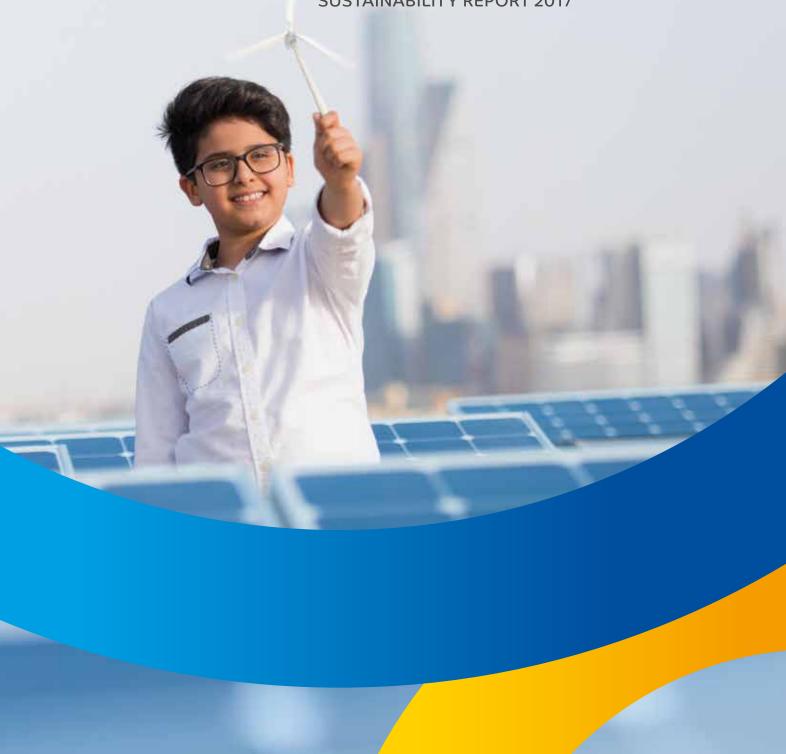


# BUILDING A BETTER FUTURE

**SUSTAINABILITY REPORT 2017** 



SABIC is a publicly traded, global leader in diversified chemicals with a Global Headquarters in Riyadh, Saudi Arabia. We manufacture on a global scale and have five key geographies with innovation hubs in the United States, Europe, the Middle East, Southeast Asia, and Northeast Asia. We are ranked among the world's largest petrochemicals manufacturers.

Seventy percent of the company's shares are owned by the Saudi government, with the remaining 30 percent traded on the Saudi stock exchange. Since SABIC began in 1976, we have grown rapidly and globally, with operations today in more than 50 countries and a global workforce of more than 34,000 talented individuals. Our materials help our customers to build a better future in key end markets - construction, medical devices, packaging, agri-nutrients, electrical and electronics, transportation, and clean energy. Our materials provide the building blocks for building a better future through 'Chemistry that Matters™'.

## **CONTENTS**

Overview	
Overview	2
Materiality	3
Chairman's Welcome	4
Vice Chairman and CEO's Statement	6
About SABIC	
Strategy	10
Engagement and Collaboration	12
Ethics and Compliance	16
Sustainability Governance	18
Performance Summary	19
Accountability for Goals	20
Innovation and Sustainability Solu	tions
Our Approach	24
Our Performance	25
Inventing and Improving Processes	26
Collaboration	27
Key Markets	28
Looking Forward	31
Resource and Energy Efficiency	
Our Approach	34
Our Performance	35
Greenhouse Gas	36
Energy	38
Water	39
Material Loss	40
Looking Forward	41

Our Approach	4
Our Performance	45
Building an EHSS Culture: Operations	40
Product Stewardship	50
Looking Forward	53
Developing Human Capital	
Our Approach and Performance	56
Our Workforce	58
Diversity, Inclusion and Collaboration	60
Looking Forward	63
Supply Chain and Procurement	
Our Approach	66
Our Performance	6
Sustainable Supply Chains	68
Sustainable Procurement	72
Looking Forward	73
Social Impacts and Community Relationships	
Our Approach	70
	7
Our Performance	
Our Performance Improving our Communities	78
Improving our Communities	78 83





Aaking progress on our

Independent Auditor



Unique process safety



**Enabling Saudi Vision** 2030 through human

resources



through employee



Next-generation vessels for the supply chain

## **OVERVIEW**

#### THIS IS SABIC



34,000+

employees including 1,400 scientists



50

countries of operation with Global Headquarters in Saudi Arabia



5

key geographies with innovation hubs in the Middle East, the United States, Europe, Southeast Asia, and Northeast Asia



11,534

patent portfolio filings

#### **OUR CORE MARKETS**



4<sub>TH</sub>

4th largest chemical company with 7 core markets

#### **CLEAN ENERGY**



TRANSPORTATION



#### MEDICAL DEVICES



ELECTRICAL AND ELECTRONICS



#### PACKAGING



AGRI-NUTRIENTS



#### CONSTRUCTION



→ Find out about our core businesses in our Annual Report from page 30

#### SUSTAINABILITY IN OUR VALUE CHAIN

#### UPSTREAM



Lower-carbon or renewable feedstocks

#### OPERATIONS



Resource efficiency and energyreduction projects; operational excellence

#### CUSTOMERS



Materials that enable lower energy for processing

#### USE PHASE



Energy savings or reduced material to meet consumer needs

#### END OF LIFE



Chemistry to enable recycling; developing technology to promote circular economy

## MATERIALITY

SABIC's sustainability strategy is guided by a materiality analysis to ensure that resources target the most important issues for our stakeholders and business success.

We approach the five most material sustainability issues in three key ways:

- Design the pillars of our sustainability strategy and prioritize goals and metrics to measure performance.
- Guide the focus of stakeholder engagement.
- Frame the structure and content of sustainability reporting.

Our most recent materiality analysis occurred in 2013, and since then we have developed metrics and reported on progress for our top five material issues. The SABIC Sustainability Council recommended that we also report on social and community relationships because these activities are important to key stakeholders and demonstrate the value that SABIC adds by engaging with and caring for communities.

We will refresh our materiality analysis in 2018. The process will include sector benchmarking and a review of global sustainability megatrends – including the United Nations' Sustainable Development Goals (SDGs), the Paris Agreement and Saudi Arabia's Vision 2030 – to develop a master list of material issues to evaluate against

our business and stakeholder needs. We will use impact pathway analysis, impact valuation, and analysis of value at risk to inform how we prioritize our material issues. Throughout the process, we will consider the priorities of our global leaders as well as our external key stakeholders to ensure focus on issues of highest priority to both groups. Historically, priorities have been approved by the SABIC Sustainability Council and in 2018 will be presented for approval to the Sustainability and Risk Committee.

So far, we have participated in several SDG workshops with peers under the World Business Council for Sustainable Development and other initiatives to evaluate the goals and select those – after our materiality assessment – that are most relevant for SABIC. We will publish an SDG roadmap in 2018.

The results of this assessment will be published in the next sustainability report and incorporated into SABIC's sustainability strategy over the coming years. We invite our stakeholders to contact us at SustainabilityFeedback@sabic.com to be considered for involvement in the process.

#### SABIC'S MOST MATERIAL SUSTAINABILITY ISSUES

RESOURCE AND ENERGY EFFICIENCY



INNOVATION AND SUSTAINABILITY SOLUTIONS



EHSS



HUMAN CAPITAL DEVELOPMENT



SUPPLY CHAIN





#### IMPRESSIVE YEAR-ON-YEAR GROWTH

NET INCOME (US\$ bn) SALES (US\$ bn)

4.9 2016: 4.8bn

20

**39.9** 2016: 35.4bn

86 2016: 84.5bn

ASSETS

(US\$ bn)

SABIC SUSTAINABILITY REPORT 2017

overview 05

## CHAIRMAN'S WELCOME



#### DR. ABDULAZIZ SALEH ALJARBOU

Chairman

When I took the role of Chairman this year, I was encouraged to see how far SABIC had come on its sustainability journey. SABIC has made efforts to put sustainable development at its core by making it a foundational element of its 2025 strategy, leading the region in sustainability reporting, and implementing major projects in areas such as carbon dioxide capture and utilization.

The year 2017 has been an important one for SABIC and the wider chemical industry. After a number of challenging years, a degree of stabilization has led to encouraging results and a more positive outlook. This improved macro-economic environment has been enhanced by SABIC's transformation process, which has made SABIC more agile and brought it closer to its customers. SABIC has been able to make progress in 2017 in part because of financial benefits from our sustainability program, which reduces operating costs and results in solutions that are attractive and beneficial for customers.

We have been keen to keep our sustainability strategy on track with clear and achievable goals faithfully implemented by our dedicated employees. We create the solutions that can provide the answers to global challenges, such as growing

demand for houses, vehicles, and food – while reducing impact on our overstressed ecosystem. From lighter and stronger materials that increase fuel efficiency to fertilizers that increase crop-yields to plastics that reduce the spread of infection, we strive to create 'Chemistry that Matters'.

As a provider of sustainable solutions, the petrochemical industry is very important to the wider economy. Our products enable success in markets as diverse as electrical and electronics, healthcare, clean energy, transportation, construction, medical devices, and packaging. Our materials - that can be lighter, more durable, or cheaper to manufacture, among other benefits create wealth for businesses and communities wherever we operate in the world – and Saudi Arabia, where SABIC started, is no exception. We have always been at the center of Saudi industrial development and we will continue to be a main driver of Saudi Vision 2030, the government's ambitious plan for national growth. The vision's three themes of a vibrant society, a thriving economy, and an ambitious nation closely align with our Sustainability program's three main dimensions - the economy, society, and the environment.

SABIC – through its 2025 strategy – has a strong blueprint for growth; it is imperative that we build new plants that enable this growth with the most efficient technology, design, and site integration. This report features a combined heat and power cogeneration plant in Mt. Vernon, Indiana – fully commissioned this year – that provides 80 percent of electricity and steam demand while eliminating the use of coal at that site. Projects such as this are milestones on the path to our 2025 goals.

We create the solutions that can provide the answers to global challenges, such as growing demand for houses, vehicles, and food – while reducing impact on our overstressed ecosystem.

We understand the ever-increasing stakeholder expectations, therefore we will continue to progress on ethics and compliance and build the best global business systems and processes. We must do this while competing for talent by building strong leaders and skills across our workforce; fostering high performance through diversity, learning, and development; and benefiting society. SABIC cannot achieve its ambitions to be an industry leader without success in these and the many other areas covered in this report.

It is a great honor to introduce this year's Sustainability Report, the seventh snapshot of SABIC's unique and groundbreaking journey in this important field.

**SABIC**SUSTAINABILITY REPORT 2017

overview 0 /

## VICE CHAIRMAN AND CEO'S STATEMENT



#### YOUSEF ABDULLAH AL-BENYAN

Vice-Chairman and Chief Executive Officer

As SABIC continues progress towards achieving the goals of its 2025 strategy with confidence, sustainability guides our strategy for long-term success in a changing and challenging world. I am pleased to report continued positive progress on the journey to build business value through a sustainability-driven approach.

Sustainability aligns with our core values and ambitions to be the preferred global leader in petrochemicals. It provides a way to meet our economic growth targets while maintaining sensitivity to environmental and social needs – and it promotes operating with strong ethics and a solid governance structure. SABIC knows that this balance of benefits and impacts – and a deep and healthy connection with customers, stakeholders, and communities – is essential to our business success. This is not just economics – it is common sense, and what SABIC calls 'Chemistry that Matters'".

Our commitment to the health and sustainability of our communities is expressed at the global level by our recognition of the ten principles of the United Nations Global Compact and its 17 Sustainable Development Goals. This year, we reaffirmed our commitment and identified the Sustainable Development Goals most relevant to our business where we can have the most impact on important

global issues. Our annual Communication on Progress, integrated into this report, reflects our commitment to advancing labor, environmental protection, anti-corruption, and sustainable innovation and development.

We continued to progress on resource and energy efficiency by developing energy-efficiency experts, optimizing processes, and implementing our Global Energy Policy. Optimization of the CO<sub>2</sub>-utilization process at our United affiliate will continue to positively affect our greenhouse-gas and materialloss results." We continue progress toward our 2025 goals on greenhouse-gas, energy, water, and material-loss intensities, and will continue to innovate and persevere to reach these targets.

In supply chain, we continued to measure our performance, benchmark with the industry, and develop safer and more-efficient modes of transportation, including increasing the number of vessels powered by natural gas and ethane.

People come first at SABIC: we never compromise on environment, health, safety, and security and nurture a strong culture to keep our people and employees and communities safe. Our improved performance this year was driven by building expertise in all regions, learning from incident-analysis, and an extensive external review to help develop our management systems.

In the areas of building talents and competencies, we continued to empower our employees to be the future decision-makers through wide-ranging skill-development and mentoring programs. The SABIC Leadership Way program is helping to create a dynamic and inclusive leadership culture that will build the talent SABIC needs to catalyze our success.

Our commitment to the health and sustainability of our communities is expressed at the global level by our recognition of the ten principles of the United Nations Global Compact and its 17 Sustainable Development Goals.

Technology and innovation is our growth engine – increasing the resource efficiency of our processes and making more differentiated and sustainable products to meet our customer needs in a world with limited resources. New sustainable areas of growth include water solutions that mitigate water stress and resins for emerging technologies such as additive manufacturing applications. These resins have strong potential to reduce waste and materials needed and lead to complete product re-designs.

These are just a few examples of the many exciting projects in this year's report. All of the hard work that went into these achievements will drive forward our growth and relationships with customers in the communities where we operate. We promise to continue this work and create the solutions that will build a better future for the world.



## STRATEGY

We have built our success on a combination of strong performance and comprehensive collaboration with internal and external stakeholders, and our customers – to understand their challenges and meet their needs amidst changing global markets.

Through our dedication to sustainability, we accelerate resource and energy efficiency, develop innovative solutions to global challenges, attract and inspire high-performing talent, create maximum long-term value for our stakeholders, and transform our company to thrive in tomorrow's world.

As a global chemical company with a strong growth agenda, our strategy and operations are shaped by megatrends including population growth, rapid urbanization, and changing mobility. These create both business risks and opportunities, such as the global need for clean energy, infrastructure, efficient transportation, effective healthcare, greater connectivity across geographies, a circular economy, and much more. Since 2009, our sustainability program has guided us to consistently improve our performance while addressing these trends, and we continue to refine our collaborative approach to accelerate positive change.

Our strategy is guided by these global trends as well as changing societal expectations in our key geographies. For example, Saudi Arabia's Vision 2030 offers the country an ambitious blueprint for sustainable growth, and as the largest publicly traded company in Saudi Arabia, we have shaped our say corporate 2025 strategy to enable the success of the country's Vision 2030. SABIC's business success will support the country's goals by meeting our strong growth projections, encouraging diversification downstream of the chemical sector, increasing the skill level and competitiveness of local industries, and strengthening the local knowledge-economy through key technology investments.

As a global company, SABIC has embraced the United Nations' Sustainable Development Goals (SDGs) as fundamental to our continued business success. In 2018, we will refresh our materiality approach to better align our priorities and approach with the SDGs, continuing a process that began in 2016 to map the SDGs to our company-wide sustainability approach. SABIC is well-positioned to impact these goals around the world: our projected growth will bring economic advancement and decent jobs to our key markets, our Agri-Nutrients business provides innovative inputs that increase the global food supply and decrease hunger, and our water-management solutions help our customers provide reliable, clean water supplies.

Our business both depends on and impacts four key financial and non-financial types of capital: economic, natural, social, and human. Maximizing sustainability business value requires us to consider each of these strategically. SABIC is on a continuous journey toward integrated thinking that considers dependencies and impacts for each of these capitals and their effect on the company and our stakeholders. We do this through valuation methods, such as a socio-economic impact study in Saudi Arabia (see case study).

In the face of a volatile business climate, SABIC is becoming more agile and cost efficient and better prepared for business environment changes. One such change is the transition to the Saudi stock exchange Tadawul, which enables SABIC stock to be traded more extensively globally, offering us access to a wider range of investors and greater global visibility. We are paying close attention to increased investor expectations around sustainability, such as through the Task Force on Climate-related Financial Disclosures, which may influence our future reporting on climate impacts. We have designed our sustainability efforts to identify opportunities, reduce risks, and improve resilience to direct and inspire company transformation.

#### **CASE STUDY**

#### SABIC SOCIO-ECONOMIC IMPACT IN SAUDI ARABIA

This year, SABIC advanced our integratedthinking journey by conducting a study of the socio-economic impact of our business in Saudi Arabia. Our objectives were to quantitatively study our historical impacts and identify potential areas to increase our contribution. We focused our study on three areas - economicvalue add, human capital improvement, and SABIC's role as a catalyst for change – and included assessment of 18 indicators. The study revealed that SABIC added economic value through contributions to Saudi Arabia's direct, indirect, and induced gross domestic product, as well as through value generated for investors, economic diversification, and innovation. Our business improved the country's human capital

through direct, indirect, and induced employment – and improving skills, leadership qualities, and diversity. As a catalyst for change, SABIC has increased transparency and international standards, developed private enterprise, improved innovation, and led in environment, health, safety and security (EHSS).

Through our work on this study, we have learned a great deal about our social-capital valuation and how to showcase the business benefit of quantifying "non-financial" impacts. We plan to annually track these indicators and report them internally to maintain the understanding of our positive impacts over time.



jobs created in Saudi Arabia (direct, indirect, and induced)



employee value from learning and development programs



Cocal spend for material and

services



Kingdom Tower in the heart of Riyadh, Saudi Arabia.

12 SABIC SUSTAINABILITY REPORT 2017

## ENGAGEMENT AND COLLABORATION

SABIC is one of the world's largest chemical companies, operating in 50 countries. As a result, our business has a wide range of potential impacts upon a great number of stakeholders; we believe it is our responsibility to consider these relationships in our performance.

