


# TRANSFORMING TOGETHER

SUSTAINABILITY REPORT 2016










# OVERVIEW






## THIS IS SABIC

 <b>4<sup>TH</sup></b> LARGEST DIVERSIFIED CHEMICAL COMPANY	 <b>35,000+</b> EMPLOYEES	 <b>50</b> COUNTRIES	 <b>US\$</b> NET INCOME 4.8 BN SALES 35.4 BN ASSETS 84.5 BN
---	--	---	--

## SABIC CORE MARKETS

 CLEAN ENERGY	 MEDICAL DEVICES	 PACKAGING	 CONSTRUCTION
 TRANSPORTATION	 ELECTRICAL AND ELECTRONICS	 AGRI-NUTRIENTS	

## VALUE CHAIN

 <b>UPSTREAM</b> Lower-carbon or renewable feedstocks	 <b>OPERATIONS</b> Resource efficiency and energy- reduction projects; operational excellence	 <b>CUSTOMERS</b> Materials that enable lower energy for processing	 <b>USE PHASE</b> Energy savings or reduced material to meet consumer needs	 <b>END OF LIFE</b> Chemistry to enable recycling; developing technology to promote circular economy
--	--	--	--	---

# MATERIALITY

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

### WE USE THE FIVE MOST MATERIAL SUSTAINABILITY ISSUES IN THREE KEY WAYS:

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

The most recent update to our materiality analysis occurred in 2013, when we narrowed from seven to five material issues. The Sustainability Council reviewed priorities and recommended that we also report on social and community relationships. These activities are important to key stakeholders and demonstrate the value that SABIC adds by engaging with and caring for communities.

In 2017, we will refresh our materiality analysis again. That process includes 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. Through the process, we engage externally with key stakeholders and internally with leaders to ensure focus on issues of highest priority to both groups.

The results of this assessment will be published in the next report and incorporated into SABIC's sustainability strategy over the coming year. We invite our stakeholders to contact us at [SustainabilityFeedback@sabic.com](mailto: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 AND PRODUCT SAFETY



HUMAN CAPITAL DEVELOPMENT



SUPPLY CHAIN

## CHAIRMAN'S WELCOME



PRINCE SAUD BIN  
ABDULLAH BIN  
THENAYAN AL-SAUD

Chairman

2016 was a challenging year globally for petrochemicals, with volatile oil prices and shifts in feedstock availability. So steady progress toward our 2025 operational-efficiency targets, which is positively impacting our financial returns through energy and resource efficiency improvements, is a welcome boost.

The company took strong actions in 2016 toward fulfilling our strategic growth expectations, announcing multiple new projects in Saudi Arabia, China and the USA. These economically attractive investments provide access to abundant feedstocks that reduce financial risk through diversification. Focusing on sustainability will be critical for their success. To ensure this outcome, we will use the best available technologies to build plants that maximize efficiency to remain competitive in the long term. Sustainability—with its economic, environmental, and social dimensions—covers a wide territory; so to keep focused and effective, we have identified the top-five areas that are most important for our success. These are resource and energy efficiency; innovation and sustainability solutions; environment, health, safety, and security and product safety; human capital development; and supply chain. This approach has continued to guide our sustainability decision-making and enabled us to emerge as a sustainability leader in the Middle East.

SABIC continues to work closely with our customers on innovative products and solutions in all of our core markets. This collaboration enables us to keep up with their changing sustainability needs for mutual top-line growth. To keep collaboration central to our business model, SABIC's Home of Innovation™ opened this year. This is a unique initiative that fosters downstream development, inspires innovation, and showcases SABIC's sustainability solutions and materials—many of which improve energy and water efficiency.

Ethics and integrity are core SABIC values: the way we do business. SABIC's regional and global leadership on ethics was acknowledged by the Gulf-business-led Pearl Initiative. This honor recognized our significant contribution to advance sustainability and our holistic effort to make corporate governance a business priority. We endeavor to continue and strengthen this approach.

In terms of human capital, we continue to create opportunities in our communities all over the world and develop our people. We demand high standards from our employees, in terms of safety and best practice, and companies connected to our supply chain must meet clear criteria in order to work with us. Through practices such as these—and many others explained in this report—we are spreading prosperity and best practices throughout our global operations.

At SABIC, we never forget that our company was literally born out of the need for sustainability. We were created in order to find valuable uses for the natural gas that was then being flared off uselessly into the atmosphere. 'Chemistry that Matters™' is our heritage, and we live it every day.

“Sustainability – with its economic, environmental, and social dimensions – covers a wide territory; so to keep focused and effective, we have identified the top-five areas that are most important for our success.”

## VICE CHAIRMAN AND CEO'S WELCOME



YUSEF ABDULLAH  
AL-BENYAN

Vice-Chairman and  
Chief Executive Officer

I am pleased to report that SABIC has enjoyed another strong year in the realm of sustainability. Sustainability provides short-term gains while strengthening long-term prospects for any organization, both internally and externally. The benefits include financial value for shareholders, business resilience, inspired employees, stronger communities, and environmental stewardship.

This is why sustainability is a pillar of our 2025 strategy—it brings our core values into the decision making process by providing a scientific framework to improve in every area of the business. By consistently striving for better performance in innovation, health and safety, social responsibility, human capital, and supply chain, we hope to emerge as the world's preferred supplier of chemicals.

No organization is any better than the people who comprise it and SABIC is no exception. Like all responsible companies, we put a lot of work into protecting the health and safety of our employees. This year, we implemented a new program to connect our global experts. This new channel of communication helps us to continue to build a strong culture of personal accountability and robust management systems, and put a renewed emphasis on life-critical tasks in our operations.

In manufacturing, our operations continued steady progress toward our 2025 targets, helped by the first full year of operations of the CO<sub>2</sub> utilization project at our United affiliate; phasing out coal usage at our plant in Indiana, USA, through installation of a natural-gas cogeneration plant; flaring reduction; and continued execution of hundreds of efficiency projects. Our forward progress is supported by our new global Energy Policy, which complements our global management system by emphasizing innovation, cross-site integration, education, and exploration of renewables.

The success of the CO<sub>2</sub> utilization plant—which has increased our use of the gas as a feedstock to more than three million tons annually—is inspiring other unique and financially attractive cross-site actions, such as using olefin-cracker coke as a carbon source in our steel operations.

Sustainability product growth accelerates through collaboration and "Chemistry that Matters™", and we have had some excellent examples of this pattern in 2016. Our Home of Innovation™ growth initiative opened in Riyadh, a flagship for downstream development that connects with industry-leading companies, identifies market needs, and creates a platform for the development of innovative solutions. Also in Riyadh, our brand new Estidamah Agricultural Research Center includes multiple greenhouse designs to conduct research on sustainable and financially viable technologies that could revolutionize regional farming. And in the Netherlands, we opened a Foam Innovation Center to bring new foam grades to the market that reduce material footprint, enable energy and cost reductions, and decrease introduction times.

This year, we were recognized for our work in improving governance and integrity practices, not only within the company, but also across the entire supply chain. Internally, we are implementing some of the industry's most effective sustainability supply-chain measurements, and externally we activated a global due-diligence program to ensure that our suppliers are committed to ethical and safety, security, environmental, and labor standards.

At SABIC, we know that sustainability is not simply ensuring that we use the world's resources as wisely as possible—important though this is. Sustainability involves using all resources—natural as well as human—as wisely and efficiently as possible to secure a better future for all. This approach is central to SABIC's way of doing business and we have emerged as a stronger and more influential company as a result.

# CONTENTS



## ABOUT SABIC

- 10 Strategy
- 12 Engagement and Collaboration
- 14 Ethics and Compliance
- 16 Sustainability Governance
- 17 Performance Summary
- 18 Accountability for Goals



## INNOVATION AND SUSTAINABILITY SOLUTIONS

- 22 Our Approach
- 23 Our Performance
- 24 Inventing and Improving Processes
- 25 Collaboration
- 26 Key Markets
- 29 Looking Forward



## RESOURCE AND ENERGY EFFICIENCY

- 32 Our Approach
- 33 Our Performance
- 34 Greenhouse Gas
- 36 Energy
- 37 Water
- 38 Material Loss
- 39 Looking Forward

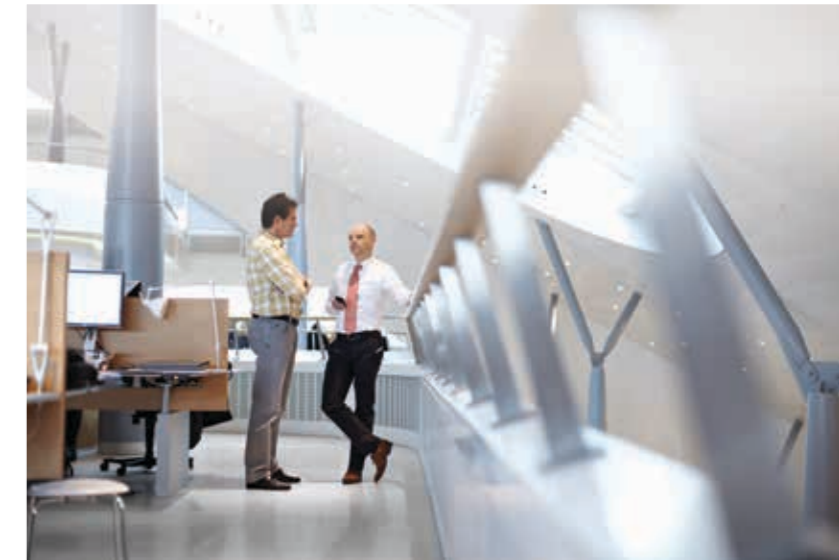


## SOCIAL IMPACTS AND COMMUNITY RELATIONSHIPS

- 68 Our Approach
- 69 Our Performance
- 70 Improving Our Communities
- 73 Looking Forward

## ADDENDUM

- 76 About this Report
- 77 Assurance report of the independent auditor



## EHSS AND PRODUCT SAFETY

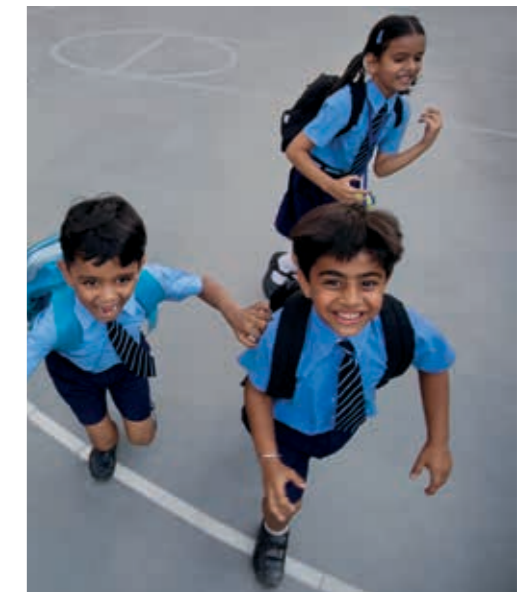
- 42 Our Approach
- 43 Our Performance
- 44 Building an EHSS Culture: Operations
- 46 Environmental Releases and Emissions Management
- 47 Product Stewardship
- 49 Looking Forward

## DEVELOPING HUMAN CAPITAL

- 52 Our Approach and Performance
- 53 Our workforce
- 55 Talent Development
- 57 Looking Forward

## SUPPLY CHAIN

- 60 Our Approach and Performance
- 61 Managing Material Movement
- 62 Ensuring Safe Operations
- 64 Improving Operations Through Training
- 65 Looking Forward



# ABOUT SABIC

STRATEGY	10
ENGAGEMENT AND COLLABORATION	12
ETHICS AND COMPLIANCE	14
SUSTAINABILITY GOVERNANCE	16
PERFORMANCE SUMMARY	17
ACCOUNTABILITY FOR GOALS	18



# STRATEGY

This year, we made steady progress toward the SABIC 2025 vision to be the preferred world leader in chemicals. In working to achieve this vision and create 'Chemistry that Matters™', sustainability continues to be a foundational element and core SABIC value.

Our success is built upon strong relationships and collaboration with internal and external stakeholders, as well as customers, to understand their challenges and priorities for meeting the most demanding needs of changing global markets. Our passion for sustainability guides us to deliver on our promise to accelerate resource and energy efficiency, develop differentiated solutions using the latest technology, attract and inspire high-performing talent, create maximum value for our stakeholders for the long term, and transform our company to thrive in tomorrow's world.

Global challenges inform our strategy and bring a sense of urgency to our mission. Megatrends such as population growth, rapid urbanization, and changing mobility result in unmet needs for clean energy, infrastructure, efficient transportation, effective healthcare, greater connectivity across geographies, a circular economy, and much more. As a global chemical company with a strong growth agenda, we believe these trends present business risks in balance with opportunities – underscoring the importance of our sustainability ambitions.

We created our sustainability program in 2009 to address these trends, and since that time we have continued to refine our program, developing a collaborative structure and the appropriate resourcing to accelerate positive change. Our business both depends on and impacts four financial and nonfinancial types of capital: economic, natural, social, and human. Maximizing sustainability business value requires us to consider each of these strategically.

Guided by the need to build value and manage impacts to economic, social, human, and natural capitals, SABIC is evolving our business today so we can continue to thrive in the world of tomorrow.

Embedding sustainability into our company's DNA drives the business and our operations to achieve targets set for our sustainability priorities. Materiality analysis is used to prioritize our efforts, enabling us to focus on and drive deep, significant change in the sustainability areas that offer the greatest business impact. SABIC's sustainability program has a strong technical basis, assuring data integrity, accounting for the life-cycle impacts of our products across the value chain, and setting technology milestones. Sustainability helps catalyze change, using concepts such as life-cycle thinking and circular-economy principles to shift mindsets and reveal innovative opportunities.

SABIC's passion for innovation and commitment to customers' material and performance needs forms the basis of our product strategy. More than ever before, our customers seek to collaborate on innovative designs to meet their goals and society's needs; they seek more sustainable products, responsive and efficient supply chains, and ethical partners with strong social-responsibility practices. Embedding sustainability into our innovation strategy means developing products that meet the challenges facing society and customers, including efficient mobility solutions, improved packaging materials, and smarter consumer electronics.

SABIC takes a tiered approach to improving resource and energy performance in our process operations. We maintain a continuous focus on operational excellence, supporting progress through measurement and reporting that quickly identifies efficiency opportunities, as indicated by our flaring-reduction efforts.

Measurement, along with empowering our employees, further helps us identify and prioritize hundreds of site-improvement projects that require small-to-moderate capital and effort, such as condensate recovery and heater-tube coatings. Identifying and planning significant step changes require detailed engineering and capital expenditure. The combination of these efforts has resulted in significant environmental and operating-cost performance improvements. We continue to implement procedures and policies that encourage and enable improvements, sending a strong message to our employees and stakeholders about our commitment to operational efficiency.

Facing an increasingly volatile business climate, SABIC is becoming more agile, cost-efficient, and prepared for business-environment changes. Our sustainability efforts are designed to help us identify opportunities and reduce risks, improve resilience by providing direction and inspiration to transform our company, make the best market-differentiation choices, provide a basis for evaluating feedstock choices, and inspire new technology direction. Guided by the need to build value and manage impacts to economic, social, human, and natural capitals, SABIC is evolving our business today so we can continue to thrive in the world of tomorrow.

## BUILDING SUSTAINABLE VALUE

(FINANCIAL AND NON-FINANCIAL)



### RESOURCE AND ENERGY EFFICIENCY

- Lower bottom-line operating costs
- Resource and carbon efficiency
- More product per unit-feedstock



### INNOVATION AND SUSTAINABILITY SOLUTIONS

- Top-line sustainability-solution growth
- Enable customer sustainability goals
- Technologies adapted to future needs



### HUMAN CAPITAL DEVELOPMENT

- Positive behavioral change
- Capacity and capability awareness
- Enhanced decision making



### EHSS AND PRODUCT SAFETY

- Safe and healthy employees
- Innovative and safer products
- Healthier societies



### SUPPLY CHAIN

- Safer, more-efficient transport
- Lower transport costs
- Faster product delivery

# ENGAGEMENT AND COLLABORATION

With operations in 50 countries, SABIC is one of the world’s largest chemical companies. As a result, our business has a wide range of impacts on 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:

- Learning primary stakeholders and sources of accountability
- Understanding our effect on stakeholders and their priorities
- Discovering new ways to collaborate and create value
- Identifying the best tools for stakeholder engagement

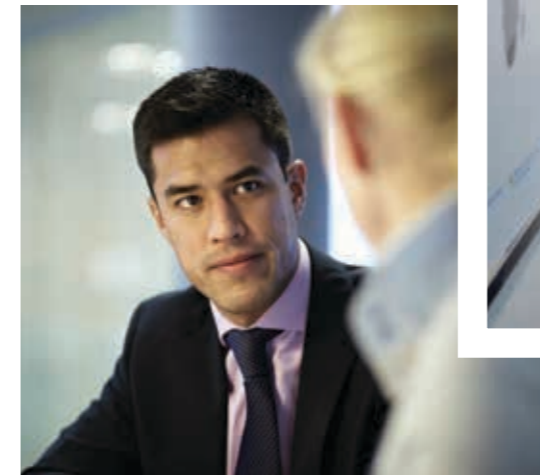
We weave stakeholder engagement throughout our sustainability program, and leaders from the company engage as it relates to their business needs.

In 2016, SABIC supported Saudi Arabia’s participation in the Gulf Cooperation Council delegation to the UN Conference of Parties 22 (COP22) in Marrakesh, Morocco, where we displayed a large portfolio of initiatives that spur sustainable development throughout our value chain.

In October, we participated in the K-Show in Dusseldorf, Germany, where we engaged more than 2,000 visitors at our exhibition of groundbreaking case studies, many with excellent examples of sustainability.

