LIVING SUSTAINABILITY.
TOGETHER.

SUSTAINABILITY REPORT 2018

Driving Success. Together.
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All of us want to make a positive contribution to society and to the health of our planet in both our personal and professional lives. Sustainability in the way we live and work impacts all of us. The sustainability of our business and operations is of critical concern to all our stakeholders, and is becoming a significant differentiator in today’s competitive landscape.

To ensure long-term competitiveness, companies not only need to focus on their economic performance, but also need to provide products and solutions to tackle global challenges – be it climate change, resource scarcity, urbanisation or marine litter.

At INEOS Styrolution, we have a clear vision to be recognised as the global leader in providing sustainable styrenics solutions. Therefore, we have embedded sustainability into our decision-making across all functions and operations. At the same time, we continue to create and foster a working environment that respects human rights and promotes diversity of people, thoughts and ideas.

During the course of the past year, we have made clear strides to contribute to a circular economy. We finalised our circular economy strategy and are now implementing it within our business. Our key focus has been to retain the high value of our products after their intended use through chemical recycling of polystyrene and mechanical recycling of ABS. We will introduce a new portfolio that encompasses a wide range of offerings including products with defined recycled content and we have the strong ambition to grow this portfolio over time as we work on making solutions available on a larger commercial scale.

We are developing technologies for chemical recycling via collaborations within the styrenics industry, as part of the larger INEOS Group, as well as with several leading-edge technology companies. We are delighted with the progress we have made in this respect, notably achieving a breakthrough in chemical recycling by producing polystyrene from 100 % recycled styrene monomer.

As part of the INEOS Group, we have committed to deliver significant volumes of recycled polystyrene and offer polystyrene with up to 30 % recycled content in our products destined for polystyrene packaging in Europe, by the year 2025. We also aim to offer recycled ABS at commercial scale by 2020.

In order to save valuable resources and minimise our carbon footprint, we have further reduced our greenhouse gas and waste water emissions over the past four years and have taken actions to prevent the loss of pellets in our operations as well as along our value chain. We are engaging with our suppliers on sustainable sourcing of raw materials, utilities and services, and are investigating the integration of renewable feedstock into our production processes.

At the core of our company and our sustainable approach to business are the people that make up INEOS Styrolution – it is their dedication and expertise that drives us forward. They are our most valuable asset and we are fully committed to ensuring a workplace environment that guarantees their health, safety and wellbeing, as well as promoting their personal development and growth.

We believe that we are on the right track in our sustainability journey being awarded a gold rating from EcoVadis for the second year in a row, which places us among the top one percent in the category of plastics manufacturers.

We are committed to further exploring opportunities to drive sustainability not only within our own business, but also to work with our customers and stakeholders to develop sustainable and circular products and solutions throughout the entire value chain.

We hope you find this report helpful in learning about our commitment and actions to provide sustainable solutions and look forward to your support as we continue on our journey of Living Sustainability. Together.

Sincerely yours,

Kevin McQuade
CEO INEOS Styrolution
As the leading global styrenics supplier, we have incorporated sustainability in our operations. Ensuring responsible business practices in our plants, throughout all our processes and across the entire value chain is a key element of our sustainability drive. This includes many aspects, from the efficient use of resources and the reduction of our environmental footprint to achieving zero incidents in operations, making INEOS Styrolution a safe and secure place to work.

PIERRE MINGUET
President Operations

Our stakeholders including investors, financial experts and rating agencies increasingly expect our company to address sustainability in all business areas. Through this report, we aim to provide higher transparency on our actions and thereby maintain the trust and credibility our stakeholders have placed in us. For us, sustainability and financial success simply go hand in hand.

MARKUS FIESELER
Chief Financial Officer

Driving the circular economy is at the centre of our activities at INEOS Styrolution. In addition to optimising our existing products, we are investing into chemical recycling, which we believe to be a key cornerstone contributing to reducing post-consumer polystyrene waste. Besides chemical recycling, we are also developing mechanically recycled products and have defined concepts for bio-attributed feedstock. We are closely working together with many stakeholders across the value chain -- an absolute prerequisite to positively influence the perception of our customers as well as end-consumers.

ROB BUNTINX
President Europe Middle East & Africa

Our customers are looking to us for sustainable offerings for their applications, ranging from using recycled materials at the outset or making them recyclable after use. In addition to creating new products containing a significant percentage of recycled material from post-consumer recycling schemes, we are improving our supply chain to ensure access to these recycling sources. We are working hard to provide our customers with innovative, best-in-class solutions that support their sustainability objectives.

STEVE HARRINGTON
President Global Styrene Monomer & Asia-Pacific

Our efforts around sustainability, specifically chemical and mechanical recycling, keep INEOS Styrolution on the leading edge of innovation in the styrenics industry. Building a circular economy means we can continue to offer our customers the strong performance they expect from us while also meeting the growing expectations of end-consumers for sustainable products.

ALEXANDER GLÜCK
President Americas
OUR COMMITMENT TO SUSTAINABILITY

MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW

SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS

ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS

VALUING OUR PEOPLE

MANAGING OUR BUSINESS RESPONSIBLY

ANNEXE
For INEOS Styrolution, sustainability is a lever for growth and will enable us to tap into new and emerging business models. We are committed to enabling a circular economy for styrenics, further improving our resource efficiency and promoting sustainable operations throughout our entire value chain.

INEOS STYROLUTION AT A GLANCE

INEOS Styrolution is the leading global styrenics supplier with a focus on styrene monomer, polystyrene, ABS standard and styrenic specialties. As of December 31, 2018, the company operated 18 manufacturing sites in Belgium, Canada, France, Germany, India, Mexico, South Korea, Thailand and USA, with six R&D centres and 24 sales offices around the globe.

INEOS Styrolution has four headquarters around the world – the global and EMEA headquarters for specialties in Frankfurt am Main, Germany, the EMEA headquarters for commodities and standard products in Rolle, Switzerland, the American headquarters in Aurora, USA, and the Asia-Pacific headquarters in Singapore.

OPERATING SEGMENTS

Global styrene monomer 20%
Polymers Americas 24%
Polymers Asia-Pacific 23%
Polymers EMEA 33%

as of December 31, 2018
OUR PRODUCT SCOPE IN THE STYRENICS VALUE CHAIN

- **Benzene**
- **Ethylene**
- **Propylene**
- **Butadiene**

**Styrene monomer**
- Styrene monomer
- Ethylbenzene

**Acrylonitrile**

**Butylacrylate**

**Methyl methacrylate**

**Styrolution PS**
- GPPS
- HIPS

**ABS standard**
- Terluran®

**Specialties**

- **ABS**
  - Absolac® (Asia only)
  - Absolac® High Heat (Asia only)
  - Novodur®
  - Novodur® High Heat
  - Lustran® Standard
  - Lustran® Specialties
  - Lustran® High Heat

- **MABS**
  - Terlux®
  - Clearlux®

- **ASA & ASA+PC**
  - Luran® S
  - Luran® SC (EMEA & Asia only)

- **SAN**
  - Absolan® (Asia only)
  - Luran®
  - Luran® High Heat
  - Lustran® (Americas only)

- **ABS+PA & ASA+PA**
  - Terblend® N
  - Terblend® S
  - Triax® (Americas only)

- **SBC**
  - Styrolux®
  - Styroflex®
  - K-Resin®

- **SMMA & MBS**
  - Clearblend® (Americas & Asia only)
  - NAS®
  - Zylar®

- **Terluran®**

**Purchased by INEOS Styrolution**

**Produced by INEOS Styrolution**

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**MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW**

**SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS**

**ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS**

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**ANNEXE**
OWNERSHIP

INEOS Styrolution is wholly owned by INEOS Limited.
OUR SUSTAINABILITY FOCUS

INEOS Styrolution intends to operate and develop its business in a way that balances our current and future needs, taking into account economic, environmental and social factors so that we can sustain and further grow our business in the long term.

Our focus industries are driven by sustainable megatrends such as …

**Our vision**
To be recognised as the global leader in sustainable styrenics solutions

**Our mission**
To utilise our entrepreneurial culture to deliver long-term value to our customers and stakeholders. We do this by operating in a safe, environmentally and socially responsible manner to provide sustainable styrenics solutions across the full lifecycle of our products.
Styrenics are one of the most versatile materials in the 21st century, and have revolutionised the way we live today. Our products have become an indispensable part of consumers’ everyday lives and provide solutions to societal challenges such as climate change, resource scarcity, urbanisation, rising living standards and population growth. The solutions styrenics products offer include extending food shelf life, thereby reducing food waste while also providing lightweight solutions for the automotive industry leading to lower fuel consumption. However, due to littering and inadequate waste management practices, plastic products are not being disposed responsibly.

This misuse of plastics, leading to their release into the environment, is a growing concern, which must be addressed urgently. As the global market leader in styrenics, we are committed to developing innovative and circular solutions for the materials we produce. Plastics are a valuable resource during their lifetime and we are determined to show that they can even be a valuable resource after their intended use.

This is why INEOS Styrolution supports the shift from a linear to a circular economy, where the benefits of plastics are maximised, and negative environmental impacts are minimised.

We are actively contributing to a circular economy – as an industry, a group and a company

**AS AN INDUSTRY …**

… we are committed to playing a key role in contributing to innovative and sustainable solutions, together with our value chain. Together with the European plastics industry, we have set a series of ambitious targets and initiatives called “Plastics 2030: PlasticsEurope’s Voluntary Commitment to increasing circularity and resource efficiency,” to achieve the goal of 100% reuse, recycling and recovery of all plastics packaging by 2040. We are also one of the founding members of Styrenics Circular Solutions (SCS), promoting circular solutions in the industry in collaboration with the complete value chain.

**AS A MEMBER OF INEOS GROUP …**

… we are committed to achieving the following five ambitious targets that were set by our parent company for 2025. This includes, amongst others, a pledge to use on average 30% of recycled content in products destined for polystyrene packaging in Europe, incorporate at least 325 kilotonnes per year of recycled material into products and ensure 100% of our polymer products can be recycled.

By 2025, INEOS will …

… use, on average 30% recycled content in products destined for polystyrene packaging in Europe

… deliver 900 kt/a vinyl recycling by our leadership of VinylPlus programme

… ensure 100% of polymer products can be recycled

… incorporate at least 325 kt/a of recycled material into products

… offer a range of polyolefin products for packaging applications in Europe containing 50% or more recycled content
AS A COMPANY …

… we build on the fact that styrenics, and in particular polystyrene, are very well suited to recycling due to their unique chemical properties. Globally, we are collaborating with a number of leading technology companies to investigate and define joint technical and commercial solutions as well as beneficial life cycle assessments (LCA) to close the loop for styrenics, thereby helping to reduce waste to landfill and incineration.

Instead of only using virgin raw materials to manufacture products that could end up as waste, we see an opportunity in converting this plastic waste into raw materials for the plastics industry, making the value chain more resource-efficient and circular.

We have also planned to undertake an LCA of our polystyrene recycling process and will compare the greenhouse gas footprint of recycled polystyrene versus virgin polystyrene.

Message from our CEO & Board Members’ View

Our commitment to sustainability

Shaping the future with sustainable styrenics

Ensuring safe and resource-efficient operations

Valuing our people

Managing our business responsibly

Annexe

We have a dynamic team that manages our sustainability efforts across all our business areas. For each business area listed below, we have established a work stream staffed with global and regional experts, driving the implementation of our sustainability programme. The responsibility for steering and aligning our company-wide sustainability strategy lies with our steering committee, chaired by management board members. The steering committee sets targets, gives strategic guidance, creates and implements initiatives and ensures top management backing. The team is supported by an internal ambassador group, comprising colleagues from all functions, regions and levels. It is their role to promote sustainability within and outside INEOS Styrolution.
DETERMINING WHAT IS MATERIAL

We regularly engage with our stakeholders to understand the sustainability issues that are of relevance to them and important to our business. To ensure we prioritise these issues, we periodically conduct a formal materiality assessment. In accordance with the reporting framework of the new GRI Standards, we undertook a focused materiality assessment in 2017 involving key internal and external stakeholders.

**MATERIALITY ASSESSMENT PROCESS**

The starting point for the current materiality matrix was based on the findings of our materiality analysis conducted in 2014-2015. We re-evaluated these findings in 2017, and taking into account current trends and developments, we included three new topics – circular economy, low carbon economy, as well as marine litter and pellet loss. We then decided on 16 topics that we deemed as most important for our stakeholders as well as most relevant to our business.

External and internal stakeholders were identified based on their impact on our business operations and their knowledge of our business activities. All our key stakeholders represented a wide variety of functions, regions and business segments.

The views of our stakeholders were incorporated into a matrix, discussed with the management board in depth, and evaluated in light of the company’s objectives, strategy and current development targets. In addition, an external verification of the matrix was also undertaken. The matrix shows the position of all our 16 material topics relative to the degree of stakeholder interest and potential business impact. We have developed KPIs and targets for the three newly added topics, which we have shared in this report.

We use the materiality assessment findings to prioritise the sustainability topics in our report so that it responds to our stakeholders’ needs and expectations. The results of this assessment will be reviewed and approved by internal and external stakeholders on a periodic basis to confirm relevance and appropriateness.
The United Nations Sustainable Development Goals (UN SDGs) are essentially a materiality assessment of our planet and lay out a path to end extreme poverty, address inequality and injustice, and protect the earth. These goals provide guidance and direction on sustainable development for both industry and society. We strongly believe that we can contribute positively to these goals through our concerted sustainability actions. We have indicated below where we are focusing our sustainability efforts towards meeting these goals.

For more information on the UN SDGs, please visit [www.un.org/sustainabledevelopment](http://www.un.org/sustainabledevelopment).
SUSTAINABILITY HIGHLIGHTS

Here is a selection of our key achievements that demonstrate our sustainability performance in our key focus areas.