### FOUR MAIN OBJECTIVES GUIDE SABIC'S STAKEHOLDER ENGAGEMENT:

- Identify our primary stakeholders and sources of accountability.
- Understand our effect on stakeholders and their priorities.
- 3 Discover new ways to collaborate and create value.
- 4 Establish best tools for stakeholder engagement.

We weave stakeholder engagement throughout our sustainability program, and leaders from the company are engaged as the program relates to their business needs.

#### **CIRCULAR ECONOMY AT SABIC**

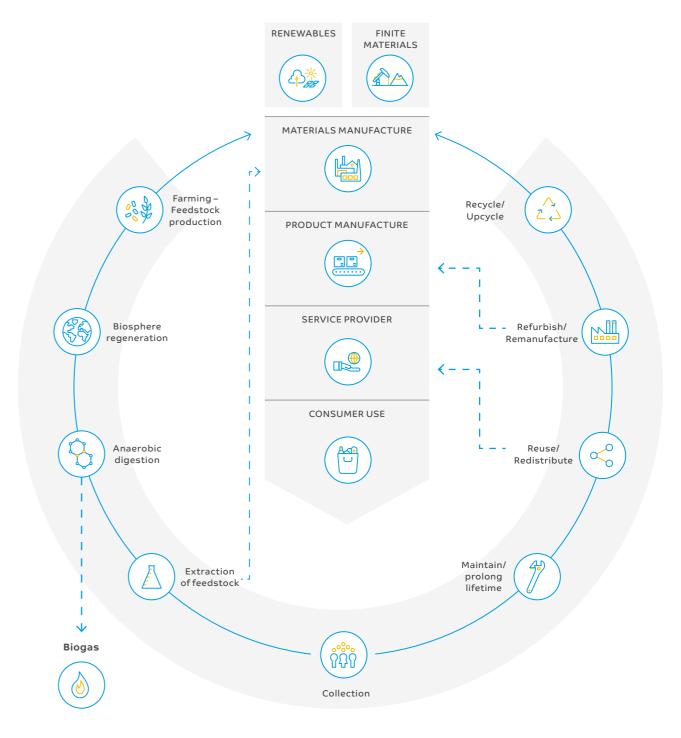
The circular economy is the idea that using renewables, conserving finite resources, and reducing waste by reusing, repurposing, and recycling materials wherever possible provides business benefits while also protecting the environment and human health. SABIC has seen first-hand the benefits of circular-economy projects, and we are committed to increasing the efficiency of our resource use and applying circular principles throughout our operations and product design.

One example of our circular economy work involves reusing operational wastes at our United affiliate's  $CO_2$  plant in Saudi Arabia. This unit – the world's largest such facility – captures and purifies up to 500,000 metric tons of  $CO_2$  waste per year, recirculating it for use as a manufacturing feedstock for valuable products including urea, methanol, and liquid  $CO_2$  for the food industry.

Our customers are increasingly enthusiastic about circular-economy solutions. SABIC is one of the first chemical companies to offer both renewable polyethylene (PE) and polypropylene (PP) that do not compete with the food chain. Using renewable feedstock reduces the amount of fossil fuel depletion compared to polyolefin created from fossil feedstocks, such as naphtha. We will continue to use circular-economy principles to evaluate potential business opportunities and to drive lifecycle and integrated thinking (see diagram).

ABOUT SABIC 13

#### CIRCULAR ECONOMY IN PRACTICE



## ENGAGEMENT AND COLLABORATION continued

### THE CARBON SEQUESTRATION LEADERSHIP FORUM

The Carbon Sequestration Leadership Forum (CSLF) is a ministerial-level international climate-change initiative consisting of 25 national governments and the European Commission that focuses on developing cost-effective technologies for carbon capture, utilization, and storage (CCUS). The organization promotes awareness and champions legal, regulatory, financial, and institutional environments that support sequestration projects.

Saudi Arabia has been a member of the CSLF since 2005, and SABIC supports the forum in a number of ways. This year, we organized a regional stakeholder-engagement workshop, convening stakeholders from the Gulf Cooperation Council and South Africa to discuss the technical economic and political challenges that limit deployment of CCUS.

We encourage and demonstrate the potential of CCUS through advocacy and projects such as our United affiliate's CO<sub>2</sub> capture and reuse plant in Saudi Arabia.

Through our participation in the CSLF, we bring home the latest global innovations in carbon capture and sequestration to shape our strategic direction.

#### MISSION INNOVATION

Connected to the Carbon Sequestration Leadership Forum is Mission Innovation, a global initiative to accelerate public and private clean-energy innovation to address climate change, make clean energy affordable to consumers, and create green jobs and commercial opportunities.

Saudi Arabia is one of 23 members of Mission Innovation (22 countries plus the European Union) taking action to double their public clean-energy research-and-development investment over five years. Members share information, collaborate on clean-energy innovations, and coordinate with businesses and investors to drive public- and private-sector investments in clean energy, particularly focused on early-stage emerging technologies.

Saudi Arabia serves as a co-leader, alongside the United States, of Mission Innovation's Carbon Capture Innovation Challenge, which aims to enable near-zero CO<sub>2</sub> emissions from power plants and carbon-intensive industries. Within this challenge, SABIC researchers have been involved in technical



Above: The United manufacturing affiliate's CO<sub>2</sub> capture and utilization plant in Jubail, Saudi Arabia.

discussions focused on novel technologies to use waste CO<sub>2</sub> and generate carbon-free hydrogen. We expect to publish a report in early 2018 that identifies the priority research directions for this challenge.

By participating in this initiative, SABIC keeps up to date with the latest innovations in carbon capture and utilization, which will help inform our own innovation strategy and forward momentum.



monitor operations from plant control room.



Above: Maximizing energy efficiency helps to reduce SABIC's greenhouse-gas intensity.

#### **CLEAN DEVELOPMENT MECHANISM**

In March this year, SABIC's Al-Bayroni affiliate in Jubail, Saudi Arabia, earned the country's first carbon credits under the United Nations' Clean Development Mechanism (CDM). The project involved rehabilitating boilers in the facility to maximize energy efficiency and significantly reduce the use of fossil fuels. SABIC earned 53,000 carbon credits from the UN after the project reduced greenhouse gas emissions by 53,000 metric tons in its first year of operations. It is the first CDM project to deliver UN carbon credits in Saudi Arabia.

SABIC's efforts to bring this project to fruition reflect our commitment to the global fight against climate change, as well as to Saudi Arabia's Vision 2030, sustainable development, and environmental protection.

## ETHICS AND COMPLIANCE

Our commitment to ethics and compliance is fundamental to our ability to create value, support the communities in which we operate, and protect our reputation. Operating with integrity is something we strive to do every day to earn and keep stakeholder trust, and it is one of our most important values.



Above: The United Nations office in Geneva,

At the core of operating with integrity is our SABIC Code of Ethics, which is our framework for ensuring compliance with applicable laws and regulations around the world. Our management approach to ethical conduct is to adhere to our Code of Ethics corporate governance structures, policies, and processes in the most transparent manner possible. The most senior executives and governing bodies set a tone of compliance and ethical conduct from the top. In order to equip all of our leaders to be compliance champions, we held a series of Compliance Leadership Workshops at our sites around the world. In 2017, over 800 of our business leaders participated in these three-hour sessions designed to impart the skills needed for ethical leadership.

Additional highlights of our compliance and ethics programs in 2017 include completing compliance and risk-mitigation reviews for 34 executive leaders

and their businesses or functional units, and conducting a company-wide integrity-culture assessment to allow data-driven planning to continue strengthening the cultural aspects of our program.

As a major company based in Saudi Arabia, SABIC's compliance obligations are not only to our employees and direct stakeholders, but to the wider region as well. It is our responsibility to disseminate compliance practices in the region in order to create a more level, ethical playing field and to foster investor confidence. Accordingly, this year, SABIC's compliance program was featured in publications such as Compliance and Ethics Professional, the Foreign Corrupt Practices Act Report, and Ethisphere Magazine. We used these opportunities to explain our program and to offer suggestions and guidance to other companies on their compliance journeys.

It is our responsibility to disseminate compliance practices in the region in order to create a more level, ethical playing field and to foster investor confidence.

Also this year, SABIC joined 101 businesses from 19 countries and the European Union at the annual Business 20 (B20) Summit in Berlin under the German presidency of the group of the world's 20 largest economies (G20). The B20 is the official G20 dialogue with the global business community. This elite group of companies provided guidance to G20 leaders on advancing a future-focused, resilient, and sustainable economy. Since 2012, SABIC has been active in the B20's anti-corruption group, and this year participated in the newly launched cross-thematic group on Responsible Business Conduct and Anti-Corruption, which seeks to set international standards on compliance, beneficial ownershiptransparency, and responsible business conductin infrastructure projects.

#### **HUMAN RIGHTS/UNGC**

As a UN Global Compact Member, SABIC is engaged with the UN's Sustainable Development Goals and integrating them into our business model. Goal 17, "Partnerships for the Goals," fits into our sustainability plans as we continue to refine our Supplier Due Diligence Program and to engage our suppliers in global cooperation in all stages of the value chain. With Goal 17, developing multistakeholder partnerships to share knowledge, expertise, technology and financial support is seen as critical to overall success of the SDGs. We have taken this into account in the roll-out of our Supplier Due Diligence Program by using it as an opportunity to teach our suppliers in the Middle East about compliance concepts and to help them to build their own compliance capacities. With specific regard to human rights in the supply chain, we registered 6,128 suppliers in our Due Diligence Program and directed additional human rights due diligence on 975 suppliers. This gives us the added assurance that our suppliers understand our human rights expectations and are willing to comply with them.

SUSTAINABILITY REPORT 2017

## SUSTAINABILITY GOVERNANCE

We designed our sustainability governance structure to allow our sustainability expertise to reach leaders across every level of SABIC.

Our Corporate Sustainability department reports directly to our Corporate Affairs function – a structure that accelerates the pace of change by facilitating communication of progress and enabling closer relationships with external stakeholders. Making our sustainability communications frequent and clear helps us to inspire employees and embed sustainability into the company culture.

Sustainability at SABIC is led by our Sustainability Council, an executive committee chaired by the Vice-Chairman and CEO, and supported by 10 senior executive leaders. The Sustainability Council is responsible for the overall performance of the dimensions of sustainability, defining our sustainability vision and goals, and making final decisions on recommendations developed by the Sustainability Steering Committee. This year, we added sustainability to the scope and title of the Board of Directors Risk Committee, emphasizing its importance to our business as a whole. The Sustainability General Manager routinely reports on sustainability progress to the Risk and Sustainability Committee.

Our internal businesses and functions are ultimately responsible for leading progress on the goals created by the Sustainability Council. Each organization appoints a sustainability champion to lead the process, and those leaders work alongside our Corporate Sustainability department in expert sub-teams to advance SABIC's sustainability process and strategy. Our process to implement internal carbon pricing offers an example of the real impact of this structure. A cross-functional working group first developed a proposal to embed carbon pricing into large capital projects, which was then reviewed by Corporate Sustainability. Corporate Sustainability approved and delivered the proposal to the Steering Committee, and then to the council. The council approved the final carbon-pricing proposal and assigned implementation actions to Corporate Finance to put the pricing into effect.

Sustainability goals set by the council are embedded into several executive compensation schemes, which helps to ensure performance against the goals and incorporation of our economic, environmental, and societal impacts into our business priorities.

#### SUSTAINABILITY GOVERNANCE



ABOUT SABIC 19

## PERFORMANCE SUMMARY

REPORT SECTION	UNIT	2013	2014	2015	2016	2017
ETHICS + INTEGRITY						
Compliance concerns raised <sup>1</sup>	Number	131	117	123*	94*	114*
Incidents closed <sup>1</sup>	Number	129	106	103*	94*	97*
Violations found (addressed) <sup>1</sup>	Number	54	42	56*	52*	58*
Training completion <sup>1</sup>	Percent	97	98	98*	99*	99*
INNOVATION AND SUSTAINABILITY SO	DLUTIONS					
Total patent portfolio	Number	9,791	10,640	10,960	12,191	11,534
Sustainability solutions	Cumulative number	32	45	68	78	82
Innovation project sustainability assessments	Number	719	812	767	587	Discontinued
RESOURCE AND ENERGY EFFICIENCY						
Greenhouse-gas emission intensity	tCO <sub>2</sub> eq/t product sales	1.32*	1.28*	1.25*	1.24*	1.23*
Energy intensity	GJ/t product sales	17*	17*	17*	17*	17*
Water intensity	m³/t product sales	2.8*	2.7*	2.6*	2.6*	2.7*
Material-loss intensity	t/t product sales	0.109*	0.099*	0.086*	0.072*	0.078*
Flaring reduction compared to 2010 <sup>2</sup>	Percent	30	49	40	55*	43*
	AATH +	2.5	2.7	3.3	3.6*	3.5*
HUMAN CAPITAL DEVELOPMENT	Million t					
CO <sub>2</sub> utilization  HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs	Percent of workforce Participants	7.9 NA	7.8 NA	7.9	7.7	7.2 24,944
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE	Percent of workforce Participants ELATIONSHIPS	7.9 NA	7.8 NA	7.9 30,835	7.7 31,062	7.2 24,944
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs	Percent of workforce Participants	7.9	7.8	7.9	7.7	7.2
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE	Percent of workforce Participants ELATIONSHIPS	7.9 NA	7.8 NA	7.9 30,835	7.7 31,062	7.2 24,944
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving  SUPPLY CHAIN  Safety and Quality Assessment	Percent of workforce Participants ELATIONSHIPS	7.9 NA	7.8 NA	7.9 30,835	7.7 31,062	7.2 24,944
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving	Percent of workforce Participants  ELATIONSHIPS  Million US\$	7.9 NA	7.8 NA	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global	Percent of workforce Participants  ELATIONSHIPS  Million US\$  Percent of suppliers	7.9 NA NA	7.8 NA 32.7	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving  SUPPLY CHAIN  Safety and Quality Assessment  System – liquids	Percent of workforce Participants  ELATIONSHIPS  Million US\$  Percent of suppliers  Percent of suppliers	7.9 NA NA	7.8 NA 32.7	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global Procurement Due Diligence Program  Suppliers with additional GPDDP	Percent of workforce Participants  ELATIONSHIPS Million US\$  Percent of suppliers  Percent of suppliers  Number	7.9 NA NA	7.8 NA 32.7	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5 100 93 7,000
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global Procurement Due Diligence Program  Suppliers with additional GPDDP requirements	Percent of workforce Participants  ELATIONSHIPS  Million US\$  Percent of suppliers  Percent of suppliers  Number  Number	7.9 NA NA	7.8 NA 32.7	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5 100 93 7,000 1,110
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global Procurement Due Diligence Program  Suppliers with additional GPDDP requirements  Suppliers audited according to GPDDP	Percent of workforce Participants  ELATIONSHIPS  Million US\$  Percent of suppliers  Percent of suppliers  Number  Number	7.9 NA NA	7.8 NA 32.7	7.9 30,835 53.9	7.7 31,062 46.4	7.2 24,944 57.5 100 93 7,000 1,110
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE  Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global Procurement Due Diligence Program  Suppliers with additional GPDDP requirements  Suppliers audited according to GPDDP  ENVIRONMENT, HEALTH, SAFETY, AND  EHSS rate 3	Percent of workforce Participants  ELATIONSHIPS Million US\$  Percent of suppliers  Percent of suppliers  Number  Number  Number	7.9 NA NA	7.8 NA 32.7 NA	7.9 30,835 53.9 100 39	7.7 31,062 46.4 100 69	7.2 24,944 57.5 100 93 7,000 1,110 9
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RE Total community giving  SUPPLY CHAIN  Safety and Quality Assessment System – liquids  SQAS – solids  Suppliers registered through Global Procurement Due Diligence Program  Suppliers with additional GPDDP requirements  Suppliers audited according to GPDDP  ENVIRONMENT, HEALTH, SAFETY, AND EHSS rate 3  Total Recordable Incident Rate	Percent of workforce Participants  ELATIONSHIPS Million US\$  Percent of suppliers  Percent of suppliers  Number  Number  Number  Number  Incidents/200,000 hours worked	7.9 NA NA NA	7.8 NA 32.7 NA NA	7.9 30,835 53.9 100 39	7.7 31,062 46.4 100 69	7.2 24,944 57.5 100 93 7,000 1,110 9
HUMAN CAPITAL DEVELOPMENT  Women in the workplace  Learning programs  SOCIAL IMPACTS AND COMMUNITY RETOTAL COMMUNITY RET	Percent of workforce Participants  ELATIONSHIPS Million US\$  Percent of suppliers  Percent of suppliers  Number  Number  Number  Number  Incidents/200,000 hours worked  Incidents/200,000 hours worked	7.9 NA NA NA NA	7.8 NA 32.7 NA NA 0.69* 0.19*	7.9 30,835 53.9 100 39 0.48* 0.13*	7.7 31,062 46.4 100 69 0.63* 0.14*	7.2 24,944 57.5 100 93 7,000 1,110

<sup>\*</sup> Assured by KPMG.

Compliance data are reported for the 23,500 employees of Saudi Basic Industries Corporation and its wholly-owned affiliates, but not for employees of SABIC's non-wholly owned manufacturing joint ventures (or affiliates) in the Kingdom of Saudi Arabia.

<sup>&</sup>lt;sup>2</sup> Flaring reduction calculations are based on reduction of greenhouse-gas emissions.

This is a severity-weighted rating.