As part of our 2017 materiality-analysis review, SABIC will refresh our stakeholder assessment, gathering insight from our leaders who are responsible for engaging with stakeholders and groups.

STAKEHOLDER CATEGORY	CONCERNS AND PRIORITIES	MECHANISMS TO ENGAGE STAKEHOLDERS
Saudi Arabia and other governments	EHSS, financial, and ethical performance	Leadership communications
Private shareholders and joint venture partners	Robust business processes, governance, and brand	Board of Director meetings
Employees and their families	Safety, security, and career development	Surveys, talent reviews
Customers	Security of product supply, product safety, and sustainability	Conferences, forums, industry trade shows
Communities where we operate	Fair and ethical business practices	Employee engagement in the community
Suppliers	Collaborations	Scheduled meetings and capacity-building training
Consumers	Transparency	Information posted to internet sites
Global society at large	Sustainable solutions to megatrends	Financial and non-financial reports



For the first time, SABIC asked several stakeholders to submit independent commentary about our Sustainability Report. They reviewed sections within their areas of expertise, commenting on completeness, pertinence, strengths, weaknesses, and areas needing improvement. BSR, an external organization, substantiated the objectivity and fairness of these comments, working directly with the stakeholders to gather information and ensure commentary appearing in the report is not censored nor subjectively edited.

Upon publication of this report, SABIC will engage in a series of additional stakeholder dialogues with the intention of using feedback from those sessions to continue to improve the quality and relevance of our sustainability communications going forward.



“At SABIC, ethics and good governance are clearly an integral part of their business operations and commitment to sustainability. This is reflected internally in the organization as well as in their engagement with suppliers, business partners, and other stakeholders. SABIC has adopted a holistic approach incorporating education, awareness raising, processes, and reporting, and supporting a culture of accountability and transparency. What sets SABIC apart is the way in which it has embedded sustainability in the business as a core part of its governance structure.”

**CARLA KOFFEL**  
Executive Director,  
Pearl Initiative



## ETHICS AND COMPLIANCE

We are confident that our compliance program is a model for companies based in the Gulf region and meets the rigor and thoroughness of compliance programs at peer companies around the world.

The SABIC Code of Ethics underpins our compliance program and integrates a culture of compliance into our daily business. The Code guides employees' behavior in working with customers, suppliers, government officials, colleagues, and communities. To ensure that employees understand and work according to the Code, we require that they take online compliance training on all aspects of the Code every two years. To confirm that the Code is upheld in our business, we have a comprehensive compliance-reporting and investigations process. We investigate all credible reports of suspected misconduct and address confirmed violations with corrective actions, including employee discipline or dismissal.

In addition to our internal compliance efforts, SABIC also engages regionally and globally with key organizations working to advance a culture of corporate integrity.

In 2016, we hosted events in Riyadh and Jubail in conjunction with the Pearl Initiative, a nonprofit organization promoting a corporate culture of accountability and transparency as a key driver of competitiveness across the Gulf region. At this event, "Attracting International Customers and Investment through Supply-Chain Compliance," panelists from Saudi institutions joined SABIC executives to talk about the imperative for ethical business and why global and regional stakeholders are increasingly requesting evidence of good compliance practices in the Saudi supply chain. These included representatives from Nazaha, the Department of Promotion of Integrity; the National Anti-Corruption Commission; Tadawul, the Stock Exchange; and the Ministry of Economy and Planning, National Transformation Project.

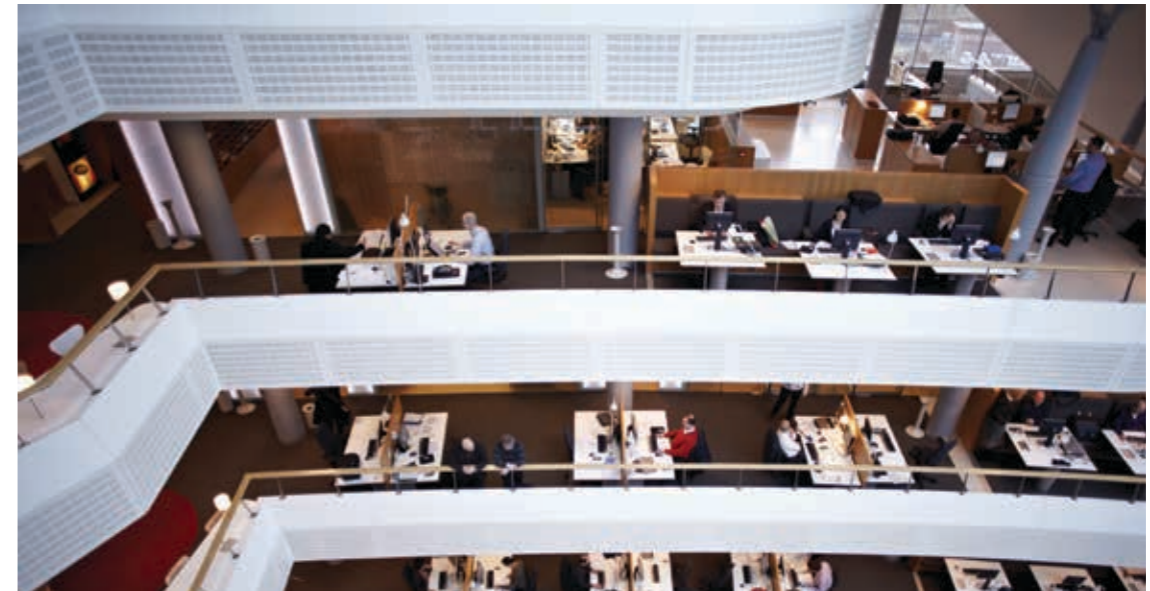
[The SABIC Code of Ethics underpins our compliance program and integrates a culture of compliance into our daily business.](#)

At the sessions, SABIC's Vice President of Global Procurement Services Ahmed Al-Shangiti said:

"The wealth that comes into Saudi Arabia through the opening of the Tadawul will be directed, at least in part, to those companies that present the lowest business risk. At SABIC, we are reducing risk in the supply chain by requiring our suppliers to demonstrate that they embrace the same strong compliance culture that our business is built upon. In the future, we will award business to those suppliers that offer us the best product, lowest price, and strongest compliance practices."

Notably, more than 100 SABIC suppliers attended the sessions. To help our suppliers develop their own compliance programs, we gave everyone in attendance a takeaway assignment: an online anti-bribery training course that SABIC offers in conjunction with Trace International. Training suppliers and other third parties on anti-bribery is a global best practice that we offer to our suppliers in Saudi Arabia to help reinforce our message that strong compliance is a business imperative for SABIC.

In addition to our regional efforts with the Pearl Initiative, SABIC also continued to be active in the B20's anti-corruption efforts and the World Economic Forum's Partnering Against Corruption Initiative.



### HUMAN RIGHTS

As a UN Global Compact (UNGC) member, we have spent the past few years focused on implementing the UNGC's 10 principles and operating in ways that reflect our fundamental responsibilities in the areas of human rights, labor, the environment, and anti-corruption. Throughout this report, we describe our activities associated with implementing these principles.

With specific regard to human rights, in 2016, we made our most significant advance through the implementation of our Global Supplier Due Diligence Program, described in more detail in the Supply Chain section. For businesses, one aspect of respecting human rights is using due diligence to avoid infringing on them. Our new due-diligence program includes a rigorous, ongoing process to identify, prevent, mitigate and account for negative human-rights impacts in the supply chain. All of our global suppliers are put through a risk model, which includes an assessment of the human-rights situation in the

country where each supplier does business. This helps us identify the risk of involvement in human-rights abuses. Suppliers identified as medium- or high-risk through this process – in conjunction with other risk criteria – then receive a questionnaire and may be subject to an audit. We use due-diligence questions and audit protocols focused on forced and child labor, working conditions, and living conditions of workers.

While adherence to the UNGC principles will remain a pillar of both our corporate-compliance program and our commitment to advancing human rights, as the UNGC looks to the next steps for responsible business conduct globally, we will do so as well. Recently, the 17 UN Sustainable Development Goals of the 2030 Agenda for Sustainable Development officially came into force. As we move forward, we will be taking our culture of integrity and compliance to the next level by looking at the goals and identifying the ways SABIC can incorporate them into our strategies, policies, and procedures.

# SUSTAINABILITY GOVERNANCE

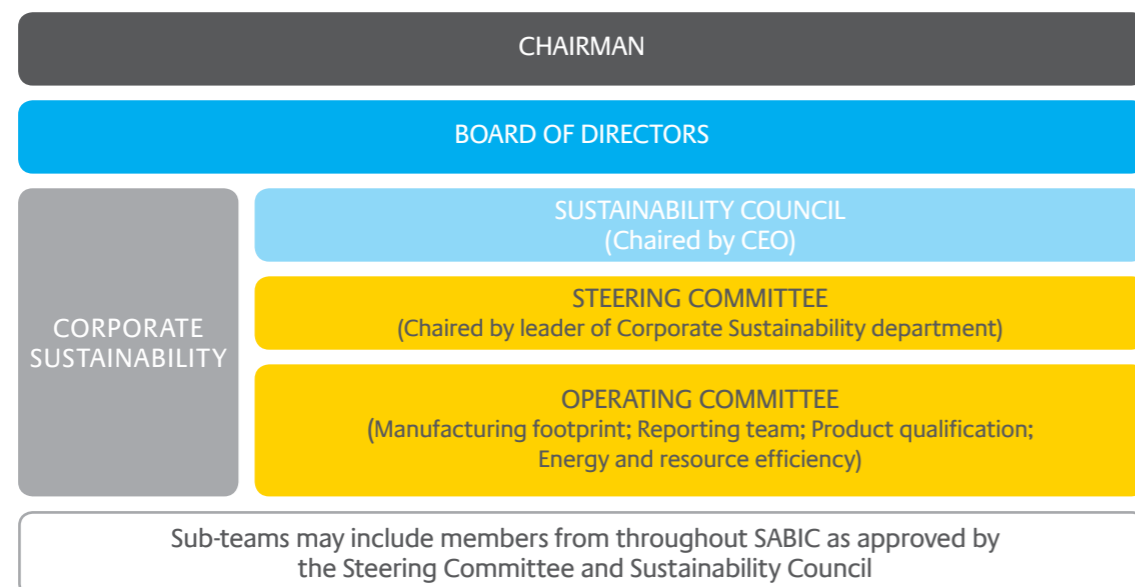
SABIC's sustainability governance structure was designed to allow our sustainability expertise to reach leaders across every level of the organization. In 2016, we moved our Corporate Sustainability department from our Technology and Innovation function into our Corporate Affairs function – a shift that reflects sustainability's importance throughout SABIC's overall corporate structure.

This move brings complementary departments closer and increases integration between SABIC's business strategy and sustainability, helping us to inspire employees and ingrain sustainability into the company culture. It accelerates the pace of change by facilitating communication of progress and enabling closer relationships with external stakeholders.

Sustainability at SABIC is led by our Sustainability Council, an executive committee chaired by the Vice-Chairman and CEO supported by 10 senior executive leaders. The Council Chairman reports on sustainability progress to SABIC's Board of Directors at their discretion. The council is responsible for the overall performance of the dimensions of sustainability, definition of our sustainability vision and goals, and final decisions on recommendations developed by the Sustainability Steering 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 Corporate Sustainability in expert sub-teams to advance SABIC's sustainability process and strategy. For example, Corporate Sustainability, Manufacturing, and several business unit leads collaborated to develop an Energy Policy that ensures new projects are competitive on energy and resource efficiency. The policy was reviewed by the Steering Committee, approved by the Sustainability Council, and signed by our CEO before going into action.

Sustainability goals set by the council are embedded into executive compensation targets, which helps to ensure performance against the goals and incorporation of our economic, environmental, and societal impacts into our business priorities. See the Vice President's message on page 19.



# PERFORMANCE SUMMARY

REPORT SECTION	UNIT	2012	2013	2014	2015	2016
<b>Ethics + Integrity</b>						
Compliance concerns raised <sup>(1)</sup>	Number	78	131	117	123*	94*
Incidents closed <sup>(1)</sup>	Number	78	129	106	103*	94*
Violations found (addressed) <sup>(1)</sup>	Number	36	54	42	56*	52*
Training completion <sup>(1)</sup>	Percent	99	97	98	98*	99*
<b>Innovation and Sustainability Solutions</b>						
Total patent portfolio	Number	8,882	9,791	10,640	10,960	12,191
Sustainability solutions	Cumulative number	27	32	45	68	78
Innovation project sustainability assessments	Number	500	719	812	767	587
<b>Resource and Energy Efficiency</b>						
Greenhouse-gas emission intensity	tCO <sub>2</sub> eq/t product sales	1.34*	1.32*	1.28*	1.25*	1.24*
Energy intensity	GJ/t product sales	18*	17*	17*	17*	17*
Water intensity	m <sup>3</sup> /t product sales	2.9*	2.8*	2.7*	2.6*	2.6*
Material-loss intensity	t/t product sales	0.11*	0.11*	0.10*	0.09*	0.07*
Flaring reduction since 2010 <sup>(3)</sup>	Percent	NA	30	49	40	55*
CO <sub>2</sub> utilization	Million t	NA	2.5	2.7	3.3	3.6*
<b>Human Capital Development</b>						
Women in the workplace	Percent of workforce	7.9	7.9	7.8	7.9	7.7
Learning programs	Participants	NA	NA	NA	30,835	31,062
<b>Social impacts and community relationships</b>						
Total community giving	Million US\$	NA	NA	32.7	53.9	46.4
<b>Supply Chain</b>						
Safety and Quality Assessment System (suppliers of dangerous goods)	Percent	NA	NA	NA	100	100
SQAS (non-dangerous goods)	Percent	NA	NA	NA	39	69
Respectable Work Conditions compliance	Percent	NA	NA	NA	51	69
<b>Environment, Health, Safety, and Security</b>						
EHSS rate <sup>(2)</sup>	Incidents/200,000hrs worked	0.96*	0.92*	0.69*	0.48*	0.62*
Total Recordable Incident Rate	Incidents/200,000hrs worked	0.22*	0.17*	0.19*	0.13*	0.14*
Fatalities	Number	4	0	0*	0*	14*
Process Safety Total Incident Rate	Incidents/200,000hrs worked	0.04	0.02	0.02*	0.01*	0.02*
Hazardous substances released	Metric tons	46	200	2600*	192*	61*

\* Assured by KPMG

<sup>(1)</sup> Compliance data are reported for the 22,000 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 Saudi Arabia.

<sup>(2)</sup> Note this is a severity-weighted rating. EHSS rate boundary excludes new large construction projects within certain affiliates.

<sup>(3)</sup> Flaring reduction calculations are based on reduction of greenhouse gas emissions

# ACCOUNTABILITY FOR GOALS

HIGH PRIORITY ACTIONS	2016 STATUS	NEXT STEPS
<b>SUSTAINABILITY STRATEGY AND VISION</b>		
Integrate sustainability into corporate programs	Revised sustainability assessment in large-capital-project process to ensure sustainability integration in key decisions	Launch process globally; implement in key growth projects to build efficient, integrated plants
Align sustainability and financial reports	Annual and Sustainability Reports issued for April 11 Annual General Meeting; increased sustainability content in Annual Report	Complete materiality assessment refresh; develop multi-year report integration plan
<b>INNOVATION AND SUSTAINABILITY SOLUTIONS</b>		
Grow sustainability product solutions	Reviewed qualification process to expand and align criteria with industry; qualified 10 solutions	Complete commercial-portfolio sustainability-assessment pilots in two markets; set up process to monitor portfolio growth
Build sustainability innovation pipeline	Completed benchmarking on metrics to drive sustainability-solutions portfolio growth	Further develop sustainability-product key performance indicators and embed sustainability into technology development
<b>RESOURCE AND ENERGY EFFICIENCY</b>		
Capital investments to reduce footprint	Commissioning Indiana coal boiler to natural gas cogeneration project; awarded first UN carbon credits in Saudi Arabia for Al-Bayroni Clean Development Mechanism project; registered Yansab project.	Multi-year project implementation of high-selectivity catalysts; furnace emissivity coatings; initiate second phase of carbon-credit issuance for Al-Bayroni; complete roll out of Yansab project
By-product and CO <sub>2</sub> utilization	Used waste coke from SABIC's Saudi-based petrochemical affiliates in steel facility; CO <sub>2</sub> operations across SABIC's Jubail affiliates	Further optimize CO <sub>2</sub> purification plant, maximize utilization
<b>DEVELOPING HUMAN CAPITAL</b>		
Develop key performance indicators for human-capital development	Progressed toward metrics for functional excellence, diversity, talent acquisition, employee engagement	Establish human-capital development targets to 2025
<b>BUILDING SOCIAL AND COMMUNITY RELATIONSHIPS</b>		
Implement global corporate social responsibility strategy	Mapped CSR RAISE categories to UN Sustainable Development Goals	Implement system for tracking volunteer hours; include community giving in report assurance
Human rights and socio-economic assessments	Completed socio-economic study for quantifying SABIC's impact in Saudi Arabia	Continue social-valuation efforts; complete Sustainable Development Goals priority mapping

HIGH PRIORITY ACTIONS	2016 STATUS	NEXT STEPS
<b>SUPPLY CHAIN</b>		
Supplier assessment process	Implemented Supplier Due Diligence Program. Reported on full slate of six metrics	Continuous improvement of six metrics and Supply Chain Academy; initiate due-diligence audits.
<b>EHSS</b>		
Transform global EHSS program to achieve targets	Critical review and significant changes to global EHSS function; implemented Life Saving Rules project	Kick-off development and internal education on enhanced risk discovery, mitigation tools
Develop sustainable chemistry program	Improved characterization of chemical-risk across the product lifecycle; identify opportunities for sustainable chemistry in technology development	Increase collaboration and develop case studies to further embed sustainable chemistry in technology and innovation

“Our new Corporate Affairs function brings together key departments to promote SABIC’s reputation and brand, engage with internal and external stakeholders, and understand how we are perceived by society at large. We are a bridge for collaboration and communication that can accelerate SABIC’s pace of change in today’s fast-moving business climate.