OVERALL

* Polystyrene produced from 100% recycled styrene monomer at pilot scale

EcoVadis gold recognition for 2nd year in a row

Proven ability to sort styrenics, specifically polystyrene out of post-consumer waste

SUSTAINABLE PROCUREMENT

100% of buyers trained on sustainability

RESPONSIBLE PRODUCTS

Proof of concept on chemical recycling of polystyrene developed

Recipes for recycled ABS developed

Concept of bio-attribution for styrenics established

SAFETY

Total case injury rate (TCIR) of 0.20

RESPONSIBLE OPERATIONS

84% reduction in SOx emissions

5.5% reduction in greenhouse gas emissions

52% reduction in landfill waste

17% reduction in waste water emissions

(>* over the period 2014 to 2018)

RELIABLE EMPLOYER

Global human resources information system introduced

Management development programmes implemented

Performance review system optimised

FAIR BUSINESS PRACTICES

Training on IT security awareness

Training on antitrust awareness

Introduction of policy on data protection

GLOBAL HUMAN RESOURCES

Global human resources information system introduced

Management development programmes implemented

Performance review system optimised

FAIR BUSINESS PRACTICES

Training on IT security awareness

Training on antitrust awareness

Introduction of policy on data protection

RELIABLE EMPLOYER

Global human resources information system introduced

Management development programmes implemented

Performance review system optimised

SAFETY

Total case injury rate (TCIR) of 0.20

RESPONSIBLE OPERATIONS

84% reduction in SOx emissions

5.5% reduction in greenhouse gas emissions

52% reduction in landfill waste

17% reduction in waste water emissions

(>* over the period 2014 to 2018)
OUR COMMITMENT TO SUSTAINABILITY

SUSTAINABILITY TARGETS

We committed ourselves to short-term and medium-term global sustainability targets covering key focus areas of our business. Here is an update of our progress in the past year.

SAFETY

Annual total case injury rate (TCIR) of 0.33 by 2018

Continuous improvement of our company’s safety performance

Achieved (0.20)

In progress

Responsibility to SUSTAINABILITY

RESPONSIBLE OPERATIONS

100% of sites ISO 14001 certified by 2019

On track (81%)

In progress (50%)

Delay in integration of EMS standards

60% of sites ISO 50001/EMS certified by 2018

In progress (improved waste management: shift from landfill to recycling)

10% reduction* of waste by 2018

Achieved (-17%)

7% reduction* of waste water by 2018

In progress (due to changes in legislation, acquisitions and advanced measurements)

3% reduction* of water use by 2018

Achieved (-4.3%)

7% reduction of VOC** by 2019

NEW!

SAFETY

Responsibility to SUSTAINABILITY

SUSTAINABILITY PRODUCTS

Develop proof of concept of polystyrene depolymerisation including business case by 2019

Achieved

Offer 30% recycled polystyrene in plastic packaging in Europe by 2025

NEW!

Offer recycled ABS at commercial scale by 2020

NEW!

Responsibility to SUSTAINABILITY

SUSTAINABLE PROCUREMENT

80% of total supplier spend to be third-party assessed by end of 2020

On track (77%)

NEW!

MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW

SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS

ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS

MANAGING OUR BUSINESS RESPONSIBLY

VALUING OUR PEOPLE

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(*baseline year 2014, **VOC baseline year 2015)
**OUR COMMITMENT TO SUSTAINABILITY**

**KEY ACTIONS**

**RESPONSIBLE PRODUCTS**

**Active contribution**
- to Circular Plastics Alliance (CPA) together with Styrenics Circular Solutions (SCS) and the European Chemical Industry Council (Cefic)

**Establish certification**
- for recycled and bio-attributed content in our product offerings by 2020

**SUSTAINABLE PROCUREMENT**

**100%** of buyers trained on sustainability in 2018

- Achieved (100%)

- Sustainability to be included as a key component in supplier excellence programme by 2020

**RELIABLE EMPLOYER**

**80%** of exempt employees to have an Employee Development Interview

- Achieved

- Implementation of Management Development Programmes in all regions in 2018

- Achieved

- Employee survey for the entire workforce conducted in 2020

**FAIR BUSINESS PRACTICES**

New policy on data protection introduced in 2018

- Achieved

Refresher training on antitrust in 2018

- Achieved

Biennial training of entire active employee base on Code of Conduct and screening requirements

- On track

Global training on data protection

- NEW!

Procedure for data protection breach to be issued

- NEW!

**MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW**

**SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS**

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STAKEHOLDER DIALOGUE

Engaging stakeholders and developing meaningful partnerships with them over time is essential for our long-term business success. We realise that regular, open and proactive dialogue with all relevant stakeholders helps us to understand their perspectives, expectations, key issues and needs.

In this way, we are able to integrate them into our business decision-making processes wherever possible, ensuring that our strategy addresses the issues that are important to them. Dialogue with stakeholders gives us the opportunity to explain our clear and committed approach to sustainability as well as the value of our work, and our products and services for society.

We have identified our key stakeholders as those who contribute to our economic, social and environmental performance. These stakeholder groups comprise our customers, suppliers, employees, investors, financial experts and rating agencies, local communities, industry associations, NGOs, universities, scientific institutions and value chain partners such as waste sorters and recyclers.

We hold membership in national and international industry associations, such as the European Chemical Industry Council (Cefic), PlasticsEurope, Styrenics Circular Solutions (SCS), Circular Plastics Alliance (CPA), the Chinese International Chemical Association (AICM), the Styrene Information & Research Center (SIRC), the Plastic Food Packaging Group in the American Chemistry Council, the World Plastics Council as well as local community advisory panel organisations in Canada, Mexico and USA.

INEOS Styrolution employees are passionate and committed to making the company a frontrunner in sustainability. They are keen to learn, understand and support our sustainability approach and initiatives, and become ambassadors in their peer groups inside and outside of the company.

Therefore, we set up an integrated concept that put sustainability on the agenda of group and regional conferences, management and sales meetings, as well as town hall events.

In addition, we have rolled out internal communication activities via multiple channels, to openly inform colleagues on our programme, initiatives and progress and to establish a feedback channel for all employees to make sure they have the opportunity to contribute and make their voice heard.

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<tr>
<th>STAKEHOLDERS</th>
<th>METHODS OF ENGAGEMENT</th>
<th>KEY TOPICS</th>
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<tbody>
<tr>
<td>Investors, financial experts &amp; rating agencies</td>
<td>Quarterly disclosures, sustainability report, annual investor days, investor relations releases</td>
<td>Strategy, performance, market and corporate developments, sustainability</td>
</tr>
<tr>
<td>Customers</td>
<td>Innovation workshops, sustainability report, customer meetings, direct engagement, industry trade group meetings</td>
<td>Strategy, performance, sustainability, product quality, safety and reliability (safety data sheets)</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Direct engagement, assessments and audits</td>
<td>Product quality, safety and reliability, sustainability</td>
</tr>
<tr>
<td>Employees</td>
<td>Group &amp; regional conferences, town hall meetings, work council meetings, workshops, management board briefings, sustainability report, intranet, eMagazines, newsletters, training sessions, webinars, anonymous 24/7 hotline</td>
<td>Strategic initiatives, business performance, policies, IT security, new developments, personnel changes, R&amp;D, innovation, sustainability, health and safety</td>
</tr>
<tr>
<td>Industry associations</td>
<td>Memberships, direct engagement, task force &amp; working group engagements, dialogue, conferences, workshops</td>
<td>Sustainable business practices</td>
</tr>
<tr>
<td>Universities, scientific institutions &amp; external partners</td>
<td>Direct engagement, collaborative partnerships, quarterly face-to-face meetings</td>
<td>R&amp;D, innovation, sustainability</td>
</tr>
<tr>
<td>Local communities</td>
<td>Direct engagement, collaborative partnerships, sports and educational programmes, employee volunteering, sponsorships</td>
<td>Community sponsorships, volunteering, local engagement</td>
</tr>
<tr>
<td>Non-governmental organisations</td>
<td>Direct engagement, dialogue, conferences, workshops</td>
<td>Sustainable business practices</td>
</tr>
<tr>
<td>Value chain</td>
<td>Direct engagement, collaborative partnerships, face-to-face meetings, joint development projects</td>
<td>Sustainable business practices</td>
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</table>
SHAPING THE FUTURE
WITH SUSTAINABLE STYRENNICS

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We strive to provide sustainable solutions to our customers and end-consumers by taking a responsible approach to our product portfolio across the entire value chain.

**OUR APPROACH**

As the global market leader in styrenics, we take a holistic approach looking at our entire value chain – from procurement, development and production to transport and sales, through integration into customer processes to final intended use. Together with customers and the scientific community, we engage in collaborative innovation of cutting-edge sustainable products. By driving product stewardship and quality management, we ensure compliance with product regulations and deliver safe, best-quality and high-performance products to our customers. Together with associations and our business partners, we strive to achieve high and well-acknowledged sustainability standards in the styrenics industry.

Marine litter, inadequate waste management systems, low recycling rates and lack of end-of-life solutions for plastics waste are significant challenges not only for original equipment manufacturers, plastics packaging producers and plastics manufacturers, but also for our society. Applications such as bags and straws and other ‘disposable’ plastics are thrown away because consumers do not allocate a value to it. We are aware that some of our polystyrene products are used in single-use applications and cannot accept that some badly managed waste from these applications are found in marine and land environments where they do not belong.

Instead of disposing polystyrene and other plastics products after a single use, a sustainable and resource-efficient solution is to close the loop to contribute to a circular economy: by keeping resources in use for as long as possible, followed by recovering and recycling products and materials at the end of their life cycle.

Being part of a circular economy will be a transformative way of doing business and we want to play an active role in its development. This is why we are pursuing potential solutions, such as depolymerisation, to successfully achieve circularity of our products.

Polystyrene has intrinsic chemical properties that allow for thermal depolymerisation into styrene monomer, the main raw material of our production. Using recycled styrene monomer as a raw material in our production will close the loop from cradle to cradle and establish a true, circular plastics business model.

**MATERIALITY ASSESSMENT**

The circular economy is a topic of very high relevance to our stakeholders and us. It offers a solution to global and societal challenges, particularly marine litter. Contributing to a circular economy will help improve our resource efficiency and address the issue of insufficient waste management. And innovation will drive this change.

We are constantly striving to optimise the resource efficiency of our products in order to develop innovative products and applications.

We work closely with our customers by offering services ranging from innovation workshops to development support and co-development projects to solve technical and performance challenges.

Our customers require safe products that are compliant with local and international regulations during handling and for their final applications. Thus, responsible product stewardship by complying with product regulations and delivering safe, top-quality products to our customers is at the heart of our business.
DEVELOPING A STRATEGY FOR THE CIRCULAR ECONOMY

Sustainability is about to reshape our industry and we believe that creating a circular economy for plastics will be of strategic, long-term importance. Therefore, we have defined a strategy for a circular economy by analysing technologies and options as well as assessing their long-term impact and viability.

Our aim is to create a positive, targeted impact and actively shift our industry to create a circular economy through our efforts in the upcoming years. Colleagues from all geographical regions representing a broad range of functions, including sales, marketing, technology, operations, R&D, innovation and strategy contributed to develop the strategy. The suggested approach was approved by our management board and implementation has begun. The strategy touches areas such as our various developments in recycling of styrenics and the introduction of renewable feedstock, but also supporting our customers in their path towards more circular products.

In order to demonstrate our commitment to provide improved sustainable and circular solutions to our customers, we have defined global targets that are aligned with our material topics and key business needs.

By 2025, we commit to deliver significant volumes of recycled polystyrene and offer polystyrene with up to 30% recycled content in our products destined for polystyrene packaging in Europe. This is a very ambitious target and to achieve this, mandatory collection of all plastics, the development of state-of-the-art technologies to support sorting polystyrene from post-consumer waste, as well as the acceptance of chemical recycling by the European Union and the green dot systems is crucial.

With increased collection of plastics waste, including polystyrene notably in Belgium, France and Germany, the development and expansion of polystyrene sorting technologies, our joint efforts across the value chain and our active participation in cefic, PlasticsEurope, the Circular Plastics Alliance, and Styrenics Circular Solutions, we are confident that we can reach this target.

Our sustainability targets

- Develop proof of concept of polystyrene depolymerisation including business case by 2019 | Achieved
- Offer 30% recycled polystyrene in plastic packaging in Europe by 2025 | NEW!
- Offer recycled ABS at commercial scale by 2020 | NEW!
- Active contribution to Circular Plastics Alliance together with Styrenics Circular Solutions and the European Chemical Industry Council | NEW!
- Establish certification for recycled and bio-attributed content in our product offerings by 2020 | NEW!

Key highlights

- Polystyrene produced from 100% recycled styrene monomer at pilot scale
- Proof of concept on chemical recycling of polystyrene developed
- Recipes for recycled ABS developed
- Concept of mass balance for styrenics established

Our actions

- Active contribution to Circular Plastics Alliance together with Styrenics Circular Solutions and the European Chemical Industry Council | NEW!
- Establish certification for recycled and bio-attributed content in our product offerings by 2020 | NEW!
RESPONSIBLE BUSINESS PRACTICES ACROSS OUR VALUE CHAIN

The complexity of a circular economy requires a collaborative approach. Thus, we are currently embarking on several projects to develop sustainable solutions in our products’ lifecycle, by engaging not only styrenics manufacturers but also stakeholders across our value chain, such as recyclers, brand owners and customers.

Together with the European plastics industry, we have set a series of targets and initiatives called “Plastics 2030: PlasticsEurope’s Voluntary Commitment to increasing circularity and resource efficiency,” to achieve the goal of 100% reuse, recycling and recovery of all plastics packaging by 2040.

We are also part of a joint initiative of the styrenics industry called Styrenics Circular Solutions (SCS), which was set up as an independent legal entity in December 2018. Its primary aim is to increase the circularity of styrenics by engaging stakeholders across the styrenics value chain to identify, develop and industrialise new closed-loop recycling technologies and solutions including improved sorting capabilities for styrenics.

<table>
<thead>
<tr>
<th>Working Group 1</th>
<th>Chemical recycling technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Group 2</td>
<td>Waste management</td>
</tr>
<tr>
<td>Working Group 3</td>
<td>Communication and advocacy</td>
</tr>
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</table>
DRIVING SUSTAINABILITY THROUGH R&D AND INNOVATION

Our global R&D pipeline is the foundation for the future growth of INEOS Styrolution, as it comprises concepts for innovative future products, improved polymerisation processes and new applications. A key criterion in our innovation project prioritisation is the sustainability screening tool, which helps identify the environmental impact of new products and applications throughout their life cycle.

The screening tool is based on a multi-criteria analysis evaluating new, innovative solutions in terms of their sustainability footprint. An analysis of all our R&D projects in our innovation process indicates that we maintained our high level of more than 90% of projects having a positive sustainability impact.

Creating a circular economy also includes designing products to increase circularity within our core business segments – packaging, automotive and household and electronics.