20 SABIC SUSTAINABILITY REPORT 2017

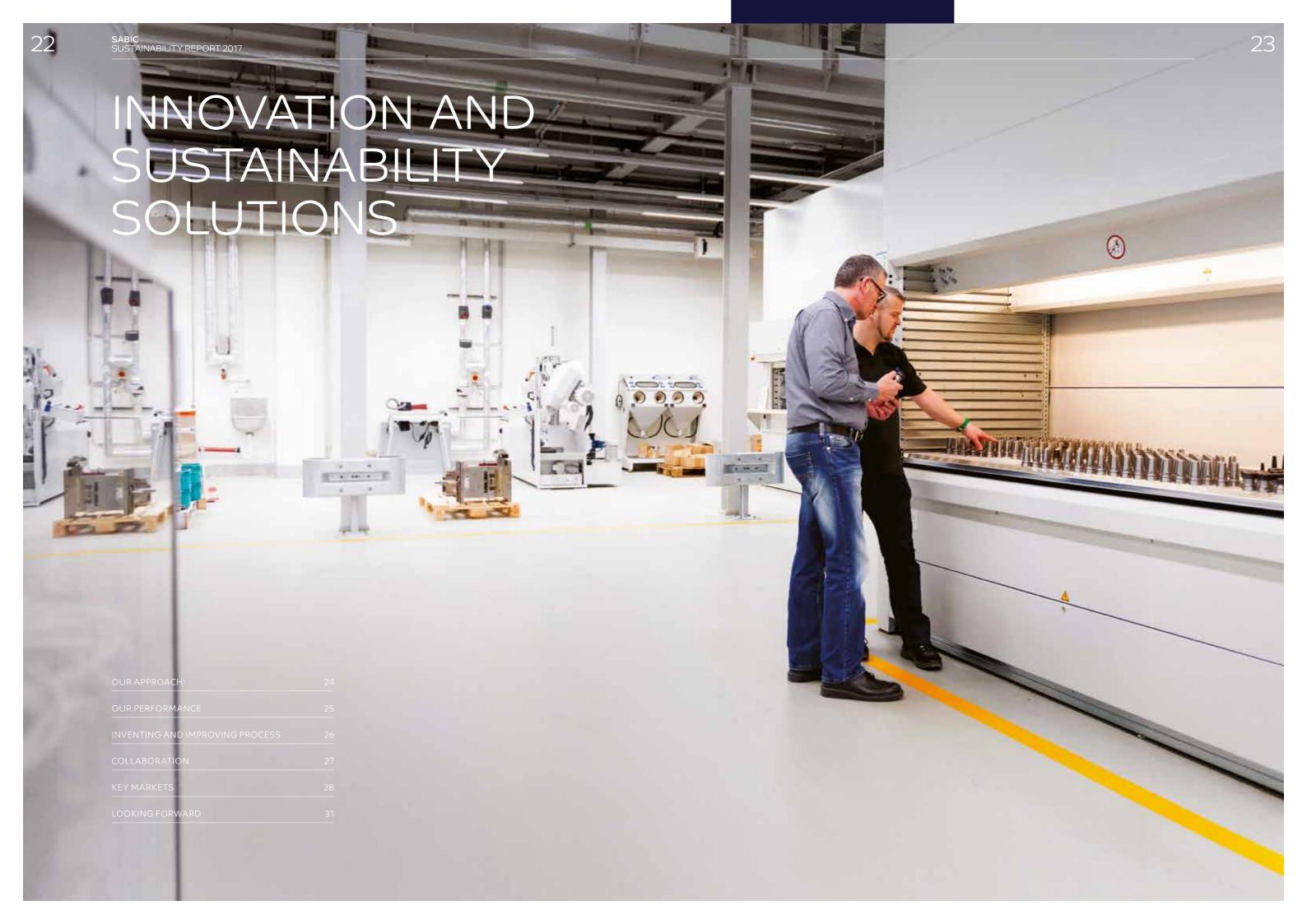
## ACCOUNTABILITY FOR GOALS

HIGH PRIORITY ACTIONS	2017 STATUS	NEXT STEPS 2018
SUSTAINABILITY STRATEGY AND	VISION	
Integrate sustainability into corporate programs	Educated internally on the business value of Sustainable Development Goals (SDGs); Embedded socio-economic valuation results into Saudi Local Content program	Key focus areas will be circular economy, materiality refresh, and incorporating SDG priorities into the business
Align sustainability and financial reports	Issuing the Sustainability Report by the Annual General Meeting provided access to financial stakeholders	Complete materiality assessment refresh; transition to Global Reporting Initiative standards
INNOVATION AND SUSTAINABILIT	TY SOLUTIONS	
Grow sustainability product solutions	Qualified four solutions <sup>1</sup> ; Implemented revised qualification criteria; commercial Portfolio Sustainability Assessment (PSA) pilots work moved to 2018 due to organizational changes and business priorities	Complete two PSA pilots and validate applicability of industry process; idetnify key improvements needed in PSA process and tools; assess feasbility to scale PSA to rest of the Petrochemicals and Specialty business units
Build sustainability innovation pipeline	Development of sustainability product key performance indicators (KPIs) delayed due to postponment of PSA pilots: it is important to have a reliable and scalable PSA process prior to KPI development	Take steps to engage technology and business teams to accelerate integration of sustainability principles in initial stages of technology development and enable sustainability-solutions pipeline growth
RESOURCE AND ENERGY EFFICIE	NCY	
Capital investments to reduce footprint	Of 11 assets in total, seven have already applied High Selectivity Catalyst (HSC), with the last affiliate implementing HSC in Q2-2017; the remaining four assets have ongoing projects in initial stages	Multi-year project implementation of high selectivity catalysts
By-product and CO <sub>2</sub> utilization	Modifications enabled the $\rm CO_2$ utilization plant to reach full capacity once a new source of $\rm CO_2$ becomes available in 2020	Further optimize CO <sub>2</sub> purification plant and maximize utilization
DEVELOPING HUMAN CAPITAL		
Transforming Human Resources to be business-centric and strategic	Launched the new HR model; established strategic workforce planning platform	Continue progress on organizational optimization; focus on strategic workforce planning

ABOUT SABIC 2

HIGH PRIORITY ACTIONS	2017 STATUS	NEXT STEPS 2018
BUILDING SOCIAL AND COMMUN	ITY RELATIONSHIPS	
Implement global Corporate Social Responsibility strategy	Progressed on tracking system for volunteer hours	Implement tracking volunteer system; start SABIC Environmental Caravan in Q4; launch SABIC Science Caravan globally
Human rights; socio-economic valuation	Continued on social valuation efforts; completed SDG priority-mapping	Incorporate identified SDGs into our strategic objectives through a wide range of measures, including messaging, targets, and partnership and initiative selection
SUPPLY CHAIN		
Supply Chain Logistics	Consolidated reporting tool on sustainability performance, which allows predicting the impact of new efforts	Analyze carbon footprint reduction opportunities such as the switch from truck to rail using the new supply-chain tool
Supplier assessment process	Raised the bar for the sustainability of our supplier networks	Build support for our sustainability targets into every contract we sign
EHSS		
Transform global EHSS program to achieve targets	Launched the SHEMS+ project and conducted in-depth assessments at nine SABIC and affiliate sites	Develop initiatives for SHEMS+ based on 2017 learnings, and implement enhanced risk discovery and mitigation tools
Implement long-term Product Stewardship strategy	Increased engagement on research and development projects to identify sustainable chemistry risks and opportunities	Further develop and launch a new product-stewardship incident classification and management system

<sup>&</sup>lt;sup>1</sup> Advisory panel review pending.



## **OUR APPROACH**

SABIC's commitment to innovation has strongly supported our sustainability efforts through the years. As we strive to foster sustainability-driven innovation throughout our business, we reap the benefits in improved economic performance, reduced environmental and climate impacts, and faster, more agile product-creation and improvement-processes and on top of that creating positive societal impact.

We focus our approach to innovation on four key themes:

- Developing and delivering new process technologies.
- Building strong collaborations to achieve scale and improve speed-to-market.
- Creating product solutions to meet our customers' changing needs.
- Developing new business opportunities.

A key part of SABIC's strategy for process optimization and development, and product design, is to innovate with our expertise in chemistry and engineering to make our operations more energy and resource efficient, creating more economic value while producing less waste and fewer emissions.

SABIC's collaborations enable us to offer more sustainable and robust solutions to the innovation challenges faced by our customers. We invest in their success over the long term, growing deep relationships at every stage of the value chain. These partnerships make us more agile and more responsive to market trends – and to our customers' dynamic needs. In this report, we feature some successful solutions in our core markets. They are a fraction of SABIC's innovation in 2017

At SABIC, we believe that innovation and sustainability go hand in hand, with innovation fueling greater sustainability, and greater sustainability fueling better business performance. To sustain this outcome and accelerate our economic growth, SABIC launched an integrated Innovation and Business Development function in 2017.

## CUSTOMER COLLABORATION CASE STUDY HDPE PIPES FOR AQUACULTURE FARMING

Aquaculture – raising fish in pens – has great promise for feeding the world's growing population. Through close collaboration between SABIC's business development and technology teams and marine-fishery R&D company Goldbill Aquatech Engineering, we have brought SABIC's innovative solutions into the aquaculture industry.

Goldbill is using our P6006 series HDPE grades for the floating pipe and major structural components of their anti-wave plastic fishing cages; The company has estimated that these materials have a 15-year lifespan, significantly more than the three- to five-year lifespan of a traditional wooden cage. Using HDPE brings superior structural strength, durability, and easy weldability, which is particularly important for offshore farms that face rough seas and high UV solar radiation. HDPE cages also replace the foam flotation materials used in traditional cages, which tend to break apart and pollute the ocean. At the end of their useful lives, our HDPE cages can easily be recovered and potentially disassembled for recycling or reuse in other purposes.

## OUR PERFORMANCE

#### 2017 HIGHLIGHTS

- Qualified four new sustainability solutions.<sup>1</sup>
- Assessed the sustainability benefits and risks of more than 80 innovation projects.
- Introduced a new, high-performance synthetic-rubbers portfolio for outdoor applications, including SABIC® EPDM (ethylene propylene diene monomer), SABIC® BR (polybutadiene) and SABIC® PIB (polyisobutylene), which enable excellent durability and weather resistance of final products.
- Launched several disruptive materialsolutions such as THERMOCOMP™ Additive Manufacturing compounds based on acrylonitrilebutadiene-styrene (ABS), polyphenylene ether(PPE), polycarbonate (PC) and Polyetherimide (PEI) resins for large-format additive manufacturing that can produce oversized complex parts with speed and precision by optimizing material use and improving process efficiency, drawing on our extensive expertise in material chemistries, formulations, production, and part printing.



Above: SABIC's unique materials drive growth in additive manufacturing.

#### PERFORMANCE METRICS <sup>2</sup>

TOTAL PATENT PORTFOLIO 3

NEW PATENT FILINGS IN 2017 TOTAL SUSTAINABILITY SOLUTIONS

11,534

424

82

#### Notes

- Advisory panel review pending
- In 2017, we discontinued our innovation and Sustainability Portfolio metric. This metric, started in 2013, was intended to drive the adoption of sustainability principles and thinking in SABIC's innovation process. However, sustainability assessment is now fully embedded and embraced by SABIC's business units. We are now focusing on accelerating the integration of sustainability into our technology strategy and ideation process, starting with the initial stages of product development. We will revisit the tool and process to improve further its quality of assessment and ease of use. In 2018, we plan to collect feedback from our internal stakeholders.
- <sup>3</sup> 2017 patent portfolio number (11,534) is lower due to SABIC's decision to drop off more than 1,000 patents that no longer add strategic value, resulting in savings of around US\$2 million in patent-maintenance fees. Further, the drop in new patent filings is primarily because of the strategic decision to file patents on projects that are business critical and at an advanced stage.

## INVENTING AND IMPROVING PROCESSES

This year, SABIC continued implementing innovative technologies to increase asset productivity and efficiency. We achieved a number of notable improvements, particularly through online optimization of plants, yield improvement, anti-coking tube technology, and high-emissivity coating applications.

An example of our process-innovation successes is the ongoing program to implement highly selective catalysts for glycol plants, offering a way to reduce carbon dioxide process emissions by up to 30 percent. By the end of the year, we used this catalyst in six of our ten glycol plants. Complete rollout by 2020 will reduce SABIC's annual emissions by about 450,000 metric tons.

Our research and development investigates novel catalysts and processes to improve resource and energy efficiency in our key chemical processes. These catalysts can reduce operating temperatures, save energy, and increase the volume of desired olefins such as ethylene.

This year, we had the first successful implementation of Big Data coupled with advanced modeling techniques in our operations. These solutions led to improvement in fuel use, reduction in greenhouse-gas emissions and improvement in plants performance.

### EXPERT FURNACE SYSTEM OPTIMIZATION PROCESS

The key technology used to produce steel at SABIC's Hadeed affiliate is the electric arc furnace, which continuously melts directly reduced iron. By injecting oxygen and carbon during melting – providing chemical energy in addition to the main energy source of electricity – we accelerate the process. Historically, the plant has used assumptions about facility conditions to determine how much chemical energy to use, even though conditions varied from batch to batch.

This year, Hadeed piloted a new expert furnace system optimization process (EFSOP) that uses the instantaneous analysis of exiting fumes to offer dynamic, real-time control and optimization of the furnace. Through EFSOP, the plant has been able to reduce the furnace's energy consumption by 1.5 percent and improve productivity by 4 percent – results that exceeded our expectations. SABIC is monitoring the long-term performance of this new process and exploring the possibility of its implementation in up to five more electric arc furnaces.

#### **CASE STUDY**

#### AWARD-WINNING TECHNOLOGY COOPERATION IN CHINA

This year, SABIC was honored to receive the first-ever International Technology Cooperation Award, established by the China Petroleum and Chemical Industry Federation (CPCIF) to recognize individuals and organizations for their contributions to the technological development of China's petroleum and chemical industries.

The award recognizes the efforts of SABIC Technology Center in Shanghai, which led international cooperation between SABIC and

Chinese academia initiated in 2013. Our technology collaborations cover the entire SABIC product portfolio from feedstock to polymerization to advanced materials. Our major partners include the Dalian Institute of Chemical Physics, part of the Chinese Academy of Sciences, for catalyst and processing; Zhejiang University for the polymerization of differentiated polyolefin products; and the Hong Kong University of Science and Technology for advanced materials development through nanotechnology.

## COLLABORATION

SABIC continues to collaborate with world leaders from both industry and academia. The following are a few examples of these collaborative efforts:

Crude-Oil-to-Chemicals (COTC) Complex: In 2017, we signed an initial agreement with Saudi Aramco to build a US\$20 billion plant to process crude oil directly into chemicals. The integrated plant will use advanced technologies to maximize chemical yields at higher production efficiencies and lower energy consumption. The complex will be able to process 400,000 barrels of crude oil per day and expects to create an estimated 30,000 direct and indirect jobs when it begins operations in 2025. The COTC Complex helps SABIC contribute to Saudi Vision 2030 in a number of ways, including developing advanced technologies and driving innovation while maximizing the value of Saudi Arabia's crude oil production. It also enables the development of downstream conversion industries to produce semi-finished and finished goods to help diversify the economy in alignment with Saudi Arabia's National Transformation Program.

**Joint Innovation Research:** SABIC first entered into a three-way partnership with the Dalian Institute of Chemical Physics (DICP) and the China National Petroleum Corporation in 2016. This year, the first three types of research were identified:

- Developing catalysts and breakthrough processes to convert methane directly into olefins, aromatics, and hydrogen, resulting in more streamlined, simplified, and energy-efficient methods faster and with lower temperatures than those in use today.
- Developing a novel catalytic cracking technology for heavy hydrocarbon feedstocks that utilizes lower reaction temperatures to produce olefins with higher yield.
- Developing a new technology that uses nanocatalysis to produce C2 olefins from syngas at yields higher than existing technologies, increasing feedstock efficiency.

This research partnership brings together DICP's expertise in advanced catalytic-process technology and SABIC's deep knowledge in commercializing products, operational efficiency, and the product and market intelligence we have developed over the years.

Home of Innovation™: The Home of Innovation™ (HOI) facility located in Riyadh, Saudi Arabia, continues to collaborate with downstream-industry original equipment manufacturers, promoting an

innovation platform that combines the latest technologies while creating demand for our products and supporting local economic development.

This year, our HOI team identified a number of business opportunities to pursue in collaboration with Dussur, the industrial investment and development company, and producing fire-safety sensors and controllers that will meet the local demand for these products. Among the promising projects that are underway is support for Saudi Electricity Company to develop specifications for residential smart meters – a preparatory step to renewable energy systems in residential houses that will optimize electricity consumption and improve energy efficiency.

Lightweighting: SABIC's innovative materials enable our transportation customers to create lightweight parts that can help reduce vehicle fuel consumption, driving down carbon dioxide emissions. While there are standardized methods to quantify the impact of lightweighting components on fuel savings for passenger cars, there are none for airplanes or trains. SABIC commissioned the sustainability consultancy Thinkstep to recommend how to quantify fuel savings from lightweighting for these modes of transport. SABIC will use this guidance to fine-tune our life-cycle assessments.

#### Framework for Portfolio Sustainability

Assessments: Recent global initiatives such as the Paris Climate Agreement and the United Nations Sustainable Development Goals underpin the importance of sustainability products and solutions. In support of these and other global ambitions, companies increasingly use portfolio sustainability assessments (PSA) to understand and proactively steer their overall product portfolios towards improved sustainability performance. SABIC contributed to development of a common PSA framework as a member of the World Business Council for Sustainable Development's chemicalsector working group, that was published this year. The ambition of the framework is to create more sustainable product portfolios. Currently, two pilots are underway to validate PSA within our business.

## KEY MARKETS

#### **TRANSPORTATION**



Enabling a safer, smarter, and more efficient world of transportation

This year, SABIC collaborated with Chinese automaker Chery and tier-1 auto supplier Wuhu to develop its first plastics-intensive inner-tailgate structure for Chery's EQ1 electric vehicle. By using SABIC's STAMAX™ long-glass-fiber-filled polypropylene (LGFPP) resin, the EQ1's inner-tailgate structure became 40 percent lighter while meeting the required stiffness, reducing energy-use and increasing the vehicle's driving range.

