

# Sustainability report 2018

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# Sustainability report

## Nouryon Sweden 2018

This report presents Nouryon's (formerly AkzoNobel Specialty Chemicals<sup>1</sup>) global activities in 2018, of which the Swedish entities AkzoNobel AB, AkzoNobel Pulp and Performance Chemicals AB, AkzoNobel Functional Chemicals AB and AkzoNobel Surface Chemistry AB are part.

2018 was a year of transition. On October 1st, the formal separation from AkzoNobel was completed and Nouryon was formed. As a new company, we are in the process of putting our strategies, policies and targets in place. This started in October 2018 and will continue during 2019. The policies, processes and compliance framework valid during 2018 were mainly those used in AkzoNobel Specialty Chemicals and are the ones presented in this report, if not stated otherwise.

As a former part of AkzoNobel we have long been an industry leader in sustainability and our commitment remains unchanged going forward. As Nouryon we will continue to build on our long history of sustainable growth and solid financial performance and our proud track record as a leader in safety, sustainability, and reliability. In doing so, our core principles of safety, integrity and sustainability and our values of leading the way, growing together, and delivering on commitments are at the core of everything we do.

## Business model

We are a global specialty chemicals leader and experts in highly demanding chemistry. Our products play an essential role in everyday life for people around the globe. We supply industries worldwide with essential chemicals for the manufacture of everyday products such as paper, plastics, building materials, food, pharmaceuticals, and personal care items. Our unique product portfolio includes cellulosics, salt, organic peroxides, chlor-alkali, bleaching chemicals, expandable microspheres, and surfactants.

We have achieved leadership positions throughout our businesses, with 80% of our current revenue coming from number one or two positions. We build long-term customer partnerships; Most of our relationships are longer than 10 years, and we have a 98% retention of our top 250 customers.

We work hard to find innovative and sustainable ways to help our customers and partners progress, because when they grow, we grow too. We apply this same diligence to our own operations, constantly striving to improve the way we do business. To accomplish this, we nourish a culture which prioritizes collaboration and integrity.

## How we create value

Our focus is on developing and innovating true win-wins, which creates value for our customers, society and our business. To achieve this, we are devoted to understanding our partners' needs and working together in an open and honest way to develop solutions that help everyone grow. We also believe that collaboration is key to our future success; that is why we are working with a wide range of stakeholders to deliver more innovative and sustainable solutions to customers.

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<sup>1</sup> AkzoNobel Specialty Chemicals was sold to The Carlyle Group October 1 st 2018.

Environmental value is managed through our resource efficiency activities. We are actively working to reduce our carbon footprint across the value chain to improve our resource productivity and reduce our environmental footprint.

We are also creating social value by helping our employees to develop their skills and being active in the communities where we operate.

All this helps us to enhance our existing business, create new business opportunities, de-risk our value chain, deliver environmental and social benefits, and generate cost improvements.

**Risk management**

Risk management is an essential element of our corporate governance and strategy development. The table below summarizes the major risk factors identified in 2017; these were also relevant during 2018.

<p><b>External – Strategic</b></p> <ul style="list-style-type: none"> <li>• Global economy and the geo-political context</li> <li>• International operations</li> <li>• Strategic moves in our value chain</li> </ul>	<p><b>Internal – Strategic</b></p> <ul style="list-style-type: none"> <li>• Innovation, identification and successful implementation of major transforming technologies</li> </ul>
<p><b>External - Operational</b></p> <ul style="list-style-type: none"> <li>• Sourcing of raw materials and energy</li> <li>• Product liability</li> <li>• Environmental risks and liabilities</li> <li>• Information Technology</li> </ul>	<p><b>Internal – Operational</b></p> <ul style="list-style-type: none"> <li>• Attraction and retention of talent</li> <li>• Production process risks</li> <li>• Management of change</li> </ul>
<p><b>External – Financial</b></p> <ul style="list-style-type: none"> <li>• Post-retirement benefits</li> <li>• Fluctuations in exchange rates</li> </ul>	
<p><b>External – Compliance</b></p> <ul style="list-style-type: none"> <li>• Complying with laws and regulations</li> </ul>	

Management of these risks are vital for our future success. We do this through our directives, programs and processes - more about these can be found in this report under the Compliance section. The risks linked to environment, social conditions and ethics is presented under each of these sections.