We are currently exploring how we create innovative products and materials that facilitates easy collection at the end of their life cycle as well as easy and efficient sorting within current sorting technologies, avoids contamination of materials and raises the percentage of recycled content in newly developed applications.

REDUCING OUR ENVIRONMENTAL FOOTPRINT

Marine litter is a growing concern for our society, our customers and the global plastics industry, and the need for transparency and credibility on this topic is only increasing. We are committed to preventing pellet loss and focus on continuous improvement through the Operation Clean Sweep programme to enhance preventive and mitigation measures in our operations. We have conducted systematic audits of our supply chain in all regions to ensure implementation of these measures.

For more information on our actions to prevent pellet loss, please read the chapter “Reducing our environmental footprint”.

INEOS Styrolution is proud to have partnerships with top innovators who are working towards a circular economy for polystyrene in North America. The nature of a circular economy is that no single company or technology can do it alone. Our leadership, along with that of our partners, demonstrates the value of post-use polystyrene waste which is captured via collaboration along all sections of the material’s value chain.

RICARDO CUETOS
Vice President Americas,
Standard Products
OPTIMISING PRODUCT PERFORMANCE

Our styrenics products contribute to every facet of our daily lives due to their intrinsic and versatile properties. Styrenics are durable and weather-resistant, making them a longer-lasting alternative to other materials. They also have a low density and a high stiffness compared to other engineering plastics, which allows the manufacture of lightweight applications with reduced transportation costs and fuel emissions.

Here are some examples of our products used in applications.

Visit our website to view more examples.

LOW-EMISSION INTERIOR PARTS MADE OF NOVODUR® ULTRA 4255

Novodur® Ultra 4255 provides 5% material savings compared to conventional alternative PC/ABS, due to lower density and wall thickness.

CUSTOMER CHALLENGE
A premium car manufacturer was looking for a low-emission grade with low-gloss finish and without the need to paint in order to optimise material savings. Automotive interior parts impose a particularly wide variety of requirements on the material used, such as high heat and scratch resistance.

OUR SOLUTION
The new Novodur Ultra 4255, a low-emission and high-heat ABS, features high impact strength at room as well as low temperatures, 100% ductility at -30°C and high heat resistance. This grade provides 5% material savings compared to conventional alternative PC/ABS due to lower density and wall thickness.

ROMPLAST WINDOW ROLLER BLINDS MADE WITH LURAN®

Due to its sustainable design, the window roller blinds from Romplast offer increased durability due to its excellent thermal resistance and can be fully recycled after the materials are separated.

CUSTOMER CHALLENGE
Specialised in the manufacturing of dies and calibrators for the extrusion of plastic material, Romplast was seeking for material to be compatible with PVC, enabling a good co-extrusion of the two materials and a material that respects full recyclability.

OUR SOLUTION
Luran® provides a very well-balanced property profile for window frames and structural parts. Luran® reinforces PVC profiles for roller blinds enhancing dimensional stability at elevated temperature conditions. The material offers low thermal conductivity, temperature resistance and a very good balance of high stiffness and impact strength.

BSH MIXER MADE OF TERLURAN® GP-35 WHITE

The most cost-efficient solution for high-quality white ABS applications.

CUSTOMER CHALLENGE
BSH, a global leader in the home appliance sector, was looking for a cost-efficient solution with high impact strength and heat resistance as well as with excellent flowability. Properties, such as high-quality surface finish and gloss, are undoubtedly important for the market leader.

OUR SOLUTION
Terluran® GP-35 White contains a primary package of white pigments and UV stabilisers. The grade is designed for self-colouring — preferably using liquid colouring technology to capture the full recipe optimisation potential. Together with its excellent property profile, the product can create significant cost-savings for customers.
GIVING STYRENICS A SECOND LIFE

For our materials to be recycled, they first need to be sorted into the right waste stream. Sorting plastics from mixed waste streams and purifying them is essential for efficient recycling as it impacts both the cost, quality and quantity of recyclates. Our styrenics products can be easily sorted with the right infrastructure in place and in use. The technology exists to separate styrenics from mixed waste and into different styrenic types.

INEOS Styrolution is currently in talks with waste sorters and recyclers in order to ensure a consistent and high-quality supply of material that we can mechanically or chemically recycle. As part of our efforts to bring high-quality recycled ABS to the market, we are testing samples from various waste sources to understand which waste source in combination with the sorting technology can help us deliver a consistent, high quality of recycled materials.

We are also working with Styrenics Circular Solutions (SCS) to create a market pull away from incineration and landfill towards game-changing recycling solutions for styrenics by engaging with regional waste collection and sorting partners. SCS is also building a close link between waste stream volumes of relevant quality and the respective high-tech recycling processes, as well as developing the market for the recycled material. Trials with technology providers at specific sorting locations have proven that polystyrene can be sorted effectively out of mixed plastics waste, paving the way to have this new raw material available for recycling technologies.

RECYCLING: TAKING THE SINGLE OUT OF SINGLE-USE PLASTICS

The styrenics industry is facing increasing pressure due to changes in the legislative environment and increasing public pressure and demands from customers, consumers and non-governmental organisations. All these factors reinforce and accelerate the need for us to find sustainable, circular solutions for our products and implement circularity as part of our end-of-life strategy.

We believe that chemical recycling has the potential to provide the necessary boost to reach the recycling quota for polystyrene, deliver economy of scale, and offer a holistic solution across the value chain.

INEOS Styrolution is therefore leading the way in the development of polystyrene chemical recycling, a process of chemically depolymerising plastic waste back to its monomer building blocks for use in future polymerisation processing. The styrene monomer produced from chemical recycling is virtually identical to virgin styrene monomer produced by fossil fuels.

We are delighted to be able to place polystyrene back on the market as an innovative and circular product offering with a lower carbon footprint. We strongly believe that converting post-consumer styrenics waste back to its key raw material will not only address the issue of littering, but will also help create durable high-performance applications.

SVEN RIECHERS
Vice President, Standard Products EMEA

As we launch our new technology to up-cycle waste polystyrene, we are delighted to work with INEOS Styrolution on applications for our secondary recycled styrene product. This exciting partnership aids both INEOS Styrolution in its goal of enhancing the sustainability of its products and GreenMantra in our mission to close the loop on waste polystyrene by identifying value-creating outlets for our two product streams.

DOMENIC DI MONDO
Vice President of Technology, GreenMantra

Depolymerisation of polystyrene to styrene
Depolymerisation of polystyrene to styrene

We have entered into cooperations with several leading-edge technology companies including Agilyx, Pyrowave, GreenMantra and Indaver to build a circular economy for polystyrene that capitalises on the value inherent in polystyrene waste and eliminates this value from being incinerated or ending up in landfill.

We have signed a joint development agreement with Agilyx to develop a recycling process based on depolymerisation of post-consumer polystyrene waste, which is expected to result in new virgin, high-quality polystyrene ultimately approved for food-related uses. INEOS Styrolution and Agilyx recently completed Phase 1 of a study to evaluate the feasibility of a facility to be built in North America based on their technology. This study found an adequate availability of waste polystyrene feedstock, which could be used in the proposed facility, and we are now moving into Phase 2.

Under the umbrella of SCS, we are also participating in a joint project with Agilyx and another third party to develop the first-of-a-kind polystyrene chemical recycling facility in Europe.

We are working with Pyrowave to recycle North American post-consumer polystyrene, based on their unique patented microwave technology that unzips plastics back into their initial constituents.

To further advance this approach, INEOS Styrolution, Pyrowave and ReVital Polymers have launched a closed-loop consortium to work together towards forming a circular economy market for polystyrene in North America.

Indaver, a waste company for recycling & recovery, is INEOS Styrolution’s most recent partnership. The initial focus of the collaboration is to fully align the output of Indaver’s depolymerisation process with feedstock specifications of INEOS Styrolution’s polymerisation process. Indaver also plans to develop a 15 kilotonne demo plant in Antwerp by the first half of 2021 to chemically recycle polystyrene.

We are collaborating with a UK-based technology provider on chemical recycling of polystyrene using fluidised bed technology.

We are also jointly working with Unternehmensgruppe Theo Müller, a recognised leader in dairy products, to develop a chemical recycling solution for polystyrene. Post-consumer polystyrene waste will be converted back to its monomers to generate high-quality virgin polystyrene ultimately for food-related use. Both companies have agreed on a phased approach with a lab-scale phase to start in 2019, a pilot-scale phase in 2020 and a commercial-scale phase in 2022.
Our Global R&D team is working on project ResolVe, which aims to explore the commercial use of post-consumer polystyrene waste as a raw material to produce high-quality plastics. The project includes a technical feasibility study, the development of a holistic recycling concept in collaboration with waste management companies, and a commercial and ecological evaluation of the recycling process. This project will be executed with contributions from INEOS in Köln. Two institutes of the University of Aachen (RWTH) – the Institute for Processing and Recycling (Institut für Aufbereitung und Recycling, I.A.R.) and the Institute of Plastics Processing (Institut für Kunststoffverarbeitung, IKV) – as well as Neue Materialien Bayreuth will support the project, which will be finished by mid-2020.

After two years of intensive work, we have made significant progress in developing chemical recycling solutions. With the help of R&D and innovation, we have demonstrated the proof-of-concept, scope, and business case for depolymerisation of polystyrene by producing 100% recycled polystyrene at lab-scale.

We have a clear picture on the availability of polystyrene waste due to the joint efforts through Styrenics Circular Solutions (SCS) to map polystyrene waste in Europe and our collaborations with technology providers to collect post-consumer polystyrene waste in Canada and the United States.

We have identified state-of-the-art sorting technologies that offer 99% purity for sorted flakes and are working with leading sorting centres and our value chain for development and implementation.

Our next step is to run a trial of the recycled styrene monomer as feedstock for one of our polymerisation plants and then to shift to commercial scale by setting up demo plants. We expect our first plants in USA and Europe to be operational from 2021-22 onwards. We have a well-defined road map in place and are on track to achieving our milestones.

Chemically recycled polystyrene will be a truly unique circular solution for packaging with food contact applications when compared to other recycling solutions that are not suitable for providing food-grade products.

Waste is not an end product. It is a phase in the lifecycle of a material. With the innovative Plastics2Chemicals project, Indaver develops a sustainable solution for plastic waste by recycling into high-grade materials. We are pleased to work with INEOS Styrolution as one of our preferred partners to use these recycled materials as a valuable alternative for virgin raw materials. This project is an example of the industry’s sustained commitment to help achieve the European objectives in valorizing plastics.

Our relationship with INEOS Styrolution has resulted in several exciting initiatives to create a circular pathway for post-consumer polystyrene. Polystyrene is often misunderstood, yet it is one of the highest utility polymers, and one of the most recyclable of all plastics. Our collaboration is focused on developing advanced recycling facilities to shift from a linear to a circular economy for polystyrene.

JOE VAILLANCOURT
CEO, Agilyx

JOCELYN DOUCET
CEO, Pyrowave

PAUL DE BRUYCKER
CEO, Indaver
Mechanical recycling is a method by which plastic waste is physically processed back into pellets, without changing the basic structure of the material. With know-how from INEOS Styrolution, this method can generate new polymer blends or grades that come very close to virgin polymer performance.

Since early 2018, INEOS Styrolution has been exploring this option with the objective to develop a lean portfolio of basic grades for our standard applications. After undergoing various cycles of recipe development, we have just compounded the first tonne of mechanically recycled material with commercially interesting product properties. Mechanical recycling is the best available and proven technology to reuse end-of-life plastic waste on a short to medium term, and is currently the most feasible option for some of our polymer grades such as ABS.

We have identified a list of companies in the plastics waste value chain and are finalising discussions with the most capable of them to secure highest-quality supply for our ABS recycling grades. We foresee having the new portfolio of recycled ABS grades commercially available by the end of 2019.
USING RENEWABLE RESOURCES AS A RAW MATERIAL
As part of our efforts to reduce our environmental footprint and save valuable resources, both for our company as well as for our customers, we are working on offering the integration of renewable feedstock as a replacement for fossil fuel in upstream existing petrochemical installations.

We will only source feedstock that does not compete with food and complies with the highest sustainability certification criteria. As the renewable feedstock gets mixed with fossil feedstock during the production process, we cannot guarantee a dedicated concentration of bio-based material in the end-product. Therefore, we will attribute an equivalent amount of the renewable feedstock to the end-product. This will be done using internationally accepted certification schemes and will be audited by a third-party provider.

This approach allows us to create more sustainable supply chains, while retaining our already optimised and highly efficient infrastructure and processes, and is our way to contribute to a bio-economy in addition to all our other efforts on circularity.

The variable content of bio feedstock in the final product is attributed as a percentage of production.

The use of bio-attributed styrene offers us at least 50% lower greenhouse gas footprint when compared to styrene produced by fossil fuel. For our customers, this approach presents a “drop-in” solution with identical product quality and properties and therefore does not require product development or new registration and regulatory approvals.

The attribution approach is aimed as our short-term offering to customers to contribute to sustainability in addition to our recycled products. This approach will be key for chemical recycling as well: by allocating chemically recycled materials into petrochemical installations as a raw material. Through an extensive collaboration along the value chain, we believe this can significantly contribute to a lower greenhouse gas footprint and encourage the use of renewables.

Bio-attributed feedstock is a drop-in solution that can be used the complete portfolio.
Ensuring compliance with various national and international regulations is an ongoing obligation and forms an integral part of our operations. We make sure that our styrenics and raw materials comply with legal requirements in all the regions and industries we serve. For example, in the food packaging industry, our products meet strict standards, including those set by the European Food Safety Authority (EFSA) and the U.S. Food and Drug Administration (FDA).

In order to provide customer-centric regulatory support and proactively address global regulatory and product safety trends, we rely on our global network of internal and external experts.

To ensure product safety and to give our customers a competitive edge, we offer a comprehensive range of services. Via an online portal, we provide various important information – such as safety data sheets in various languages, technical data sheets and regulatory documents. In addition, a team of dedicated professionals is on hand to help our customers meet strict international regulatory requirements.

To gain a broader market overview, assess product quality and minimise risks, we also work closely with industry associations, such as PlasticsEurope and the U.S. Styrene Information & Research Center. These partnerships help us better understand current and future regulatory developments, for instance, by giving us access to studies on feedstock and product safety. Our certified quality management system ensures the consistent delivery of high-quality products around the world and, in combination with regulatory affairs, assists in building and maintaining the trust of our customers. The system is based on best practices and international standards, such as ISO 9001 and ISO 14001.