The material allows easier assembly and integration with other parts, and its modular design can further improve vehicle assembly and dimensional stability. In this collaboration, SABIC provided development support with our computer-aided engineering analysis, allowing for accurate modeling and optimizing of the tailgate's performance.

Our material solutions for cars, trucks, trains, and aircraft help manufacturers reduce weight, making their products more fuel-efficient without compromising safety.

Also in the automotive industry this year, SABIC helped to optimize a solution for the instrument-panel carrier of BMW Group's 2017 MINI Countryman. By using an innovative foam-injection-molding process combined with lightweight STAMAX resin, the program team was able to reduce part weight by about 15 percent compared to previous materials. This foam solution typically requires less material during manufacturing and accelerates production cycles. SABIC's support of this project helped earn top honors at the Society of Plastics Engineers Automotive Innovation Awards.

#### **PACKAGING**



Preserving product value while minimizing environmental impacts

Securing product value from factory to consumer is the most important contribution of plastic packaging. Through close collaboration with industry partners, SABIC devises plastic-packaging solutions that offer great value with minimum resources and extremely lightweight designs that protect the product, help manufacturers serve their customers, and safeguard the environment.

Securing product value from factory to consumer is the most important contribution of plastic packaging.

Thin-wall packaging is ubiquitous in the world today, not only in food - where it is familiar in ready-made meals, chilled and ambient food, dairy products, and much more – but also in applications including housewares, appliances, caps, and closures. In order to meet changing customer needs, this year SABIC introduced a new range of polypropylene impact copolymers. These new products offer further opportunities for packaging manufacturers and convertors to increase their production efficiency with shorter cycle times and weight reductions through thin-wall manufacturing. These new grades comply with manufacturer requirements for taste and odor, and feature excellent stiffness and higher strength for high stackability. Altogether, these innovative products result in lower transport and storage costs as well as an overall reduction of resource use through higher-performance, lighterweight plastics.

#### **AGRI-NUTRIENTS**



Improving food security

In our work with food producers, SABIC has developed agri-nutrient solutions that improve food security by increasing crop production. Our latest generation of products also reduces the environmental impacts from farms and promotes farmer safety.

This year, SABIC's Agri-Nutrients business introduced an innovative class of nitrogen sulfate (NS) fertilizer products consisting of urea and calcium sulfate (CS).

This product delivers nitrogen, a primary nutrient, in a highly usable form, coupled with two secondary nutrients for plant health: sulfur and calcium. We developed this product to lower ammonia volatilization, which reduces runoff from farm fields, protecting water supplies. Fertilizers like these offer farmers a more stable alternative to potentially explosive ammonium nitrate-type fertilizers that require increased security and special storage measures in a number of markets.

#### **ELECTRICAL AND ELECTRONICS**



Enabling slimmer and smarter consumer electronics designs

Differentiation in design and performance are key needs of the consumer electronics industry.

In-mold structural electronics (IMSE) combine injection-molded plastics and electronics to create smart touchscreen surfaces and sensors. IMSE simplifies production and assembly processes for resource efficiency and lifespan. TactoTek used SABIC's LEXAN™ clear polycarbonate molding resin as well as LEXAN™ thermoformable hard-coated polycarbonate film to develop and produce thin,3D touchscreen interface concepts for consumer electronics. This concept won an innovation award from the Society of Plastics Engineers in Europe.

Laser-direct structuring (LDS) technology is capable of producing a metallic pattern on a plastic substrate for integrated antennas. SABIC has 10 products in our LDS portfolio, which enables our customers to miniaturize smart devices. LDS improves on conventional processes through the greater resource and manufacturing efficiency that comes with integrating multi-functional parts. LDS offers customized design flexibility and significantly shortens a product's time-to-market. Our innovative compounding technology and broad patent portfolio have given our solutions a leading position in the market.

The widely publicized fire hazards associated with the failure of lithium ion batteries in smartphones inspired the technology team to develop a new material with increased flame retardance for use in phone battery covers. A new material was developed and launched - LEXAN™ EXL9414 specialty copolymer resin – to meet the industry standard of IEC 62368-1, the Underwriters Laboratory standard for fire hazard. Not only did the new material meet the industry standard, it also was adopted by a top Asia-based consumer-electronics manufacturer. Since then, other manufacturers have adopted the IEC 62368-1 standard and we continue to see robust demand. In this instance, SABIC not only led in developing a product solution, but also inspired its industry adoption.

## KEY MARKETS continued

#### **CONSTRUCTION**



Driving sustainable, cutting-edge building designs

Our innovative materials help the construction industry meet growing consumer and regulatory demands for energy and resource efficient buildings.

In 2010, buildings accounted for 32 percent of total global energy use and 19 percent of energy-related greenhouse-gas emissions. SABIC innovative materials help construction to reduce emissions and meet rapidly growing consumer and regulatory demands. Our COOL energy-saving pre-painted galvanized iron (PPGI) is a heat-absorbing, pre-painted steel sheet for roofing in construction projects. Our internal life-cycle estimates suggest that a building with a SABIC's COOL roof would reduce its cumulative energy demand and emissions by up to 28 percent over 30 years.<sup>1</sup>

Foam plays a key role in reducing energy consumption. With its flexibility and strong thermalinsulation properties, polyolefin foams are widely used for floor underlay, sealing, ground cushioning, and especially pipe insulation. SABIC developed PP-UMS, a completely new generation of polypropylenes. These unique products feature very high melt-strength and outstanding foamability, making them ideal to develop new foaming solutions that improve lightweighting and reduce resource use.

The United Nations estimates that water shortages will affect two-thirds of the world's population by 2025. We are collaborating with CERAFILTEC, a manufacturer of water filtration solutions, to incorporate SABIC's NORYL™ glass-reinforced polyphenylene ether (PPE) resin into a unique, all-plastic enclosed water-filtration module, which can effectively filter seawater, freshwater, industrial wastewater, and even hot water. CERAFILTEC determined that using the NORYL™ resin-based filtration module more than doubles the lifespan of their filter frame to 20 years. Using all-plastic module frame designs reduces resource use and costs from steel, makes assembly and operation easier, allows the filter to work in a broader range of conditions and improves corrosion resistance.

<sup>1</sup> Internal analysis was based on ISO14040 principles, but did not undergo critical peer review.

#### **CLEAN ENERGY**



Advancing energy efficiency and renewables

Innovation in solar renewable energy has reduced costs and increased the efficiency of solar cells, making this clean-energy source more affordable and helping to achieve significant reductions in greenhouse-gas emissions. SABIC is committed to help address the global climate challenge while also growing our business by applying our innovation mindset to advance renewable energy and improve the efficiency of our customers' products.

SABIC is committed to help address the global climate challenge while also growing our business by applying our innovation mindset to advance renewable energy and improve the efficiency of our customers' products.

Floating solar farms – arrays that float atop reservoirs or lakes – offer a number of sustainability benefits. They can be built at larger, more powerful sizes than ground-mounted systems. Floating solar panels benefit from reduced water-surface temperatures surrounding floating arrays, which can lead to greater electricity generation. Two of SABIC's blow-molding HDPE grades, B1054 and BM1052, offer structural support for floating solar panels with their durability, excellent weather resistance, stiffness, and strength. We can now produce these grades at lower temperatures and with less waste during production, providing an added sustainability benefit.

In the automotive sector, SABIC has collaborated with strategic partners throughout the value chain, such as metallizers and capacitor manufacturers, to specify successfully our UTF120 ULTEM<sup>TM</sup> film in automotive-capacitor applications. These high-temperature dielectric films accelerate the development of electric vehicles by delivering significantly higher energy density for film capacitors compared to conventional polypropylene films.

## LOOKING FORWARD

As we move forward, we will continue to incorporate sustainability into our research-and-development investments for new products, process improvements, and collaborations – growing our business and contributing sustainable value to the environment and society.

Going forward, our priorities are to:

- Continue to develop advanced catalysis and breakthrough process technologies to diversify our feedstocks and improve our operational efficiency in order to meet our operational intensity goals and generate bottom-line savings.
- Complete our portfolio sustainability assessment (PSA) pilots to identify the top sustainability solutions as well as any potential product risks.
   We will also assess the feasibility of applying PSAs to the broader SABIC portfolio.
- Shift our focus from verifying sustainability assessments to engaging with our technology teams early in the ideation and projectdevelopment process to help them grow our innovation project pipeline.

- Drive downstream industry development through our Home of Innovation™ facility in Saudi Arabia.
- Investigate circular-economy opportunities within our business, such as chemical and mechanical recycling through value chain collaborations.

SABIC has already achieved great benefit from our effort to combine innovation with sustainability. We are excited to explore the powerful growth opportunities that lie ahead: these investments will bring business success and create solutions to meet our customers' needs – all while addressing global sustainability challenges.



Innovation fuels sustainability and business performance.



## **OUR APPROACH**

SABIC recognizes the fundamental importance of natural resources to our operations. Threats to those resources – climate change, resource scarcity, and freshwater shortages, among others – pose significant threats to our continued business success.

We have embedded resource and energy efficiency at the core of our strategy, corporate culture, and operations, not only because this is the responsible action of a leader in sustainability, but also because our customers, stakeholders and communities increasingly expect it.

We have set ambitious company-wide goals for our sustainability performance: to reduce greenhousegas, energy, and water intensities by 25 percent, and material-loss intensity by 50 percent, all from 2010 levels by 2025. levels. Despite facing some challenges, this year SABIC continued to make progress on achieving these goals while improving our operational efficiency, reducing our operating costs, and lowering our products' life-cycle impacts.

Our progress has been made possible by our comprehensive culture of sustainability, our operational excellence, and our deployment of innovative new technologies and efficiency projects. In addition to our own operations, we monitor and evaluate the performance of our affiliates and encourage employees to share inspiration, best practices, and expertise. Our company is committed to investing in the growth and application of the best available technologies to improve long-term resource and energy efficiency.

#### **OPERATIONAL EXCELLENCE**

Our strategic focus on culture, systems, and tools allows SABIC to progress on our sustainability objectives. This year, we launched the SABIC Certified Energy Expert Program, an innovative in-house training that is a significant step forward in our energy-efficiency capabilities and network of experts. By the end of 2017, 37 people have qualified.

As we develop megaprojects around the globe, our Manufacturing team takes the lead on sustainability and energy-opportunity assessments early, ensuring that each includes world-class energy and sustainability performance. By the end of 2017, our team had assessed 15 such megaprojects.

SABIC Manufacturing has developed a number of site energy-optimizers for our facilities. This sophisticated tool identifies efficient operating strategies for energy systems, raises energy-efficiency awareness and expertise, and enables better evaluation of future-project energy performance with an eye toward greater savings.

This year, an online dashboard system was implemented at our SAFCO affiliate that enables individual plants to monitor and manage key sustainability parameters and track losses in real time. We anticipate rolling it out to additional facilities over time.

Our SAFCO affiliate this year began weekly monitoring of the energy efficiency of its boilers, compressors, and turbines. This process identified performance gaps and corrective actions to remedy them. As a result, SAFCO optimized its ammonia, urea, and utility plants.

#### SAUDI ENERGY EFFICIENCY PROGRAM

The Saudi Energy Efficiency Program (SEEP) is a government program to reduce fossil-fuel consumption in Saudi Arabia and improve its asset performance against international benchmarks. SABIC and our affiliates support this initiative by collecting annual data to monitor the performance of existing plants and implementing energy-efficiency projects to reduce our site-by-site energy use. For every new plant we design, SABIC incorporates the latest in energy-saving technologies and systems.

## OUR PERFORMANCE

#### **KEY RESULTS**

- Commissioned a new combined heat and power cogeneration plant at Mt. Vernon, Indiana, that provides 80 percent of the site's electricity and steam and eliminates the use of coal.
- Fully implemented SABIC's energy policy, which is aligned with the Saudi Energy Efficiency Program.
- Conducted opportunity assessments for megaprojects.
- Received the first Clean Development Mechanism greenhouse-gas reduction credits in Saudi Arabia for projects at our Yansab and Al-Bayroni affiliates.
- Increased throughput at our CO<sub>2</sub> utilization plant; improved the availability of CO<sub>2</sub> for methanol production.



SABIC's Manufacturing department takes the lead on sustainability and energy-opportunity assessments.

#### **KEY METRICS AND TRENDS**

These metrics provide the changes in performance compared to 2010 for greenhouse-gas emissions, energy use, freshwater use, material loss, and flaring reduction.  $CO_2$  utilization is the absolute usage in 2017. The intensities are based on units per metric ton of external product sales.

GREENHOUSE-GAS INTENSITY REDUCTION	ENERGY INTENSITY REDUCTION	WATER INTENSITY REDUCTION	MATERIAL LOSS INTENSITY REDUCTION
9.3%	7.6%	8.8%	35.2%
FLARING REDUCTION	TOTAL CO <sub>2</sub> UTILIZATION (MILLION METRIC TONS)		
43%*	3.5m t*		

<sup>\*</sup> Assured by KPMG

## GREENHOUSE GAS

Recognizing the size of the climate challenge the world must address, SABIC is committed to reducing our greenhouse-gas emissions intensity, supporting global solutions, and investing in process innovations to reduce our impacts.

This year, we continued to make progress toward our 2025 goals. Our greenhouse-gas emissions intensity, as measured in metric tons of  $CO_2$  equivalent ( $tCO_2$ e) per metric ton of product sales, fell to 1.23. This marks a 1.1 percent reduction in emissions over 2016, and a 9.3 percent reduction from our 2010 baseline.

A primary factor in our emissions-reduction success was the full commissioning of our new combined heat and power cogeneration plant at our Mt. Vernon, Indiana, facility. The new plant meets 80 percent of the site's electricity and steam demand at SABIC's

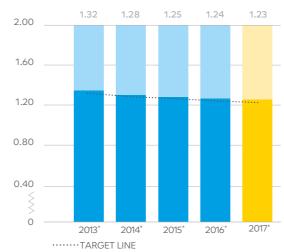
#### GHG EMISSIONS BY SCOPE (MILLION tCO<sub>2</sub>eq)

	2012*	2013*	2014*	2015*	2016*	2017
Scope 1	39	38	38	38	38	37
Scope 21	18	18	18	18	18	17
TOTAL	57	55	56	56	56	55

<sup>\*</sup>Assured by KPMG



#### GHG INTENSITY (t CO<sub>2</sub>eq/t PRODUCT SALES)



\* Assured by KPMG



Above: United captures  $CO_2$  for use as a feedstock. Left: Cogeneration plant at Mt. Vernon, Indiana.

#### Boilers central to Yansab's Clean Development Mechanism project.



largest US manufacturing location, and has eliminated the facility's need for coal-fired steam generation, reducing their  $\rm CO_2e$  by 460,000 metric tons per year.

SABIC's Yansab affiliate implemented a project to recover waste heat and reuse it for preheating process-water. This new process will save significant energy and reduce emissions by more than 23,000 metric tons  $CO_2$  eq.

<sup>&</sup>lt;sup>1</sup>Location-based method

## **ENERGY**

Managing our global energy use is a critical way for SABIC to reduce both our operating costs and our environmental impacts.

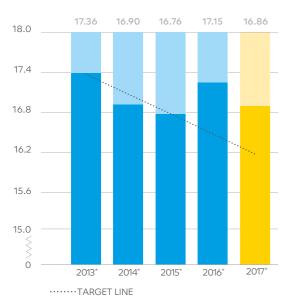
This year, we continued to make progress toward our 2025 goal of reducing energy intensity, measured in gigajoules (GJ) of energy used per metric ton (t) of product sales. Our total energy use decreased to 749 million GJ from 771 million GJ in 2016, and our energy intensity reached 16.86 GJ per t. This marks a 1.7 percent intensity reduction from 2016 and a 7.6 percent reduction from our baseline year of 2010.

We achieved these results through a number of projects at our facilities around the world. Stable operations at our Saudi Kayan plant significantly reduced our energy intensity, with 11 percent reduction in total energy consumption.

In SABIC Asia-Pacific, our Moka site in Japan reduced its electricity consumption by 3.1 percent through a number of energy-efficiency projects, including installation of LED lighting and additional insulation for the site's extruder barrel heaters. Our Benoi site in Singapore reduced its electricity consumption by 1.9 percent through on-site optimization of its dust-collection and air-conditioning systems.

In Selkirk, New York, our facility completed a renovation of its mechanical vapor-recompression system that is expected to reduce the site's energy use and greenhouse-gas emissions by 6 percent and save nearly US\$1 million per year in energy costs.

#### **ENERGY INTENSITY** (GJ/t PRODUCT SALES)



<sup>\*</sup> Assured by KPMG

## WATER

Water is an essential natural resource - not only for operations and business, but also for communities and ecosystems. At SABIC, we are focused on reducing our water use, with a special emphasis on regions where water supplies are stressed.

Our freshwater intensity performance this year, measured in cubic meters (m³) per metric ton (t) of product sales, slightly increased over 2016 from 2.64 to 2.69. An 8.75 percent improvement over our baseline year of 2010 was realized. Our total freshwater use increased to 120 million m<sup>3</sup> from 119 million m<sup>3</sup> in 2016.

While we made progress in several areas noted below, unplanned shutdowns coupled with startup and turnarounds negatively affected our performance for the year.

We achieved several successes through projects at our facilities around the world.

Our SAFCO affiliate completed a water-recycling project to reduce on-site water consumption by 33,000 m³ per year. The site also implemented improvements to its urea-condensate and watertreatment processes that are expected to save nearly 18,000 m<sup>3</sup> per year.

At our Sharq affiliate, water-saving initiatives that include recycling process water and leak-management have resulted in a 5 percent reduction in annual water use, a saving of 393,000 m³ per year.