Sustainable growth requires not only an understanding of the economy, but also of the needs of society and the environment. We must engage with communities so everyone feels the benefits we bring. Communications are essential to this journey, so our new structure will strengthen our message and help bring ‘Chemistry that Matters™’ to the world.”

By integrating our Corporate Sustainability department into this new function, we have the technical knowledge to select the priorities that are most materially important to our company. We are also better prepared to advocate with government and international agencies and can strengthen our marketing communications with sustainability messages.



**KHALID AL-MAZYED**  
Vice President  
Corporate Affairs

# INNOVATION AND SUSTAINABILITY SOLUTIONS

OUR APPROACH	22
OUR PERFORMANCE	23
INVENTING AND IMPROVING PROCESSES	24
COLLABORATION	25
KEY MARKETS	26
LOOKING FORWARD	29



## OUR APPROACH

Innovation and sustainability are at the core of SABIC's economic value creation and growth strategy, and they form the basis of our extensive collaboration with customers and stakeholders.

The world today faces a growing array of challenges, such as pollution, increasing population, a rising middle class, and concerns about climate change – these require resource efficiency, actions to mitigate climate change, waste minimization, and lower impacts through circular-economy solutions. At SABIC, we believe challenges bring new growth opportunities. Through investments and collaboration in research and innovation, we can create value and realize our ambition of becoming the preferred leader in chemicals.

We focus our approach to innovation on three 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

Innovation based on chemistry and engineering is a key part of SABIC's strategy, enabling our operations to be more energy and resource efficient – and produce less waste and emissions. In this case, "less" is more sustainable and key to addressing resource-efficiency challenges.

Collaboration brings fresh ideas, building more sustainable and robust solutions across our operations. This year, we highlight collaborative solutions to feedstock diversification, automotive design, and downstream-industry development in Saudi Arabia.

Investing in the success of our customers helps SABIC deepen relationships across the value chain, become more agile, and respond to market trends and our customers' dynamic needs. Some of these solutions in our seven key markets feature in this report, but they are only a fraction of our successes in innovation from the past year.

At SABIC, innovation and sustainability are inseparable – propelled forward by strong collaboration and responsiveness. Through innovation, we can deliver solutions to some of the world's greatest challenges and capture growth opportunities. By investing in innovation, we are securing SABIC's competitive edge today and laying the foundation for sustainable growth in a rapidly-changing, competitive market.

**“SABIC faces vastly different challenges today than when it was founded four decades ago. Innovation has always been part of SABIC's culture. We aim to develop novel process technologies that use natural resources more efficiently, and we are constantly creating new materials that meet customer needs such as lighter, stronger, and more durable materials for transportation. At SABIC, we have established an extensive research and development program to develop unique products and meet ambitious targets. With sustainability-directed innovation, we can transform SABIC and realize our ambition of becoming the world's preferred chemical supplier.”**



**UWAIDH AL-HARETHI**  
Executive Vice President,  
Innovation and Business  
Development

## OUR PERFORMANCE

### 2016 HIGHLIGHTS

- Qualified 10 new sustainability product solutions
- Verified more than 170 innovation projects for sustainability benefits and risks
- Launched the SABIC Home of Innovation™ initiative in Saudi Arabia to engage with local and global downstream customers and turn sustainability challenges into opportunities
- Signed an agreement with Saudi Aramco to conduct a feasibility study on the development of a fully integrated crude oil-to-chemicals complex in Saudi Arabia that would increase economic diversification and create jobs
- Collaborated with Chinese automaker SGM to launch the world's largest polycarbonate, rear-quarter window molded from SABIC's LEXAN™ resin in new luxury vehicles. Our design is 40 percent lighter than a comparable glass window and reduces greenhouse-gas emissions.
- Introduced several new product families in packaging, building and construction, transportation, electrical and electronics, and other markets. These enable the creation of products with less material and lighter-weight applications, such as
  - SUPEER™, COHERE™, and FORTIFY™ resins
  - SABIC® POM (polymethylene or polyacetal), SABITAL™ glass-fiber-reinforced polyacetal, and SABIC® PMMA (polymethyl methacrylate) resins
  - UDMA™ GPP45-70 tape, a patented HPFIT™ direct-melt impregnation technology

**“PlasticsEurope has been working with SABIC for several years. Through interactions with them in our various working groups, I have seen SABIC advancing the sustainability and innovation agenda in the industry. SABIC clearly looks at innovation and sustainability through the lens of global challenges such as providing quality of life to a growing population, increasing energy efficiency, protecting the environment, and human health. And they are finding ways to tackle these challenges through their products and processes. SABIC walks the talk, which you can clearly see in their reporting, and works closely with direct and indirect stakeholders including customers, suppliers, associations, civil society, and governments in solving complex sustainability challenges.”**

**PATRICIA VANGHELUWE**  
Director Consumer and  
Environmental Affairs, PlasticsEurope

### KEY METRICS AND TRENDS



12,191

PATENT PORTFOLIO  
FILINGS



78

TOTAL SUSTAINABILITY  
SOLUTIONS



587

INNOVATION PROJECT  
SUSTAINABILITY  
ASSESSMENTS

## INVENTING AND IMPROVING PROCESSES

To lessen environmental impacts, SABIC identifies ways to reduce waste, increase efficiency, and conserve or reuse resources. By viewing our operations through the lens of innovation, we transform challenges into exciting opportunities to minimize our environmental impact and reduce costs.

One example of process improvement is at Hadeed, a SABIC affiliate, which successfully piloted a program to recycle water containing large amounts of dissolved gases, such as ammonia, for cooling during steel production. This program has the potential to save approximately 100,000 cubic meters of water per year, reduce operating costs, and reduce the facility's water-consumption intensity by approximately 2 percent.

Another example is our program to implement highly selective catalysts for glycol plants to reduce CO<sub>2</sub>-process emissions by up to 30 percent. Implementation at Saudi Kayan, a SABIC affiliate, reduced CO<sub>2</sub> emissions by 70,000 metric tons annually. We will roll out this process for all glycol plants by 2020, which ultimately will reduce our annual emissions by about 450,000 metric tons.

We continue to optimize the CO<sub>2</sub> purification and utilization project described in our 2015 Sustainability Report – a network that uses up to 500,000 metric tons of CO<sub>2</sub> emissions from one plant as feedstock in others to produce urea and methanol. We are pursuing markets to increase purified-CO<sub>2</sub> sales, such as the local carbonated-drinks industry, and we are developing two new catalytic processes to convert the recovered CO<sub>2</sub> into valuable chemical products such as olefins and syngas.

To understand the overall sustainability impacts and benefits of our emerging process and product-technology innovations, we evaluate our project portfolio using the Sustainability Assessment Tool highlighted in our 2014 report. Based on our assessments, about 40 percent of our total innovation portfolio delivers significant sustainability benefits.

### SABIC INNOVATION AWARD: FOSTERING INNOVATION IN SAUDI ARABIA



ABOVE Innovation Award winner receives trophy at opening of SABIC's Home of Innovation™

We initiated a new external competition with a prize fund of US\$2.6 million to foster innovation, encourage exceptional talent, and support entrepreneurship among individuals and institutions in Saudi Arabia, focused on plastics and polymers. This award supports the country's vision to move away from dependency on oil. The SABIC Innovation Award has two categories: the SABIC Ideas Award, which is for fresh ideas, and the SABIC Growth Fund, for existing solutions that are ready for investment. Altogether, the competition attracted almost 600 diverse entries from throughout Saudi Arabia: 57 percent of participants were male, 43 percent female, and 81 percent aged between 18 and 40. Award-winning projects include polymeric materials that can help detect chemicals or test for cancer.

## COLLABORATION

Collaboration creates new opportunities as experts from diverse companies, industries, and institutions can combine their unique skills, technologies, and expertise to build effective solutions faster and on a grander scale.

At SABIC, we develop relationships with customers, original equipment manufacturers, suppliers, research institutions, and governments globally.

Three collaborative efforts were particularly noteworthy in 2016.

The first collaboration relates to our goal of diversifying SABIC's feedstock mix in Saudi Arabia – and the country's goal of improving value from oil. As part of this effort, we signed an agreement with Saudi Aramco to explore the development of a fully integrated crude oil-to-chemicals (OTC) complex – an important investment to drive feedstock differentiation. In the process-design phase, our scientists developed and patented several innovative technologies to recycle by-products and improve production efficiency to maximize chemical yield. This project would benefit the economy by creating jobs and new technologies in Saudi Arabia.

A second collaborative effort was with vehicle manufacturers to achieve sustainability gains on the roads. We began working with Scania and its parts-suppliers more than five years ago to develop a new range of commercial trucks, which launched in 2016. In addition to supplying material, we supported parts design, performance simulation, and testing with sophisticated tools and analysis – enabling Scania to produce sleeker and more-aerodynamic exterior components. This advance, combined with improved engine efficiency, enables a 5 percent reduction in diesel-fuel consumption.

A third collaboration focused on bringing global solutions to the local market and generating new technologies. SABIC's Home of Innovation™ facility in Saudi Arabia fosters partnerships to promote the latest technologies in construction, energy, consumer goods, and transportation in order to create demand and inspire innovation. This program connects partners and markets and showcases new materials from SABIC and our partners – supporting sustainability, downstream industries, and jobs.

### CUSTOMER COLLABORATION CASE STUDY: HDPE PIPES FOR GAS TRANSPORTATION

In its 13th Five-Year Plan, the Chinese government identified sustainable development as one of five key pillars and elevated air quality on the national agenda. Soon after, Beijing, Hebei, and Tianjin started an initiative to reduce greenhouse gas and other emissions by replacing coal-fired power plants and heating facilities with gas-powered plants.

To achieve this, a new network of pipelines must safely transport natural gas. SABIC's customer, Cangzhou Xintai, won the tender for the Hebei-city gas-project pipeline. Because our bimodal-grade HDPE P6006 meets the government's stringent pressure requirements for, gas-pipe systems, Cangzhou Xintai selected SABIC's high-performing material. As part of the collaboration, a SABIC project team, with technical experts and customer representatives, visited the site, sampled raw materials, and supervised the pipe-production process. Our product allows optimum line speed and efficiency during extrusion, and improves safety with excellent stress-cracking resistance.

## KEY MARKETS



## TRANSPORTATION

**ENABLING A SAFER, SMARTER, AND MORE EFFICIENT WORLD OF TRANSPORTATION**

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

One of our aviation materials was inspired by nature. Our LEXAN™ resin light-sheet series has a unique, microcellular foam layer encapsulated by skins of solid polymer, similar to high-strength bones. This product offers airlines the opportunity to boost fuel efficiency and reduce greenhouse-gas emissions by saving up to 40 percent in weight versus incumbent materials. It meets regulatory requirements and the manufacturer's safety standards, provides design freedom, enhances passenger experience, and offers compatibility with existing manufacturing processes.

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

In China, SABIC collaborated closely with SAIC General Motors (SGM) and Shentong, a tier-1 auto supplier, to develop the world's largest polycarbonate rear-quarter window, which was molded from SABIC's LEXAN™ resin. The window, featured in the next-generation Buick GL8 and GL8 Avenir luxury vehicles, measures a record-breaking 1,200 by 450 millimeters and weighs three kilograms less than conventional glass – a 40-percent reduction in weight. This LEXAN™ resin glazing solution can reduce greenhouse-gas emissions and increase fuel economy.

For Volkswagen, we developed SABIC® PPcG3135X, a unique glass-fiber-reinforced polypropylene solution for the air-intake manifold of a 1.6-liter gasoline engine. Using this material reduced part-weight by 15 to 20 percent, contributing to fuel-efficiency and lower greenhouse-gas emissions. This example proves that sustainability can pay off: our solution helped reduce costs by 25 to 30 percent.



## PACKAGING

**PRESERVING PRODUCT VALUE WHILE MINIMIZING ENVIRONMENTAL IMPACTS**

Securing product value from factory to consumer is the most important contribution of plastic packaging. For the food industry, packaging enhances nutritional safety and helps prevent tampering. SABIC creates plastic-packaging solutions for markets, such as food, beverage, and medical, which offer great value with minimum resources and extremely lightweight designs. We prioritize products that can be recycled or reused at the end-of-life phase.

Our new concepts for multilayer laminate pouches for food packaging reduce weight, greenhouse-gas emissions, and energy requirements across the product life-cycle compared to glass or metal packaging.

To meet emerging demands from the healthcare and food industries, we reformulated and launched several unique, high-purity and low-density plastics for ultra-low-migration applications such as phthalate-free polypropylene solutions or high-density polyethylene grades for caps and closures. We also introduced polyethylene terephthalate (PET) grades for pharmaceutical-fluids packaging that are lighter and save substantial resources compared to glass. In addition, these grades support safe use, reduce transportation costs, and minimize product damage.

Concepts based on our new SUPEER™ polyethylene grade resins for stretch-hood-film applications offer up to 10 percent down-gauging potential, which saves more resources than current stretch-film-based packaging concepts. The SUPEER™ resin also improves the package's recyclability and protects against leaks or damages during bulk-palletized transport.



## AGRI-NUTRIENTS

**IMPROVING FOOD SECURITY**

SABIC develops agri-nutrient solutions that improve food security by increasing crop production. Some of our latest products also reduce environmental impacts and promote farmer safety.

For example, we are working on tailored fertilizer products that can reduce impacts on the atmosphere and groundwater during use. Our technology teams are developing a novel, carbon-based coating that reduces nitrogen-loss and improves fertilizer efficiency. We are evaluating biodegradable polymer coatings for controlled-release fertilizers with the same nitrogen content as standard urea.

SABIC collaborated with the Saudi ministry of Environment, Water, and Agriculture and the Arab Fertilizer Association to launch the Agricultural Awareness Caravan, which helps date farmers increase yield, manage pests and more (see the Social Impacts and Community Relationships section).

We worked with Saudi Arabia's Ministry of Energy, Industry, and Mineral Resources and the Ministry of Environment, Water, and Agriculture, to fund, build, and operate the Sustainable Agriculture Research Center, Estidamah. The center will research, demonstrate, and capacity-build in climate control, irrigation strategies and soilless agriculture, crop management, and integrated pest management.



## ELECTRICAL AND ELECTRONICS

**ENABLING DESIGN OF SLIMMER AND SMARTER CONSUMER ELECTRONICS**

Differentiation in design, style, and performance is key to success in the rapidly growing consumer electronics industry. SABIC supplies the high-performance and unique solutions demanded by the market through a commitment to sustainability, consistency, and innovation.

For instance, our portfolio of flame-retardant compounds, made with up to 50 percent recycled content including postindustrial recycled carbon fiber and postconsumer recycled (PCR) polycarbonate, combines specialty LEXAN™ polycarbonate resin and new halogen-free flame-retardant (FR) additives, resulting in excellent thin-wall, FR, and mechanical performance, while reducing greenhouse-gas emissions and energy use. Compared to incumbent FR products, SABIC's PCR thin-wall, FR portfolio offers similar properties to non-recycled compounds, while meeting regulatory and voluntary eco-label criteria recognized by the consumer electronics industry.

SABIC's LEXAN™ resin polycarbonate and glass hybrid laminate technology helps consumer-electronics manufacturers create shatter-resistant and lighter screens, and our customers also use LEXAN™ resin films to improve their designs. For example, they use SABIC's proprietary glass-insert molding technology to simplify the mechanical design of their devices, allowing for easier assembly, lower product weight, and more-waterproof products.

SABIC also has developed a series of reinforced THERMOTUF™ compounds that are optimized for use and plastic designs that avoid the use of adhesives or complicated mechanical interlocks, thus reducing environmental impacts.

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 homes and buildings.

For instance, our new SUPEER™ polyethylene resins with raised temperature resistance (PE-RT) are used for under-floor pipe heating systems in residential buildings. Compared to traditional materials used for this application such as cross-linked polyethylene (PEX) and copper, our grades result in lower cradle-to-grave greenhouse-gas emissions and primary energy demand.

Steel pipes, used in oil and gas exploration and transport, require protection against corrosion to extend the lifetime of the pipe infrastructure. SABIC's VESTOLEN™ A 5640C compound is used as a top coat on three-layer corrosion-protection systems for steel pipes, delivering optimum protection against corrosion, excellent stress-cracking resistance, resistance to hazardous chemicals, and reduced maintenance costs. The compound prevents premature pipe failure and promotes durability.

Our four-meter scaffolding planks, constructed from SABIC STAMAX™ long-glass-fiber-reinforced polypropylene compounds, are lighter-weight and longer lasting than traditional wood planks. Our NORYL™ resins, which can be used in place of die-cast brass in the design of water-meter bodies, can reduce part costs by approximately 30 percent. NORYL™ resins comply with regulations for low-lead potable water in the US and food contact in the EU and can withstand exposure to different environments, including lawn chemicals, and chlorinated water.

In the Netherlands, SABIC opened the Foam Innovation Center to bring new foam grades to market. The center is equipped with many foam-processing and testing capabilities, enabling the development of new foam solutions, and collaborative projects with customers to reduce material footprint, and enable energy and cost reductions.



## MEDICAL DEVICES

**CREATING MATERIALS FOR HIGH-TECHNOLOGY HEALTHCARE DEVICES**

Our healthcare solutions help customers manage costs while meeting their requirements for highly durable products that are easy to clean, resistant to chemicals, and lightweight. Our solutions support needs in both mature economies, where disease prevention and self-medication are driving demands for low-cost, easy-to-use devices, and in developing economies, where equipment must combine high performance with affordability.