**PRODUCT RESPONSIBILITY**  
We constantly monitor international regulations as they develop: to anticipate requirements, improve our products and ensure compliance in all markets in which we operate. For example, in applying global inventory management, we have implemented automated tools such as the Substance Volume Tracking Tool for REACh to avoid non-compliance cases.

Concerning “conflict minerals” as defined by the Securities and Exchange Commission (SEC), i.e. cassiterite, columbite-tantalite, gold, wolframite and their derivatives, these have not been intentionally added as ingredients in the manufacture of our products and, to the best of our knowledge, are not known to be present in the final products.

**PRECAUTIONARY PRINCIPLE**  
As a manufacturer committed to the long-term sustainability of our business, we manage the use of our chemicals in a responsible manner by applying the precautionary principle. This principle is an inherent part of our approach to risk assessment and risk management: We are familiar with and closely scrutinise our substances’ properties, establish guidelines for safe handling and processing and will continuously review and update our criteria and guidelines for the development of new products. In all our plants, the precautionary principle is an integral component in our management of change process, requiring a documented risk assessment for all process changes.

For customers who register on our website, around 265 regulatory documents are available for download, including regulations on food contact, RoHS*, REACh**, and SVHC***. Customers that download regulatory documents receive notification of updates. We are constantly reviewing and improving our website services in order to make it more user-friendly for our customers.

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* RoHS: Restriction of Hazardous Substances Directive  
** REACh: EU regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals  
*** SVHC: Substance of very high concern
ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS
Our employees, contractors and on-site logistics personnel are our most valuable asset, which is why workplace safety is and remains our undisputed #1 priority. For us, incident-free operation is our objective.

OUR APPROACH

INEOS Styrolution is convinced that being a market leader goes hand-in-hand with an outstanding safety record and that all accidents are preventable. We take our responsibility for safety, health and environment (SHE) very seriously and are fully committed to delivering a continually improving performance across all our operations.

Our commitment to safety starts at the top, with the management board being responsible for our safety performance. However, it is the responsibility of everyone at INEOS Styrolution to ensure the highest standards of safety and health in everything that we do every day.

We have established a SHE culture of open dialogue, coaching and trust that reinforces our SHE performance. We aim to minimise the impact our facilities have on local communities and local environments. This means working in close partnership with community groups and key stakeholders to ensure that we are a responsible neighbour and partner.

We strive to meet, and where feasible, exceed strict safety and health performance targets. We are transparent about our performance and publish our results locally and nationally, as required. According to our materiality analysis conducted in 2017, out of all 16 key topics, workplace safety was rated as being of highest importance to our internal and external stakeholders.

OUR GLOBAL SHE EXCELLENCE PROGRAMME

Our global SHE Excellence programme was introduced in early 2012 to establish high SHE standards and management systems. By 2016, INEOS Styrolution integrated the INEOS Group’s SHE principles, guidelines and life-saving rules within its SHE Excellence programme.

We focus our attention on safety in the processes we apply and the behaviours we expect. In alignment with all other INEOS Group businesses, we follow two sets of ten key safety principles that have become our 20 principles. These 20 principles form the foundation of our SHE Excellence programme, and define what is expected of all our employees, contractors and businesses on a day-to-day basis.

For more information on our 20 Principles, please visit our website.

Regular training activities, auditing and the exchange of best practices across all regions and sites keep safety at the forefront of operations. We utilise a rigorous internal audit protocol to ensure our sites continue the journey of SHE Excellence. Starting in 2018, we further increased the rigour of our internal standards by adapting the protocol to ensure that best practices identified during past audit cycles are now the normal standard of today’s protocol. Audits are led by trained members within our Operational Leadership team, accompanied by an Internal Audit team knowledgeable in SHE and the operational aspects of our business. During such audits, findings related to serious deviations are resolved by immediate corrective actions. Findings related to minor deviations are integrated into the site’s annual SHE improvement plan. These audit processes take place according to a rolling three-year schedule.

In 2018, our ten process safety principles were audited at all our sites. In 2019, our ten behavioural safety principles will be audited at all our sites.
In 2018, we saw an overall year-on-year improvement in our in-plant operations and safety performance. The number of injuries that resulted in employees or contractors being away from work for one or more days was reduced by 33% as reflected in the lost time injury rate (LTIR), which is 0.06 versus 0.09 in 2017. In addition, the overall severity of such injuries was also reduced, resulting in less days away from work per lost time injury, as indicated in the 43% improvement in severity rate compared to 2017.

We are required to report any loss of containment (LOC) events that occur at our production sites that are above release thresholds equal to 1/10th the U.S. EPA reportable quantity (RQ) threshold, as a process safety and environmental impact indicator. This LOC reporting has consistently been in place at all our operations since 2015. We have demonstrated year-on-year improvement in reducing the number of releases since we started measuring and reporting these incidents.
**Total number of injuries**

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</tr>
<tr>
<td>2018</td>
<td>147</td>
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**Performance trend**

<table>
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<th>TCIR</th>
<th>LTIR</th>
<th>DART</th>
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**Severity rate**

<table>
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<td>2017</td>
<td>2.49</td>
</tr>
<tr>
<td>2018</td>
<td>1.06</td>
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</tbody>
</table>

**Definitions**

- **TCIR**: Total case injury rate per 200,000 work hours (includes employees and contractors)
- **LTIR**: Lost time injury rate per 200,000 work hours (includes employees and contractors)
- **DART**: Rate of injury cases involving days away or restricted transfer per 200,000 work hours (includes employees and contractors)
- **Severity rate**: Reflects the number of days away from work per 200,000 work hours (includes employees and contractors)
Operating responsibly is deeply embedded in our corporate values. We are strongly committed to protecting the safety and health of individuals, using resources efficiently, and safeguarding the environment.

**OUR APPROACH**

As a leading manufacturer for polystyrene and styrenics specialties globally, we aim to use available resources efficiently and reduce our environmental footprint.

Complete compliance with local and national environmental legislation is mandatory for our operations. We strive to continuously improve our operations as well as our sustainability performance by following the key drivers of our environmental policy:

- **Reduction in energy use and greenhouse gas emissions**: Striving to continuously optimise the energy efficiency of our technology and operations
- **Resource efficiency, including scrap reduction and waste management**: Efficiently using raw materials, including reuse, recycling and recovery through optimisation of our processes
- **Efficient use of water**: Reducing the use of water where possible and optimising the water efficiency of our operations
- **Reduction of air emissions and waste water discharge**: Evaluating best available technology and prevention of accidental emissions through advanced process control
- **Transparency and open communication on our environmental performance with stakeholders (personnel, customers, authorities, communities)**

To monitor the evolution of our environmental performance, we have integrated key performance indicators (KPIs) on energy and water use, material yield, waste management and air emissions into our business and site procedures. The continuous tracking and improvement of our data accuracy and our improvement projects reflects the expertise of our manufacturing processes, and our target of operational excellence.

Complying with required regulations, especially for waste and air emissions, is part of our SHE Excellence programme and managed by site, regional and global SHE representatives.

This includes reporting of data, investigation of environmental incidents, risk assessments, defining and review of processes as well as internal and external ISO audits. In 2018, our North American headquarters as well as three manufacturing sites were successfully certified for ISO 14001. We aim to achieve 100% ISO 14001 certification by the end of 2019.

Environmental topics are part of our Risk & Control audit programme and includes testing on compliance evaluations, soil investigations or remediation, and environmental control measures. In addition, all our sites have programmes to ensure open communication with the local communities.

Our global sustainability data is collected on an annual basis, in accordance with the GRI Standards disclosures and in compliance with local and national legislation. The sustainability data from our manufacturing sites are consolidated by SHE, energy, technology and sustainability managers and validated at site, regional and global levels. As a follow-up to the environmental data collection audit, we have integrated a new software tool to support data collection and automation of processes.

As part of our goal to continuously improve our operational and sustainability performance, we combine our site expertise with our global technology team, exchanging and developing the best available process and technology solutions.

The year 2018 has been an exciting one for us, with the purchase of two polystyrene plants in China, the investment for a capacity increase in Wingles, France, and the final announcement for a new ASA plant in Texas, USA. Expanding our operations gives us the opportunity to debottleneck our capacities and be more resource-efficient in our production, while implementing the best available technology to supply the markets locally and reduce the environmental footprint of our products.

In our recent materiality assessment, greenhouse gas emissions, energy, resource efficiency, marine litter and pellet loss, water use, waste water and waste generation, and air emissions were rated as being of high significance to our stakeholders and of key importance to our business.
OUR PERFORMANCE

Key highlights

- 84% reduction of SOx emissions
- 17% reduction in waste water
- 5.5% reduction in greenhouse gas emissions

Our sustainability targets

- 100% of sites ISO 14001 certified by 2019
- 60% of sites ISO 50001/EMS certified by 2018
- 10% reduction of waste* by 2018
- 7% reduction of waste water* by 2018
- 7% reduction of VOC** by 2019
- 3% reduction of water use* by 2018
- Operation Clean Sweep audits for all sites by end of 2020

*over the period 2014 to 2018  **VOC emissions 2015–2019

An overview of our environmental performance (2014 to 2018)

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>EVOLUTION</th>
<th>TARGETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
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<td></td>
</tr>
<tr>
<td>GHG emissions</td>
<td>-5.5%</td>
<td></td>
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<tr>
<td>Waste (excluding projects)</td>
<td>+1.3%</td>
<td>-10%</td>
</tr>
<tr>
<td>Landfill waste</td>
<td>-52%</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>-4.3%</td>
<td>-3%</td>
</tr>
<tr>
<td>Waste water</td>
<td>-17%</td>
<td>-7%</td>
</tr>
<tr>
<td>NOx</td>
<td>+0.5%</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>+19%</td>
<td>-7%*</td>
</tr>
<tr>
<td>SOx</td>
<td>-84%</td>
<td></td>
</tr>
<tr>
<td>Dust</td>
<td>-28%</td>
<td></td>
</tr>
<tr>
<td>ISO EMS/50001</td>
<td>50%</td>
<td>60%</td>
</tr>
<tr>
<td>ISO 14001</td>
<td>81%</td>
<td>100%</td>
</tr>
<tr>
<td>ISO 9001</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

*VOC target timeline 2015–2019

NEW!

MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW

OUR COMMITMENT TO SUSTAINABILITY

SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS

ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS

VALUING OUR PEOPLE

MANAGING OUR BUSINESS RESPONSIBLY

ANNEXE
ENVIRONMENTAL DATA

BOUNDARY
The following data represents the summary of the environmental impact, measured at all INEOS Styrolution assets and legal entities of our 181 production sites worldwide. This covers the consumption and emissions from our activities and utilities that we source from third parties, but excluding emissions from our raw materials.

SCOPE
The performance data refers to the net impact of INEOS Styrolution’s production activities, including emissions and consumption of resources. Treatment of waste water or air emissions resulting from activities provided to non-INEOS Styrolution plants are excluded. We have retained the same scope since the start of our environmental data collection in 2014. Any change has been described in detail in our previous sustainability reports.

METHOD AND ACCURACY
Water, waste water, waste and energy usage is predominantly based on conducted measurements. In the cases where accurate measurements were not possible, estimates and assumptions have been made.

For air emissions from combustion gases (NOx) and solvent air emissions (VOC), our measurements and estimates comply with local legal requirements for monitoring and reporting. As measuring equipment is not available at all sites, we used an accuracy limit of +/-3% for measuring, monitoring and collection of data for emissions and consumption.

At our production site in Ulsan, South Korea, additional legal monitoring for VOC was required, which explains the change in scope and methodology from 2018 onwards.

RESOURCES EFFICIENCY

Resource efficiency is central to our business and fundamental to our operational excellence as it relates to reliable operations. It is a driver for many of our improvement initiatives and capital expenditures as well as in our daily work at our production sites. It is internally reported and reviewed by our management team.

We use material yield as an indicator for our resource efficiency performance. Raw material yield is defined as polymer or monomer produced per unit of raw material used. Our yield definition excludes low value by-products and waste streams, which however are also mostly further reused, recycled or recovered.

DISCUSSION OF DATA
The diagram illustrates the development of the material yield for our polymers and for our ethylbenzene styrene monomer (EBSM) plants over the past years. The yield for both polymers and monomers are at a stable high level. Monomer yield is lower than polymer yield, as more by-products are formed in the EBSM production process.

Resource efficiency: material yield [%]

1 Our production sites in Ningbo and Foshan, China are excluded from this report as the acquisition was only completed in February 2019.
WASTE REDUCTION

For INEOS Styrolution, waste management starts with efficient use of raw materials and the avoidance of waste generation where possible. When waste is produced, we first consider recycling, followed by energy recovery, and incineration or landfill as the last option.

Although a significant amount of waste is avoided by optimised operations and the reuse of side streams at neighbouring plants or sites, the amount of generated waste is still relevant. Our conscious waste management including appropriate storage, handling and disposal are additional measures we take to mitigate its impact.

We started measuring our global waste management performance in 2014. For these measurements, the definition of waste is in accordance with international standards and defined by national legislation. INEOS Styrolution complies with all local waste management regulations.

Waste accumulations at the sites can vary, depending on the chemical processes and the presence of on-site utilities such as waste water treatment plants.

To give more insight into our global waste management performance, we separately report data by waste origin, type and the method of disposal.

### Specific waste (kg/tonne produced)

<table>
<thead>
<tr>
<th>By source</th>
<th>2014</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>2.72</td>
<td>2.80</td>
<td>2.88</td>
</tr>
<tr>
<td>Projects</td>
<td>0.80</td>
<td>1.72</td>
<td>0.94</td>
</tr>
<tr>
<td>Sludge</td>
<td>2.42</td>
<td>2.26</td>
<td>2.03</td>
</tr>
<tr>
<td>Municipal</td>
<td>0.67</td>
<td>0.74</td>
<td>1.00</td>
</tr>
<tr>
<td>Other</td>
<td>0.07</td>
<td>0.06</td>
<td>0.04</td>
</tr>
</tbody>
</table>

### By destination including project waste

<table>
<thead>
<tr>
<th>By destination including project waste</th>
<th>2014</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling &amp; recovery</td>
<td>2.14</td>
<td>3.76</td>
<td>3.42</td>
</tr>
<tr>
<td>Incineration</td>
<td>1.97</td>
<td>2.20</td>
<td>2.33</td>
</tr>
<tr>
<td>Landfill</td>
<td>2.37</td>
<td>1.61</td>
<td>1.13</td>
</tr>
<tr>
<td>Other</td>
<td>0.05</td>
<td>0.04</td>
<td>0.03</td>
</tr>
</tbody>
</table>

### By category including project waste

<table>
<thead>
<tr>
<th>By category including project waste</th>
<th>2014</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous waste</td>
<td>2.04</td>
<td>2.48</td>
<td>2.05</td>
</tr>
<tr>
<td>Non-hazardous waste</td>
<td>4.50</td>
<td>5.14</td>
<td>4.86</td>
</tr>
</tbody>
</table>
DISCUSSION OF DATA

Compared to 2017, total specific waste (including project waste) decreased by 9%. This is mainly due to waste from sludge, which reduced by 10%, municipal waste which increased by 36%, and waste from projects which decreased by 45%.

