluation of the management approach                                                              | 71 a 74, 75                                                                                                                                                                                                                                                                                                                                                                                 |                                  |

| GRI Standard                                  | Disclosure                                                                                                                            | Page and/or disclosure                         | Principles of the Global Compact |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| GRI 403: Occupational Health and Safety       | 403-2 - Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities | 74                                             |                                  |
|                                               | 403-4 - Health and safety topics covered in formal agreements with trade unions                                                       | 54                                             |                                  |
| <b>TRAINING AND EDUCATION</b>                 |                                                                                                                                       |                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                                                                       |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries                                                                         | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components                                                                                    | 43 a 54                                        |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                                                         | 43 a 54                                        |                                  |
| GRI 404: Training and Education               | 404-2 - Programs for upgrading employee skills and transition assistance programs                                                     | 53                                             |                                  |
|                                               | 404-3 - Percentage of employees receiving regular performance and career development reviews                                          | 50-52                                          | 6                                |
| <b>DIVERSITY AND EQUAL OPPORTUNITY</b>        |                                                                                                                                       |                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                                                                       |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries                                                                         | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components                                                                                    | 43 a 54                                        |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                                                         | 43 a 54                                        |                                  |

| GRI Standard                                  | Disclosure                                                                                       | Page and/or disclosure                         | Principles of the Global Compact |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| GRI 405: Diversity and equal opportunity      | 405-1 - Diversity of governance bodies and employees                                             | 45, 47 a 50                                    | 6                                |
| <b>NON-DISCRIMINATION</b>                     |                                                                                                  |                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                                  |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries                                    | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components                                               | 21 a 22                                        |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                    | 21 a 22                                        |                                  |
| GRI 406: Non-discrimination                   | 406-1 - Incidents of discrimination and corrective actions taken                                 | 21 a 22                                        | 6                                |
| <b>LOCAL COMMUNITIES</b>                      |                                                                                                  |                                                |                                  |
| <b>Macro Goal: Local development</b>          |                                                                                                  |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries                                    | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components                                               | 55 a 59, 71 a 74, 76 a 77                      |                                  |
|                                               | 103-3 - Evaluation of the management approach                                                    | 55 a 59, 71 a 74, 76 a 77                      |                                  |
| GRI 413: Local Communities                    | 413-1 - Operations with local community engagement, impact assessments, and development programs | 56 a 59                                        | 1                                |
|                                               | 413-2 - Operations with significant actual and potential negative impacts on local communities   | 71, 76 a 77                                    | 1                                |

| GRI Standard                                  | Disclosure                                                     | Page and/or disclosure                         | Principles of the Global Compact |
|-----------------------------------------------|----------------------------------------------------------------|------------------------------------------------|----------------------------------|
| <b>SUPPLIER SOCIAL ASSESSMENT</b>             |                                                                |                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries  | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components             | 60 a 66                                        |                                  |
|                                               | 103-3 - Evaluation of the management approach                  | 60 a 66                                        |                                  |
| GRI 414: Supplier Social Assessment           | 414-1 - New suppliers that were screened using social criteria | 60 a 66                                        | 2                                |
| <b>PUBLIC POLICIES</b>                        |                                                                |                                                |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries  | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components             | 69                                             |                                  |
|                                               | 103-3 - Evaluation of the management approach                  | 69                                             |                                  |
| GRI 415: Public Policy                        | 415-1 - Political contributions                                | Zero                                           | 10                               |
| <b>CUSTOMER HEALTH AND SAFETY</b>             |                                                                |                                                |                                  |
| <b>Macro Goal: Safety</b>                     |                                                                |                                                |                                  |
| GRI 103: Management Approach                  | 103-1 - Explanation of the material aspect and its Boundaries  | www.braskem.com.br/material-issues-assestement |                                  |
|                                               | 103-2 - The management approach and its components             | 71 a 74, 78                                    |                                  |
|                                               | 103-3 - Evaluation of the management approach                  | 71 a 74, 78                                    |                                  |