WATER INTENSITY (m<sup>3</sup> /t PRODUCT SALES)



<sup>\*</sup> Assured by KPMG

In seeking to optimize its use of steam and water, our Yanpet facility used a modeling tool to identify the best approach. After implementing the project, the site reduced the water needed for steam generation by 400,000 m<sup>3</sup>. The same optimization tool generates a weekly water-use report that tracks water reduction and is distributed to all teams to maintain their engagement with the site's water-reduction efforts.

in Jubail, Saudi Arabia



## MATERIAL LOSS

Material loss, as with all other types of waste, represents an inefficiency in our operations. By minimizing all our losses, including in flaring, process vents, fugitive losses, hazardous and non-hazardous wastes, and wastewater, SABIC is able to improve our business performance and protect the environment.

This year, SABIC saw a 8.69 percent increase in material loss intensity over 2016, as measured in metric tons (t) per metric ton of product sales. This unplanned increase was driven by unplanned shutdowns combined with facility startup and turnarounds. Material loss intensity still shows 35.15 percent improvement over our 2010 baseline. Our absolute material loss increased to 3.5 million metric tons, from 3.2 million metric tons, mainly due to increased flaring.

This year, the Mt. Vernon, Indiana, combined heat and power cogeneration plant – which significantly reduced the facility's greenhouse-gas emissions – eliminated 25,000 metric tons of non-hazardous waste, previously leaving the site in the form of coal ash.

Our Ibn Zahr affiliate successfully completed a waste-reduction project at its Olefin Conversion Technology (OCT) facility that brought a number of benefits. The facility now captures its iso-butane instead of flaring it, so it can then be converted to MTBE (methyl tertiary butyl ether) for use in other products. Ibn Zahr has captured 700 metric tons of iso-butane since project activation in August; the project is expected to pay for itself in less than a year.

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#### \* Assured by KPMG

## LOOKING FORWARD

As we continue to make progress toward our 2025 strategy, SABIC will maintain our strong focus on four key performance indicators: greenhouse gas, energy, water and material loss. We pursue projects that address multiple indicators simultaneously, such as our successful cogeneration and renewable-energy projects.

Our plans include a facility-wide energy-management system at our Hadeed, Kemya, and Sharq affiliates that complies with the ISO 50001 standard, a globally recognized framework for energy efficiency projects. Affiliates have completed all the necessary steps to achieve ISO 50001 certification, and expect to complete the final audit in 2018.

Hadeed is also working to expand a successful pilot project to use wastewater for cooling. By implementing the project across the facility, the site could reduce water use by 100,000 m³ per year—lowering water intensity by about 2 percent.

All of SABIC's Saudi affiliates are continuing to work toward the 2019 Saudi Energy Efficiency Program (SEEP) targets. To date, we have developed structured plans for progress and are tracking performance regularly.

Below: Facility-wide management systems contribute to energy efficiency.

The Energy and Sustainability Group will continue to work to achieve company objectives within the Manufacturing organization, other departments, and external bodies.

We continue our megaproject sustainability-assessment efforts as a key pillar for SABIC's future growth and sustainability performance. Early in the development process, SABIC teams assess the projects, making recommendations to ensure the energy and sustainability performance is best in class

We are studying renewable-energy opportunities, especially solar power, to increase the share of clean energy in SABIC's overall portfolio, in accordance with the objectives as defined in our global Energy Policy.





## **OUR APPROACH**

Protecting the environment, health, safety, and security (EHSS) is a foundation of all of our business activities. Our internal and external stakeholders – including employees, leadership, business partners, customers, and community members – expect and require us to excel in our EHSS efforts.

To meet and exceed the expectations of our stakeholders, we have made a company-wide commitment to creating a supportive culture, with strong systems and processes, that seeks to empower everyone at SABIC to improve our EHSS performance. Culture is a critical factor within any organization – without a strong, supportive culture, no organization can achieve its goals and ambitions. That is why SABIC strives to promote a culture where EHSS is a core value and built into everything we do.

Across SABIC, we integrate this thinking into all of our business activities, and our company-wide expectation is that we do not compromise EHSS practices in order to achieve business goals. We reinforce our commitment to an incident-free workplace by requiring every activity to be subject to rigorous EHSS risk management procedures.

In 2016, SABIC implemented a revised global EHSS organization to support and guide our regional and facility EHSS performance, and it has shown promising results this year. Our global teams have used cross-regional expertise to encourage facilities and local teams to improve performance. As a result, we are devoting significantly more attention to analyzing incidents and developing specific programs to improve EHSS performance in our Health and Safety, Process Risk Management, Environment, and Security functions. This year, we began partnering with a global consultancy to continue to evolve and strengthen our EHSS management systems.

We made strong progress on our journey to continually improve our world-class product stewardship management system, to further our knowledge and practices, and to reduce the environmental, human-health, and safety risks of our product portfolio. We executed the long-term product stewardship strategy announced in our 2016 Sustainability Report, and started to see positive results. We recognize that, when it comes to protecting the safety of our employees, contractors, customers, and communities, complacency is not an option.

## **OUR PERFORMANCE**

#### 2017 HIGHLIGHTS

- Recorded a 21 percent decrease in annual EHSS rate, marking a strong annual performance.
- Achieved a 14 percent decrease in our Total Recordable Incident Rate, our lowest rate and best annual performance to date.
- Launched and enrolled 46

   safety and process engineers
   in a comprehensive process
   safety competency
   development program at
   Jubail, Saudi Arabia, created
   in partnership with Texas
   A&M University's Mary
   Kay O'Connor Process
   Safety Center.
- Completed systemic improvements to our Customer Declaration Portal in response to a record 12,669 customer product-safety inquiries.



Above: SABIC's strong EHSS systems and processes empower all employees.

#### **KEY METRICS AND ANNUAL TRENDS**

**EHSS RATE** 

**↓21**%

RECORDABLE INCIDENT RATE

**14**%

CUSTOMER PRODUCT-SAFETY INQUIRIES

12,669

## BUILDING AN EHSS CULTURE: OPERATIONS

The key to successful EHSS management is developing clear and comprehensive risk management systems that ensure everyone understands and consistently implements the actions and procedures necessary to achieve EHSS excellence.

#### **MANAGING EHSS**

The goal of SABIC's EHSS management system – which has been implemented across all of SABIC's manufacturing and commercial facilities and operations, as well as those of our affiliates – is to use our Safety, Security, Health, and Environmental Management Standards (SHEMS) to establish a world-class EHSS risk-and-performance framework, focused on the significant aspects we determine through our risk-identification processes.

To measure our performance, we use the SABIC EHSS rate, which is a severity-weighted rate that captures all EHSS incident types, such as accidental releases to the environment, process-safety events, occupational health and safety injuries, illnesses, and security incidents.

Since 2010, the combined EHSS rate of SABIC affiliates has improved by 69 percent – with a 21 percent improvement from 2016. Both the Total Recordable Incident Rate and the Process Safety Total Incident Rate improved between last year and this year, by 14 percent and 50 percent respectively. In this section, we discuss initiatives launched this year to continue forward progress toward our ambitious long-term goal of a combined EHSS rate of less than 0.25 by 2025.

Our 2016 implementation of a global EHSS organization has proven to be highly effective, resulting in significantly greater analysis of incidents and EHSS performance in 2017 – and the development of dedicated new programs in response. Along with our successes in EHSS management this year, however, it is with great sadness that we report a single fatality at one of our technology centers in the Asia-Pacific region. Serious injury or loss of life is never acceptable, and we remain committed to rigorous incident investigation, awareness, and action to prevent similar incidents in the future.

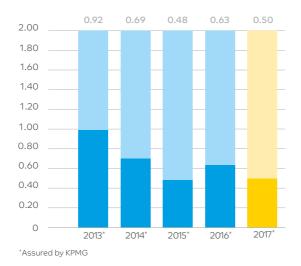
To further transform our EHSS management practices, SABIC started work with a global consultant in 2017. As part of this multi-year SHEMS+ project, we took important steps to shape our next-generation practices through in-depth assessments at nine selected SABIC facilities in diverse regions to identify individual and common opportunities for improvement. A cross-functional team spent two weeks at each facility, assessing operations and organizations on practical health, process and employee safety, and environment

#### EHSS PERFORMANCE METRICS (per 200,000 hours)

	2013	2014	2015	2016	2017
Process Safety Total Incident					
Rate (PSTIR)	0.02	0.02*	0.01*	0.02*	0.01*
Process Safety Incident Severity Rate (PSISR)					
	0.14	0.08	0.02	0.07	0.02
Total Recordable Incident Rate					
(TRIR)	0.17*	0.19*	0.13*	0.14*	0.12*
Occupational Illness Rate (Total)					
	0.004*	0.019*	0.000*	0.002*	0.014*

<sup>\*</sup> Assured by KPMG

#### EHSS RATE TREND FROM 2013 TO 2017



excellence – comparing the results against SABIC's global performance and international standards. These assessments provide vital information to guide us in 2018 as we accelerate our journey to improve EHSS effectiveness to safely operate, maintain, and modify SABIC assets.

## PROCESS SAFETY KNOWLEDGE AND COMPETENCY

All SABIC-owned-or-affiliated manufacturing facilities that undertake hazardous operations have implemented fully compliant, industry best-practice standards. These standards are based upon the US Occupational Safety and Health Administration's Process Safety Management and the European Union's chemical accident prevention (Seveso) requirements.

SABIC has developed and implemented a number of programs to enhance process-safety knowledge and competency across all functional roles from operators to executive leadership. In addition to hiring top talent at all our facilities, SABIC is committed to developing the skills of current

employees. One key initiative is our Process Hazard Analysis Leader Qualification Program, which specializes in providing training and coaching to leaders who can guide our facilities to continuous improvement in EHSS culture. Process Hazard Analysis is one of the tools used to identify hazards before an incident occurs and is a key principle of safe operations.

#### PROCESS SAFETY COMPETENCY DEVELOPMENT PROGRAM FOR ENGINEERS

This year SABIC EHSS formally launched a unique and comprehensive internal Process Safety Competency Development Program for Engineers at Jubail in partnership with Texas A&M University's Mary Kay O'Connor Process Safety Center. The objective of the program is to develop, improve, and strengthen the process-safety competency of SABIC engineers through a structured, intensive training and qualification program.

The program's competency training modules are structured on three levels, with each building on the one before: developing, proficient, and advanced. The first level develops knowledge and conceptual understanding of process-safety theory and principles. As students reach the proficient level, they gain more in-depth knowledge of industrial hazards and independently perform fundamental and routine process-safety-related tasks at affiliates. SABIC engineers passing the advanced level will have the ability to apply creative solutions to complex process-safetyrelated problems and achieve recognition as subject matter experts in process-safety management, hazard identification and risk assessment, or process-safety design engineering.

As of this year, 46 SABIC process safety and process engineers have completed or are enrolled in the developing level of this extensive program. The proficient level detailed design and development will be completed and launched in mid-2019.



Above: The program strengthens the process safety competencies of SABIC engineers though structured and intensive training

SABIC
SUSTAINABILITY REPORT 2017
EHSS AND PRODUCT SAFETY

## BUILDING AN EHSS CULTURE: OPERATIONS continued

Below: SABIC undertakes regular workforce skills-assessment and facility-siting studies.



### IMPROVING RISK DISCOVERY AND MANAGEMENT

At SABIC, we take every opportunity to improve our EHSS performance, particularly from near-miss events. In order to ensure we effectively learn from these near-miss events, we have developed a SABIC EHSS Event Evaluation Risk Assessment (SEERA) process. This process categorizes these events according to their worst-case potential and assesses the effectiveness of existing safeguards. SEERA effectively structures the thinking process after a near-miss event to provide immediate clarity on the current risk level and required safety barriers, and to evaluate the worst-case scenario for that risk.

In order to continue to improve our EHSS performance, and to identify and prioritize the highest-potential risks to our employees and contractors, SABIC undertakes regular workforce skills-assessment and facility-siting studies for all types of facilities. A facility-siting study provides each worksite with detailed information about the processes that pose the greatest risks and the locations, buildings, and workers that face those risks, giving site leaders the ability to take action and reduce risk as much as possible. To date, we have trained 31 process engineers in our facilitysiting program software and modeling practices, and we have already conducted facility-siting assessments at ten SABIC sites in the Middle East, with the remainder to be completed in 2018.

### ENVIRONMENTAL RELEASES AND EMISSIONS MANAGEMENT

Reducing environmental emissions of all types is central to our EHSS practices. Across SABIC our Environment function tracks our progress, categorizes all accidental releases by severity, and works to eliminate emissions of hazardous materials and minimize all others. This year, SABIC EHSS greatly increased collaboration with SABIC facilities to proactively monitor and act on their emissions.

In addition to conducting spot checks on facilities' emission data and identifying challenges to reducing those emissions, SABIC has developed an Environmental Emissions Analysis Tool (EEAT), which reveals anomalies in emissions data to identify non-compliance risks and necessary follow-up procedures for each facility. Over the course of 2017, the EEAT has proved useful in keeping the organization focused on achieving our goals.

At SABIC, we are committed to ensuring that security and crisis management are core competencies of our company.

This year we report a modest increase in the number of incidents, while the volume of hazardous-substance releases was 105 metric tons, compared to 61 in 2016. Our sites and affiliates had 35 hazardous-chemical accidental release incidents in 2017, including two Class B incidents, which is in contrast to the record low of 23 incidents in 2016.

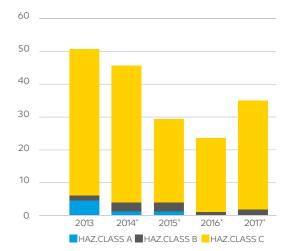
In 2018, we will continue to work toward our goal of eliminating all accidental releases of hazardous substances to the environment. As we do with safety issues, SABIC analyzes and identifies the root causes of each environmental-release incident, and we share findings from significant releases with all SABIC affiliates to ensure the implementation of best practices.

#### **SECURITY AND CRISIS MANAGEMENT**

At SABIC, we are committed to ensuring that security and crisis management are core competencies of our company. We achieve this by developing a unified approach to collectively identifying the highest-priority facilities and allocating the resources needed to protect them. We have also created a unified, global travel security program that manages the risks of SABIC employees through education and training programs and processes.

This year, we conducted multiple crisis management exercises that incorporate the most up-to-date risk profiles we face. These exercises evaluate SABIC's ability to respond to, manage, and recover from crises more effectively. We have revised our company-wide information-security standards to address the emerging threats all companies face when it comes to data security, and we have implemented appropriate measures to continue to reduce our data-security risk exposure.

#### TOTAL NUMBER OF HAZARDOUS SUBSTANCE ACCIDENTAL RELEASE INCIDENTS



\*Assured by KPMG

This year, we began execution of our long-term product stewardship strategy announced in 2016, and started to evaluate the results with the goal of reinforcing our world-class product safety management system. The following sections detail important aspects of our program and strategy.

Product stewardship guides the business during product development and planning, uses risk-assessment processes to appropriately identify and manage potential risks, and prioritizes products under Responsible Care®.

Product stewardship is a critical part of SABIC's sustainability strategy. Product stewardship guides the business during product development and planning, uses risk-assessment processes to appropriately identify and manage potential risks, and prioritizes products under Responsible Care®. We work to communicate product and process safety information proactively with our employees, customers, distributors, and local emergency response authorities.





#### **ENHANCE PRODUCT SAFETY** THROUGHOUT THE VALUE CHAIN

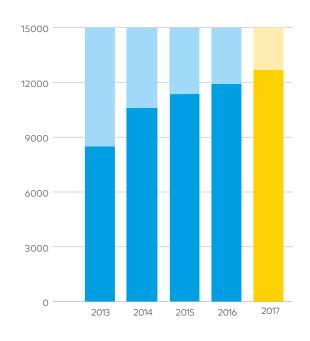
In 2017, SABIC developed a classification system for product-safety-related incidents similar to our long-standing management system for reporting, classification, investigation, and analyzing of EHSS incidents. Over the course of the year, we reviewed 51 incidents, through the product stewardship incidentmanagement system, all of them with medium-to-low severity. None of these incidents posed a product safety concern for users in the value chain or required the reporting of a product compliance violation to the competent authorities.

As part of our commitment to the Responsible Care® initiative, SABIC proactively provides relevant EHSS information and guidance about SABIC chemicals to our stakeholders so that they can understand and minimize potential significant risks to human health,

the community, or the environment arising from the use and management of these materials. This year, SABIC launched a pilot value-chain communication project in the United States, focused on the chemicals methanol and styrene. The first stage of the pilot program involved distributing a questionnaire on how they use and handle the chemicals. To date, we have received feedback from 65 percent of our US customers about their methanol and styrene use, and we are currently reviewing the feedback and developing a plan to address comments. In 2018, we will continue this pilot by expanding it to include more substances and additional regions. Our goal is to develop a procedure allowing our sales teams to set up two-way communication with customers anywhere in the world to discuss, and thereby help our customers mitigate, significant potential risks related to the use of our products.

#### PRODUCT STEWARDSHIP METRICS

	2013	2014	2015	2016	2017
Number of Customer Product Safety Inquiries	8,462	10,577	11,328	11,900	12,669



## PRODUCT STEWARDSHIP continued

### SUPPORT SABIC GROWTH AND COMPLIANCE INITIATIVES

This year, the Product Stewardship function collaborated with the Health, Safety, and Environment and Process Risk Management global functions to improve the process for monitoring and reviewing research and development (R&D) projects. The process enhances risk identification and mitigation options, particularly in a project's early stages. During the year, we completed hazard assessments and regulatory profiles of more than 30 chemicals during the early stages of R&D, which we used to guide research decisions on material selection and site-based risk assessments. At the same time, we continued to streamline our product stewardship processes, achieving a 10 percent increase in engagement with product stewardship in reviews of R&D projects.