The reduction in sludge was mainly due to our plant in Map Ta Phut, Thailand. Here, the total amount of waste fell back to the 2014 level due to process optimisation measures for the required cleaning frequency of the reactors used to produce our premium quality products. This caused a decrease in the quantity of suspended solids ending up in the sludge. In Ulsan, South Korea, significant efforts have been taken to reduce the amount of sludge by enhanced dewatering.

The total specific waste linked to demolition and infrastructure projects decreased by 45% compared to 2017. The waste from projects is highly impacted by turnarounds at our production sites. During the shutdown, large optimisation projects are executed and equipment is exchanged. In 2018, a low number of sites had their turnaround.

As part of a redundant asset removal plan and upcoming investments, we expect figures for demolition waste to increase within the next years. For waste arising from necessary infrastructure or demolition works, we mainly focus on good handling practices and maximisation of recycling and reuse of the generated waste.

Over the last years, we have successfully shifted from landfill waste to recycling and recovery. Currently, 50% of our overall waste is sent to recycling and recovery and 16% to landfill. Over the period 2014 to 2018, landfill waste has been reduced by 52%, while waste that is recycled and recovered increased by 60%.

We continue to evaluate further measures to reduce landfill waste over the next years. One example of such a project is the evaluation of applications for an ABS rubber waste stream to be reused or recycled.

Another key waste indicator is the distribution between hazardous and non-hazardous waste: 30% of our waste is hazardous waste and 70% is non-hazardous waste. Hazardous waste requires special handling, disposal and storage measures. We aim to minimise and recover our hazardous waste and recycle non-hazardous waste as much as possible. Compared to 2017, we reduced our hazardous waste by 5%.

Total specific waste linked to production, excluding project waste increased by 1.6% compared to 2017. Monomer production waste decreased by 16% while polymer production waste increased by 5% in comparison to 2017. The main sources of production waste for polymers are process waste from ABS rubber production and sludge from waste water treatment plants. The main sources of waste in EBSM production are project waste, spent catalyst and exported waste water.

Over the period 2014 to 2018, waste generated by monomer production reduced by 9.3%, while waste from polymer production increased by 3%, resulting in an overall specific waste increase of 1.3%. This means that our ambitious target to reduce our waste from production by 10% for this period was not reached despite our efforts to improve our waste management. The main reason for this overall increase can be seen in our polymer waste stream. Here, a shift in our product portfolio towards specialities and high quality polymer products that generate a higher quantity of intermediate waste has impacted our overall waste figures.
ENERGY EFFICIENCY

Conscious energy usage is integral to our resource efficiency efforts and is a key driver for all capital expenditure projects. Since the establishment of our company in 2011, we have completed a significant number of energy reduction projects, and every year, our Capex programme includes numerous initiatives to improve energy efficiency. We have implemented energy management systems to measure, monitor, internally report, and evaluate the use of energy.

An inventory of all ongoing energy improvement projects as well as other potential projects has been made, to ensure a clear understanding of the pipeline on energy improvements. Best practices in terms of technology are shared during global technology exchange meetings. Benchmarks of sites with the same technology are shared and coordinated by our global technology group.

Energy management starts and ends with the efforts on each site. It is being integrated into daily operations and its implementation is continuously ensured. Therefore, the sites have energy managers or project managers in place, who coordinate actions within the departments. For Europe and the Americas, energy management is further coordinated at regional level, led by a dedicated regional energy manager.

Energy reporting at our 18 sites involve fossil fuels, electricity, steam and oil residues. The energy usage can vary annually depending on site-specific conditions such as turnarounds and the type of chemical process.

DISCUSSION OF DATA

In 2018, 50.5% of our energy use was from fossil fuels, 37.8% from steam and 10.1% from electricity. In general, steam and fossil fuels are mainly used by EBSM plants, whereas extruders at polymer production sites use a higher quantity of electricity.

Specific global energy consumption decreased by 1.5% in 2018. Compared to 2017, our polymers production sites show an increase of 0.9% in specific energy use in 2018. This increase in polymer production is mainly due to the installation of a new mega extruder in Altamira, Mexico, additional generator usage due to instability of the electricity grid in India, as well as production-related increase in Ulsan, South Korea, and Decatur, USA.

Our four EBSM plants represent approximately 80% of our global energy usage. This is a direct result of the different thermodynamics of the EBSM process versus polymer processes. Energy efficiency decreases over the lifetime of a catalyst, which is in the range of three to four years. The specific energy use of our four EBSM plants reduced by 3.4% compared to 2017, mainly due to the impact of scheduled plant turnarounds in Texas City and Bayport, USA. During these shutdowns, energy optimisation measures such as fresh catalyst exchange and the repair of a steam leak in a heat exchanger were implemented.
GREENHOUSE GAS EMISSIONS

We are committed to reduce our greenhouse gas (GHG) emissions and to take actions to mitigate the negative effects of climate change to keep temperature increase well below 2°C (above pre-industrial levels). Our efforts and interests to comply with the globally established carbon emission targets, is of high interest to our customers, stakeholders and investors.

We report and review our carbon dioxide scope 1 and 2 emissions on an annual basis. This includes review and validation of each site, methodology, conversion factors and ETS (emission trading system) reporting. Energy and GHG reduction projects are identified and tracked in our Capex system and exchanged within the INEOS Carbon & Energy network. Within this network, joint cooperation within INEOS businesses for energy efficiency projects as well as innovations are shared and discussed on a regular basis.

In our previous report, we extensively explained our engagement in ETS or carbon policy programmes at a country level (EU, Canada and South Korea). Furthermore, our Mexican site in Altamira acquires clean energy certificates (Certificados de Energías Limpias) and thus supports the national goal to generate 35% of its electricity by clean sources by 2024.

The reported emissions cover the scope 1 and 2 CO₂ emissions as defined in the Greenhouse Gas Protocol. Scope 1 emissions include direct emissions from fossil fuel consumption at our sites as well as process-related CO₂ emissions from N₂O (nitrous oxide), CH₄ (methane) and CFC/HCFCs (chlorofluorocarbons/ hydro chlorofluorocarbons). Scope 2 includes indirect CO₂ emissions related to sourced electricity and utilities such as steam. CO₂ emissions are evaluated either based on CO₂ conversion factors or calculated based on the carbon content in fuels. The used conversion factors are either given by energy suppliers, national/ regional authorities or taken from global warming potentials as stated in international standards such as the Intergovernmental Panel on Climate Change (IPCC) or the GHG protocol.

DISCUSSION OF DATA

In 2018, 44% of our total greenhouse gas emissions were emitted by scope 1 emissions and 56% by scope 2 emissions.

It can be seen that 22.5% of our GHG emissions was related to electricity production, while only 10% of our energy consumption was electricity based. The key factors here are CO₂ conversion factors for electricity that can strongly vary depending on the local supplier. The accessibility and availability of energy sources, especially renewable energies, can be nationally and regionally limited. Increasing the share of renewables in our electricity mix to reduce the carbon impact of this energy source will be subject to further follow-up in 2019 and beyond.

In 2018, our EBSM production sites achieved a reduction of 2.4% in specific greenhouse gas emissions compared to 2017, which is concurrent with the energy reduction as explained in the previous section. For the polymer production sites, an increase in greenhouse gas emissions of 5.1% was reported. This can be explained by an update of CO₂ conversion factors as well as by a shift in energy sources with different CO₂ impact. For example, in 2018, our polymer sites consumed more electricity and less steam. In Altamira, Mexico, a new electricity consuming mega extruder was installed. The combination of polymers and monomer production sites led to an overall specific increase of 0.6% compared to 2017. We have reduced our GHG emissions by 5.5% over the period 2014 to 2018.
WATER USE

We report on process and cooling water, relating to the efficiency of our processes. By definition, process water comes in contact with our product and can be either reused as process water or sent to an on-site or off-site waste water treatment facility. Cooling water does not come into direct contact with the product, therefore no organic contamination occurs. In case of a separate discharge point, it can be routed back directly to a river or sea, without further treatment by a waste water facility. Regardless of regional differences, the use and discharge of process and cooling water are monitored by quantity and quality.

At our EMEA sites, we use semi-open primary cooling water systems that often extract water from nearby surface water bodies, such as the Rhine and Scheldt rivers. After use in cooling processes, this water is partially routed back to the river via dedicated discharge points, separated from waste water. The cooling water demand of the semi-open systems is more dependent on the temperature of the water source and was impacted by the warm summer period in the EMEA region.

In Asia-Pacific and in Americas, the cooling water is discharged together with process waste water, leading to relative higher volumes of discharged waste water. Closed cooling water loops are being installed wherever possible during turnarounds or other installation replacements.

At our styrene monomer sites in the Americas, evaporative cooling systems are used, in which cooling water ends up as water vapour. In addition to technical differences, these systems require significantly higher cooling water amounts during the warmer summer months.

Process water use fluctuates much less due to meteorological circumstances and is rather linked to stable and reliable operations. Our initiatives to reduce water use are also in line with our set target focus on process water.

The table and graph indicate the breakdown of data on our total water use in cooling water and process water as well as our waste water discharge.

DISCUSSION OF DATA

Compared to 2017, specific water use including cooling water increased by 0.8 %. Thereby, cooling water usage increased by 0.9 %, while process water usage reduced by 0.2 %.

### Specific usage [m³/tonne produced]

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water withdrawal including cooling water</td>
<td>13.44</td>
<td>14.54</td>
<td>14.65</td>
</tr>
<tr>
<td>Process water* withdrawal by source</td>
<td>1.77</td>
<td>1.70</td>
<td>1.69</td>
</tr>
<tr>
<td>Surface water</td>
<td>1.26</td>
<td>1.22</td>
<td>1.23</td>
</tr>
<tr>
<td>Public water</td>
<td>0.08</td>
<td>0.10</td>
<td>0.11</td>
</tr>
<tr>
<td>Steam/condensate</td>
<td>0.37</td>
<td>0.31</td>
<td>0.28</td>
</tr>
<tr>
<td>Process water* discharge by destination</td>
<td>2.15</td>
<td>1.79</td>
<td>1.78</td>
</tr>
<tr>
<td>External waste water treatment</td>
<td>1.60</td>
<td>1.40</td>
<td>1.28</td>
</tr>
<tr>
<td>On site waste water treatment</td>
<td>0.55</td>
<td>0.39</td>
<td>0.50</td>
</tr>
</tbody>
</table>

* Process water excludes the volumes of cooling water, since cooling water is not in direct contact with chemicals and can be re-directed to source.

91% recirculation of cooling water

91% recirculation of cooling water

9% process water

72% external waste water treatment

28% internal waste water treatment and discharge
**DISCUSSION OF DATA**

Water used for production purposes is drawn from different sources, such as surface water and wells. It can also be imported from neighbouring sites, which has a different environmental impact. Groundwater is the less favoured source. Only 4.1% of our total process water consumption comes from ground water.

Reporting the total volume of our water use subdivided by source contributes to our understanding of its overall impact and evolution. Compared to 2017, surface water (our primary source of water use) increased by 0.8% and public water increased by 5%. Groundwater use increased by 15% due to an underground leak and limited measurement for detection. This will be subject to further follow-up and improvement in 2019 and beyond. The water imported by steam condensate decreased by 9%. The usage of steam condensate can vary at sites, depending on the required import and export to other facilities.

In general, polymer production sites use more process water than monomer production sites. Compared to 2017, water use by monomer production reduced by 6.2%, whereas our polymer production plants increased their water use by 3.5%. The reasons for this fluctuation are limited measurements, housekeeping, increased cleaning and a new demineralised water plant in Altamira, Mexico. In addition, our polymer portfolio shift towards high quality specialties products, for example for medical applications, caused higher water consumption. Overall, withdrawal of process water reduced by 0.2% in 2018, resulting in a reduction 4.3% between 2014 and 2018. This is in line with our target of 3% reduction over the period 2014 to 2018. Over the past years, we have executed multiple water reduction projects, such as the reuse of process water at our EBSM plant in Antwerp, Belgium, and the efficient new underwater pelletising unit at our polystyrene plant in Wingles, France.
WASTE WATER
The amount and quality of water discharged by our sites is directly linked to both ecological impact and operational costs. Good treatment of emissions and reduction of waste water discharge mitigates our impact on rivers and local habitats. We are committed to further reducing our environmental impact by progressively improving the quality of discharged water and by reducing volumes.

All of our production sites have waste water treatment plants at site or send their waste water to an external waste water treatment facility. Several measures, such as closed-loop water systems to reuse the water for cleaning purposes or as cooling water, as well as procedures to reuse their process water or condensate at neighbouring production plants, are in place or in progress. Our process sedimentation basins, filters, as well as flotation units contribute significantly to preventing solids from entering waste water treatment facilities. Due to water scarcity in India, effluents from the waste water treatment is used for irrigation on site.

Waste water is a key indicator and part of local and national reporting at each of our production facilities. Compliance with all local requirements is actively monitored and anticipated, led by our SHE managers onsite as well as our regional SHE managers.

All process waste water as well as contaminated cooling water are included in the reported scheme. After internal or external treatment in waste water treatment facilities, the water is directly discharged to surface water.

DISCUSSION OF DATA
Globally, 28 % of our total waste water is treated on site and 72 % of our total waste water is sent to a third party waste water treatment facility.