| GRI Standard                                  | Disclosure                                                                                            | Page and/or disclosure                                                                                                                                                                 | Principles of the Global Compact |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| GRI 416: Customer Health and Safety           | 416-1 – Assessment of the health and safety impacts of product and service categories                 | 78                                                                                                                                                                                     |                                  |
|                                               | 416-2 – Incidents of non-compliance concerning the health and safety impacts of products and services | 78                                                                                                                                                                                     |                                  |
| <b>MARKETING AND LABELING</b>                 |                                                                                                       |                                                                                                                                                                                        |                                  |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                                       |                                                                                                                                                                                        |                                  |
| GRI 103: Management Approach                  | 103-1 – Explanation of the material aspect and its Boundaries                                         | www.braskem.com.br/material-issues-assestement                                                                                                                                         |                                  |
|                                               | 103-2 – The management approach and its components                                                    | 78                                                                                                                                                                                     |                                  |
|                                               | 103-3 – Evaluation of the management approach                                                         | 78                                                                                                                                                                                     |                                  |
| GRI 417: Marketing and Labeling               | 417-1 – Requirements for product and service information and labeling                                 | 78                                                                                                                                                                                     |                                  |
|                                               | 417-2 – Incidents of non-compliance concerning product and service information and labeling           | 78                                                                                                                                                                                     |                                  |
|                                               | 417-3 – Incidents of non-compliance concerning marketing communications                               | Zero. The Company declares non-existence of non-compliance with regulations and voluntary codes regarding marketing communications, including advertising, promotion, and sponsorship. |                                  |

| GRI Standard                                  | Disclosure                                                                       | Page and/or disclosure                         | Principles of the Global Compact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SOCIOECONOMIC COMPLIANCE</b>               |                                                                                  |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Macro Goal: Strengthening of Practices</b> |                                                                                  |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| GRI 103: Management Approach                  | 103-1 – Explanation of the material aspect and its Boundaries                    | www.braskem.com.br/material-issues-assestement |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | 103-2 – The management approach and its components                               | 16 a 18                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | 103-3 – Evaluation of the management approach                                    | 16 a 18                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| GRI 419: Socioeconomic Compliance             | 419-1 – Non-compliance with laws and regulations in the social and economic area |                                                | Braskem had assessments during the period, both environmental and regulatory; however, the Company was not definitively ordered to pay fines or to comply with non-monetary sanctions during the period in question. For the purpose of this report, the same materiality criterion used in the Reference Form established by the Brazilian Securities and Exchange Commission (“CVM”) was adopted, pursuant to CVM Instruction 480/2009 BRL 60 million. For environmental issues, the amount of BRL 10 million was considered. |

## LIMITED ASSURANCE REPORT ISSUED BY INDEPENDENT AUDITORS

To the Board of Directors, Shareholders and Stakeholders

### **Braskem S.A.**

São Paulo – SP

### **Introduction**

We have been engaged by Braskem S.A. (Braskem or “Company”) to apply limited assurance procedures on the sustainability information disclosed in Braskem’s Annual and Sustainability Report 2017, related to the year ended December 31st, 2017.

### **Responsibilities of Braskem’s Management**

The Management of Braskem is responsible for adequately preparing and presenting the sustainability information in the Annual and Sustainability Report 2017 in accordance with the Standards for Sustainability Report of Global Reporting Initiative –GRI, as well as the internal controls determined necessary to ensure this information is free from material misstatement, resulting from fraud or error.

### **Independent auditors’ responsibility**

Our responsibility is to express a conclusion about the information in the Annual and Sustainability Report 2017 based on a limited assurance engagement conducted in accordance with Technical Communication (TC) 07/2012,

which was prepared based on NBC TO 3000 (Assurance Engagements Other Than Audits and Reviews), both issued by the Brazilian Federal Accounting Council – CFC and equivalent to international standard ISAE 3000, issued by the International Federation of Accountants and applicable to Non-Financial Historical Information. These standards require compliance with ethical requirements, including independence ones, and the engagement is also conducted to provide limited assurance that the information disclosed in the Braskem’s Annual and Sustainability Report 2017, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with NBC TO 3000 (ISAE 3000) consists mainly of questions and interviews with the Management of Braskem and other professionals of the Company involved in the preparation of the information disclosed in the Annual and Sustainability Report 2017 and use of analytical procedures to obtain evidence that enables us to reach a limited assurance conclusion about the sustainability information taken as a whole. A limited assurance engagement also requires additional procedures when the independent auditor acknowledges issues which may lead them to believe that the information disclosed in the Annual and Sustainability Report 2017 taken as a whole could present material misstatement.