For example, Novosanis selected the SABIC® PP PCGR40 resin as the housing material for a short, thin, almost-invisible needle that penetrates only one millimeter of skin to administer vaccinations, lessening the stress of receiving a shot. Our ultra-clear material with enhanced flow provides an extra level of patient safety due to its transparency. The easy-to-use device is also dose sparing: only 10 percent of the dose must be injected compared to regular flu shots, which means more people can be vaccinated with the same amount of antigen.

SABIC's research also addresses a serious industry challenge: the prevention of healthcare-associated infections. SABIC and PDI, a leader in infection-prevention products, completed a joint study on the environmental stress-cracking resistance of SABIC's materials used for medical-device enclosures. The study revealed that several of SABIC's product technologies – including LEXAN™ EXL (PC) resin, XYLEX™ (PC/polyester blend) resin, and VALOX™ (PBT) resin – deliver improved compatibility with PDI's leading hospital-grade disinfectant, Sani-Cloth®.



## CLEAN ENERGY

**ADVANCING ENERGY EFFICIENCY AND RENEWABLES**

The world is in the midst of a clean-energy revolution, driven by the international Paris Agreement on climate change, lower costs for renewable energy, and a greater focus on energy efficiency in a range of industries. At SABIC, we are capturing this opportunity to grow our business and address the global climate challenge by applying innovation that advances renewable energy and improves the efficiency of our customers' products.

SABIC is engaged in a collaborative project in Europe to build lightweight, durable, functionally integrated solar roof panels to generate energy. Combining our material, design, and application-development expertise, this new solar concept aims to achieve lower costs with less material and installation time. Additionally, it meets all standards on active and passive energy for new housing concepts, and could increase aesthetics.

In another project focused on construction and buildings, we are developing a new, integrated heating, ventilation and air conditioning (HVAC) technology that achieves up to 23 percent energy savings. Energy-efficient HVAC systems are critical in reducing the climate impacts of buildings - especially in hot locations such as Saudi Arabia. By demonstrating the energy-saving patterns and air-quality improvements delivered by innovative HVAC systems, we hope our technology helps support a clean-energy breakthrough in the HVAC industry.

By 2021, the auto industry anticipates producing a greater number of electric vehicles. Such a shift would help manufacturers meet targets for greenhouse-gas emissions globally. SABIC's ULTEM™ film UTF120 and other high-temperature dielectric films are helping enable electrification by delivering significantly higher energy density for film capacitors compared to the current polypropylene films. This means that converter and inverter manufacturers can design for higher temperatures (140°C to 150°C) and eliminate cooling systems, while facilitating higher-efficiency semiconductor-chip technology and lower system costs.

## LOOKING FORWARD

We firmly believe that investing in innovation and integrating sustainability principles into our new products and processes helps SABIC achieve world-class technologies and manufacturing operations.

## GOING FORWARD

Our priorities are the following:

- Look at specific challenges and market needs through the lens of sustainability and innovation to create products and solutions that lead to business growth
- Develop new metrics to measure and drive progress in sustainability and innovation
- Introduce processes and tools to assess the sustainability of our commercial portfolio and offer sustainability solutions as a key differentiator in core markets
- Drive downstream industry development through our Home of Innovation™ facility in Saudi Arabia
- Collaborate on advanced catalysis and new process technologies to drive feedstock diversification
- Investigate circular-economy opportunities within our business, such as developing advanced catalysis to reuse CO<sub>2</sub> as a feedstock for chemicals and intermediates

We are excited about the powerful growth opportunities we can create by combining innovation with sustainability. These investments are bringing SABIC success in business and creating solutions that our customers need – all while addressing global sustainability challenges.



# RESOURCE AND ENERGY EFFICIENCY

OUR APPROACH	32
OUR PERFORMANCE	33
GREENHOUSE GAS	34
ENERGY	36
WATER	37
MATERIAL LOSS	38
LOOKING FORWARD	39



## OUR APPROACH

We understand the connection between our business success and global challenges ranging from climate change to resource and freshwater scarcity. By integrating resource and energy efficiency into our strategy, company culture, and operations, SABIC supports the global effort to protect natural capital for future generations in accordance with the expectations of our customers and other stakeholders.

We set four sustainability goals for 2025: reduce greenhouse-gas, energy, and water intensities by 25 percent, and material-loss intensity by 50 percent from 2010 levels. Lowering our intensities not only reduces our products' life-cycle impacts but also helps us improve operational efficiency and operating costs.

We have made progress on these goals through operational excellence, new technologies, and efficiency projects. SABIC monitors and evaluates the performance of our affiliates, and engages employees across the organization to raise awareness, offer training, share best practices, and inspire new ideas. We invest in immediate, smaller-scale solutions; longer-term actions; and large-scale operational changes for transformational resource and energy-efficiency gains.

Lowering our intensities not only reduces our products' life-cycle impacts but also helps us improve operational efficiency and operating costs.

### OPERATIONAL EXCELLENCE

IMTYAZ (pronounced em-tee-yaz) – the Arabic word for excellence – inspires SABIC's manufacturing culture to ensure that we deliver great value efficiently and effectively. Our multifaceted approach includes the use of global standards and tools, training programs to build staff capabilities, and evaluation of operations and standard-implementation at all SABIC facilities. Last year, as part of our IMTYAZ program, we developed the Manufacturing Excellence Management Standard (MEMS) to ensure best practices at our operations in organizational effectiveness, work process, and performance management. As part of the IMTYAZ program in 2016, we assessed the data-reporting process and energy-management systems at 20 sites.

As part of SABIC's new global Energy Policy, we will extend this assessment to all significant sites to identify areas for improvement in energy-management programs.

We continually monitor existing facilities and evaluate new sites – looking for ways to reduce costs and maximize profits by making more product from the same volume of inputs. When developing new plants, we evaluate sustainability and energy efficiency during design to make sure they are best in class.

## OUR PERFORMANCE

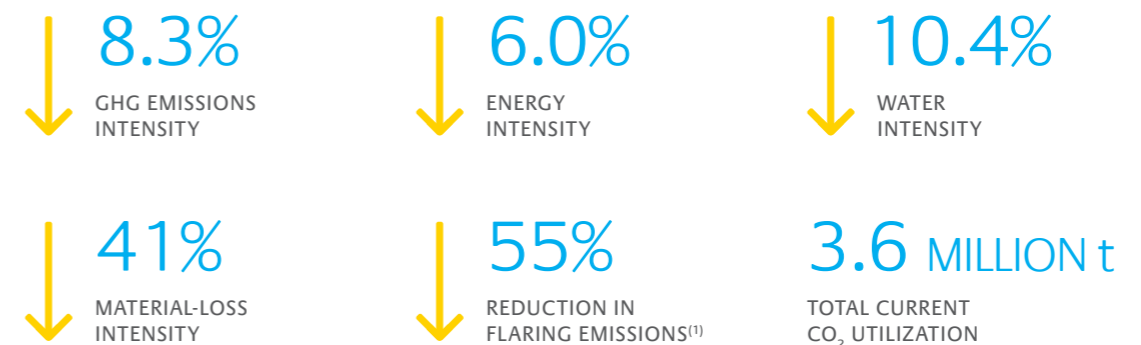
### KEY RESULTS

- Established a global Energy Policy to ensure the availability of reliable and cost-effective energy, and a commitment to continuous efficiency improvement and best-in-class design
- Achieved a 55 percent reduction in flaring since 2010
- Completed first full year of CO<sub>2</sub>-utilization operations for two major projects at our SAFCO and United affiliates, significantly increasing our resource efficiency
- Increased CO<sub>2</sub> purification at our United plant to reach approximately 173 kilotons annually
- Neared the milestone of having zero coal-fired assets in the Americas through start-up of our Mt. Vernon, Indiana, cogeneration plant, with complete commissioning expected in early 2017
- Received the Excellence in Energy Conservation award at our compounding site in Cobourg, Ontario, for an LED-retrofit project, resulting in a one-time lighting rebate of more than US\$80,000 from Hydro One (the largest to be processed through Canada's Save on Energy program)

### KEY METRICS AND TRENDS

These metrics provide the changes in performance since 2010 for greenhouse-gas emissions, energy use, freshwater use, material loss, and flaring reduction. CO<sub>2</sub> utilization is the absolute usage in 2016. The intensities are based on units per metric ton of external product sales.

### OPERATIONAL KPI PERFORMANCE



<sup>(1)</sup> Flaring reduction calculations are based on reduction of greenhouse gas emissions

# GREENHOUSE GAS

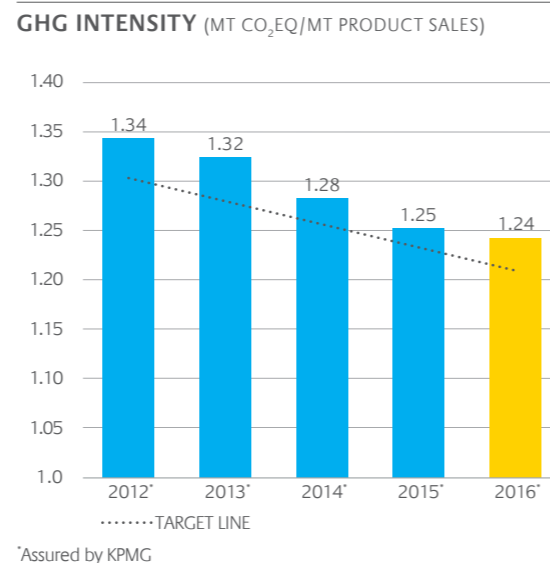
In recognition of the world's climate challenge, we take action to reduce our greenhouse-gas emission intensity, support global solutions, and invest in process innovations to reduce our impacts (see the Innovation section).

We progressed toward our goal to reduce greenhouse-gas emission intensity, which we measure in metric tons of CO<sub>2</sub> equivalent per metric ton of product sales, reaching 1.24. We continued diligence and focused attention on high-impact projects and operational improvements. This was 0.6 percent less than 2015 and 8.3 percent less than our 2010 baseline.

At SABIC's United affiliate, waste CO<sub>2</sub> from the ethylene-glycol plant is purified and transported downstream for use as a feedstock at other affiliates, such as the SAFCO-V urea plant at our SAFCO affiliate, or sold as a product. We significantly improved our CO<sub>2</sub> utilization, because 2016 was the first full year of operations for both SAFCO-V and the United purification plant. SAFCO-V used more than 699,000 metric tons of CO<sub>2</sub>, a 62 percent improvement since 2015, and the United plant purified approximately 173,000 metric tons CO<sub>2</sub>. United's positive impact will continue to increase when the plant reaches full capacity after resolving operational challenges.

A new cogeneration plant generating both electricity and steam – replacing coal-fired boilers – neared completion at our site in Mt. Vernon, Indiana. It will reduce the greenhouse-gas emissions by 460,000 metric tons per year.

In order to identify opportunities to reduce greenhouse-gas emissions from olefins crackers, we conducted benchmark studies and opportunity assessments at three SABIC affiliates: Sadaf, Yanpet, and Kemya. The project revealed ways to reduce emissions by potentially 350,000 metric tons of CO<sub>2</sub> equivalent. Another project used high-emissivity, furnace-coating technology in olefins-cracker furnaces at multiple sites to improve heat transfer. At our Sharq affiliate, this reduced energy use by more than 2 percent.



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

	2011	2012*	2013*	2014*	2015*	2016*
Scope 1	39	39	38	38	38	38
Scope 2	17	18	18	18	18	18
<b>TOTAL</b>	<b>57</b>	<b>57</b>	<b>55</b>	<b>56</b>	<b>56</b>	<b>56</b>

\* Assured by KPMG

## IMPROVING SUSTAINABILITY PERFORMANCE AT MT. VERNON



ABOVE  
Cogeneration unit at  
Mt. Vernon, Indiana, USA

We made a major investment at Mt. Vernon, Indiana, our largest manufacturing site in the Americas, in order to improve sustainability performance, increase operational efficiency, integrate world-class technologies, and reduce our products' environmental impacts in core SABIC markets.

Scheduled for completion in early 2017, our state-of-the-art cogeneration unit will replace coal with natural gas to produce the majority of the site's steam needs and up to 78 percent of electricity demand. Eliminating the use of coal at Mt. Vernon will reduce the greenhouse-gas footprint by 33 percent from our 2010 baseline – the equivalent of removing roughly 100,000 passenger vehicles from the road annually. We expect this initiative to reduce material losses by 32 percent, primarily because of coal-ash elimination. The project, along with many other SABIC efficiency projects, will significantly reduce the carbon footprint of our materials produced at the site.

Efforts such as these give our customers high-performance and more sustainable products – and they have a positive impact on our communities. To improve our performance, meet our 2025 sustainability targets, and become a world leader in resource and energy efficiency, we are aggressively building our projects pipeline with efficiency upgrades and investments in next-generation technology.

## ENERGY

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

The energy intensity of SABIC, measured in gigajoules of energy used per metric ton of product sales, was 2.3 percent higher than 2015 and 6.0 percent less than our 2010 baseline. Total energy use increased to 771 million gigajoules from 747 million in 2015.

This year, Yousef Al-Benyan, SABIC's Vice Chairman and CEO, approved our global Energy Policy, which guides energy management, complements ongoing programs to embed sustainability into our culture and operations, and places a core focus on continuous improvement and innovation. Through this policy, we can ensure our assets are energy efficient, explore traditional energy and renewables, improve the energy efficiency of our products, and pursue cross-site integration.

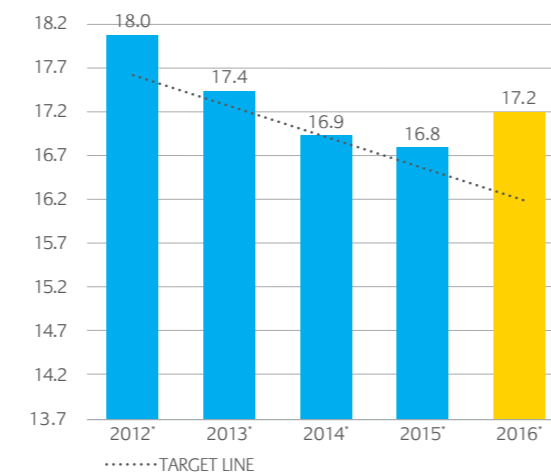
The policy gives every employee and contractor responsibility for energy management. To increase our knowledge base, we will execute a new SABIC Energy Expert program for engineers next year. And to complement this work, we are committed to opportunity assessments at our biggest sites.

At most sites, the payoff for energy-efficiency investments is visible, and clearly benefits the bottom line. For instance, reducing steam venting at our SAFCO affiliate lowered the site's fuel consumption and saved 600,000 gigajoules of energy.

We faced challenges from volatile market conditions at some of our affiliates' operations, which had a substantial effect on our energy performance. Low and unpredictable demand for steel required SABIC to interrupt operations, reducing plant efficiency. Despite this, our continued focus on process improvements reduced steel-plant energy consumption. For example, Hadeed's rolling mills are designed to roll previously produced metal pieces (billets) into smaller sections after preheating them to 1,200°C. Prioritizing the use of freshly produced, warm billets before they are fully cooled helped save energy and improve productivity, resulting in savings of US\$430,000 per year with no capital expenditure required.

Our Hadeed affiliate is creating substantial energy savings by implementing a network of chilled water-recirculation piping that spans more than 15 kilometers and replaces stand-alone air-conditioning units serving individual buildings and plants. Hadeed further improved the system by replacing 102 active pumping units with 59 larger, more efficient units equipped with variable-frequency drives. This project saves nine gigawatt hours per year, reduces greenhouse-gas emissions by 7,000 metric tons of CO<sub>2</sub> equivalent per metric ton, and saves the facility more than US\$400,000 annually.

ENERGY INTENSITY (GJ/MT PRODUCT SALES)



\*Assured by KPMG

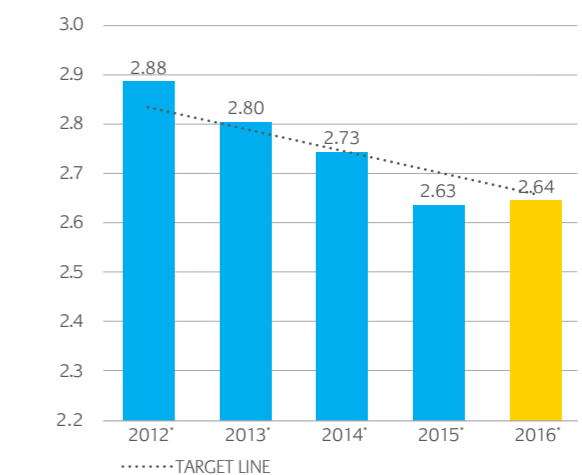
## WATER

Water is an essential natural resource; we focus water-reduction efforts in areas where water costs are high or supplies are stressed.

SABIC's freshwater intensity performance, measured in cubic meters per metric ton of product sales, was 0.4 percent higher than 2015 and 10.4 percent less than our 2010 baseline. Absolute freshwater use by SABIC increased to 119 million cubic meters from 117 million in 2015.

Several of our sites took water-reduction steps, such as less steam venting at our SAFCO affiliate, which reduced freshwater consumption by 180,000 million cubic meters. Our site at Baroda, India, reduced freshwater consumption by 22 percent – or 16,500 cubic meters – from 2015, by identifying new opportunities to recycle water in compounding operations and improving recycled-water quality. Our Sharq affiliate replaced part of the freshwater consumed for steam generation with condensate recycled from manufacturing facilities, reducing freshwater volume by 320,000 cubic meters, improving water intensity by 4 percent.

As noted in the Innovation section of this report, our Hadeed affiliate conducted successful pilots for recycling water with large quantities of dissolved gases – this is expected to reduce water intensity at the plant by 2 percent with no adverse environmental health-and-safety impacts. This program requires significantly less capital than an initial plan to fully treat and reuse the water.

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

\*Assured by KPMG

We focus water-reduction efforts in areas where water costs are high or supplies are stressed.