Compared to 2017, we reduced the overall specific waste water by 0.6 %. In general, polymer production sites discharge more waste water than monomer production sites. Compared to 2017, waste water discharge by monomer production sites decreased by 11 %. In 2017, waste water figures for the monomer production plants in Texas City and Bayport were seriously impacted by hurricane Harvey, resulting in a large reduction in 2018. The 4 % increase in waste water discharge for polymer production sites in 2018, is connected with the increase in water use at these sites as explained above. At our production site in Antwerp, the overflow of cooling water during summer months ending up in our waste water, due to infrastructure anomalies at the chempark, continued. During 2014 to 2018, we achieved a reduction in waste water discharge of 17 %. This means that our reduction target of 7 % in the period 2014 to 2018 has been achieved.

Specific waste water discharge [m³/tonne produced]

<table>
<thead>
<tr>
<th>Year</th>
<th>Monomers</th>
<th>Polymers</th>
<th>INEOS Styrolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1.50</td>
<td>2.15</td>
<td>2.44</td>
</tr>
<tr>
<td>2017</td>
<td>1.15</td>
<td>2.26</td>
<td>2.26</td>
</tr>
<tr>
<td>2018</td>
<td>1.78</td>
<td>1.79</td>
<td>2.35</td>
</tr>
</tbody>
</table>

2018 Destination of discharge

- **72.0%** External waste water treatment
- **28.0%** Internal waste water treatment, routed to surface water
AIR EMISSIONS

Air emission management is of high significance to our industry’s environmental management. It ensures that the air quality in the neighbourhood remains suitable and that the impact on nearby habitats and our atmosphere is limited. Air emissions are therefore highly regulated and part of the technical handling, advanced monitoring and reporting, and are subject to continuous improvement.

Air management is an integral part of the environmental management of our sites. Air emissions from manufacturing (VOC) and combustion gases (NOx, SOx, CO and dust) are monitored at each site according to local legislation. We treat our air emissions from our production sites with methods such as condensation, filtration, absorption or incineration, in line with national and local legislation requirements. The results are reviewed and evaluated for further optimisation. Diffuse air emissions in operations are monitored via leak detection and repair procedures.

DISCUSSION OF DATA

Compared to 2017, we reported a 1.0% decrease in global specific air emissions, NOx decreased by 2.3%, VOC by 5% and SOx by 31%, while CO increased by 6.7% and dust by 0.8%.

The air emissions of NOx, CO, SO2 and dust are related to the combustion of fossil fuel and waste. Over the period 2014 to 2018, SOx emissions decreased by 84% and dust emissions decreased by 29%. The large reduction in SOx is due to the use of more environmentally friendly fuels in India. In Ulsan, South Korea, new measuring points were installed due to additional legal monitoring of VOCs, improving our baseline and giving us a broader scope for future improvements.

In Sarnia, Canada, VOC emissions reduced by 10% due to improved air emissions management by the installation of an internal floating roof system on the hydrocarbon tanks. In Antwerp, Belgium, measures to reduce VOC emissions back to 2015 levels have been implemented. Our overall specific VOC emissions decreased by 5% from 2017 to 2018. However, due to additional legal requirements and the acquisition of our new site in Yeosu, South Korea, our specific VOC emissions from 2014 to 2018 have increased by almost 20%.
PREVENTING PLASTIC PELLET LOSS WITH OPERATION CLEAN SWEEP®

Marine litter and pellet loss is a global issue and a key concern for us. Municipal waste including plastic packaging waste as well as plastic pellets are littered or spilled in the marine environment. Nature cannot degrade such materials and it is mistaken for food by fish and other wildlife, or it remains in the environment.

The general sources for pellet loss in the environment are pellet-handling facilities such as pellet manufacturers, logistics and transportation companies, processors, compounders, suppliers or customers.

Operation Clean Sweep® (OCS), the industry programme to prevent pellet loss, which we joined in 2015, is a high priority for us. OCS builds up on five action pillars: commitment, assessment, facility upgrade, awareness and improvement.

During our implementation period, we performed a root cause analysis and defined preventive and mitigation measurements to avoid the escape of pellets from their primary containment. Potential locations for spillage can be within operations (such as packaging areas), logistics (loading and unloading areas) or warehouses.

Examples of our preventive measurements are additional covers for pelletisers, spilling protections, funnels, sizing of collection tools or pipes. In case of an occasional spill, mitigation steps such as systematic clean-up by our employees, pit collections, filters in rainwater drainages and waste water treatment facilities have been installed to prevent stray pellets leaving our sites. In case of such an incident, preventive and mitigation measures are re-evaluated and enhanced.

To continuously improve our OCS approach, we enhanced our cleaning equipment protocols, reviewed our housekeeping programme, extended AsCare initiatives, and trained employees and contractors. In addition, supervisors performed frequent checks in high-risk areas. The importance of OCS has been communicated to our contractors and integrated where possible in their bonus malus performance measurement.

From our leadership, OCS is integrated in our engineering study on truck blowing stations. We reviewed best-practice solutions regionally as well as at the INEOS group level. At each site, we reviewed potential locations, engineering possibilities and required regulations. Once finalised, the project will move to the next implementation stage.

In the Americas, we continue to enhance preventive and mitigation measures. In Channahon, we cleaned up rail car gravel, silo trenches and upgraded our piping junctions. At our Mexican site in Altamira, root causes for silo overfilling have been mediated, and pelletiser gaskets and clamps have been replaced.

In our supply chain: As reported in our previous sustainability report, systematic audits of our supply chain have been implemented in all regions. Hereby internal and external warehouses, tollers and transloading areas have been reviewed. Based on the results, audits will be repeated on a longer or shorter timeframe.

Externally, we continued our engagement within the PlasticsEurope OCS task force. We voluntarily participated in an annual survey to reflect the level of implementation of OCS within the industry and to enhance the transparency of the programme. Further, we are engaging within the task force to increase communication with governmental and non-governmental organisations on pellet loss and exchange best practice examples. Please see the annual PlasticsEurope OCS report 2018.

Locally in Antwerp, we participate in the Port of Antwerp OCS initiative to address and prevent pellet loss at the regional chemical hub, collaborating with all stakeholders such as manufacturers and logistics providers. Frequent exchange meetings, investments and annual waste collection events are part of our engagement.

Due to the success of our supply chain audit and the on-boarding of all regions to OCS, we now aim to extend the level of transparency on a global basis to ensure that all sites fulfil the same standard requirements. Therefore operational audits will start in 2019, and by the end of 2020, all sites will have been internally audited.

HIGHLIGHTS OF OUR 2018 PERFORMANCE

The following examples highlight initiatives undertaken at a regional level:

• All our Asian sites completed their on-boarding to the OCS programme. Hereby, all the pillars of OCS have been integrated and adapted into daily operations. We will continue to improve our preventive and mitigation measures in operations and begin performance audits in 2019.

• At our sites in the EMEA, we continued our engineering study on truck blowing stations. We reviewed best-practice solutions regionally as well as at the INEOS group level. At each site, we reviewed potential locations, engineering possibilities and required regulations. Once finalised, the project will move to the next implementation stage.

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From our leadership, OCS is integrated in our engineering study on truck blowing stations. We reviewed best-practice solutions regionally as well as at the INEOS group level. At each site, we reviewed potential locations, engineering possibilities and required regulations. Once finalised, the project will move to the next implementation stage.

In the Americas, we continue to enhance preventive and mitigation measures. In Channahon, we cleaned up rail car gravel, silo trenches and upgraded our piping junctions. At our Mexican site in Altamira, root causes for silo overfilling have been mediated, and pelletiser gaskets and clamps have been replaced.

In our supply chain: As reported in our previous sustainability report, systematic audits of our supply chain have been implemented in all regions. Hereby internal and external warehouses, tollers and transloading areas have been reviewed. Based on the results, audits will be repeated on a longer or shorter timeframe.

• Externally, we continued our engagement within the PlasticsEurope OCS task force. We voluntarily participated in an annual survey to reflect the level of implementation of OCS within the industry and to enhance the transparency of the programme. Further, we are engaging within the task force to increase communication with governmental and non-governmental organisations on pellet loss and exchange best practice examples. Please see the annual PlasticsEurope OCS report 2018.

Locally in Antwerp, we participate in the Port of Antwerp OCS initiative to address and prevent pellet loss at the regional chemical hub, collaborating with all stakeholders such as manufacturers and logistics providers. Frequent exchange meetings, investments and annual waste collection events are part of our engagement.

Due to the success of our supply chain audit and the on-boarding of all regions to OCS, we now aim to extend the level of transparency on a global basis to ensure that all sites fulfil the same standard requirements. Therefore operational audits will start in 2019, and by the end of 2020, all sites will have been internally audited.
**TRANSPORT & DISTRIBUTION**

**ENVIROMENTAL FOOTPRINT**

Transport and distribution is integrated into our supply chain management. INEOS Styrolution relies on an intermodal distribution model of trains, ships and trucks to find the most efficient route for the worldwide distribution of our products. As we have production sites worldwide, we are able to serve our customers from closer locations, which helps minimise intercontinental transport. We do not apply airfreight as a regular mode for intercontinental transports.

In order to lower our environmental impact, we favour the use of rail and sea transport, rather than road-based transport. We aim to ship our products directly to our customers without the use of intermediaries and use off-site warehouses for temporary or overflow storage only. Since bulk shipments have a lower environmental impact, we encourage our customers to order in bulk when possible.

We select our service providers according to a set of quality standards, such as safety, environmental friendliness, as well as adherence to social, ethical standards and technical standards of the chemical industry and the INEOS Styrolution Supplier Code of Conduct.

Euro 6/ VI is the latest and most comprehensive EU standard on the reduction of exhaust emissions from passenger and commercial vehicles. We encourage our logistics providers to always be at the highest norm (Euro 6/ VI), with tendering being undertaken regularly. Measuring our safety and environmental impact helps us optimise our performance and monitor improvements.

Therefore, we collaborate with environmentally friendly logistics partners to set and measure our environmental and safety performance, such as miles travelled, fuel consumed, greenhouse gas emissions, loss of containment as well as transport accidents and collaborate with them on reducing their carbon footprint. In support of the Operation Clean Sweep (OCS) initiative, we regularly audit our logistics service providers and ensure sharing of best practices to avoid any pellet loss in the environment.

**TRANSPORT SAFETY**

INEOS Styrolution has internal reporting criteria for distribution incidents that require detailed follow-up and reporting to our management board. This means that all transport incidents have a very high visibility and priority in the company and learnings from all transport incidents are shared within the organisation.

We also use the European Chemical Industry Council (Cefic’s) Safety & Quality Assessment System (SQAS) to evaluate the performance of our logistics service providers and chemical distributors, and thereby assure carrier competence and reduce the likelihood of incidents. SQAS assessments cover quality, safety, security, environment and CSR.

In EMEA, we are increasing the rigour of the application of the SQAS, and in Asia-Pacific, we are in the process of implementing SQAS and performing our own assessments of our logistics service providers. In the Americas, we rolled out a logistics service provider assessment where we monitor U.S. motor carrier safety and performance data published by the Federal Motor Carrier Safety Administration via their Safety Management System (SMS) tool. The SMS is a huge database, which contains all incidents, audits and assessment data relative to our contracted carrier fleet.

It helps us spot trends and develop interventions in areas, such as driver fitness, vehicle maintenance, and unsafe driving.

For sea terminals, we are rolling out a programme to assess management systems against Oil Companies International Marine Forum (OCIMF)’s International Safety Guide for Oil Tankers and Terminals (ISGOTT) management standards. OCIMF is a voluntary association of oil companies with an interest in the shipment and terminals of crude oil, oil products, petrochemicals and gas. ISGOTT contains management standards for equipment, security, emergency response, risk assessment, tanker/ terminal interface and personal safety. It is intended to reduce the likelihood of injury to people as well as to reduce both the likelihood and severity of environmental incidents.

All our sea terminals will conduct a self-assessment against these standards, which we will follow up with a validation inspection with the INEOS Marine Assurance Group.
Our people are INEOS Styrolution’s most important asset. Their creativity, diversity, knowledge, passion and expertise help us achieve a competitive advantage and drive business success.

**OUR APPROACH**

One of our core guiding principles is “valuing and respecting people” and we aim to maintain positive relations with our employees and develop a healthy working environment where our workforce can develop and maximise their potential.

With 18 manufacturing sites in nine countries and 24 sales offices around the world, our employees are accustomed to working with people of diverse cultural backgrounds. We truly believe in diversity and equal employment opportunities regardless of gender, age, nationality, religion, race, or cultural background.

Market conditions and local legislation vary per country, and because of this, our employment strategy is mainly locally driven. Nevertheless, regardless of location, we are committed to offering employees an appealing work environment with competitive remuneration and benefits, as well as attractive opportunities to grow and develop professionally. Our remuneration policy is geared – through higher variable terms – toward an above-average remuneration of employees, and is oriented toward country-specific conditions within the chemical industry, in all countries in which the company is active. We do not deviate between part-time and full-time employees in terms of remuneration and apply equal salary and remuneration development for new hires as well as employees.

In a competitive, global industry such as ours, success hinges on our ability to attract and retain the most qualified and committed employees in each of the markets we operate. We are always looking for people whose skills and aspirations are an optimal fit for the responsibilities they will undertake. We welcome the best candidates based on merit, and practice principles of equal opportunity for recruiting and advancement in order to access a broader talent pool and foster innovation.

In our materiality assessment, being a reliable employer as well as education and training were rated as being of high significance to our stakeholders and of strategic importance to our business.

**Key highlights**

- Global **human resources information system**
- **Management development programmes** implemented
- **Performance review system** optimised

Our sustainability targets

- 80% of exempt employees to have an **Employee Development Interview** [Achieved (80%)]
- Implementation of **Management Development Programmes** in all regions in 2018 [Achieved]
- **Employee survey** for the entire workforce conducted in 2020 [NEW!]

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**MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW**

**OUR COMMITMENT TO SUSTAINABILITY**

**SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS**

**ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS**

**MANAGING OUR BUSINESS RESPONSIBLY**

**ANNEXE**

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**VALUING OUR PEOPLE**
Since 2014, we have been tracking changes in our employee demographics by region and business unit based on gender and age. We do not track demographic data based on race because definitions of racial minorities differ from country to country, and collecting such data in some regions is a violation of privacy laws. We currently do not disclose employment data based on part-time and full-time contracts, as it is not material in our business. In 2018, INEOS Styrolution’s workforce totalled 3,398 employees with 84% male and 16% female employees. Higher gender diversity is evident in our three regional headquarters, where categories of professional function are broader.
GLOBAL EMPLOYEE TURNOVER

INEOS Styrolution strives to provide a setting for rewarding, life-long careers. We track both voluntary exits and involuntary exits. In 2018, 257 employees left INEOS Styrolution, which translates to a global employee turnover of 7.6%. The increase is mainly driven by the increasing number of retirements. We will continue our efforts to retain talent as well as introduce young talent to the company. We also recruit young graduates as part of a programme offered by our parent company INEOS that aims at recruiting and developing the best commercial and engineering graduates internationally.