KPMG Financial Risk & Actuarial Services Ltda.

Rua Arquiteto Olavo Redig de Campos, 105, 6º andar – Torre A

04711-904 – São Paulo/SP – Brasil

Caixa Postal 79518 – CEP 04707-970 – São Paulo/SP – Brasil

Telefone +55 (11) 3940-1500, Fax +55 (11) 3940-1501

www.kpmg.com.br

The selected procedures were based on our understanding of the issues related to the compilation, materiality and presentation of the information disclosed in the Annual and Sustainability Report 2017, on other engagement circumstances and also on our considerations regarding areas and processes associated with material sustainability information disclosed where relevant misstatement could exist. The procedures consisted of:

- (a) Engagement planning: considering the material aspects for Braskem's activities, the relevance of the information disclosed, the amount of quantitative and qualitative information and the operational systems and internal controls that served as a basis for preparation of the information in the Braskem's Annual and Sustainability Report 2017. This analysis defined the indicators to be checked in details;
- (b) Understanding and analysis of disclosed information related to material aspects management;
- (c) Analysis of preparation processes of the Annual and Sustainability Report 2017 and its structure and content, based on the Principles of Content and Quality of the Standards for sustainability report of the Global Reporting Initiative - GRI (GRI-Standards);
- (d) Evaluation of non financial indicators selected:

- Understanding of the calculation methodology and procedures for the compilation of indicators through interviews with management responsible for data preparation;
- Application of analytical procedures regarding data and interviews for qualitative information and their correlation with indicators disclosed in the Annual and Sustainability Report 2017;
- Analysis of evidence supporting the disclosed information;
- Visits to three Braskem's operations and to the corporate office for application of these procedures, and items (b) and (c);

- (e) Analysis of whether the performance indicators omission and justification are reasonable to be accepted associated to aspects and topics defined as material in the materiality analysis of the Company;

- (f) Comparison of financial indicators with the financial statements and/or accounting records.

We believe that the information, evidence and results we have obtained are sufficient and appropriate to provide a basis for our limited assurance conclusion.

**Scope and limitations**

The procedures applied to a limited assurance engagement are substantially less extensive than those applied to a reasonable assurance engagement. Therefore, we cannot provide reasonable

assurance that we are aware of all the issues that would have been identified in a reasonable assurance engagement, which aims to issue an opinion. If we had conducted a reasonable assurance engagement, we may have identified other issues and possible misstatements within the information presented in the Annual and Sustainability Report 2017.

Nonfinancial data is subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate or estimate these data. Qualitative interpretation of the data's materiality, relevance and accuracy are subject to individual assumptions and judgments. Additionally, we have not examined data related to prior periods, to evaluate the adequacy of policies, practices and sustainability performance, nor future projections.

**Conclusion**

Based on the procedures carried out, described earlier in this report, we have not identified any relevant information that leads us to believe that the information in the 2017 Annual and Sustainability Report of Braskem is not fairly stated in all material aspects in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards), as well as its source records and files.

São Paulo, May 18th, 2018  
KPMG Assessores Ltda.  
CRC SP 034262/F

**Eduardo V. Cipullo**  
Accountant CRC 1SP135597/O-6

KPMG Financial Risk & Actuarial  
Services Ltda.

**Ricardo Algis Zibas**

## CREDITS

### Vice President of People, Business Communication, Marketing, and Sustainable Development

Marcelo Arantes

### Director of Corporate Communication

André Vieira

### Director of Sustainable Development

Jorge Soto

### Corporate Communication Supervision

Amanda Moscardini

### Sustainable Development Supervision

Mario Pino

Luiz Carlos Xavier

### Analysis of Indicators, Project Development, and Content Production

Keyassociados

### Graphic Design and Layout

Magenta•Lab

### Assurance

KPMG

### Photos

Acervo Braskem

### Translation

Gotcha! Idiomas



For more information about this report,  
please contact [imprensa@braskem.com](mailto:imprensa@braskem.com)

**102-53**



### Headquarters - Office

Odebrecht Building - Rua Lemos Monteiro, 120

Butantã - São Paulo (SP)

ZIP CODE: 05501-050

**102-3**