## MATERIAL LOSS

We measure material loss in operations so that we can minimize total process material-losses to flaring, process vents, fugitive losses, hazardous and nonhazardous wastes, and wastewater.

SABIC saw a 17 percent improvement in material loss intensity from 2015, measured in metric tons per metric ton of product sales. This was 41 percent less than in 2010. Absolute material loss decreased to 3.2 million metric tons from 3.9 million in 2015.

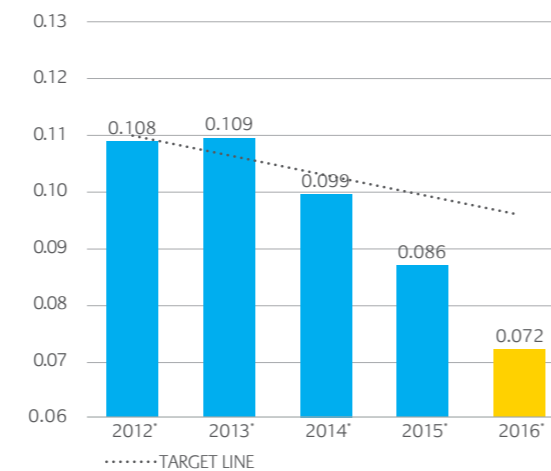
To address material loss, we focus on flaring and venting reduction: the lowest-cost mitigation opportunities. We emphasize operational excellence by improving reliability, managing shutdowns and turnarounds, and adjusting operations frequently. The SAFCO-V and United CO<sub>2</sub> purification and utilization projects described earlier significantly contributed to better material-loss performance.

We have a special focus on cross-site integration. An excellent example is the use of waste coke from our Saudi-based affiliates to increase carbon content in our steel products – reducing the use of imported coke. Last year, our affiliates used 140 metric tons of waste coke, and we expect this to grow.

In our 2015 report, we highlighted our Hadeed affiliate's project to capture unused spent gas for use as fuel in burners, lowering the site's consumption of natural gas and electrical power. After more than a year, this initiative has delivered greater-than-expected benefits, reducing flaring by 83 percent and natural gas consumption by 8 percent from 2014 at the steel direct-reduction plant. Overall, gas-flaring and material-loss actions have tremendously improved performance with a 29 percent reduction in waste since 2010.

To address material loss, we focus on flaring and venting reduction: the lowest-cost mitigation opportunities. We emphasize operational excellence by improving reliability, managing shutdowns and turnarounds, and adjusting operations frequently.

MATERIAL LOSS INTENSITY (MT/MT PRODUCT SALES)



## LOOKING FORWARD

To achieve the goals of our 2025 vision, we will maintain a strong focus on our four core key performance indicators: greenhouse-gas, energy, water, and material loss, assisted by our efforts on flaring reduction and the expansion of solutions to utilize CO<sub>2</sub>.

### PLANS INCLUDE:

- Implementing high-emissivity furnace coating in additional affiliates to reduce energy consumption and greenhouse-gas emissions.
- Commissioning the state-of-the-art, natural-gas-powered cogeneration unit at Mt. Vernon, Indiana, in early 2017.
- Returning a mechanical vapor-recompression system to service at the Selkirk site in New York. This system, which has not been used since 2010 due to utility costs, compresses hot vapor from a large distillation column to replace steam as the column's heating source. The project is expected to reduce the site's energy use by about 6 percent, saving nearly US\$1 million annually.
- Conducting sustainability opportunity assessments during the design phase of large-capital projects to ensure that new SABIC plants are highly efficient.
- Studying renewable-energy opportunities, especially solar power, to increase the share of clean energy in SABIC's overall portfolio, according to the objectives of our global Energy Policy.

# EHSS AND PRODUCT SAFETY

OUR APPROACH	42
OUR PERFORMANCE	43
BUILDING AN EHSS CULTURE: OPERATIONS	44
ENVIRONMENTAL RELEASES AND EMISSIONS MANAGEMENT	46
PRODUCT STEWARDSHIP	47
LOOKING FORWARD	49



## OUR APPROACH

The safe and reliable operation of SABIC's global manufacturing sites requires a strong foundation of environment, health, safety, and security (EHSS) leadership, effective management systems, smart metrics, and goals that inspire continuous improvement.

Further embedding EHSS as a core SABIC value means building a strong culture that empowers every employee to identify and effectively address safety risks. Our deeply held belief in the fundamental importance of EHSS shapes our actions and behaviors. Together, we can create a safe work environment for every SABIC employee, bring value to the communities where we operate and our stakeholders, and prevent accidental releases to the environment.

Despite implementation of extensive management systems and focus on EHSS, major incidents occurred at SABIC manufacturing affiliates in 2016 that resulted in tragic loss of life or significant damage. These incidents are of concern to us and led us to strengthen our efforts to prevent such tragedies in the future. Our desire to be a global EHSS leader drives us to investigate and identify root causes for each incident, review our global processes, and integrate what we have learned. We detail the changes made in response to these incidents later in this section.

To drive continuous improvement in our performance, we critically reviewed our EHSS organization in 2016 and subsequently made substantial changes. We moved from a regional-based structure to a global structure with regional support. The change makes our global expertise in process safety, environment, (industrial) health, (occupational) safety, security, and product stewardship more readily available to all regions. Already, we are seeing improvements in knowledge sharing and safety performance, which we believe will bring SABIC closer to achieving the goals of our 2025 vision.

We are dedicated to using Responsible Care® (RC14001) as the basis of our risk-management approach. RC14001 is a management system developed by the American Chemistry Council that expands the scope of the globally recognized ISO 14001 standard beyond a traditional environmental-management system to include health and safety, security, transportation, product stewardship, emergency response, and other factors. As a mark of our commitment to safety, every SABIC-affiliated chemical-manufacturing site globally maintains RC14001:2013 certification.

### MAINTAINING OUR INDUSTRY-LEADING EHSS CERTIFICATIONS

Every SABIC-affiliated chemical-manufacturing site globally is externally certified to RC14001:2013, a stringent Responsible Care® certification specific to chemical companies. Many of our compounding sites have received ISO14001 certification for their overarching environmental-management systems. These standards were revised in 2015, and we

have conducted a gap analysis to understand the necessary updates and incorporate changes into our Responsible Care framework. Training on the revised-certification standards and specific changes to SABIC's management system will continue through 2017, when we will begin transition audits to ensure we achieve the new certification by the end of the year.

## OUR PERFORMANCE

### 2016 HIGHLIGHTS

- Recorded an EHSS incident rate of 0.62, which is a 29 percent decline from last year's performance
- Achieved a 13 percent reduction in the total number of minor and higher incidents that influence the EHSS rate, though the relative overall severity increased
- Reduced hazardous-substance chemical-release incidents by 21 percent and reduced the volume of accidental releases by 68 percent

### KEY METRICS AND TRENDS

↑ 29%  
EHSS RATE

↓ 21%  
TOTAL NUMBER OF  
HAZARDOUS SUBSTANCE  
RELEASE INCIDENTS

↓ 68%  
TOTAL VOLUME OF  
HAZARDOUS  
SUBSTANCES RELEASED



# BUILDING AN EHSS CULTURE: OPERATIONS

We work together with our employees to improve SABIC's EHSS performance. Our EHSS team engages with staff at every level of the company to raise awareness of potential workplace hazards and to define the best methods to address them. We promote EHSS as a core SABIC value through regular communications and efforts to create a unified approach that makes our culture stronger.

## MANAGING EHSS

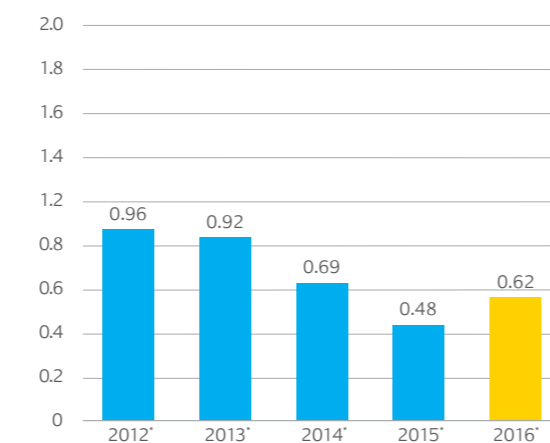
To measure and improve our performance year-over-year, we use our comprehensive safety, health, and environment management (SHEM) standards. We monitor our EHSS key performance indicators for every facility and across our supply chain. Our regular review and audit of SHEM-standards implementation helps us design, construct, maintain, and operate our industrial processes with full consideration of EHSS risks.

To measure our performance, we use an "EHSS rate," which captures a comprehensive range of incident types, including accidental releases to the environment, process-safety events, occupational health-and-safety injuries, and illnesses and security incidents. The EHSS rate is based upon the number of incidents per 200,000 man-hours worked and the severity of the incidents.

Since 2005, the combined EHSS rate of SABIC affiliates has improved by 82 percent, and our overall injury rate has improved by 67 percent. However, due to four significant incidents, the EHSS and injury rates increased between 2015 and 2016. In this section, we discuss the initiatives launched this year to achieve our ambitious long-term goal of a combined EHSS rate of less than 0.25 by 2025.

It is with great sadness that we report that people lost their lives and others were critically injured in incidents that occurred at SABIC affiliates. An additional affiliate's facility suffered a fire-and-explosion incident. Together with these affiliates and regulatory authorities, we conducted rigorous investigations to identify all the factors that may have contributed to these incidents, and we have implemented specific actions to prevent similar incidents from occurring in the future.

EHSS RATE TREND FROM 2012 TO 2016



\* Assured by KPMG

EHSS PERFORMANCE METRICS

(PER 200,000 HOURS)

	2012	2013	2014	2015	2016
Process Safety Total Incident Rate (PSTIR)	0.04	0.02	0.02*	0.01*	0.02*
Process Safety Incident Severity Rate (PSISR)	0.14	0.14	0.08	0.02	0.07
Total Recordable Incident Rate (TRIR)	0.22*	0.17*	0.19*	0.13*	0.14*
Occupational Illness Rate (Total)	0.003	0.004	0.019*	0.000*	0.002*

\* Assured by KPMG

One of the changes we made to protect people at SABIC affiliate facilities was to implement the Life-Saving Rules project, which reinforces mandatory safety precautions for 10 high-hazard activities, such as confined-space entry, safety at height, working safely with high-voltage electrical systems, and safe vehicle operation. These activities were selected based upon our internal incident data as well as benchmarking efforts conducted by SABIC affiliates and our chemical industry peers. These precautions are not new, but our recent experience makes it clear that the safety risk is lower when these rules are taken into account. The Life-Saving Rules set clear, consistent expectations across our facilities for how all employees and contractors should conduct such high-hazard work. We will continue to raise awareness about the serious nature of these high-hazard tasks to prevent serious incidents, save lives, and avoid injuries.

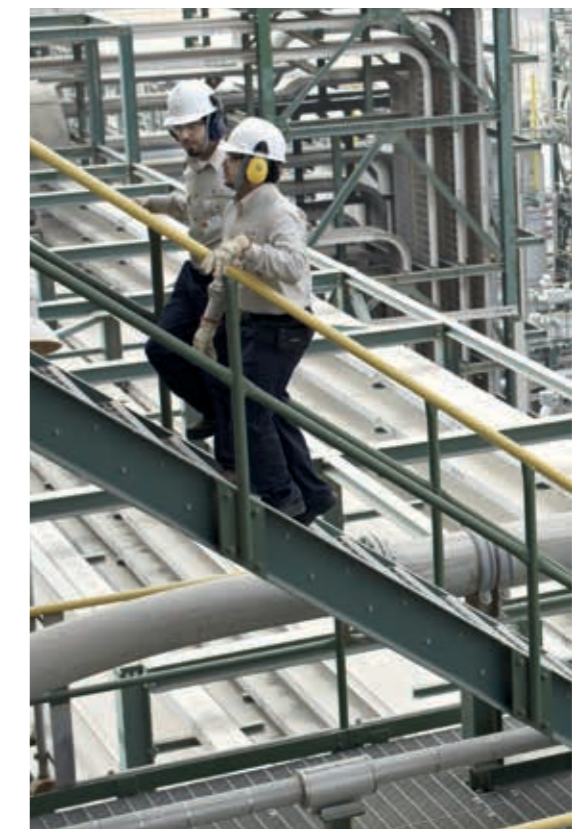
We also launched SABIC's "Global EHSS Bulletins." Each week, leaders across the company receive information about a best practice, near miss, or incident from within or outside SABIC. The bulletins include talking points and lessons leaders can share and discuss with their teams. We also initiated periodic Global EHSS Town Halls to help employees learn about important incidents and near misses and the best responses to them. Through these initiatives, we strive to further meaningful dialogue across all levels of the organization that will highlight the fundamental importance of EHSS as a core SABIC value.

Within SABIC's operations, we continue efforts to steadily improve our global safety performance. This year, SABIC Americas received a Responsible Care® Company of the Year award from the American Chemistry Council. As one of only three firms to earn this award in 2016, our US operations demonstrated a recordable-injury rating in the top 10 percent of companies in our size category; positive-performance trends in process safety, transportation safety, and emissions reduction; transparency in product-stewardship information; and prompt completion of safety-performance-metrics reporting and RC14001 certification.

## SELF-SCHEDULING SUCCESSES IN THE NETHERLANDS

Our Dutch facility in Bergen op Zoom received the Responsible Care® award from the Dutch Chemical Industry Association (VNCI) for its innovative efforts to reduce overtime and sick leave.

Through our Bergen op Zoom site's "Zelfroosteren" (Self-Scheduling) program, we became the first employer in the chemical industry offering shift-working employees the opportunity to plan their own schedules. By giving employees more flexibility and control over their schedules, we have seen overtime hours drop by nearly 50 percent and sick leave decrease by 20 percent. The awards jury recognized the innovative way our team helped change attitudes toward work, and we look forward to exploring how this self-scheduling approach can be used at other SABIC facilities.



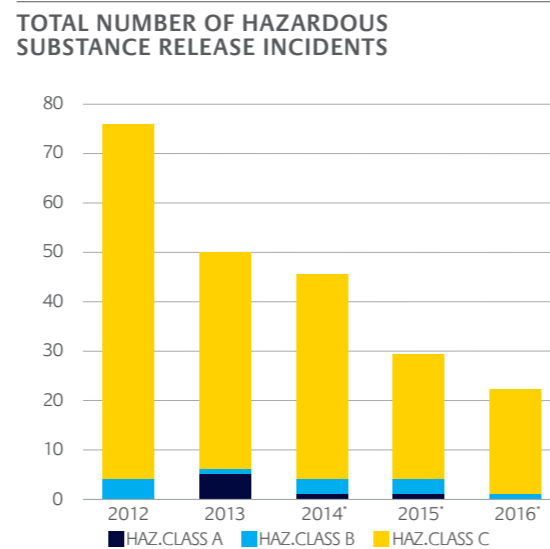


# ENVIRONMENTAL RELEASES AND EMISSIONS MANAGEMENT

One of our central EHSS practices is reducing environmental emissions. Consistent with this, we strive to eliminate all accidental releases of hazardous substances to the environment and to minimize all other emissions. We track our progress and categorize releases by their severity.

We are pleased to report significant progress on both of these goals: for the third consecutive year, we have reduced both the number and the volume of our accidental releases. Our affiliates reported only 23 incidents, down from 29 in 2015 and marking a significant improvement from 50 in 2013. These incidents released approximately 61 metric tons of substances to the environment, down from 192 in 2015.

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 encourage the implementation of best practices.



\*Assured by KPMG



**21%**  
↓  
TOTAL NUMBER OF HAZARDOUS SUBSTANCE RELEASE INCIDENTS

**68%**  
↓  
TOTAL VOLUME OF HAZARDOUS SUBSTANCES RELEASED

# PRODUCT STEWARDSHIP

Product safety is a key pillar of SABIC's sustainability strategy. We strive to understand the environmental, health, and safety risks associated with our product portfolio so that we can minimize risks throughout our value chains.

In 2016, our Product Stewardship department revised its five-year plan to develop and strengthen four program themes related to product safety:

- Enhance product safety throughout the value chain
- Support SABIC growth and compliance initiatives
- Establish fully developed product-safety systems and tools
- Ensure organizational excellence

We discuss each of these themes in detail below.

## ENHANCE PRODUCT SAFETY THROUGHOUT THE VALUE CHAIN

In global chemistry markets, we are seeing more regulatory complexity, as well as a growing demand from end-users for transparency on product formulations and compliance. These trends create challenges we must overcome through improved communication across the chemical value chains. Working in partnership with global chemical-trade associations, such as the International Council of Chemical Associations, SABIC played a leading role in a task force to develop the guiding principles, features, and resources for these types of value-chain communications. The task force was able to develop these tools based on a wide array of experiences from peers in the chemical, textile, automotive, and electronics industries.

In 2016, our Product Stewardship team successfully implemented the third phase of the updated Responsible Care® Product Safety Code, achieving a three-year execution plan for the Americas. By implementing the code, we strengthened product risk management with suppliers and customers and could improve the quality of our product-hazard communications. The team is now in the process of completing a multi-year plan to globalize this initiative by translating it to every region.

## PRODUCT STEWARDSHIP METRICS

	2012	2013	2014	2015	2016
Number of Customer Product Safety Inquiries	4,824	8,462	10,577	11,328	11,900

## SUPPORT SABIC GROWTH AND COMPLIANCE INITIATIVES

This year, our Product Stewardship team worked closely with our Life-cycle Assessment team to identify opportunities to gain a better understanding of risks associated with human health and environmental hazards throughout our value chain. The collaboration aims to establish business processes and identify sustainable chemistry tools for use during the early stages of critical business programs. Sharing of data and interpreting the findings using two complementary approaches will enable the business to make informed decisions.