We are better able to merge the expertise of product stewardship with business plans, product development, and business opportunities on the ground across SABIC's operations, allowing us to build-in from a very early stage the latest global developments in product safety, toxicology, and regulatory affairs

In an effort to support business growth while ensuring product compliance, our Product Stewardship function in 2017 created business focal points as a proactive, two-way communication system to strengthen connections with leaders of each business unit. Through the focal points, we are better able to merge the expertise of product stewardship with business plans, product development, and business opportunities on the ground across SABIC's operations, allowing us to build-in from a very early stage the latest global developments in product safety, toxicology, and regulatory affairs. There are currently 10 team members working as business focal points, and they coordinate actions between the business units and team experts.

### ESTABLISH EFFECTIVE PRODUCT SAFETY SYSTEMS AND TOOLS

One important responsibility of our productstewardship team is responding to customer requests for information about our products. In recent years, the number of requests received from customers has grown rapidly, from 11,900 in 2016 to 12,669 in 2017. Taking seriously our goal of responding to all inquiries within five days, Product Stewardship worked with SABIC Information Technology (IT) to make systemic improvements to our Customer Declaration Portal (CDP) and CompLetter tools. There is now a single, user-friendly CDP interface for all business units that includes stronger reporting features, new key performance indicators to track our overall team and individual response times, greater information security, and more efficient handling processes to improve standardization among our global product-stewardship experts.

#### **ENSURE ORGANIZATIONAL EXCELLENCE**

Throughout this year, we conducted a number of educational events to strengthen SABIC's productstewardship culture globally. At full-day workshops in Saudi Arabia, we brought together a diverse group of employees from across our business units to discuss and share expertise about how our activities inform every aspect of SABIC's operations, and how rapid changes in global regulations impact our business. In addition, we held a number of webinars that brought together key stakeholders and members of the product-stewardship organization to present on topics including how product qualifications and certifications relate to our corporate productstewardship management standard, the basics of toxicology and product safety, and ensuring that our safety data sheets and labels comply with important global regulatory guidelines.

## LOOKING FORWARD

In 2018 we will continue to build on the successes of our global EHSS organization, strengthening our EHSS culture and performance.

We believe that focused dialogues with international teams, improved training and assessment programs, and better sharing of information and knowledge will lead to a step change to achieve the objectives of the SABIC 2025 strategy.

SABIC recognizes that there is always room for improvement. In the coming months and years we are dedicated to strengthening our systems to allow us to make even greater improvements in our safety performance across SABIC and our value chain.

Our efforts to support our value chain will continue to gain momentum as SABIC advances our

Responsible Care® initiative to manage product risk from high-hazard SABIC products for customers in additional regions around the world.

In 2018, we plan to launch "Phase 2" of our product stewardship incident-management system, merging it with the EHSS incident-management system by including it in our EHSS incident-reporting system. Under Phase 2, all of our global manufacturing sites will be trained to report product stewardship concerns. We expect that the implementation of our product stewardship incident metric and management system will help us identify common cause issues across SABIC and develop improved risk-reduction strategies.



## OUR APPROACH AND PERFORMANCE

To become the preferred world leader in chemicals, SABIC must strive to attract, develop, and retain the best talent in the industry. We recognize that our success as a company starts with our employees, so we are committed to becoming the industry's employer of choice.



SABIC's work culture encourages continuous learning, career opportunities, and attractive rewards for performance.

We can achieve this by continuing to put our people first. SABIC builds human capital through a number of initiatives that we host at the SABIC Academy, our learning hub for employees, and we encourage professional and career growth through our new SABIC Leadership Way initiative. We provide new opportunities through academic collaborations and the SABIC Scholarship Program. We also support the promise of innovative thinking through local and regional events such as the SABIC Human Resources Forum.

SABIC Human Resources is dedicated to creating a work culture that encourages continuous learning, provides exceptional career opportunities, and offers attractive rewards for performance. We are committed to nurturing new talent and progressing the careers of our existing workforce – helping every employee to achieve his or her career ambitions and life goals.

#### **PERFORMANCE METRICS**

WORKFORCE:	SABIC SCHOLARSHIP PROGRAM PARTICIPANTS	MORE THAN	EMPLOYEES
65% MEA 15% EUROPE, 9% ASIA, 11% AMERICAS	763	300 SABIC EMPLOYEES ON GLOBAL ASSIGNMENTS IN 27 COUNTRIES	34,000+ EMPLOYEES
PARTICIPANTS FOR LEADERSHIP TRAINING	LEARNING-AND- DEVELOPMENT PROGRAMS	TRAINING PROGRAM PARTICIPANTS	PERCENTAGE OF WOMEN IN THE WORKFORCE
2,200+	3,000+	24,900+	7.2











**LIBBIE CRAFT**Director,
Global Talent Solutions

We understand that it requires the right people to make a difference; they need ingenuity, brilliance, and the freedom to turn their ideas into reality. At SABIC, we look for open-minded, gifted, and questioning people, then we create the conditions for their talent to flourish: a fulfilling work environment, state-of-theart technology, and empowerment.

#### **CONTINUING THE SABIC TRANSFORMATION**

Our human-capital development aims for consistent, unified progression toward the leadership culture and a singular identity that SABIC needs for organizational transformation into a more business-oriented, strategy-driven human-resources model.

Our new human-resources model makes us truly competitive in everything we do, while accelerating growth, delivering innovation, ensuring profitable businesses, developing the next generation of leaders, and outperforming our peers.

The new model increases efficiency and ensures global-to-local alignment. And by building on three core pillars – strategic business partnering, operations and our specialized community of expertise – we can continue to advance our talent-development initiatives.

Our strategic HR business partners support business units and corporate functions through driving the talent agenda, promoting the corporate culture, increasing employee engagement, and improving organizational effectiveness. positions SABIC's business strategy at its heart. It is designed to ensure that HR has the focus and global agility needed for the speed and demands of the new world of work.

Our new HR model intentionally

Our HR operations drive compliance through governance, improved cost efficiency, and maximizing employee experience through translating the winning culture of SABIC.

With the launch of our new HR Organization, there has been a shift from "Centers of Excellence" to "Community of Expertise." This Community of Expertise provides expert leadership and strategic guidance to key areas in the organization. This includes collaboration on high-impact programs that align with our business priorities and enhance standards and processes.

This approach is making our human-resources organization more business-centric and strategic, better supporting SABIC's business.

## OUR WORKFORCE

Given the changing business landscape and our own transformation, it is important for SABIC's employees to have some essential skills: decision making, creative thinking, and leadership. We develop these skills through programs that keep us up to date with trends in innovation, technology, processes, safety, standards, and leadership.



ABDULRAHMAN SHAMSADDIN General Manager, Enterprise Risk Management

The SABIC Leadership Way is our formula for how we, SABIC leaders, will be differentiated and distinguished in fulfilling the 2025 strategy goals. It provides guidance on striking the right balance to 'Be the Impact'. I am not only excited about embodying SLW but feel very proud being part of this journey to collectively position SABIC as the preferred world leader in chemicals.

SABIC has embarked on a "Leadership Way" journey to help achieve our 2025 strategic goals, specifically in relation to talent development and transforming organization and culture.

The SABIC Leadership Way builds capacity and capabilities that distinguish SABIC from its peers. To do this, global cross-functional teams collaborated to build guiding principles that anchor SABIC's purpose of 'Chemistry that Matters™' with our commitments and values: inspire, engage, create and deliver. The Leadership Way aligns with our 2025 strategy and allows us to create a dynamic and inclusive leadership culture that builds the right talent for the right challenges.

This effort has inspired all our leaders globally by focusing on the delivery of rigorous and reliable outcomes that build internal and external relationships, and encouraging immediate responses while keeping a focus on long-term goals.

The SABIC Leadership Way has four leadership priorities:

- Talent Champion: bringing in the best people, and growing and developing them to fuel our growth and achieve our goals.
- SABIC leaders should seek growth opportunities for teams and take personal responsibility for championing development and career progression.
- Collaboration Partner: working closely with colleagues and partners on smarter, more efficient, and higher-performing products is essential to our success. Communication is critical and, as the Employee Survey showed, a focus area for improvement.
- SABIC leaders should co-create for shared stakeholder success.
- Innovation Pioneer: the pace of change is only getting faster. We can only remain relevant and retain a leadership position through innovative ideas and ways of working.
- SABIC leaders should encourage new thinking at every level and drive innovative approaches that make an impact for our customers.
- Excellence Driver: making an impact for customers, stakeholders, and communities requires continual improvement and a sense of urgency.



ALAN LEUNG,
Vice President, Value
Creation and Marketing

We strive to convert ideas into product solutions for our customers, and that's innovation.

At the launch of the SABIC Leadership Way at the end of this year, Abdulaziz Al-Oudan, the Executive Vice President of Human Resources, unveiled an innovative tool to help us achieve its goals. Known as LEAP or the Leadership App, this online platform lets employees provide feedback on the SLW's four priorities with colleagues. This is an important step in increasing dialogue and open communication internally, throughout our workforce.

### A CLASSROOM FOR GROWTH: THE SABIC ACADEMY

Since 2012, the SABIC Academy has been our core learning platform for SABIC's future leaders to develop their skills. Starting from an employee's pre-identified competencies, the academy provides individualized assessments, coaching, experiential learning, and formal classroom training.

We have developed more than 6,000 classroom and online courses to support learning at every professional level, including developing core business abilities in the areas of finance, sales and marketing, supply chain and technical skills.

The SABIC Academy is a vital piece in the development of each individual employee, providing a wide range of custom training and learning programs each year.

#### **DEVELOPING EMPLOYEE DIALOGUE**

At the end of 2016, SABIC conducted a companywide employee survey to engage on the positive and negative facets of work. We learned of a number of clear areas of concern from employees, including a desire to improve communications among all levels of SABIC's operations.

Our CEO and leadership team recognized that a need to engage in deeper and more frequent dialogue with employees lies at the root of these concerns – both to understand them and to communicate that we, as a company, are addressing them.

In 2017, we launched the SABIC Pulse Dialogue Survey as a next step in communicating with all employees, and monitoring and instilling accountability with managers to act on employee feedback. Through the survey, which was open to every SABIC employee, we have begun an ongoing conversation and a process of continuous improvement, with a goal of developing strategic approaches to address any challenges or concerns.

#### **BECOMING THE EMPLOYER OF CHOICE**

In recognition of SABIC's exceptional employee offerings, this year we earned Top Employer Institute certifications in five of our key Asian markets – China, India, Japan, Singapore, and South Korea. This marks the eighth consecutive year that SABIC has attained a Top Employers certification in China and the fifth earning the Top Employers Asia-Pacific certification and Top Employers certification in India, Japan, South Korea, and Singapore. These certifications recognize our ongoing efforts to nurture an inclusive environment that encourages innovation, excellence, and organizational effectiveness – with a strong focus on employee development.

SABIC has always provided diversified and equal opportunities for employee career development. In March of 2017, we launched a global initiative to increase new-employee engagement with the company leadership. Through this initiative, new SABIC employees engage with senior leaders to learn from their experience and insights as a way of inspiring employees to make a real difference to the world by applying their expertise to work.

## DIVERSITY, INCLUSION AND COLLABORATION

Diversity of experience, knowledge, and ideas in an inclusive atmosphere strengthens our organization by fostering greater creativity, innovation, and effectiveness.



LUBNA ALANSARI Engineer, Engineering and Project Management Site Projects

I am honored to be one of the first Saudi female manufacturing engineers at SABIC. I was introduced to the SWN when I was still a college intern at the Burkville, Alabama, site. I met with the SWN to talk about the diverse nature and drive that Saudi women embody, as well as what it means to be a woman in manufacturing. I remember leaving that meeting feeling deeply inspired to push myself as an engineer and as a leader. Now, as a full-time SABIC employee, the motivation from my fellow SWN members has only grown stronger. I view it as my personal responsibility to continue to lay the foundations on which capable female talent will prosper and become essential contributors to the growth of our company.

We take pride in our ability to attract the best and brightest people from around the world and are committed to creating a working environment that values inclusion and collaboration. And SABIC is a truly global, diverse organization: Around 65 percent of our workforce is based in the Middle East and Africa, 15 percent in Europe, 11 percent in the Americas, and 9 percent in Asia.

To support women throughout Saudi Arabia and across our global operations, the SABIC Women's Network (SWN) shapes our talent acquisition and development of female employees through our global network of SWN hubs.

SWN members around the world serve as mentors and role models, by leading and participating in professional development activities that encourage the high-performance culture needed to move SABIC's business objectives forward, while also seeking creative ways to make SABIC a better place to work.

We build on our commitment to diversity by offering our employees opportunities to experience different cultures. In addition to those who work every day in global roles, in 2017 more than 300 SABIC employees embarked on assignments in 27 different countries.

Our SABIC Scholarship Program also continued in 2017, offering scholarships to 763 scholars in Saudi Arabia, allowing them to pursue higher education abroad, from which they will bring back their acquired knowledge and skills to SABIC.

#### YOUNG SABIC PROFESSIONALS

The Young SABIC Professionals (YSP) platform empowers early-career employees through development, engagement, networking, training, and community services – strengthening their bonds with senior leadership and developing the leaders of tomorrow.

This year, the YSP and SWN joined forces to organize a workshop in Sittard and Bergen op Zoom, the Netherlands, to discuss the circular economy, the challenges and opportunities it presents, how it can create positive impact, and how SABIC can develop and benefit from it.

We expect circular economies to become more prevalent in the coming years, so it is fitting that our Young SABIC Professionals should be leading our discussions of ways to develop innovative practices and products that benefit our company and the environment.

#### SABIC HUMAN RESOURCES FORUM

SARIC 5 days during and 440 participants Government 5 kevnote attendees attendees post programs/ engaged via HR speakers activities Forum mobile app sector attendees attendees 18 collaborators 71 breakout 3 nanel discussions 3 days VR and AR Post-forum Announced HR 7 exhibitors 3 signed Memorandums of demonstration survey Think Tank Understanding

#### **ENABLING SAUDI 2030 VISION**

A key principle in SABIC's strategy to increase our engagement with the public sector is the development of the skills and qualifications of our internal and political leaders; this strategy enables us to work with stakeholders on achieving SABIC's 2025 strategy and Saudi Vision 2030.

This year, we hosted our third SABIC Leadership Program at the SABIC Academy, a five-day program dedicated to a national training initiative for Saudi government leaders. Through the program, we focused on leadership development and the need for both the private and public sectors to adopt more modern management techniques.

We have developed a number of programs as a way of giving back to our communities and reflecting our values through education, including the SABIC Summer Innovation Program, which began its third year in 2017. The three-week program, which this

year embraced the slogan "Our children are the future of our country," is held for the sons and daughters of SABIC and affiliate employees. It engaged more than 1,000 trainees from secondary schools in Riyadh, Jubail and Yanbu- recently extending to Hail and Abha as part of a corporate social responsibility initiative. New learning tracks help students acquire skills in engineering, innovation and technology, and a number of seats are reserved for students with special needs.

This year, we hosted the SABIC Human Resources Forum to expand our engagement in the community and with the public sector. The event highlighted our commitment to Saudi Vision 2030 and reflected the efforts of our highly motivated employees to help achieve its ambitious economic goals. The HR Forum concluded with three Memorandums of understanding signed by the Ministry of Civil Service, King Salman Youth Center and the Ministry of Education.

## DIVERSITY, INCLUSION AND COLLABORATION continued

Our memorandum with the Ministry of Civil Service supports the Saudi 2030 Vision pillar of a thriving economy. We will achieve this by developing training programs to elevate the leadership and HR competencies at government ministries, developing HR skills through consultations and best-practice sharing, and building an effective dialogue about HR opportunities and challenges among all sectors of the Saudi economy.

Our memorandum with the King Salman Youth Center supports youth, and life and career planning skills, while developing leadership. We will achieve this by creating an inspiring community to connect youth with each other and with leaders in government and the private sector – helping them to learn and expand their networks.

Our memorandum with the Ministry of Education aims to promote a culture of making among young people. We will achieve this by creating an inspiring space to empower students to turn their innovative ideas into final products, while training teachers to recognize and develop innovation and invention among their talented students.

Through these three partnerships, SABIC will apply our expertise across all areas of our operations to advance the Saudi culture and economy toward a more sustainable future.



Above: Saudi Vision 2030 is the government's ambitious plan for national development

Below: SABIC is global and diverse organization.



## LOOKING FORWARD

SABIC is moving towards organizational effectiveness.

Throughout all our talent development efforts, SABIC is focusing on improving our effectiveness today, while laying the foundations for an even stronger leadership in future, as we reach toward our 2025 strategy. We will continue to refine and expand the SABIC Leadership Way and empower employees at every level with open channels of communication that identify and address areas of concern, harnessing the power of our human-resources model to translate to greater efficiency in our operations and greater competitiveness in the industry. By strengthening our partnerships with the public sector and working to develop our communities around the world, SABIC is a valuable partner everywhere we operate.



Above: Employees at SABIC Plastic Applications Development Center (SPADC) in Riyadh, Saudi Arabia.



## **OUR APPROACH**

SABIC's goal is to be the recognized global leader in supply chain sustainability in the chemicals industry. Achieving this goal will create value for SABIC by developing the skills of our employees and service providers and make a positive contribution to the communities where we operate – and the global environment.

Our Supply Chain Performance Management (SCPM) program, which we launched in 2017, is the key tool we use to rapidly scale up our sustainability performance. The SCPM program provides an efficient visual way to report supply-chain performance for sustainability and other business metrics, and enables analytics across our value chain, allowing us to thoroughly validate and measure our supply-chain performance data and quickly prototype new metrics. This year, our average transportation intensity factor is 11.2 grams of carbon dioxide equivalent per ton-kilometer transported (grCO<sub>2</sub>eq/ton-km), an improvement over last year's result of 12 grCO<sub>2</sub>eq/ton-km. Our success was a result of improved performance over the year and more detailed data.