In order to reduce our voluntary departures, we are working to get a better understanding of the motivations of those who resign. We have implemented processes to make exit interviews consistent across all regions and include more job levels. In addition to this new globally structured process, we expanded our management development programme to include the Americas and Asia-Pacific.

GLOBAL HR INFORMATION SYSTEM

Our global Human Resources Information System, which was launched in 2018, resulted in a big improvement in terms of the accuracy and quality of our global employee master data. This system has also enabled globally aligned, transparent and professional processes around recruitment, on-boarding, learning and performance reviews.

Professional development was extended with our Senior Management Development Programme, our regional Management Development Programmes, and an increased focus on employee development interviews (EDI). Moreover, our performance review system has been optimised. Two new modules, Performance & Goals and Compensation, were added in 2018 and 2019, respectively. The module on Succession Planning and Development will be included in the system in 2020.

IMPROVING EMPLOYEE ENGAGEMENT

In 2018, we further implemented measures following on the outcome of our global survey conducted in 2017. To measure the impact of the changes made, we will be conducting a follow-up survey in 2020.

Health and fitness of our employees is important to their physical and mental well-being. Therefore, we support and encourage a healthier lifestyle for our employees. Many of our production sites and offices have fitness centres within the company premises, where employees can make use of the facilities thanks to subsidised fees by the company.
DEVELOPING OUR PEOPLE
We follow local legislation with regard to renewing technical certificates for employees both at our offices as well as at our manufacturing sites. To further drive generational balance, we focus on tailor-made training and succession planning for all employees globally.

For exempt employees, a management development programme has been implemented in each region. By the end of 2018, around 250 employees attended either the global senior or the regional management development programme. These programmes will continue to run with new candidates every year.

In 2018, all 1,173 exempt employees reported an annual performance review with their manager. Due to the new Performance & Goals module in our global information system, Human Resources, direct managers and upper management are capable of tracking objectives, calibration and the progress of employees.

In addition, an employee development interview (EDI) process is available for exempt employees worldwide. The employee and their manager jointly discuss skills needed to perform their work, skills that might be needed to fulfil future requirements and aspirations, and professional development steps that can be taken to enable the acquisition of those skills.

In 2018, 80% of our exempt employees (EMEA 66%, Americas 91% and Asia-Pacific 82%) had employee development interviews jointly with their manager.

OPERATIONAL CHANGE AND COLLECTIVE BARGAINING
INEOS Styrolution makes every effort to give a reasonable notice period to employees impacted by significant change. We respect and apply legal notice periods in compliance with local legislation regarding advanced notification of operational change. Our employees have the freedom to organise and collectively bargain. We do not intend to impair the rights of any employees included in any collective bargaining agreement, or prohibit the lawful exercise of any rights guaranteed by any applicable legislation. In 2018, 64% of INEOS Styrolution’s workforce was covered by collective bargaining agreements.

Collective bargaining by region*

<table>
<thead>
<tr>
<th>Year</th>
<th>Polymers EMEA</th>
<th>Polymers Asia-Pacific</th>
<th>Polymers Americas</th>
<th>Total</th>
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<tr>
<td>2018</td>
<td>1,235 86%</td>
<td>674 64%</td>
<td>256 29%</td>
<td>2,158 64%</td>
</tr>
<tr>
<td>2017</td>
<td>1,240 86%</td>
<td>675 70%</td>
<td>246 31%</td>
<td>2,161 67%</td>
</tr>
<tr>
<td>2016</td>
<td>1,238 87%</td>
<td>624 64%</td>
<td>244 31%</td>
<td>2,106 66%</td>
</tr>
<tr>
<td>2015</td>
<td>1,189 86%</td>
<td>550 57%</td>
<td>244 31%</td>
<td>1,983 63%</td>
</tr>
</tbody>
</table>

*this includes non-exempt employees globally, except South Korea where employees up to grade 37 are included

MESSAGE FROM OUR CEO & BOARD MEMBERS’ VIEW
OUR COMMITMENT TO SUSTAINABILITY
SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS
ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS
MANAGING OUR BUSINESS RESPONSIBLY
ANNEXE
DRIVING SUSTAINABILITY
ALONG THE VALUE CHAIN

Our efforts to monitor and enhance our sustainability performance are grounded in the activities of our own business. We believe, however, that our overall responsibility is not limited to our own manufacturing sites. We, therefore, assess sustainability performance along the entire styrenics supply chain to ensure that our suppliers meet high sustainability standards.

In our materiality assessment undertaken in 2017, sustainable procurement was assessed as being of significance to our stakeholders and of strategic importance to our business. Therefore, together with our various supply chain partners, we continue to ensure efficient and effective production planning and execution as well as filling and storing of finished and intermediate material, based on customer demand and requirements. By engaging our stakeholders on sustainability performance, we limit the risk of delivering products to the marketplace that are not in line with our values or the stated intent of our sustainability programme.

The cornerstone of our supply chain management is our Supplier Code of Conduct, and defines our minimum expectations and requirements in supplier standards, including labour practices and human rights, health and safety, environmental protection, ethics and fair business practices.

We expect all our suppliers – at a minimum – to comply with INEOS Styrolution’s Supplier Code of Conduct, which provides additional details of our expectations from suppliers. We also monitor and review their performance through our own internal assessments as well as through third-party assessors.

Responsible business practices across our supply chain

- Responsible procurement of our raw materials & supply chain
- Energy- & resource-efficient production of granules in our plants
- Safe & reliable transportation of our granules to our customer’s site
Our sustainability targets and actions

- **80%** of total supplier spend to be third-party assessed by end of 2020 | On track (77%)
- **100%** of buyers trained on sustainability in 2018 | Achieved
- Sustainability to be included as a **key component** in supplier excellence programme by 2020 | In progress

ENVIRONMENTAL AND SOCIAL RESPONSIBILITY IN OUR SUPPLY CHAIN

In 2018, we provided a refresher training for all our existing buyers as well as a training for new buyers as part of their on-boarding.

Our top suppliers, comprising companies with long-standing sustainability programmes, account for about **80%** of spend volume. Since 2016, INEOS Styrolution has been assessing the sustainability performance of our suppliers through annual internal assessments as well as through third-party assessors such as EcoVadis.

Over the past three years, the percentage of global supplier spend assessed on environmental and social criteria increased from **67%** to **77%** and we are on track to reach the target of **80%** by 2020.

As a next step, we aim to apply our risk assessment to our remaining suppliers to prioritise ones that have a relevant sustainable impact to our business and include them in our monitoring and assessment.

As part of the company’s Procurement Excellence initiative, in 2017, four new programmes were rolled out across the company focused around Category Excellence, Process Excellence, Team Excellence and Supplier Excellence.

Our Supplier Excellence framework is a systematic, life-cycle management process through which we identify, select and work with suppliers from identification through targeted development and evaluation or to phase-out, if necessary. Through this process, we ensure a systematic screening of relevant new suppliers for sustainability, consider sustainability items in the evaluation of suppliers and monitor our sustainability performance.

We have developed a concept for Supplier Excellence and are systematically integrating sustainability as a key component in our Supplier Excellence programme, such as including additional sustainability criteria to evaluate supplier performance. This programme encourages buyers to work together with large and small suppliers to innovate around sustainability and move towards a fully circular business model.

The programme will incorporate all critical elements to drive sustainable supply (reliable, flexible and competitive) and sustainable performance (economic, environmental and social) of our supplier base.

To the best of our knowledge, through our third-party assessments, we can confirm that we did not find any negative environmental or social impacts in our supply chain in 2018.
OUR APPROACH

A key cornerstone of our community involvement activities is our responsibility and accountability to current and future generations. We are committed to fostering mutually beneficial and long-term relationships by supporting our communities with initiatives that are focused on future generations. As part of the plastics industry, we raise awareness and engage our employees to contribute to environmental activities and aim to enhance the health and well-being of young and disadvantaged children. Besides these initiatives, we also respond to the most pressing needs of the communities by active volunteering or by providing financial assistance.

In our materiality assessment undertaken in 2017, community involvement was rated as being of significance to our stakeholders and of importance to our business.
READY, SET, GO RUN FOR FUN
We aim to motivate young kids to get involved in sports and enjoy a healthy, active lifestyle on into adulthood. This is why we support our parent company INEOS with their global GO Run For Fun (GRFF) campaign. With more than 287,200 children participating since its inception in 2013, the GRFF is the world’s largest running series for children, encouraging young people’s participation in sports.

In 2018, we further expanded our GRFF series and hosted events in all three regions. We staged six events with nearly 2,000 elementary school students between the ages of 5 and 11. These events took place in Frankfurt am Main, Germany, close to our global headquarters, in the Chicago area near our Channahon production site, in Altamira, Mexico, and for the very first time in Singapore, where we have our Asia-Pacific headquarters. Volunteers from our European, American and Asia-Pacific offices and production sites volunteered as track marshals to ensure the kids’ safety or handed out t-shirts, fruit and beverages, and medals to reward the athletes after the race.

INSPIRING KIDS ABOUT SCIENCE AT PRIMARY SCHOOL AGE
With future generations in mind, we are committed to promoting educational projects. As the leading global styrenics supplier, we want to inspire interest in polymer science among young students at an early age. Through a series of child-oriented scientific experiments, we introduce primary school kids playfully to the world of chemistry and plastics and help them explore the wide variety of properties and applications of plastics.

In cooperation with PlasticsEurope Germany, we provide free teacher trainings in which teachers get to learn “Kunos coole Kunststoff-Kiste”, an experimental kit for child-oriented scientific experiments. In 2018, we organised a training session for teachers near our production site in Schwarzheide, Germany. In addition to this training, our colleagues from Channahon introduced this kit to their employees and their families at their Family Day in 2018.

Beyond our efforts in primary schools, we support several programmes that encourage university students with scholarships to pursue these sciences and explore its career possibilities.

In addition to the clean-up initiatives, we supported the “Moxi Green Zone” project in India together with 1,000 people from Moxi, Poicha village. Through this initiative, we created a green community area for the public by refurbishing a garbage dump near a local pond, planting saplings and connecting a water source to the green zone for watering the plants and creating a walkway for joggers.

We also financially supported the Sujalam Sufalam waterbody recharge scheme in Katol, India. The Government of Gujarat repaired and developed the water bodies to hold more rainwater. This reduces the dependency on ground water for daily use and irrigation, and helps retain and replenish the groundwater table.

Visit our website for an overview about our community involvement activities globally.
MANAGING OUR BUSINESS RESPONSIBLY

ENSURING FAIR BUSINESS PRACTICES
MAKING SUSTAINABLE GROWTH A REALITY
ENSURING FAIR BUSINESS PRACTICES

We operate with a fundamental respect for the rights of the individual, our employees as well as business partners. We are firmly opposed to all forms of human rights violations or deficient labour conditions, and expect this across our value chain.

OUR APPROACH

INEOS Styrolution, with the strong support of its senior management, is dedicated to maintaining a high standard of corporate governance and regularly articulates the company’s policies on business integrity and human rights. We believe that high standards on business integrity and human rights are critical to deliver our strategy, create long-term value and maintain our licence to operate.

We are committed to complying with all relevant local, national and international laws, as manifested in our own values and guiding principles. Our globally defined policies and standards to some extent even exceed the requirements of local laws, and we strive to live up to the highest standards of business practice regarding ethics, integrity and transparency. We will not compromise our safety, health or environmental standards for any reason, including profit or production. We continue to refine our policies, increase awareness and understanding of these among employees and business partners, and enforce compliance in accordance with the policies’ intent. In our materiality assessment undertaken in 2017, human rights and business integrity were rated as being of high significance to our stakeholders and of strategic importance to our business.

OUR GLOBAL COMPLIANCE PROGRAMME

We have in place a Compliance programme with an organisational framework at global, regional and country levels to ensure that INEOS Styrolution always operates as a responsible corporate citizen everywhere. The Compliance programme is strongly supported by the Risk & Control programme. The cornerstone of our Compliance programme is the INEOS Styrolution Code of Conduct. Acting in accordance with this Code of Conduct is a prerequisite for each of our employees. To ensure that all employees fully understand our policies, the Code of Conduct has been translated into selected relevant languages and is posted on our intranet. In addition, our entire active employee base is trained on its content at a minimum every two years. A quarterly publication, summarising policy updates and information about ongoing compliance events, is provided by the CEO and emailed to employees. In addition, an internal newsletter on compliance topics is regularly issued, which highlights the policies, explains new updates, and provides concrete examples of compliant and non-compliant behaviour.

INEOS Styrolution maintains four compliance teams: one team for each of the three regions and one global team. Each of these teams is made up of a representative from Legal, Business, Human Resources, SHE and Finance. Members of other departments participate occasionally as members of the extended team.

The Chief Compliance Officer of the company, reporting directly to the CEO, chairs the global team, as well as oversees and manages regulatory compliance issues, ensuring that the company complies with both its internal policies and its outside regulatory requirements.

Compliance team roles and responsibilities

- Legal requirements
  - INEOS Styrolution guidelines and policies
- Management board
- Regions/ functions/ departments
  - Implement requirements
  - Ensure compliance
- Compliance team
  - Compliance oversight
  - Communication, education, training
  - Auditing and monitoring, request for performance data/ reports
  - Other compliance initiatives
- Supports management board, drafts INEOS Styrolution guidelines and policies
- Supports regions, functions, departments
**Key highlights**

- Training on Antitrust and IT security awareness conducted
- Introduction of policy on data protection

**Key actions**

- New policy on data protection introduced in 2018 (Achieved)
- Refresher training on Antitrust in 2018 (Achieved)
- Biennial training of entire active employee base on Code of Conduct & screening requirements | In progress!
- Global training on data protection | NEW!
- Procedure for data protection breach to be issued | NEW!

**HUMAN RIGHTS**

We focus on identifying and managing human rights-related risks in all our activities. Thorough due diligence is performed to mitigate those risks, and we seek to remediate any possible adverse human rights impacts that we might have caused or to which we might have contributed. We set minimum mandatory requirements for all our suppliers and relevant contractors, including zero tolerance in relation to child labour, forced or compulsory labour, modern slavery, freedom of association, non-discrimination and diversity, and treatment of employees.