We also increased collaboration between our Product Stewardship and Technology and Innovation teams, especially on portfolio management. This will increase the effectiveness of our reviews of product safety and compliance, while raising awareness of product safety and sustainability. We expect this collaboration to result in more products and processes that meet the growing demand for sustainable chemistry.

Finally, we improved our checklists and procedures to more effectively assess product safety during the due-diligence phases of merger-and-acquisition activities, placing an increased emphasis on identifying and addressing future risks.

Sharing of data and interpreting the findings using two complementary approaches will enable the business to make informed decisions.

## PRODUCT STEWARDSHIP

continued



### ESTABLISH FULLY DEVELOPED PRODUCT-SAFETY SYSTEMS AND TOOLS

We have steadily increased our ability to manage supply-chain compliance. We have implemented new regulatory systems for raw materials and products across our customer-relations platform, which further embeds our risk assessments into product design and helps us manage the evolving expectations for hazard communications.

Our Product Stewardship organization formalized a process to characterize all product risks based on the information we collect about potential hazards, intended uses, and estimated exposures throughout each product's life-cycle. The team conducted risk characterizations for 10 high-priority chemicals, detailing issues related to health, safety, and the environment. The characterizations include important mitigation and management options, which help ensure that the products are used safely.

Within the next five years, our product-stewardship team plans to complete additional risk characterizations to assess, document, and share findings for each of our 50 high-priority chemicals.

### ENSURE ORGANIZATIONAL EXCELLENCE

The best way to understand and incorporate evolving product-safety science is by continuously understanding and predicting the technical and functional competencies needed by SABIC and its affiliates. Our Product Stewardship team has developed a detailed assessment process for every role to identify personnel gaps and development opportunities. We use these assessments to create and expand our human-resources plans for hiring and training our workforce to ensure that we have all the product-safety expertise we need.

### CONTINUED PERFORMANCE

Safety and performance are top priorities for SABIC and our customers. Every year, we receive more product-safety inquiries through our Customer Declarations Portal, and we use that information to understand trends and meet our customers' needs.

This growing demand is one of the factors that led us to develop the risk-characterization practice described above. We plan to expand our risk-characterization tools to customers to ensure stronger communications and improved chemicals management.

## LOOKING FORWARD

SABIC thrives by steadily applying our core values of EHSS, quality, and sustainability amidst the constantly changing global-regulatory environment and customer demands. We plan to improve further our performance by working with an external consultant to adapt our systems and accelerate progress toward our EHSS goals.

Our process begins by conducting in-depth performance reviews of EHSS systems of a cross-section of our affiliates that represent SABIC's global business. These reviews will shape improvements for our EHSS management systems that incorporate our business needs and global best practices, improving our overall risk-management effectiveness. From there, we will develop a plan to fully educate the relevant levels of SABIC's global organization about how to use our new tools for risk discovery and mitigation. Our overall goal with this process is to increase the use of our SHEMS (safety, health, and environment management) safety standards and improve understanding and use of process-safety skills across all SABIC affiliates.

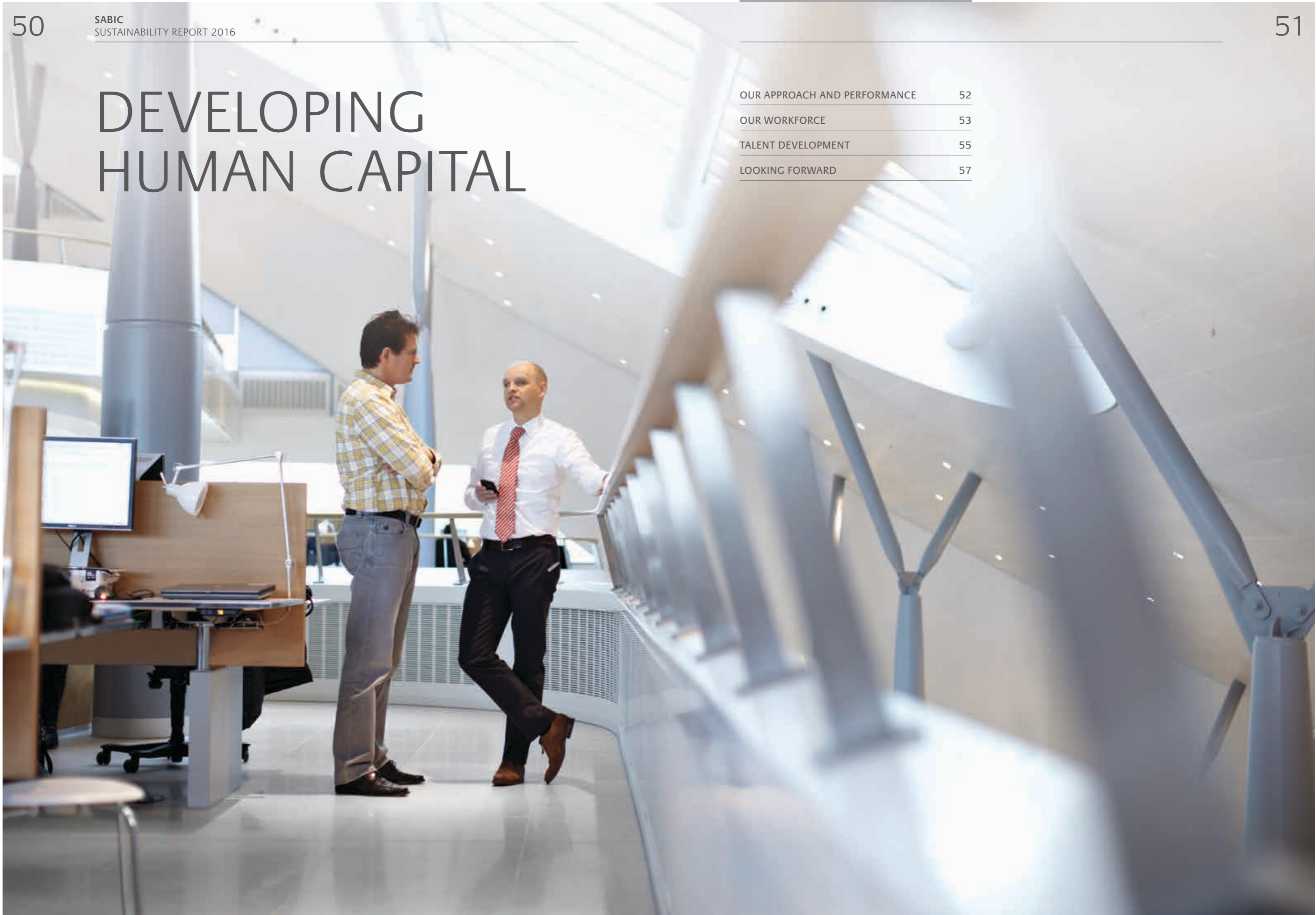
SABIC recognizes that partnerships across our industry will help us reduce the environmental, health, and safety risks we all face. We continue to collaborate with the World Plastics Council on creating global solutions for marine litter; we have implemented the principles of Operation Clean Sweep® across Europe; and we will continue to build on our current practices as we prepare to roll this out globally.

As we continue our global growth and expansion, we are proud of the advances we have made to date, but we recognize that there is more work to be done. We will continue to learn from the tragic incidents that took place in 2016, strengthen our resolve to identify and eliminate EHSS risks wherever they occur, and empower every SABIC-affiliated employee and contractor to embrace EHSS as a core value.

SABIC recognizes that partnerships across our industry will help us reduce the environmental, health, and safety risks we all face.

# DEVELOPING HUMAN CAPITAL

OUR APPROACH AND PERFORMANCE	52
OUR WORKFORCE	53
TALENT DEVELOPMENT	55
LOOKING FORWARD	57



## OUR APPROACH AND PERFORMANCE

SABIC's 40-year history of success in the chemical industry has been made possible by our people, who first grew our base in Saudi Arabia and enabled growth globally. Their ingenuity and dedication was always essential to our competitive edge. Now, we have over 35,000 employees, and we continue to invest heavily in human capital – to grow a talented global team that continues to create 'Chemistry that Matters™'.



ABOVE Developing the next generation at the SABIC Science Caravan

To support SABIC's 2025 strategy, we have undergone an organizational transformation to become more agile while accelerating sustainable growth and focusing on customer needs. The reorganization provides us with the structure we need to become the preferred world leader in chemicals.

As part of this change, we strive to attract and retain passionate employees who share our commitment to delivering the highest quality products and services to our customers. To attract the best talent, we build a culture of diversity, inclusion, and collaboration.

To support our employees in their quest for self-improvement, we invest in learning and development for skills, cross-functional expertise, and senior-leadership capabilities. We provide continuous learning for SABIC employees and external stakeholders in necessary areas and reward the best performers throughout the organization.

All of these steps are necessary to prepare our talent for the challenges facing our industry.

### KEY METRICS AND TRENDS



1,800

MANAGERS AND  
EXECUTIVES TRAINED



4,200

LEARNING-AND-  
DEVELOPMENT  
PROGRAMS



31,000

TRAINING PROGRAM  
PARTICIPANTS



7.7

PERCENTAGE  
OF WOMEN IN  
THE WORKFORCE

## OUR WORKFORCE

### DIVERSITY, INCLUSION, AND COLLABORATION

During a town hall broadcast to 91 sites in 33 countries, Yousef Al-Benyani, Vice-Chairman and CEO, discussed the results of the 2016 SABIC Employee Survey. The survey is our way of gathering feedback from our most important stakeholders: our employees.

The survey showed that SABIC employees feel valued and respected regardless of background – a reassuring endorsement of our policies. As Al-Benyani noted during the town hall, "Diversity should be viewed as our strength." At SABIC, we embrace diversity and aim to create an environment that values inclusion and collaboration.

We take pride in our ability to attract the best and brightest people from around the world. Some 64 percent of our workforce is based in the Middle East and Africa, 14 percent in Europe, 14 percent in the Americas, and 8 percent in Asia – demonstrating the success of our concerted effort to make SABIC a truly global, diverse organization.

We strengthen our commitment to diversity by giving employees opportunities to experience different cultures. In addition to those who work every day in global roles, in 2016 more than 200 SABIC employees embarked on assignments in 25 different countries. We provided scholarships to more than 800 scholars in Saudi Arabia to pursue higher education abroad, from which they will bring back their acquired knowledge and skills to SABIC. We also collaborate with 15 local and international educational institutions to increase our knowledge and skillsets. International experience brings fresh, innovative views, and those exposed to different backgrounds become more inclusive, which is a key building block for successful collaboration. Cultural enrichment has helped us integrate best practices from around the world and create a more agile, efficient organization.

We are also committed to gender equality and advancing women in our workforce, and currently 8.5 percent of SABIC's management and leadership positions are filled by women. We formed the SABIC Women's Network (SWN) to support women throughout the company. The network helps develop women, promotes women's issues in the workplace, and connects women locally and globally.



ABOVE SABIC employees walk together for better health in Bergen op Zoom, the Netherlands

### FEMALE LEADERSHIP PROFILE

#### NAVEENA SHASTRI

In 2016, SABIC appointed Naveena Shastri as our first female General Counsel. The appointment supported our 2025 strategy to invest in leaders and promote talent. Shastri has held senior positions in the Legal Affairs, including Regional Chief Counsel for the Americas. She is one of our role models for female employees and supports other women globally through her activities with the SABIC Women's Network.

"I feel privileged, honored, and excited to be the first female direct report to the CEO at SABIC. More importantly, the appointment shows that SABIC has a progressive vision, commitment to a performance-driven culture, and values diverse human capital. I look forward to the challenges and adventures of the role; it will be a deeply rewarding experience."



NAVEENA SHASTRI

Vice President and General Counsel,  
Legal Affairs

# OUR WORKFORCE

continued

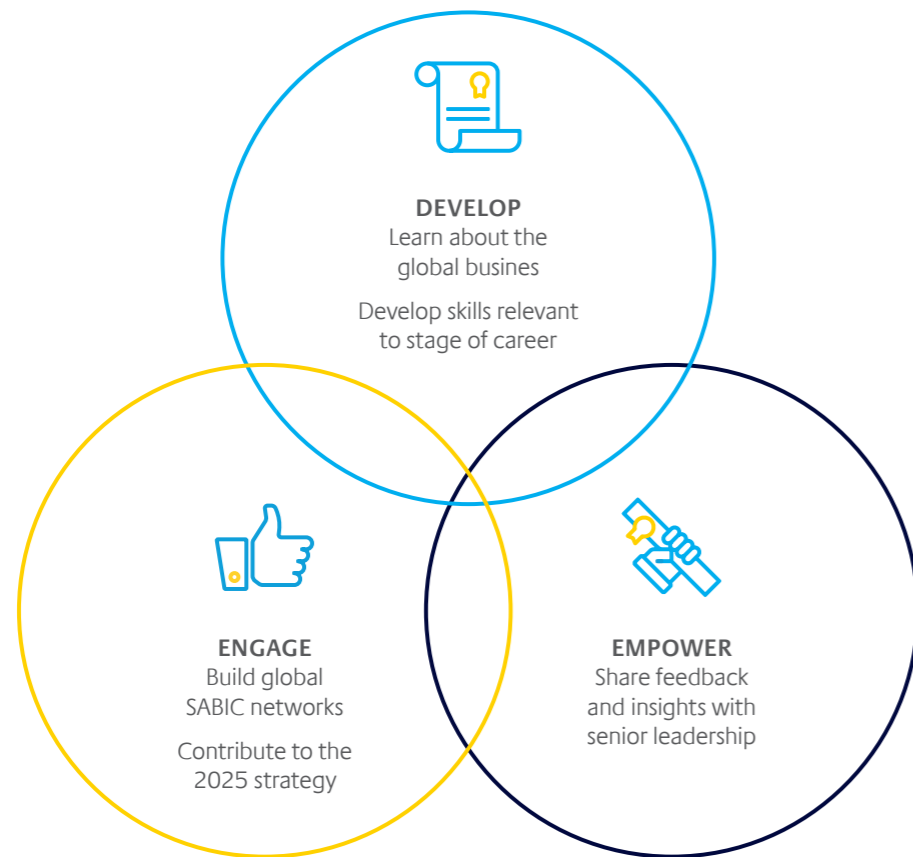
## YOUNG SABIC PROFESSIONALS

To ensure future leaders have a network of support, an understanding of the business from different perspectives, and a direct connection with senior management, we developed Young SABIC Professionals (YSP) hubs in each region. Through the hubs, participants can support one another and impact the broader SABIC community. The hubs frequently express interest in sustainability, with 86 percent of young professionals saying they contribute or would like to contribute to sustainability as part of their job. The platform empowers early-career employees through development, engagement, networking, training, and community service, strengthening bonds with senior leadership to contribute to our 2025 strategy.

**“Building networks and collaborating across boundaries enables our global colleagues to transform the way we do things, which is critical to our sustainable growth and future success.”**



**GREG ADAMS**  
Vice President, Americas



# TALENT DEVELOPMENT

## CONTINUOUS LEARNING

SABIC provides exceptional learning and development and rewards performance to create a culture that encourages continuous growth. Our experience proves that educational programs help us to remain a competitive business. One of our core strategies is to deliver programs that help our employees continuously develop skills, and share knowledge and best practices.

In 2012, we established the SABIC Academy as a global learning hub for employees. It also provides support for external stakeholders and enables continuous learning. Employees can engage in programs focused on leadership, functional learning, and core-business skills. Teaching methods include teaching our global curriculum in class, convenient e-learning courses, practical training, and coaching. These opportunities are available to all levels and functions.

In 2016, we grew human capital in multiple ways. More than 6,000 participants took advantage of e-learning tools, including 6,000 online courses, 3,000 videos, and 24,000 e-books. We worked with universities globally to provide the best resources for our employees, including an on-demand leadership and management skill-development tool from one of the world's top business universities.

More than 100 leaders graduated from our Global Leadership Challenge, which strengthened business and financial acumen, market focus, strategy execution, and global awareness. The challenge included a module for global sites on "SABIC's leadership way," which reported on action-learning projects that support implementation of SABIC's 2025 strategy.

In Shanghai, the Global Leadership Challenge partnered with the SABIC Women's Network to roll out the "Diversity and inclusion as a competitive advantage" module, providing insights about how diverse teams foster more effective and innovative solutions. Experienced female SABIC leaders participated in an open panel to share their experiences about growing as leaders within the organization.

The women's network introduced an educational series for their members called "Be Your Best," which provided resources for self-directed learning and professional development. The series includes sponsored modules on technology, personal branding and networking. Feedback was overwhelmingly positive, especially for the one-stop-shop design and learning-resource recommendations.

**“The partnership achieved its goal of increasing leadership's awareness of how diversity is essential to SABIC's success; we hope it is the first of many similar collaborations.”**



**MIN YIN LEE**  
Senior Director,  
Human Resources, Asia

## TALENT DEVELOPMENT

### continued

In addition to employees, SABIC invests in learning opportunities for other stakeholders. Public-sector leaders participated in SABIC Academy's inaugural Leadership Program for Ministries, where participants benefited from our experience building and developing leaders.

To invest in our children, who are the future of the country, SABIC organized our annual Summer Innovation Program for the sons and daughters of employees in Saudi Arabia. Some 423 male and female students enrolled. We plan to expand the program for under-privileged children.

Our organization-wide commitment to learning at SABIC is strong, and we provide high-quality programs that support individual professional development goals and improve organizational performance.

**“We foster a culture of learning and development to expand the expertise of our employees and help them make a real difference in the world. We believe learning can come from our experiences, our successes, and, perhaps most importantly, from our mistakes.”**



**ABDULAZIZ AL-ODAN**  
Executive Vice President,  
Corporate Human Resources

#### ACCELERATING PERFORMANCE

To complement our culture of continuous learning, we help employees take ownership of their careers through clear pathways. These align the needs of our business with the aspirations of our people and are aided by our career-development tools and resources. All leaders in SABIC must actively help employees gain the right experience and proceed through their chosen pathways. These investments help us create a best-in-class workforce.