This year, we implemented a significant change to our Supply Chain organization to optimize its performance and speed progress toward our ambitions. We have consolidated our chemicals and polymers supply chains under a single structure while further developing our ongoing strategy. We also achieved significant successes in a number of sustainability initiatives in 2017, including the continued improvement of our marine-vessel sustainability performance.

In addition to improving the performance of our supply chain, SABIC focuses on raising the bar for the sustainability of our supplier networks. This year, we launched a new, comprehensive supplier due-diligence process that better tracks how every SABIC supplier aligns with our expectations in corporate social responsibility.



Above: SABIC ranks sixth among chemical companies on the Gartner Supply Chain Index.

## OUR PERFORMANCE

#### 2017 HIGHLIGHTS

- Earned a spot on the Gartner Supply Chain Index for the first time. SABIC ranked 75th overall and sixth among chemical companies. Gartner's analysts noted our "comprehensive programs for talent management and performance benchmarking" in evaluating our performance.
- Developed a new supply-chain carbon-footprint model to identify the highest-impact supply-chain improvement projects throughout our business portfolio. The model behind our industry-leading approach calculates the carbon footprint of our products down to the individual-shipment level.
- Advanced supply-chain sustainability from concept to measurement and management, again taking a leading position in our industry. We have achieved notable results from safer and more-efficient transport, which also reduces our transport costs. Among our successes:



- The NCC Fajr, our state-ofthe-art chemical tanker, delivers products with 27 percent fewer greenhousegas emissions than industry standard.
- Our first full year of operating two vessels driven by liquefied natural gas and two driven by ethane resulted in a 20 percent reduction of emissions per ton-kilometer of product transport.

Above: The NCC Fajr: marine-vessel sustainability performance is continuing to improve

## SUSTAINABLE SUPPLY CHAINS

### SAFETY AND QUALITY ASSESSMENT SYSTEM

SABIC uses a Safety and Quality Assessment System (SQAS) to evaluate our logistics service providers based on their quality, safety, security, and environmental performance. Through questionnaires, independent inspection teams, and auditors using best practices tailored for the industry, SQAS helps us to identify any performance gaps and areas for improvement among our logistics service providers, as well as identifying our highest-performing providers.

This year, we maintained 100 percent coverage among our dangerous-goods carriers, and assessed 100 percent of our liquids road-carriers in Europe, the Middle East, and China through SQAS, including those who carry non-dangerous goods.

In our solids transport operations, we assess all bulk carriers using SQAS protocols. Among our packed carriers, which all transport non-dangerous goods, we have assessed 67 percent of carriers chartered in China, 95 percent in the Middle East, and 96 percent in Europe.

#### **KEY METRICS AND TRENDS**

#### SQAS BY REGION (LIQUIDS/SOLIDS)



#### SQAS (LIQUIDS/SOLIDS)





Above: SQAS helps to identify performance gaps and areas for improvement among logistics service providers.

Right: Safer and more-efficient transport reduces costs.

Our performance this year puts us ahead of schedule to achieve our goal of 100 percent coverage for dangerous goods and 95 percent coverage of non-dangerous goods by 2020. See the graphs in this section for details.

#### SUPPLY CHAIN INCIDENT REPORTING

For many years, SABIC has reported, analyzed, and tracked incidents of all types across our supply chain. Our Supply Chain Incident Reporting (SCIR) key performance indicator measures the safety performance of our supply chain, with the goal of identifying improvement areas and creating a benchmarking platform and an improvement roadmap internally and externally.

The focus of every incident report is to identify the root cause and learn how to avoid a similar incident in future. We have set an ambitious multi-year target to achieve either a 10 percent improvement over the average of the past three years or a 10 percent improvement over the previous year's target, whichever is lower.

Our incident rate in 2017 shows a 5 percent improvement over our three-year performance average. However, we performed less than we did in 2016, with an incident rate 2 percent higher than our



SUPPLY CHAIN AND PROCUREMENT

2017 target. We have worked with the logistics service providers to enact corrective safety actions to prevent similar incidents in the future.

#### UPDATES TO PAST REPORTING METRICS

As part of the restructuring of our Supply Chain organization, SABIC has changed the way we track and report some of our past sustainability metrics.

We continue to follow our Working Capital Efficiency metric closely across our Supply Chain organization. This year, we are aggregating it in our financial reporting.

We continued our Respectable Work Conditions (RWC) efforts in 2017, requiring that every supplier, including logistics service providers, agree to the Supplier Code of Conduct. We have achieved 100 percent compliance with our code of conduct for all the new suppliers and now report those numbers with our procurement data.

## FUNCTIONAL COMPETENCY INDEX FROM EDUCATION TO EXECUTION

People Development is a key imperative in SABIC's global supply-chain strategy, driving success in business operations. Building and sustaining an adaptive organization with skilled employees is the engine to lead SABIC's transformation journey and perform in a fast-changing and competitive environment.

#### **COMPETENCY AND CAPABILITIES**

This year, we began to fully roll out the Functional Competency Assessment to select groups in each region. The assessment has become a best practice in our company, continuously reviewing employees' skills and performance. It is an integral part of our formal talent-review process, ensuring that identified competency requirements are considered in individual development plans. The Functional Competency Index is a key performance measure, indicating the skill gaps and need for training. SABIC is committed to providing that education to all our employees and developing their skills.

#### **HUMAN CAPITAL DEVELOPMENT**

Our Supply Chain Academy builds strong expertise, develops supply-chain talents, and transfers knowledge among our employees to continuously develop, attract, and retain top talent. This year, we invested in industry-respected certification programs including the American Production Inventory Control Society to extend our SABIC value-chain innovation education portfolio. Our supply-chain-focused career program and engagement with leading universities, such as the University of Houston, King Fahd University of Petroleum and Minerals in Dhahran, Prince Mohammed bin Fahd University and King Abdulaziz University in Jeddah, teaches young SABIC employees supply chain disciplines and equips them with the knowledge and experience to master business challenges and drive excellence. By fostering a culture of learning, SABIC seeks to transform our supply-chain organization and better execute on our strategy.

## SUSTAINABLE SUPPLY CHAINS continued



#### **REDUCING OUR CARBON FOOTPRINT**

SABIC is leading the industry in creating innovative solutions to reduce the carbon footprint of our supply chain. In addition to achieving significant reductions in greenhouse-gas emissions in 2017, we have completed a comprehensive modeling system to allow us to understand in great detail the carbon footprint of our supply chain and identify areas for high-impact solutions.

#### SUPPLY CHAIN CARBON FOOTPRINT MODEL

This year, SABIC's Global Supply Chain Sourcing and Excellence team introduced a new supply-chain carbon-footprint model that provides emissions details down to the individual-shipment level, an industry-leading innovation.

This model incorporates energy-based carbon-footprint contributions on every transport mode and route where actual fuel consumption can be measured. We use industry-standard emissions factors for transport modes where energy-based measurement is unavailable.

As a result of this model, we can visualize carbonfootprint contribution as a specific key performance indicator, allowing our management teams to accurately predict the sustainability impacts of improvements in our supply chain.

This model builds on previous work to reduce our supply-chain carbon footprint, several examples of which made significant achievements in 2017.

Left: The GasChem Beluga carries nearly 40,000 cubic meters of ethane from the US to the UK per trip.

#### GASCHEM BELUGA AND GASCHEM ORCA

This year, SABIC began using the next-generation vessels GasChem Beluga and GasChem Orca together for the first time. These liquid-ethane-gaspowered sister vessels carry nearly 40,000 cubic meters each of ethane from the United States to the United Kingdom per trip.

The GasChem Beluga began operations at the end of 2016, and the GasChem Orca in July 2017; both vessels feature an innovative hull design that increases cargo capacity by 30 percent over previous ships of the same size while also optimizing fuel consumption and maximizing reliability and sea endurance.

Both vessels boast a main engine capable of burning ethane as well as traditional fuel, reducing emissions sufficiently to meet strict maritime nitrous oxide and sulfur emissions requirements scheduled to go into effect in 2020.

During sea trials, these vessels performed beyond expectations. They needed less propulsion power to maintain speed, resulting in lower fuel consumption. This year, the two vessels avoided more than 4,200 tons of greenhouse-gas emissions; as we phase in the ethane fuel capability, we expect even greater emissions reductions.

#### CORAL STAR AND CORAL STICHO

The GasChem Beluga and GasChem Orca build upon other highly efficient, climate-friendly ships used by SABIC. The Coral Star and Coral Sticho, two dual liquefied-natural-gas and conventional-fueled gas tankers, operate between Teesport in the United Kingdom and European ports. Both ships are part of a pioneering partnership between SABIC and the Teesport harbor operator PD Ports to develop a permanent jetty that allows the ships to be fueled with natural gas. LNG is a new fuel option for vessel operators, allowing them to meet stringent new sulfur and nitrous oxide emissions regulations. As a result of our work with PD Ports, these two vessels can be operated primarily on LNG, and over the past year these ships reduced our carbon footprint by 1,315 tons of CO<sub>2</sub> equivalent.

#### ICC EA IP

The NCC Fajr chemical tanker has been sailing the seas carrying SABIC goods since 2014. The Fajr was purpose-built as the world's largest-capacity chemical tanker, designed to carry large amounts of cargo efficiently. In 2017, the Fajr moved on average 74.4 kilotons per shipment, nearly double the 40-kiloton capacity of a conventional chemical tanker; the carbon intensity of each shipment was 27 percent below the industry average, reducing our carbon footprint from these shipments by 11,300 metric tons of greenhouse-gas emissions over the course of the year.

#### SABIC SUPPLY CHAIN SERVICE COMPANY

As part of our efforts to optimize supply chain logistics, SABIC has operated centralized supply-chain services in Jubail since 2014. By partially shifting our flow of containers and shipments from ground to marine transport in Jubail, we have been able to more efficiently move products to our customers and reduce time spent in transit as well as emissions from logistics. This year, we achieved a reduction of more than 1,200 tons of greenhouse-gas emissions through SABIC Supply Chain Services Company.

SABIC SUSTAINABILITY REPORT 2017

SUPPLY CHAIN AND PROCUREMENT

## SUSTAINABLE PROCUREMENT

Our sustainable procurement policy requires all aspects of SABIC's operations to procure materials and services from suppliers that meet the legal, ethical, and fair practices in line with our SABIC Supplier Code of Conduct.

This policy allows us to get the right materials and services at the right time and at the lowest total cost of ownership, creating the best value for SABIC.

We are committed to sourcing from suppliers that meet SABIC's high requirements for quality, environmental and health performance, safety and security, sustainability, and social responsibility. This year, we dedicated a team of SABIC compliance employees to embed these practices further within our procurement organizations, and in 2018, we are introducing a training refreshment to help our buyers keep these guidelines in mind during procurement.

With each new supplier we register, screen, and audit, SABIC gains more information and detail about the sustainability of our global supply chain, allowing us to continue to assure our own customers about our commitment to making improvements in the months and years to come.

### GLOBAL SUPPLIER DUE DILIGENCE PROGRAM

We have continued to advance our efforts to ensure that every SABIC supplier adheres to our own high standards of excellence. In 2016, we launched a new supplier-registration process to our Global Supplier Due Diligence Program, requiring those suppliers that present a higher risk to SABIC to demonstrate their compliance practices in areas such as safe working conditions, anti-corruption and environmental responsibility.

All new suppliers are required to undergo our Supplier Due Diligence Program registration process registration process, and we are adding existing suppliers to the process as we renew contracts. As suppliers complete the registration process, we are able to better track their performance, regularly monitor compliance, and identify those that work in higher-risk fields or regions requiring additional screening. To date, nearly 7,000 suppliers have registered through the new process, and more than 1,110 of those have undergone additional due diligence as a result of the findings of the preliminary supplier-registration process. Nine of those suppliers received a thorough audit as the final phase of due diligence based on risk profiles identified during registration.

With each new supplier we register, screen, and audit, SABIC gains more information and detail about the sustainability of our global supply chain, allowing us to continue to assure our own customers about our commitment to making improvements in the months and years to come.

## LOOKING FORWARD

This year marked significant progress in SABIC's efforts to boost the sustainability of our global supply chain. Having completed our first full year of implementation and measurement in 2016, we have begun analyzing the data we collected and identified next steps for continued improvement.

We are fostering sustainable procurement through the use of our Supplier Due Diligence Program designed to improve our buyers' understanding of how our suppliers comply with the SABIC Supplier Code of Conduct. In 2018, we will focus our efforts on training our buyers to make the best use of this tool.

In product transport, we are implementing an Agri-Nutrient Conveyor project that is expected to reduce greenhouse-gas emissions by as much as 92 percent. In Saudi Arabia, we will continue our efforts to switch to rail transport, which we expect to reduce shipment emissions by as much as 70 percent.

We also plan to work with our buyers to build support for our sustainability targets into every contract we sign. For instance, we can begin to include energy efficiency as a key topic to be included in cost evaluations when we source new equipment.



## **OUR APPROACH**

SABIC seeks to use a culture of social responsibility to positively impact the people and communities where we operate.

Through our well-structured community-welfare programs and strategic investments, we invest in the regions to build healthy, resilient communities, while our ongoing operations also create social, environmental, and economic value that meet existing and emerging global issues.

Our Stakeholder Driver Strategy helps us to engage with a wide variety of stakeholders, both internal and external, to develop focused corporate social responsibility (CSR) initiatives that maximize scalability, impact, and sustainable development.

As part of this work, SABIC has been assessing megatrends, such as urbanization and consumerism alongside global economic growth and technological advances, to interlink society's current and future needs with our 2025 strategy.

In 2016, our global CSR strategy RAISE provided a process and framework to guide, organize, and streamline corporate contributions and employee volunteerism to areas where they would have the most impact. Selection of initiatives and signature global programs is strategically designed with a sustainable approach that respects diverse cultures, values, and traditions – cultivating long-term, mutually beneficial partnerships, while creating lasting value for SABIC and our stakeholders.

#### **RAISE PRIORITY FOCUS**



We evaluate all SABIC's CSR initiatives against the RAISE criteria:

#### R: Reputation

Does it raise SABIC's overall visibility and reflect positively on corporate identity?

#### A: Audience

Does it address community needs and engage key stakeholders?

#### I: Innovation

Does it include a novel approach or new technology that distinguishes SABIC leadership?

#### S: Strategy

Does it complement business interests and align with company values?

#### E: Endurance

Does it promote a socially responsible culture and generate a positive and lasting impact?

Under this strategy, RAISE has four priority areas for CSR and sustainability initiatives:

Strong global and regional governance structures support our CSR progress and enable teams and employees to contribute to and expand activities.

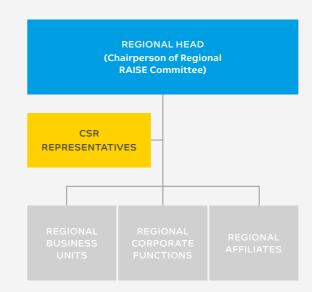
## **OUR PERFORMANCE**

This year, we are pleased to have finalized the development of our regional RAISE committees – helping further to align global initiatives with local efforts.



Teaching young people the benefits of sustainability in Thailand

#### **RAISE COMMITTEE**



#### **THROUGH RAISE IN 2017**

CSR initiatives (by spend)

COMMUNITY GIVING IN 2017 (US\$)

57.5m

TOTAL GIVING OVER PAST 16 YEARS (US\$)

850m+

## IMPROVING OUR COMMUNITIES

RAISE helps our company to make an impact, achieve our CSR goals, support communities, and create lasting change. At its core are the SABIC leaders and employees we depend on – those who embody our socially responsible values and are willing to give back and strengthen our culture of giving.



This year, SABIC's European facilities became the first to launch our new global volunteering policy, which encourages SABIC employees to commit eight hours per year to SABIC-sponsored events or approved organizations. As we introduce this global volunteering policy to employees around the world, we will better support community-level initiatives and strengthen partnerships and collaborations with civil society and the public sector, giving them greater potential for growth and positive impact.

Primary focus areas this year, as identified by key stakeholders, were science and technology education, environmental protection, health and wellness, and water and sustainable agriculture. Below, we showcase some of these activities from around the world.

### 1. SCIENCE AND TECHNOLOGY EDUCATION

Science and technology are vital to the future in many ways, from innovation in product manufacturing to the long-term health of economies. By investing in science and technology education, we are building a pipeline of talent for SABIC's workforce, increasing the skills of young people and adults, and opening the door to new employment opportunities in Saudi Arabia and around the world.

We have expanded our signature "Back to School" program to include Saudi Arabia, China, India, Pakistan, the Netherlands, Spain, the United

Kingdom, the United States, Brazil, Mexico, Argentina, Egypt, Lebanon, and Tunisia.

Through this program, SABIC and our partners have distributed more than 80,000 bags of much-needed school supplies, organized workshops on chemistry and technology, and undertaken numerous projects to repair schools and repaint classrooms.

The SABIC Women's Network supported our "Back to School" efforts around the globe. In Selkirk, New York, the network spearheaded a "School Backpack" fundraiser, collecting donations and organizing a raffle to purchase supplies for local children in need. The women delivered more than 800 school supplies to the Ravena-Coyemans-Selkirk school district, including spiral notebooks, folders, highlighters, and backpacks. At the end of the fundraiser, the team raised enough money to provide every grade with all the supplies requested by district staff members.

In Europe, several SABIC sites took part in Back to School initiatives that supported students returning to school with supplies or improvements to school facilities, provided extra learning opportunities throughout the summer holiday, and developed projects that complemented school curriculums.

For example, in Bergen Op Zoom, the Netherlands, over 150 SABIC volunteers helped renovate a local schoolyard to create a better learning environment for pupils. The site also held a Girls Day to help promote STEM (science, technology, engineering,

and mathematics) activities for female pupils. Twenty-seven young girls took part, with our employees fostering inspiration by showing them what SABIC does and demonstrating the practical aspects of working in chemical manufacturing. The students had the opportunity to meet female employees, opening their eyes to new role models and challenging gender assumptions about the types of jobs appropriate for men and women.