Although the chemical and plastics industry is not usually prone to these human-rights related risks, we are vigilant to prevent it and have set clear criteria in the Code of Conduct as well as the Supplier Code of Conduct.

**CHILD LABOUR**

According to the Code of Conduct and Supplier Code of Conduct, only persons who are at least 15 years of age or the applicable minimum legal age, whichever is higher, may be engaged as employees. Legitimate workplace apprenticeship programmes for educational benefit may be provided that are consistent with Article 6 or 7 of ILO’s Minimum Age Convention No. 138.

Employees are free to terminate their employment upon reasonable notice. We ensure that there are no unreasonable restrictions imposed on movement within the workplace or upon entering or exiting company-provided facilities.

**FORCED OR COMPULSORY LABOUR AND MODERN SLAVERY**

All work performed for INEOS Styrolution has to be voluntary. There is zero tolerance for trafficking of persons or the use of any form of forced, bonded, slave or prison labour. No employee or contractor can be required to surrender any government-issued identification, passports, work permits or travel documents as a condition of employment. Contracts and human resources policies clearly mention the conditions of employment in explicit language understood by our employees. All our operations are assessed with a view to comply with our human rights policies, which are mirrored in our human resources policies.

We have published a respective statement as required under certain U.S. legislation on our website. In addition, a statement applicable for the INEOS group of companies has been posted on the INEOS website.

**ANTI-BRIBERY, ANTI-CORRUPTION AND ANTI-MONEY LAUNDERING**

Anti-corruption and anti-bribery is included in the Code of Conduct and consequently brought to the awareness of INEOS Styrolution’s employees. Further information on this topic is embedded in the anti-bribery and corruption policy (also covering the main areas and expectations of money laundering regulations). This policy specifically includes – as already contained in the Code of Conduct – a clear statement that no gifts or entertainment of any kind may be offered to any politician, political party or any politically exposed persons.

In addition, a compliance due diligence checklist has been issued clarifying the need for information, when dealing with identified high-risk countries (in line with the corruption perception index issued by Transparency International) and introducing certain requirements when identifying and selecting agents and other representatives of INEOS Styrolution. All relevant employees were trained on anti-bribery, corruption and money laundering in 2018, and relevant new recruits are assigned to the training as part of their on-boarding.
ANTI-COMPETITIVE BEHAVIOUR

All employees are prohibited from entering into any discussions, formal or informal agreements or understandings with competitors that may restrict competition. Vigorous competition, free from collusion and unreasonable restraint, is the most effective mechanism to ensure that we provide high-quality and well-priced products and services. Failure to comply with competition, antitrust and other trade regulation laws in any jurisdiction in which we conduct business could result in serious consequences, for both our company and the offending individuals, including significant civil and criminal penalties.

Each employee is responsible for familiarising themselves and complying with the competition laws relevant to their role and their business. For employees whose job function puts them at risk of non-compliance, further guidance is provided through regular, mandatory training on policies related to compliance with antitrust and competition law.

We have in place a policy related to interaction with competitors that defines certain requirements on due diligence for interacting with third parties, such as customers, suppliers or agents, particularly if located in or transacting into and out of certain listed countries. Selection of countries is based on issued and active trade restrictions, on the corruption perception index issued by Transparency International, as well as an IT screening tool that has been rolled out globally to support such due diligence processes electronically. Should there be any doubt about the propriety of any transaction or course of conduct, the Code of Conduct instructs employees to contact the Legal department immediately for direction.

INFORMATION AND CYBER SECURITY

We have implemented an information and cyber security programme to protect the data and IT environment of our company, as well as that of our customers and business partners, from any kind of security-related threats. The IT department is part of the enterprise risk management process, and we perform a global IT security incident response management process, we also introduced a simpler and faster way to report and react to these kinds of threats within our company. We also engage an external company to check our data security by attempting to “hack” into our systems.

INTERNATIONAL TRADE

Our international trade policy outlines the areas in which national and international laws and regulations can impact our business. The policy also introduces certain requirements on due diligence for interacting with third parties, such as customers, suppliers or agents, particularly if located in or transacting into and out of certain listed countries. Selection of countries is based on issued and active trade restrictions, on the corruption perception index issued by Transparency International, as well as an IT screening tool that has been rolled out globally to support such due diligence processes electronically. Should there be any doubt about the propriety of any transaction or course of conduct, the Code of Conduct instructs employees to contact the Legal department immediately for direction.

DATA PROTECTION

Due to the adoption of the GDPR, a major reform designed to strengthen and unify data protection, we have introduced a global data protection policy. In addition, we ensured that our current practices are re-assessed, documented and shared, in order to meet the requirements of the GDPR as it came into effect in 2018. Standard employee statements related to data protection as well as the templates for “commissioned data processing” have been reviewed and updated in line with the GDPR. To strengthen the understanding of data protection within the organisation and inform about the meaning of the GDPR, all relevant employees have been provided training in 2019.

MANAGING COMPLIANCE VIOLATIONS, INCLUDING GRIEVANCES

Since 2014, we have a grievance mechanism in place with an independent provider operating a standardised compliance hotline accessible by phone, email or via the internet, which also offers response in various languages. This anonymous hotline is available at all times (24 hours a day, 365 days a year) and is free of charge to the caller. Each call received on the compliance hotline is categorised and tracked according to a variety of criteria, including labour and business practices as well as human rights issues.

In 2018, all reports received via the compliance hotline were fully investigated and resolved in 2018. The reported issues were related to labour practices and business practices. None of the calls were related to impacts on society or human rights.

To the best of our knowledge, in 2018, in none of INEOS Styrolution operations, were cases of human rights abuse, child or forced labour, corruption, or incidents in anti-competitive behaviour identified. We can also confirm that, to the best of our knowledge, we did not incur any justified cases of employee discrimination in 2018.
OUR APPROACH

INEOS Styrolution looks at sustainability as a genuine driver of growth and value, and is embedded in our Triple Shift growth strategy.

As the name suggests, the strategy is a commitment to three essential elements:

- The company’s strong dedication to its styrenic specialties business
- A well-balanced split across all focus industries
- Improved global presence with a special focus on growth regions, particularly in Asia-Pacific and the Americas

The first shift refers to a stronger focus on higher-value specialties and ABS standard products and is reflected in INEOS Styrolution’s broad portfolio of more than 1,500 high-performance and value-added products, a large number of customised solutions, comprehensive service packages and a close relationship with key customers and external partners.

INEOS Styrolution places a stronger focus on five higher-growth industries, namely automotive, electronics, healthcare, construction and household. Growth of these industries is supported by global megatrends, such as resource efficiency, need for mobility and demographic change.

Finally, our global presence refers to a shift towards high-growth regions. This move includes strategically investing in growth markets by expanding assets and sales footprint, particularly in Asia-Pacific and the Americas. Global production and supply footprint is continuously strengthened, enabling local sourcing for customers and providing them with greater supply security. This also has a beneficial impact on the company’s environmental footprint.

We are determined to support the market success of our customers by leveraging sustainable business management as a competitive edge. In order to do so, we carefully listen to our customers’ needs, continually engage in collaborative innovation, and position sustainability as an integral part of our business management activities. We are constantly optimising our economic, environmental and social performance to deliver safe, best-quality and high-performance products that eventually render our customers’ businesses as well as end consumers’ choices more sustainable.

OUR PERFORMANCE

We believe that sustainable management and operations is the basis of our business success. Since our foundation in 2011, we have significantly strengthened our competitiveness in many business areas and have continuously delivered a strong business performance. Today, we are the leading global styrenics supplier with access to customers in growth industries, such as automotive, electronics and healthcare. We are well-positioned in the higher-value ABS standard and specialties markets and have a strong asset footprint globally. We can rely on our broad product portfolio, considerable intellectual property and our world-scale commodity manufacturing platform with best-cost technology. We are leveraging these strengths to the benefit of our customers.

Our ability to transform our industry position into solid financial results, as shown in the graph below, enables us to develop the company further and invest into the future.
STRATEGIC INVESTMENTS

Our investment decisions and growth strategy are guided by an emphasis on sustainable business practices.

In 2018, we announced the agreement to acquire two polystyrene plants in Ningbo and Foshan, China. As part of our due diligence, we undertook an environmental and social impact assessment of both sites. These two sites, which we acquired in 2019, represent the company’s first manufacturing assets in China. This acquisition of 400 kilotonnes will enable us to significantly increase our presence in the region and provide customers in our core industries with locally produced best-in-class materials.

Our investment to increase our compounding capacity by an additional 34 kilotonnes at our plant in Moxi, India, as well as upgrade the site’s infrastructure will be completed in 2019. This expansion will grow our compounding capacity to 100 kilotonnes per annum at the site. Additionally, we have sanctioned a detailed engineering study to evaluate doubling the overall production capacity for ABS in India over the next years. In Europe, we are investing in a new ABS production line at our site in Wingles, France, to meet the growing demand for ABS.

We are also expanding our ABS and ASA capacity in the Americas through the construction of a new 100 kilotonne capacity ASA plant in Bayport, Texas, USA, which is expected to be operational in 2021. The new facility will allow additional production of ABS polymers at our plant in Altamira, Mexico.

At the same time, we are continuing to improve our product portfolio to ensure it is more sustainable and resource-efficient. We are developing specialty materials allowing a reduction in weight for lower fuel consumption and lower emissions and investing into research projects exploring new innovative materials.

As part of our shift to a circular business model, we are currently building strong global partnerships with leading environmental technology companies to investigate and implement innovative recycling concepts for styrenics and developing new chemical recycling technologies for polystyrene packaging waste.

The six pillars of our risk & control programme

What is a risk management process?

1. Risk identification
2. Risk analysis & assessment
3. Risk management
4. Risk reporting, monitoring & auditing

OUR RISK & CONTROL PROGRAMME

INEOS Styrolution is exposed to various risks that could impact the achievement of its corporate objectives. In order to identify, assess, monitor, and mitigate these risks, a company-wide Risk & Control programme was established and is continuously developed further. The scope of the programme covers six pillars reflecting the company’s main business areas: Strategy & Business, Finance, Compliance, Operations (including SHE), Human Resources and IT. This programme is embedded in a three lines of defence model as an integral component of our governance, management and operations.
**THE THREE LINES OF DEFENCE**

**FIRST LINE OF DEFENCE**
The first line of defence is undertaken by operational management, initiated by the pillar heads, who are responsible for implementing and maintaining effective internal controls for their respective area of responsibility and for executing Risk & Control processes on a daily basis. Operational management is also responsible for implementing corrective actions to address control deficiencies.

**SECOND LINE OF DEFENCE**
The second line of defence is undertaken by the Compliance team, the Risk & Control department and the Risk Management Committee. The latter acts as the reporting medium for this line of defence. Compliance monitors various specific risks, such as non-compliance with applicable laws and regulations.

To strengthen the company’s governance structure, a Risk Management Committee has been established with representatives from each of the six pillars. This committee meets periodically to monitor the risk management process and drive continuous improvement within the programme. The Risk & Control department coordinates this on a daily basis. Risks are identified and assessed by considering impact and likelihood through risk workshops and risk assessments.

Controls are then implemented to mitigate the identified risks. Annual control testing is performed within each pillar to determine if controls are well-designed and operating effectively. All controls are tested on a three-year-rotational basis. Results are reported to the CEO, CFO and Risk Management Committee members on a regular basis.

Our Risk & Control programme covers sustainability risks, which are also reflected in our Risk & Control matrix. In addition, three sustainability topics addressed in our risk management process are ranked in the top ten risks of the company, given their increasing importance and potential impact. Controls have been set up to mitigate these risks and are part of the above-mentioned control testing.

**THIRD LINE OF DEFENCE**
The third line of defence is undertaken by our Internal Audit department. Internal audits are performed on the basis of an annual audit plan, which is approved by the management board. The audit plan is based on a risk approach and covers all our entities and business functions. The scope of each audit is defined by the Internal Audit department in coordination with the management board. Audits cover control testing as well as sample-based testing. The Internal Audit function reports functionally to the CEO and CFO.

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**The three lines of defence**

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**NEW RISK & CONTROL AND INTERNAL AUDIT TOOLS**
In 2018, we replaced our existing Risk & Control tool with a new tool that is more powerful and provides higher flexibility. We have also decided to adopt another new tool to support our Internal Audit function, to be implemented in 2019. It is on the same system landscape as the Risk & Control tool, with both tools being connected to each other, thus strengthening the synergies between Risk & Control and Internal Audit.

The Risk & Control tool is also integrated with the company’s Enterprise Resource Planning (ERP) and can monitor real-time data in ERP under the pre-defined rules set up by our six pillars and Risk & Control. These automated controls (called continuous control monitoring or CCM) allow real-time monitoring, and can detect any exception to controls when these occur, shortening issues identification and ultimately enhancing the internal control system.
ABOUT THIS REPORT
GRI INDEX

MESSAGE FROM OUR CEO & BOARD MEMBERS' VIEW
OUR COMMITMENT TO SUSTAINABILITY
SHAPING THE FUTURE WITH SUSTAINABLE STYRENICS
ENSURING SAFE AND RESOURCE-EFFICIENT OPERATIONS
VALUING OUR PEOPLE
MANAGING OUR BUSINESS RESPONSIBLY

ANNEXE
ABOUT THIS REPORT

This report has been prepared in accordance with the Global Reporting Initiative’s (GRI) Standards core option. The collected data provides an overview of our sustainability efforts between January 1 and December 31, 2018, and covers the activities of all INEOS Styrolution legal entities worldwide, which fell within the scope of the company’s consolidated financial statements as of December 31, 2018. For the avoidance of doubt, this excludes activities in our production sites in Ningbo and Foshan, China, which we acquired in February 2019, as well as the activities of INEOS ABS, Addyston, USA.

The financial information presented in this report is consistent with the company’s audited consolidated financial statement and management report for the year ending December 31, 2018, which was prepared in accordance with International Financial Reporting Standards (IFRS) and interpretations.

This report has been published on September 16, 2019. The previous year’s report was published on July 31, 2018. INEOS Styrolution has published sustainability reports since 2015, all of which can be downloaded from the company’s website.

All internal stakeholders accountable for the company’s sustainability programme and performance, including the management board, have validated the content of this report.

For more information on our sustainability approach and actions, please write to INSTY.sustainability@ineos.com or visit our website at www.ineos-styrolution.com.
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