In 2016, we took several steps to help employees advance in their careers in a strategic way for our organization.

We successfully completed a formal competency-assessment process, which evaluates employees based on the competencies required for their current roles. Analysis of the data will give us a better understanding of employee needs and make the promotion process more streamlined and effective.

Our annual Talent Review Process continues to give managers an opportunity to review the competency level and desired career path of each employee – and to lay out a path for accelerated progress in the coming year through formal training, self-training, mentoring, and enriching work experiences.

We put into action 12 career lines, which provide a clear view of steps to progress in a specific function. Within each line, we identified a career path, created a competency assessment, and provided learning resources to improve current performance and prepare for future roles as an expert or manager. These are helping employees advance to senior roles.

We also have Early Career Development Programs in five career lines that provided employees with practical learning through a series of rotational assignments.

From our unique educational opportunities to our clear system for career path progress, our talent-development programs reach every employee, beginning from day one.

## LOOKING FORWARD

SABIC always looks to the future: we must continue our internal transformation and enhance the effectiveness of our employees to create value. These changes will make us more agile and competitive, and enable us to stay ahead of the competition.

We aim to continue ongoing dialogue with our employees following the employee survey. We recognize employee engagement provides valuable insight into our day-to-day operations, and we plan to continue to increase the frequency of the dialogue with our employees as a way of doing periodic health checks on the organization. Going forward, we will ensure our surveys continue to be aligned with SABIC's strategy and that we track and measure the resulting actions that are planned.

To accelerate growth, we will leverage our diverse workforce and provide continuous learning.

Beginning at recruitment and continuing throughout employment, we aim for the best. At the final SABIC town hall in 2016, our CEO stressed that people development plays a major role strengthening our competitive position. By making investments in learning, we will improve the quality of our leaders. Our objective is to ensure a healthy and robust talent pipeline to achieve our 2025 goals.

# SUPPLY CHAIN

OUR APPROACH AND PERFORMANCE	60
MANAGING MATERIAL MOVEMENT	61
ENSURING SAFE OPERATIONS	62
IMPROVING OPERATIONS THROUGH TRAINING	64
LOOKING FORWARD	65



## OUR APPROACH AND PERFORMANCE

In 2015, SABIC's global Supply Chain organization announced our ambition to be the chemical industry's recognized leader in supply-chain sustainability.

To achieve this, we undertook a number of initiatives across all of our businesses to develop standards for good governance in quality, safety, security, efficiency, education, and environmental performance. We are working together with our compliance, governance, and enterprise-risk-management functions to strengthen a culture of transparency and accountability in SABIC that will lead us to best practices in global supply-chain governance. We implemented a system for Supply Chain Incident Reporting (SCIR) to capture these incidents, and we will regularly share what we learn across our supply chain.

We see the benefits of embedding sustainable practices in our global operations, including energy savings, improved resource efficiency, technological innovation, and cost savings. These efforts are helping SABIC to become a global leader in the chemical industry, and we will continue adding value through sustainability in the supply chain.

### 2016 HIGHLIGHTS

- Experienced an extremely safe year with zero major incidents in the supply chain, and only two moderate physical injuries in moving product into or out of SABIC facilities
- Made critical progress on emissions-reduction initiatives, including developing a new generation of eco-friendly vessels
- Established the Supply Chain Academy within our existing learning and development facility, the SABIC Academy, to strengthen our core-supply-chain competencies; the new academy piloted a "Demand planning" course for more than 50 staff
- Implemented four additional metrics in our Supply Chain and Procurement Sustainability initiative: Carbon Footprint, Supply Chain Incidents, Working Capital Efficiency, and Functional Competency Index

**"SABIC stands out for the approach it takes to developing standards for good governance across the supply chain, not only setting clear requirements for its supply chain actors but also investing in training and support for suppliers to meet those standards and targets. SABIC's proactive approach in working closely with its suppliers to build their awareness and capabilities within areas such as anti-corruption, transparency, and accountability is an impressive part of its effective supply-chain management and demonstrates its focus on supporting suppliers to operate according to the highest ethical standards."**

**CARLA KOFFEL**  
Executive Director, Pearl Initiative

## MANAGING MATERIAL MOVEMENT

As a global leader in the chemical industry, SABIC's supply chain is complex, with close to 20,000 delivery locations spanning 140 countries. Our supply-chain and procurement operations manage the movement of all materials supplied to our manufacturing plants.

Once we turn raw materials into SABIC products, the supply-chain operations team and an extended network of logistics service providers execute the planning, scheduling, and delivery of those products to our end-customers.

Dedicated supply-chain execution teams manage operations, supported by our Global Supply Chain Center of Excellence. The center leads many strategy, optimization, process-governance, and other activities that are critical to our sustainability efforts in the supply chain.

### EXPANDING THE SUPPLY CHAIN AND PROCUREMENT SUSTAINABILITY INITIATIVE

In 2014, we committed to developing new metrics to measure and evaluate the sustainability performance of key processes and materiality areas. In 2015, we launched our first two metrics: the Safety and Quality Assessment System (SQAS) and Respectable Work Conditions (RWC). This year, we continued developing those metrics and added four more: Carbon Footprint, Supply Chain Incidents, Working Capital Efficiency, and Functional Competency Index. We elaborate on each of these key performance indicators (KPIs) below.

As part of our extensive change-management campaign, we developed and implemented rigorous data-collection processes and identified and trained the people responsible for validating and reporting our KPI data every quarter. Our Supply Chain Center of Excellence led these and other initiatives to ensure that every SABIC business adopts these KPIs and embeds a sustainability mindset into all of our actions.

We focused on transitioning from definitions to measurement. Going forward, we will prioritize automating metrics-measurement and expanding our initiative-implementation to analyze and improve our performance and strengthen our impact.



### SUPPLY CHAIN PERFORMANCE MANAGEMENT PROGRAM

We launched our Supply Chain Performance Management (SCPM) program to bring our efforts to a higher level. We use SCPM to report on our supply-chain KPIs for both sustainability and other metrics, which is helpful because sustainability is a driver for overall performance. Our focus is on cost management, profitability, delivery reliability, customer satisfaction, planning efficiency, and sustainability performance. The platform provides an effective and descriptive way to visually report supply-chain performance and enable analytics across our value chain.

Through the SCPM program, we can thoroughly validate and measure our supply-chain performance data and quickly prototype new metrics before releasing them widely. Already, three of our KPIs – Carbon Footprint, Supply Chain Incidents, and Cash to Cash (our metric for working capital efficiency) were prototyped, and we are working toward reporting on all six.



# ENSURING SAFE OPERATIONS

## SAFETY AND QUALITY ASSESSMENT SYSTEM

Our Safety and Quality Assessment System (SQAS) evaluates the quality, safety, security, and environmental performance of chemical-industry logistics service providers. The system employs questionnaires, independent inspection teams, and auditors using best practices tailored for the industry. Suppliers are measured for compliance to industry-set SQAS standards based on the quality and maintenance of their delivery fleets and quality and training of operators.

We continued to improve our suppliers' SQAS performance and are pleased to report that we maintained our 2015 success of having 100 percent of suppliers of dangerous goods achieve compliance. In addition, we surpassed our original framework target for suppliers of non-dangerous goods by 9 percent, with 69 percent of those suppliers in compliance.

## SUPPLY CHAIN INCIDENT REPORTING

SABIC's global process for reporting and investigating environment, health, safety, and security (EHSS) incidents has been fully operational for many years, and we extended the reach of the internal program to cover external performance in our supply chain. Our Supply Chain Incident Reporting (SCIR) KPI measures our supply-chain safety performance, with the goal of identifying improvement areas and creating a platform for benchmarking internally and externally.

Last year, we expanded our incident-reporting system to include incidents within logistics-service-provider operations and outside the direct operational scope of SABIC's facilities. This is one of the most effective ways to manage and mitigate risks for our company as well as for service providers and the communities where we work. It also improves the safety and financial performance of our logistics service providers by reducing accidents and improving delivery performance.

Going forward, we will implement this KPI with all logistics service providers in order to develop and maintain uniform reporting across SABIC.

## ENSURING OPERATIONAL EFFICIENCY

### WORKING CAPITAL EFFICIENCY

Our Cash to Cash (CTC) metric tracks the working capital, measured in days, currently in use to operate the business. Also known as "net working capital," this metric tracks the operational liquidity of our company in terms of the currency needed for day-to-day operations. A lower number of days represents greater efficiency. We include this metric in the initiative because inefficient operations affect both our financial performance and the environment. Our CTC improved by about 20 percent compared to 2015.

## REDUCING OUR CARBON FOOTPRINT

### TRANSPORTATION CARBON FOOTPRINT

As we work to reduce SABIC's external carbon footprint and increase the efficiency of our supply-chain logistic operations, we are focused on aligning our business and sustainability goals. A way for us to do this is by accurately calculating the greenhouse-gas (GHG) impacts of specific projects. We achieved critical successes on a number of initiatives that will help achieve our emissions-reductions targets.

We aim to improve our environmental performance, which we measure as the amount of greenhouse-gas emissions, expressed as CO<sub>2</sub> equivalent per ton-kilometer traveled (CO<sub>2</sub>eq/t-km), resulting from SABIC's logistic operations. The following initiatives showcase our footprint-reduction work.

In 2015 and 2016, we calculated the results of our efforts to reduce greenhouse-gas emissions. The first result from calculating greenhouse-gas intensity related to transport operations is 12grams CO<sub>2</sub>eq/t-km. During 2017, we will further automate and improve the data collection in order to consolidate the carbon-footprint baseline from which to measure improvements.

## THE SAUDI NATIONAL RAILWAY PROJECT

We completed the feasibility and sustainability assessment for the planned Saudi rail network to deliver freight between Jubail, Jeddah, and Riyadh. The network will allow SABIC to shift three million kilometers of truck trips per year to rail, resulting in an 86 percent reduction in greenhouse-gas emissions, 75 percent less fuel consumption, and significantly reduced national road maintenance. We anticipate moving forward with the project in 2017, with completion expected beyond 2020.

## FUEL SWITCHING

In addition to our route-optimization efforts, SABIC is developing a new generation of eco-friendly vessels that are powered with clean ethane gas instead of heavy fuel oil. The two ships, GasChem Beluga and GasChem Orca, were designed in Germany and constructed in China with new, hydrodynamic features, including crew quarters in the bow instead of the stern and three special tri-lobe-shaped cargo tanks that save fuel and reduce emissions.

The GasChem Beluga is already at sea, and we anticipate putting the GasChem Orca to work next year. Each ship brings a reduction of approximately 1,300 metric tons of greenhouse-gas emissions each year and complies with International Maritime Organization's emissions requirements well in advance of the 2020 deadline.

These innovative ships expand our existing fleet of high-performance, low-emission vessels, including the Coral Star and Coral Sticho, two liquid-natural-gas-fueled carriers launched in 2014, and the NCC Fajr, a state-of-the-art chemical tanker launched in 2015. The Fajr is the largest-capacity tanker worldwide; by taking advantage of increased payload per voyage, it delivers products with 40 percent less greenhouse-gas emissions than average chemical tankers.

## ASIA LOGISTIC-NETWORK OPTIMIZATION

We began reviewing our Polymers business's logistic network to determine the potential for improving performance and efficiency and to support our business growth plans. We conducted detailed analysis of the three service hubs and 43 warehouses that comprise the network. Following this, we streamlined the network to three hubs and 15 warehouses, resulting in reduced goods-handling emissions and substantial savings over the course of the year. We anticipate implementing this optimization in 2017.

## BULK-CONTAINER DELIVERIES

Beginning in 2015, SABIC launched an initiative to increase the use of bulk-container deliveries across Asia. Shifting to bulk containers instead of palletized bags can increase transportation efficiency and reduce emissions from shipping, while also reducing the bags, shrink-film, and wooden-pallet packaging needed to ship materials.

In 2015, we conducted a first-round survey to gauge the use of such bulk shipping, and we began to encourage our customers to shift to bulk transport for their goods. This year, we completed our second-round survey to understand the progress made. Since the shift from palletized bags to bulk-container liners, we saved around 1,100 tons of packaging material. We expect to increase our bulk-container shift by another 35 percent in 2017. Consequently, we expect to increase savings of packaging material to 1,500 tons per year. Next, we will conduct educational seminars in the region to increase our customers' understanding of the positive economic and environmental benefits of sea-bulk-container shipping. We also have plans to expand this practice to Africa.

## ROAD TANKER TO STORAGE

Historically, SABIC customers in the United Arab Emirates have been served by road trucks. As part of our route-optimization and supply-chain-sustainability work, we evaluated the possibility of creating a multimodal network for these deliveries. We negotiated a long-term lease for a storage facility at the port of Jebel Ali, which reduced the number of trucks traveling from our operations in Jubail, Saudi Arabia, to the UAE by 50 percent. In addition to reducing the shipping costs for these products by 40 percent, we calculate that the shift to multimodal transport will save in excess of 1,200 metric tons of greenhouse-gas emissions per year.

## IMPROVING OPERATIONS THROUGH TRAINING

Our continued success requires dedicated efforts from SABIC employees and service providers in the supply chain. We continue to teach best practices as fundamentally important to improving our operations.

### FUNCTIONAL COMPETENCY INDEX

In order to improve SABIC staff's skills and performance, we must first understand current performance. Our Functional Competency Index highlights where supply-chain professionals need continued training and education, and we are committed to providing that education.

Last year, we conducted our first assessment with a sample of 99 employees. We have now expanded our Functional Competency Index to a comprehensive assessment, carried out by the SABIC Academy, of more than 350 employees and 110 managers. The purpose of this new metric is to determine whether supply chain's human-capital programs are positively affecting the competency of all SABIC's supply-chain professionals. We incorporated the competency assessment as part of our formal talent-review process, which will further help us improve our supply-chain performance across the company.

### SUPPLY CHAIN ACADEMY

We launched our Supply Chain Academy within the larger the SABIC Academy to build strong expertise, develop supply-chain talents, and transfer knowledge among our employees as a way to continuously improve our functional-competency performance and develop, attract, and retain top talent in Saudi Arabia.

We offered "Demand planning" as our first Supply Chain Academy course, with SABIC's staff training their peers. More than 50 SABIC employees successfully have completed the training, and we expect to expand the offerings to cover all six core supply-chain competencies:

- Environment, health, safety, and security (EHSS)
- Supply-chain execution
- Improvement and optimization
- Demand planning
- Sourcing and contracting
- Customer focus

### SUSTAINABLE PROCUREMENT

We made a major step forward in our sustainable-supply-chain practices by launching an across-the-board Supplier Due Diligence Program. The program is designed to ensure that our suppliers are committed to the principles articulated in the SABIC Supplier Code of Conduct; confirm our suppliers operate according to the highest ethical, safety, security, environmental, and labor standards; ensure our suppliers adhere to anticorruption principles; and allow SABIC to check the compliance status of every supplier consistently.

The Supplier Due Diligence Program aims to demonstrate, with confidence, sustainable business practices throughout the supply chain to internal and external stakeholders, primarily customers. We recognize this approach as vital to our commercial success; it is an essential requirement of winning and retaining business as more of our valued customers have similar expectations from SABIC as their preferred supplier.

### RESPECTABLE WORK CONDITIONS

We continued our efforts to require that every supplier, including logistics service providers, agree to the Supplier Code of Conduct; our Respectable Work Conditions (RWC) metric indicates the percentage of key suppliers that agree to these principals. In 2016, 69 percent of our suppliers were compliant.

## LOOKING FORWARD

While last year was focused on defining the key performance indicators that determine SABIC's success, 2016 marked our first year of implementation and measurement.



Next, we will focus on enabling reporting of all six metrics and automating the data-collection-and-analytics process. We will re-establish the baseline targets for our carbon-footprint metric in line with new emissions factors, which will enable more accurate reporting in the future.

We aim to capture all supply-chain-sustainability initiatives across our businesses and establish the sustainability impact of each project using the newly developed Supply Chain Performance Management toolset. Next steps for continuous improvement include developing audit criteria for Respectable Work Conditions, rolling out all six disciplines in the Supply Chain Academy, and evaluating Safety and Quality Assessment System-related programs in Africa, Asia, and the Americas.

We will further consolidate the Supplier Due Diligence Program, extending it to all of our suppliers, which will strengthen the supplier intelligence we need to advance responsible-sourcing practices across our business, ensure a compliant supply chain, and make sure we continue to invest in the right suppliers to support our growth globally.

Through all these efforts, we will continue our progress in supply-chain sustainability.

# SOCIAL IMPACTS AND COMMUNITY RELATIONSHIPS

OUR APPROACH	68
OUR PERFORMANCE	69
IMPROVING OUR COMMUNITIES	70
LOOKING FORWARD	73



# OUR APPROACH

SABIC has a strong culture of giving and volunteerism that complements our commitment to sustainability. This culture inspires our investments in corporate social responsibility (CSR) programs to create lasting, positive impacts for societies and environments throughout our global communities.

In 2015, we began our global CSR strategy, RAISE, to guide our approach to charitable donations, sponsorships, partnerships, and employee-volunteer programs. We use RAISE – Reputation, Audience, Innovation, Strategy, and Endurance – to select programs that elevate SABIC’s brand, address community needs, and promote our values.

RAISE prioritizes four socially responsible areas: Science and Technology Education, Environmental Protection, Health and Wellness, and Water and Sustainable Agriculture, supporting SABIC’s 2025 strategy and Saudi Arabia’s Vision 2030. The areas also promote the UN’s Sustainable Development Goals, which are designed to address society’s most pressing needs by 2030.