Our teams in Teesside, the United Kingdom, and Cartagena, Spain, hosted summer schools this year. Teesside hosted one session for 15- and 16-year-olds and another for undergraduates in engineering programs. More than 40 young people took part in these three-day courses tailored to suit their education levels, featuring practical activities inspired by manufacturing. They also undertook exercises that developed important softer skills, such as communication and teamwork. In Cartagena, 10 students worked at the site for three months in a summer internship program, applying the skills learned in their graduate programs to the real world of a chemical manufacturing site.

Through SABIC's Back to School initiatives, more than 30 SABIC employees visited schools in our communities and participated in several career days, benefiting more than 2,500 young people in Europe by improving the school environment and inspiring future career choices.

This year marked the end of SABIC's signature Science Caravan, a program that since 2015 has motivated young people to learn more about the depth and applicability of science through interactive activities such as workshops, discussions, and trainings. The Science Caravan grew from SABIC's core CSR strategy-pillar of Science and Technology Education – as well as our commitment to SABIC's 2025 strategy and Saudi Vision 2030. This project was made possible by the dedication and strong collaboration of Corporate Affairs and business units.

We held the final SABIC Science Caravans in the Saudi cities of Jouf, Arrar, and Jazan. More than 190 volunteers participated, leading interactive workshops and experiments based on the caravan's themes of chemistry, mathematics, astronomy, and information technology, and reaching more than 12,000 university students.

#### CASE STUDY

#### JUNIOR ACHIEVEMENT FOUNDATION

In Cartagena, Spain, SABIC has participated in the Junior Achievement Foundation education program for the last 10 years. The program, from the world's largest international educational NGO, aims to help more than 10 million young people in over 100 countries build working competencies, helping them to achieve professional and personal goals, and fostering entrepreneurial capacity and responsibility.

SABIC volunteers in Cartagena led classes of over 130 primary school children over a five-week period, encouraging teamwork and responsible collaboration, decision-making, and financial and mathematical thinking. The classes helped future generations understand the importance of education, personal growth, respect for the environment, and the positive roles they can play in the community.



The Junior Achievement Foundation in Cartagena, Spain.

## IMPROVING OUR COMMUNITIES continued

#### 2. ENVIRONMENTAL PROTECTION

SABIC supports initiatives that conserve the environment and protect its natural value, protect water sources and waterways, communicate about smarter energy use, and create awareness about the impacts of waste.

This year, SABIC named February "Environment Protection Month" across our global operations. The theme was "Waste-Free Environment," and throughout the month, we encouraged employees to volunteer for environmental projects at local government agencies, schools, and private organizations. In the Netherlands and South Africa, SABIC volunteers took part in Environment Protection Month by collecting waste and supporting recycling efforts.

Earth Day, which is celebrated in more than 190 countries around the world each year, marked another important event for the SABIC team.

Members of our Process Safety and Environmental team in Mt. Vernon, Indiana, helped spread awareness and celebration by organizing Earth Day poster and plastic-bag-recycling contests at nearby West Elementary School. We challenged students to make posters with recyclable materials that depict a "sidekick," who can protect the environment. The competition was keeping with previous Earth Day superhero-themed challenges SABIC has led at West for the past several years. Our judges chose winners in every grade to reflect the creativity and effort of all poster submissions.

In Selkirk, New York, SABIC employees celebrated Earth Day by hosting a hike at Five Rivers Environmental Education Center. The center, with 450 acres and 10 miles of trails through fields, forests, and wetlands, offers visitors classes and self-guided tours. During the event, employees enjoyed trails in an untouched natural environment with beautiful scenery and wildlife.

In Singapore, more than 170 employees devoted 2,000 hours of volunteer time for the "Lights of Our Future" program, educating students on the values of sustainable living – a core piece of SABIC's global sustainability strategy.

#### 3. HEALTH AND WELLNESS

SABIC is committed to the health and wellness of our employees and communities. We seek to improve mental health, avoid and treat drug addiction, and other health efforts that support Saudi Vision 2030.

Poor eyesight is a key issue that can affect a child's ability to learn. If detected early, vision problems can be prevented or corrected, and there is urgent need for these treatments among young children in India. This year, SABIC was proud to sponsor the "They See, They Learn" program, large-scale, comprehensive eye-care that covers screening and vision-correction and provides free spectacles to school children in government-aided schools in the Indian cities of Delhi, Bengaluru, Chennai, Vadodara, and Mumbai. The program aims to ensure that school children aged six to 18 years are clearly able to see blackboards and other resources in classrooms.



Above: Students benefiting from the Lights of Our Future program in China.

Right: Children collect litter in the Netherlands.



In partnership with the Indian Department of Education and NGOs in various cities, including Rotary Club Indirapuram and its Rotary Eye Care program in Ghaziabadin, Visionspring in Chennai, SVADES in Vadodara, and Mission for Vision in Mumbai and Bengaluru, nearly 100 SABIC employees volunteered to screen over 15,000 less-privileged students. We found through our screenings that as many as 14 percent of the students were unable to read words on the blackboard, and we provided free spectacles to those who would benefit.

The "They See, They Learn" program has helped us to create lasting value by raising awareness of the importance of vision in learning among children, guardians, and teachers. Students can now see better and are more motivated to continue their educational journeys.

To show support for World Blood Donor Day, SABIC employees in India collaborated with local NGOs to host a blood drive. Thousands of participants, including employees from SABIC and neighboring companies, came together with the community to collect more than 1,500 units of blood.

In Karachi, Pakistan, SABIC employees collaborated with the NGO Afzaal Memorial Thalassemia Foundation to donate blood to patients who require regular blood transfusions for survival.

And in Saudi Arabia, more than 40 SABIC employees and their families conducted goodwill visits to patients in hospitals in 21 cities and towns to extend greetings on Eid Al-Fitr, which marks the end of Ramadan.



Top right: Open day for Rehabilitation Center patents in Yanbu, Saudi Arabia.

Bottom: Blood donation drive



These programs and others have been part of our global CSR strategy to engage with communities and create social value during special events.

#### DRUG USE PREVENTION AND TREATMENT

2017 marked the halfway point of our five-year initiative with the National Committee for Combating Drugs in Saudi Arabia, the SABIC NEBRAS drug-prevention campaign. The campaign makes use of SABIC's corporate infrastructure, social and economic footprint, and business know-how – with the support of and staff and family members – to complement existing drug-prevention initiatives. The program started in 2015 with a targeted, evidence-driven program to help families and schools prevent drug use; it adds new knowledge to Saudi Arabia's efforts to combat drugs and sustain healthy lifestyles over the long term.

SABIC is developing a number of aspects of this program, including:

- A Family-to-Family Support Program that starts with SABIC families and extends to every home in Saudi Arabia.
- A School Program that provides training and materials to every teacher and lecturer near SABIC sites with best drug-prevention education practices. We plan to roll this program out nationally in coming years.
- A Mass Media Program that raises awareness and encourages young people and adults to seek help and support, while strengthening social standards against drug abuse.
- A New Media Program that uses new and emerging mobile technology to create social networks that support drug-abuse prevention.
- A Research and Insight Program that provides valuable information on how to support young people and families; it will also help track and evaluate the impact of the SABIC program.

## IMPROVING OUR COMMUNITIES continued

#### 4. WATER AND SUSTAINABLE AGRICULTURE

Urbanization, evolving demographics, and growing populations are a few of the emerging issues that pose significant risks to our environment and the world's waterways and oceans. That is why SABIC invests in raising awareness about water conservation and the benefits of improved farming practices.

SABIC is taking its signature CSR program in China, Lights of Our Future, into exciting new territory with the initiation of a project that aims to protect river ecosystems for future generations. The Lights of Our Future River Conservation Program was launched at a ceremony at the SABIC Technology Center Shanghai, co-hosted by Shanghai Pudong Kangqiao Town government and the CSR Public Interest Fund of the Shanghai Service Industries Development and Research Foundation.

The initial phase of the Lights of Our Future River Conservation Program will last three years, focusing on comprehensively improving the Kangqiao Chuangye River and its tributaries, as well as the ecosystem around the community. The program will mobilize the community through activities including

raising awareness of waterway protection. Within the framework of the agreement, the Kangqiao Town government will take the lead and provide guidance, will SABIC will leverage its expertise to provide technical consultation on water-quality monitoring and improvement, while fundraising and educating the public. Meanwhile, the CSR Public Interest Fund will take responsibility for managing the project and donated funds.

In the United Kingdom, the Environment Agency, with the support of SABIC, has begun to work on a US\$15.6 million project to protect homes, businesses, and wildlife from the risk of flooding. Phase one of the project was commissioned after tidal surges caused flooding at SABIC's North Tees site. Phase two aims to provide greater protection from the Greatham Creek waterway.

#### **CASE STUDY**

#### SABIC RESPONDING TO CLIMATIC CHALLENGES

South Africa is currently facing the worst drought in its history, with the lowest rainfalls since records started in 1904. Dam levels are critically low and the city of Cape Town has implemented level-three water restrictions that penalize businesses and individuals that waste water with heavy fines.

In its efforts to conserve water, the city of Cape Town identified Boundary Primary School, a 50-year-old school in an impoverished area that is experiencing significant water loss through aged and broken plumbing. SABIC partnered with local officials to repair the school's plumbing, fixing all leaks and replacing old systems with waterless plumbing and stoppers to prevent future leaks. The repairs saved the

school money on its water bill, and the savings supported a new student-meal program, a vegetable garden, and a greywater and rainwater collection system for the garden. In addition, SABIC hosted a number of educational events and selected a handful of students to become "Water Leak Agents," who monitor the repair and construction projects. We hosted an education day for 500 students, teachers, and parents at the school, which included creating a mural and posters about saving water, and handing out T-shirts to the community. The mayor of Cape Town welcomed SABIC's team, and the community was greatly supportive of our efforts.

## LOOKING FORWARD

Across all of our CSR activities and programs, SABIC is planning improvements to continue to increase our impact. In volunteer engagement, we will develop incentives to encourage employees to volunteer for causes they care about. We will continue to develop partnerships with civil society and the public sector, focusing particularly on our Environmental Caravan initiative in 2018. Across our operations and in our communities around the globe, we are increasing the exposure of internal and external stakeholders to our CSR initiatives, raising awareness about our signature programs and localized efforts, and highlighting how these efforts align with our 2025 strategy and Saudi Vision 2030. In the coming months and years, SABIC will continue to explore ways to increase engagement with our leadership and employees, promote RAISE, and increase employee engagement and feedback about our programs' impacts.

Below: Campinas helps local students through the





**SABIC**SUSTAINABILITY REPORT 2017

ADDENDUM

## ABOUT THIS REPORT

SABIC is a publicly traded, global leader in diversified chemicals with a global headquarters in Riyadh, Saudi Arabia. We manufacture on a global scale and have five key geographies with innovation hubs in the United States, Europe, the Middle East, Southeast Asia, and Northeast Asia. Ranked among the world's largest petrochemicals manufacturers, 70 percent of the company's shares are owned by the Saudi government, with the remaining 30 percent traded on the Saudi stock exchange. Since SABIC began in 1976, we have grown rapidly and globally, with operations today in more than 50 countries and a global workforce of more than 35,000+talented individuals. Our materials help our customers to build a better future in key end markets - construction, medical devices, packaging, agri-nutrients, electrical and electronics, transportation, and clean energy. Our materials provide the building blocks for building a better future through 'Chemistry that Matters™'.

#### **ABOUT THIS REPORT**

#### REPORTING PERIOD, SCOPE, AND BOUNDARIES

SABIC publishes three main annual reports: the Board of Directors Report and the Annual Report, which target the financial and investor audience, and this Sustainability Report, which targets a wide internal and external audience.

Published in April 2018, this report covers SABIC's sustainability performance from January 1 to December 31, 2017. It includes all SABIC businesses and operations that are financially consolidated in our 2017 Annual Report, available at: www.sabic.com/corporate/en/investorrelations.

Additional sustainability content, technical details and definitions are available in the Report Supplement document on our corporate sustainability web page: www.sabic.com/sustainability.

We believe external assessments improve our sustainability reporting, and for the last six years we have used KPMG to increase our confidence in certain reported data. The limited assurance engagement includes absolute and intensity operational metrics: energy consumption, greenhouse-gas emissions, freshwater usage, material loss, flaring reduction and CO<sub>2</sub> utilization, as well as selected corporate environment, health, safety, and security metrics, and compliance, as noted in the KPMG assurance report and marked by "\*" throughout the report. For compliance data, we have applied a more limited scope. Compliance data are reported for the 23,500 employees of SABIC and its wholly owned affiliates, but not for employees of SABIC's non-wholly owned manufacturing joint ventures (or affiliates) in Saudi Arabia.

#### REPORTING FRAMEWORKS

To guide the selection of report content and improve report quality, we use the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines. A complete GRI Content Index can be found on the SABIC sustainability website. We also continue to be inspired by the International Integrated Reporting <IR> Framework to capture SABIC's journey toward creating economic, natural, human, and social value in both the long and short term.

This report serves as our official UN Global Compact (UNGC) Communication on Progress. An overview of how we are meeting our UNGC commitments and actions is available on the SABIC sustainability website

## ASSURANCE REPORT OF THE INDEPENDENT AUDITOR

#### **OUR CONCLUSION**

We have reviewed (limited assurance) the data and the accompanying text for the following indicators (further 'the sustainability information') in the Sustainability Report 2017 of Saudi Basic Industries Corporation (hereafter: SABIC) based in Riyadh:

The total absolute values and the intensity values (per metric ton of product sales) at corporate level of the Environmental Footprint indicators:

- Energy consumption (p. 19, 38)
- Greenhouse gas emissions (p. 19, 36, 37)
- Water usage (p. 19, 39)
- Material loss (p. 19, 40)

### The total percentages at corporate level of the Environmental Footprint indicators:

- Flaring reduction compared to 2010 (p. 19, 35)
- CO<sub>2</sub> utilization (p. 19, 35)

## The corporate values of the Ethics and Integrity indicators:

- Compliance concerns raised (p. 19)
- Incidents closed (p. 19)
- Violations found and addressed (p. 19)
- Code of Ethics training completion (p. 19)

### The corporate values of the Environmental, Health, Safety and Security indicators:

- Total Recordable Incident Rate (RIR) (p. 19, 46)
- EHSS rate (p. 19, 46)
- Hazardous substances released (p. 19, 49)
- Fatalities (p. 19)
- Process safety Total Incident Rate (p. 19, 46)
- Occupational Illness Rate (p. 46)

The data for the indicators included in the scope of our engagement are marked with an asterisk (\*).

A review is aimed at obtaining a limited level of assurance. Based on our procedures performed, nothing has come to our attention that causes us to believe that the sustainability information is not prepared, in all material respects, in accordance with the applied reporting criteria as disclosed in the section "Reporting period, scope, and boundaries" of the Sustainability Report 2017 of SABIC.

#### BASIS FOR OUR CONCLUSION

We have performed our review on the sustainability information in accordance with Dutch law, including Dutch Standard 3000A 'Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attestopdrachten)' (assurance engagements other than audits or reviews of historical financial information (attestation engagement)).

This review engagement is aimed at obtaining limited assurance. Our responsibilities under this standard are further described in the section 'Our responsibilities for the review of the sustainability information' of our report.

We are independent of SABIC in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

### RESPONSIBILITIES OF MANAGEMENT FOR THE SUSTAINABILITY INFORMATION

Management of SABIC is responsible for the preparation of the sustainability information in accordance with the applied reporting criteria as described in section "Reporting period, scope and boundaries" of the Sustainability Report 2017 of SABIC, including the identification of stakeholders and the definition of material matters.

Management is also responsible for such internal control as Management determines is necessary to enable the preparation of the sustainability information that is free from material misstatement, whether due to fraud or error.

SABIC SUSTAINABILITY REPORT 2017

## ASSURANCE REPORT OF THE INDEPENDENT AUDITOR continued

## OUR RESPONSIBILITIES FOR THE REVIEW OF THE SUSTAINABILITY INFORMATION

Our responsibility is to plan and perform the assurance engagement in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

Procedures performed in an assurance engagement to obtain a limited level of assurance are aimed to determine the plausibility of information and are less extensive than a reasonable assurance engagement. The level of assurance obtained in assurance engagements is therefore substantially less than the level of assurance obtained in an audit engagement.

Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users taken on the basis of the sustainability information. The materiality affects the nature, timing and extent of our review procedures and the evaluation of the effect of identified misstatements on our conclusion.

We apply the 'Nadere voorschriften kwaliteitssystemen' (Regulations on quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have exercised professional judgement and have maintained professional scepticism throughout the review, in accordance with the Dutch Standard 3000A, ethical requirements and independence requirements.

Our review engagement included, among others, the following procedures:

- Performing an analysis of the external environment and obtaining an understanding of relevant societal themes and issues, and the characteristics of the organization;
- Developing an understanding of internal control relevant to the assurance engagement in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion on the effectiveness of the company's internal control;

- Evaluating the appropriateness of the reporting criteria used and their consistent application, including the reasonableness of estimates made by management and related disclosures in the sustainability information;
- Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on and consolidating the data in the sustainability information;
- Visits to six production sites in three countries aimed at, on a local level, validating source data and evaluating the design and implementation of internal control and validation procedures;
- Visits to corporate headquarters to review the design and implementation of controls and validation procedures at corporate level;
- Reviewing relevant internal and external documentation, on a limited test basis, in order to determine the reliability of the sustainability information;
- An analytical review of data and trends;
- Evaluating the design and implementation of the reporting systems and processes related to the sustainability information.

We communicate with Management of SABIC regarding, among other matters, the planned scope and timing of the review and significant findings, including any significant findings in internal control that we identify during our review.

Amstelveen, 16 April 2018 KPMG Sustainability, Part of KPMG Advisory N.V.

W.J. Bartels, Partner

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