### RAISE IMPLEMENTATION

In 2016, we implemented RAISE globally, enabling employee volunteers to nominate CSR activities for consideration by regional committees. The committees reviewed nearly 400 ideas, approving over 50 percent based on their alignment with our global strategy. To encourage participation, we offer employees eight hours of paid leave to volunteer for their favored programs every year.

After programs are complete, the regional committees evaluate the impact of each program through surveys and outreach to partners and beneficiaries. By encouraging employees to solve the problems they feel passionately about and by creating long-term, measurable impact, we are ensuring that RAISE benefits communities all over the world, creating long-term, measurable impact.

### FOUR RAISE PRIORITY FOCUS AREAS

	SCIENCE AND TECHNOLOGY EDUCATION		QUALITY EDUCATION INDUSTRY, INNOVATION, AND INFRASTRUCTURE
	ENVIRONMENTAL PROTECTION		CLEAN WATER AND SANITATION AFFORDABLE AND CLEAN ENERGY CLIMATE ACTION LIFE BELOW WATER
	HEALTH AND WELLNESS		GOOD HEALTH AND WELL-BEING
	WATER AND SUSTAINABLE AGRICULTURE		CLEAN WATER AND SANITATION ZERO HUNGER

### UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

# OUR PERFORMANCE

### 2016 COMMUNITY GIVING HIGHLIGHTS



US\$46.4 MILLION<sup>(1)</sup>

SPENT ON COMMUNITY GIVING



US\$800 MILLION

TOTAL GIVING OVER PAST 15 YEARS



2,000

SABIC EMPLOYEES ENGAGED IN VOLUNTEER PROGRAMS

### CSR PRIORITY AREAS HIGHLIGHTS

- **Science and Technology Education**  
Reached 64,720 underprivileged students in eight countries through our expanded Back to School program
- **Environmental Protection**  
Doubled participation in our Lights of Our Future Program since its establishment with 2,100 new students joining the program in China and Singapore
- **Health and Wellness**  
Reached over 15,000 schoolchildren in Gurgaon, India, through our They See, They Learn program for eye care
- **Water and Sustainable Agriculture**  
Engaged with 4,140 farmers, students, and government officials through SABIC’s new Agricultural Awareness Caravan
- **Other**  
Provided housing for 1,650 low-income families (many of which are widows, orphans and divorcees) in Al-Madinah, Saudi Arabia, through the Yanbu endowment.<sup>2</sup>



ABOVE Open day for The Adults Motor Disabilities Association HARAKIA

<sup>1</sup> Excludes approximately US\$2.7 million in annual funding provided to support the research of KSA University chairs and excludes US\$78 million funding for the Estidamah project.

<sup>2</sup> Programs that fit in areas other than the four SABIC CSR Priority Areas but align with SABIC’s values fall into the ‘Other’ category.

## IMPROVING OUR COMMUNITIES

### SCIENCE AND TECHNOLOGY EDUCATION

Science and technology are crucial to the future, from individual products to the long-term health of economies. By investing in education, we are not only building a pipeline of talent for SABIC's workforce, we are also helping develop economic opportunities in Saudi Arabia and around the world.

We invest in programs that reach children of all ages, because the earlier students are exposed to science and technology, the more likely they are to choose a technical career.

Our core, most-impactful programs have continued to grow. For example, an expanded Back to School program gave even more students the supplies they need to study, reaching over 64,000 students in Saudi Arabia, China, Brazil, Argentina, South Africa, Singapore, India, and the United States.

Other investments were targeted primarily to university age groups. The SABIC Science Caravan with interactive workshops and experiments in

chemistry, mathematics, astronomy, and information technology – reached more than 21,000 students in four cities in Saudi Arabia. Building on this success, our Agricultural Awareness Caravan displayed specialized farming methods around Saudi Arabia.

In the United States, our employees held a Discover Science program at two local elementary schools in Mt. Vernon, Indiana, where volunteers led science demonstrations and taught students about the importance of science, technology, engineering, and mathematics (STEM) education.

In the Netherlands, we continued the work we began in 2008 with JetNet, providing guest lectures on technology and chemistry to inspire high school students to pursue a technical degree.

Finally, in India, we upgraded Maharaja Sayajirao University of Baroda's polymers lab into a state-of-the-art facility; it will serve 200 undergraduate, graduate, and post-graduate students per year.

### CASE STUDY: HADEED

The Responsible Competitiveness Index (RCI) is an evaluation of how a company can build a competitive advantage through a commitment to sustainability and CSR.

SABIC's Hadeed affiliate received the King Khalid RCI Award for having a well-defined strategy to create business value while delivering positive impacts for communities, employees, customers and other stakeholders. Responsible competitiveness is key

to increasing Saudi Arabia's competitiveness at the global level, while also helping the country achieve its economic, social, and environmental development goals. The committee recognized Hadeed's significant contribution to this concept with second place in this category. Hadeed also received the King Abdulaziz Quality Award for the large production establishments sector, highlighting the facility's high-quality metal processes and products, customer satisfaction, and pursuit of excellence.



LEFT  
JetNet Career Day at Eindhoven, the Netherlands



RIGHT  
Lights of Our Future in Singapore

### ENVIRONMENTAL PROTECTION

We support environmental programs to reduce impacts in water, energy, and waste.

Through our signature Lights of Our Future program, we reached more than 2,100 students in Singapore and China this year. With a syllabus created by SABIC employee-volunteers, the program teaches about saving water, conserving energy, managing waste, and reducing our carbon footprint. In Singapore, some 50 employees spent almost 500 hours sharing these sustainability messages with over 700 primary-school students, culminating in a competition for creative and inspiring ideas on sustainability at home and school. In China, volunteers presented to middle-school students. We will expand the program there in 2017, based on the positive feedback during the pilot.

For the second year, employees and families participated in the Gulf Petrochemicals and Chemicals Association's global Waste-Free Environment Week, which promotes recycling and encourages a

responsible attitude toward litter disposal and the need for the community to respond to environmental issues. SABIC led such programs in Europe, the Middle East, Africa, and Asia.

In the Netherlands, SABIC's employees guest lectured on the importance of recycling and waste management to 500 children in Sittard-Geleen and Bergen op Zoom. Following the lectures, the students collected trash. We also held a course for older children on how plastic is made and how it affects our daily lives. Approximately 62,000 students, 130 SABIC volunteers, and 55 external volunteers participated globally, collecting 2,500 metric tons of waste.

Another program focused on landscape restoration in Spain. In the village of La Aljorra, more than 100 employees – accompanied by families, friends and local residents – volunteered to plant more than 500 local plant species. Employees from our Cartagena site supported reforestation programs in Monte de las Cenizas and Sierra Espuña Regional Park, and cleaned up the beach in Portmán.

## IMPROVING OUR COMMUNITIES continued



ABOVE  
Cyclists from  
Teesside raise  
money for  
children

### HEALTH AND WELLNESS

SABIC is committed to the health and wellness of our employees and communities.

In recent years, SABIC has prioritized improving mental health, and avoiding and treating drug addiction – supporting Saudi Arabia's Vision 2030 goal to prevent drug abuse. To do so, we developed the SABIC NEBRAS drug-prevention campaign in cooperation with the National Committee for Combating Drugs. This five-year collaboration, inaugurated by Prince Mohammed bin Naif bin Abdulaziz, Crown Prince, Deputy Prime Minister, Interior Minister, has become an umbrella project for all programs in Saudi Arabia. It represents a long-term strategy to counter narcotics through prevention, treatment, and rehabilitation. In conjunction with Saudi Arabia's Ministry of Health, we funded a specialist hospital for mental health and addiction treatment. We have finalized the location of the hospital and started design, which is to be completed by 2020. We are also building the Midway Center, costing approximately US\$4 million, to assist recovering patients and help them integrate back into the community.

In addition to mental health and addiction, SABIC employees are passionate about alleviating health conditions that affect children. In Saudi Arabia, we support the Center for Autism Research, which supports medical research and treatments for autistic children. Through workshops and lectures, the center trains specialists and parents on best practices.

In the UK, a team of five cyclists from our Teesside plant completed a nearly 500-mile bike ride to the Netherlands and back to raise over US\$6,000 for children who suffer from neurological conditions – the team was inspired by a colleague's young son who has a rare and severe neurological disease.

As mentioned earlier, we touched the lives of schoolchildren in India through our They See, They Learn eye-care initiative. About 200 SABIC employees accumulated 6,000 volunteer-hours over the last two years, working closely with program partners on the ground.

### WATER AND SUSTAINABLE AGRICULTURE

To meet the demands of a growing population and reduce the environmental impacts of development and industry on the world's waterways and oceans, sustainable water and agriculture practices are necessary. We invest in programs to raise awareness of water consumption and improve farming practices.

In Saudi Arabia, we collaborated with the Ministry of Environment, Water, and Agriculture to raise awareness through the Our Water, Our Life campaign. We funded the Estidamah Agricultural Research Center, which focuses on research to reduce water use, increase food production, and improve the quality and transfer of agricultural technologies. Our contribution totaled US\$50 million for construction and another US\$28 million for five years of operating costs. Beyond training and support, the center will help farmers be more successful throughout Saudi Arabia.

Our Agricultural Awareness Caravan shared specialized farming methods, including date-palm cultivation, with farmers, students, and government officials. Over one month, the caravan traveled 3,100 kilometers, stopping at 61 farms with diverse educational materials. The caravan was so popular that its visit to Al-Ahsa, Saudi Arabia, was extended. In addition, we collaborated with government to raise awareness about sustainable agriculture, crop improvement, and the optimal use of fertilizers among farmers.

## LOOKING FORWARD

We take pride in our CSR strategy: it supports national and international goals, taps into our passionate employees, and supports our business. Our strategy is integral to SABIC's 2025 strategy and supports Saudi Arabia's 2030 vision by helping to create a thriving society. And RAISE is committed to helping solve the world's most pressing development challenges by embedding sustainability into our global CSR.



LEFT  
The SABIC  
Science  
Caravan

We are proud of our company's culture of giving back and our employees' engagement in CSR, underscored by the growing number of programs recommended for SABIC investment. This commitment fosters long-term relationships with communities and increases our impact in the four priority areas. We also take on high-impact programs outside our priority areas that strongly align with SABIC values, such as the housing project for low-income families in Al-Madinah through the Yanbu endowment.

We plan to expand a number of initiatives in 2017: Back to School, Waste-Free Environment Week, the NEBRAS anti-drug campaign, the Midway Center, the SABIC Science and Agricultural Awareness Caravans, and Lights of Our Future. For signature programs that extend around the world, we will continue to adapt them based on the needs faced by local communities.

We will continue to implement RAISE worldwide and increase coordination between regional committees and global offices to improve workflow, efficiency and – most importantly – impact.

# ADDENDUM

ABOUT THIS REPORT 76

ASSURANCE REPORT  
OF THE INDEPENDENT AUDITOR 77



## ABOUT THIS REPORT

### REPORTING PERIOD, SCOPE, AND BOUNDARIES

Published in April 2017, this report covers SABIC's sustainability performance from Jan. 1 to Dec. 31, 2016. It includes all the SABIC businesses and operations that are financially consolidated in our 2016 Annual Report, which is available at: [www.sabic.com/corporate/en/investorrelations](http://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](http://www.sabic.com/sustainability)

We believe external assessments enhance our sustainability reporting and for the last six years we have used KPMG to increase our confidence in certain reported data. The limited assurance assessment includes absolute and intensity operational metrics: energy consumption, greenhouse-gas (GHG) 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 as 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 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 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 towards 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

To: the readers of the Sustainability Report 2016

### OUR CONCLUSION

We have reviewed (limited Assurance) the data and the accompanying text for the following indicators in the Sustainability Report (further 'the Indicators') over the year 2016 of Saudi Basic Industries Corporation (hereafter: SABIC):

- The total absolute value and the intensity values (per metric ton of product sales) at corporate level of the Environmental Footprint indicators:
  - Energy consumption (p. 17, 36)
  - Greenhouse gas emissions (p. 17, 34)
  - Water usage (p. 17, 37)
  - Material loss (p. 17, 38)
  - Flaring reduction (p. 17)
  - CO<sub>2</sub> utilization (p. 17)
- The corporate values of the Ethics and Integrity indicators:
  - Compliance concerns raised (p. 17)
  - Incidents closed (p. 17)
  - Violations found and addressed (p. 17)
  - Code of Ethics training completion (p. 17)
- The corporate values of the Environmental, Health, Safety, and Security indicators
  - Total Recordable Incident Rate (RIR) (p. 17, 44)
  - EHSS rate (p. 17, 44)
  - Hazardous substances released (p. 17, 46)
  - Fatalities (p. 17, 44)
  - Process safety Total Incident Rate (p. 17, 44)
  - Occupational Illness Rate (p. 44)

The data for the indicators included in the scope of our engagement are marked with an asterisk (\*). Based on our review, nothing has come to our attention to indicate that the Indicators are not presented, in all material respects, in accordance with the internal reporting criteria of SABIC.

### BASIS FOR OUR CONCLUSION

We have performed our review on the Indicators in accordance with Dutch law and the International Standard on Assurance Engagements (ISAE) 3000: "Assurance Engagements other than Audits or Reviews of Historical Financial Information".

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 Indicators' below. We are independent of Saudi Basic Industries Corporation 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 review evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

### RESPONSIBILITIES OF MANAGEMENT FOR THE INDICATORS

Management of SABIC is responsible for the preparation of the Indicators in accordance with the internally developed criteria as described in the section: 'REPORTING PERIOD, SCOPE, AND BOUNDARIES'.

Management is also responsible for such internal control as it determines is necessary to enable the preparation of the Indicators such that they are free from material misstatement, due to fraud or error.



### OUR RESPONSIBILITIES FOR THE REVIEW OF THE INDICATORS

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

A review is aimed at obtaining a limited level of assurance. Procedures performed to obtain a limited level of assurance are aimed at determining the plausibility of information and are less extensive than a reasonable assurance engagement. The procedures performed consisted primarily of making inquiries of staff within the entity and applying analytical procedures on the information in the indicators. The level of assurance obtained in review engagements is therefore substantially less than the level of assurance obtained in an audit engagement.

We apply the 'Nadere voorschriften accountantskantoren ter zake van assurance opdrachten (RA)' (Regulations for Audit Firms Regarding Assurance Engagements) 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.

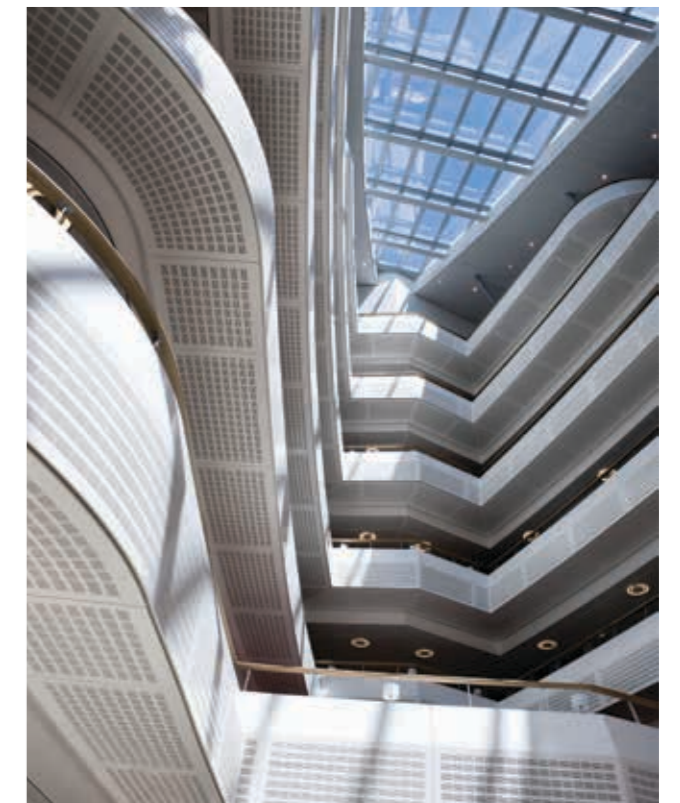
Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users taken on the basis of the indicators. The materiality affects the nature, timing, and extent of our review procedures and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

We have exercised professional judgement and have maintained professional skepticism throughout the review, in accordance with ISAE3000, ethical requirements, and independence requirements.

Our main procedures consisted of:

- Performing an analysis of the external environment, obtaining an understanding of relevant social trends and issues, and of the organization's business
- Evaluating the appropriateness of the reporting criteria and its consistent application, including the evaluation of the reasonableness of management's estimates
- Evaluating the design and implementation of the reporting systems and processes related to the Indicators
- Interviewing relevant staff responsible for providing the information and data related to the Indicators, carrying out internal control procedures on the data and consolidating the data related to the Indicators
- Visits to six production sites in three countries to review the source data, the design and implementation of controls and validation procedures at local level
- Visits to corporate headquarters to review the design and implementation of controls and validation procedures at corporate level
- Reviewing relevant data and evaluating internal and external documentation, based on limited sampling, to assess the accuracy of the data related to the Indicators
- An analytical review of the data and trends submitted by all production sites for consolidation at corporate level

Amstelveen, April 10, 2017  
KPMG Sustainability,  
Part of KPMG Advisory N.V.  
W.J. Bartels, Partner



© 2017 Copyright SABIC. All rights reserved.

Unless otherwise noted, SABIC and brands marked with ™ or ® are trademarks of SABIC or its subsidiaries or affiliates. Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.

Sani-Cloth is a trademark of PDI, Responsible Care is a trademark of the American Chemistry Council, Operation Clean Sweep is a trademark of World Plastics Council.

This document uses Sappi Magno paper. All fibers are from sustainable and controlled sources. It is FSC®, PEFC® certified and is fully recyclable.

---

**Global Headquarters**

PO Box 5101

Riyadh 11422

Saudi Arabia

T +966 (011) 225 8000

F +966 (011) 225 9000

E [info@sabic.com](mailto:info@sabic.com)