**Our approach towards sustainable growth**

Our approach towards sustainability incorporates economic (Sustainable Business), environment (Resource Efficiency) and social (Engaged People & Partners) aspects across the value chain.





Our aim is to work in alignment with the UN Paris Climate Agreement and to contribute to the UN Sustainable Development Goals (SDGs) through our operations, supply chain, products, and initiatives.

We aim to be part of the solution for the SDGs and we focus in particular on the following goals:

- UN SDG 7 Affordable and Clean Energy
- UN SDG 9 Industry, Innovation & Infrastructure
- UN SDG 12 Responsible Consumption and Production
- UN SDG 13 Climate
- UN SDG 17 Partnerships

One key focus is on expanding our portfolio of Eco-Premium Solutions – these are products that have a significant sustainability benefit over common alternatives on the market. That contributes to the SDGs 9,12,13.

We also strive to do more with less and to reduce carbon emissions through a combination of improved energy and raw material efficiency, increased use of renewable energy, and higher use of bio-based raw materials in production. This contributes to the SDGs 12 and 13.

We see partnership as key to our success and for accelerating our evolution into an even more sustainable business. We engage with external stakeholders and partners to build capability and momentum to support the transition towards a sustainable economy. We believe that these partnerships enable us to have an impact on creating economic, environmental, and social value, thereby contributing to the achievement of the SDGs 7, 9, 12, 13, and 17. More detail is included in the section: Other Social Conditions.

Our sustainability agenda is built based on extensive assessments to ensure that we have programs in place to capitalize on key opportunities, as well as mitigation plans that address the key risks. More information is included in the Risk Management section. We focus on those topics that have the biggest impact in terms of accelerating our strategy, building on our core principles of sustainability, safety and integrity, including respect for human rights. These include:

- Resource productivity
- Climate strategy
- Supplier sustainability
- People, product and process safety
- Innovation for sustainable customer solutions
- Employee engagement
- Human rights

Sustainability is important to running our business and is integrated as it is one of our three core principles, Safety, Integrity and Sustainability, that provide the foundation for our company values and our Code of Conduct. In addition, sustainability is embedded into our company-wide processes, including Research, Development & Innovation; Operations; and Project Management

## **Sustainable business**

We work together with customers, suppliers, and other partners to develop sustainable business opportunities.

### **Developing sustainable innovations**

Our goal is to create more value for our customers by developing sustainable innovations that meet their needs. Our Eco-Premium Solutions program, introduced in 2008, is a key part of this. Our focus is to grow our revenue from products that are more sustainable or offer customers clear sustainability benefits compared to commonly available alternatives.

### **Developing new sustainable businesses**

We also aim to develop new sustainable businesses worldwide that create long-term value. To do that, we are leveraging our knowledge, long-term customer relationships, integrated value chains and capability in public/private partnerships. We are also building on our existing technology platforms, pursuing innovations in biomass to chemistry, resource efficient polymer technologies, and green electrochemistry.

## **Resource efficiency**

At Nouryon, we understand that because we live in a world of finite resources, we have to focus on resource efficiency and creating more value from fewer resources. We are therefore committed to continually increasing our resource efficiency and reducing carbon emissions in our own operations and value chain.

## **Engaged people and partners**

We are a global company serving a large and diverse customer base through extensive international operations. We believe a diverse and inclusive workforce is essential to achieving our ambitions. We aim to actively embrace diversity of thought and empower people to challenge each other to be more innovative and deliver better results.

Partnerships accelerate our evolution into an even more sustainable business. We engage with external stakeholders and partners to build capability and momentum to support the transition towards a sustainable economy.

## **Sustainability foundation**

These three focus areas are underpinned by strong foundation programs for other economic, environmental and social aspects that are material for our business.

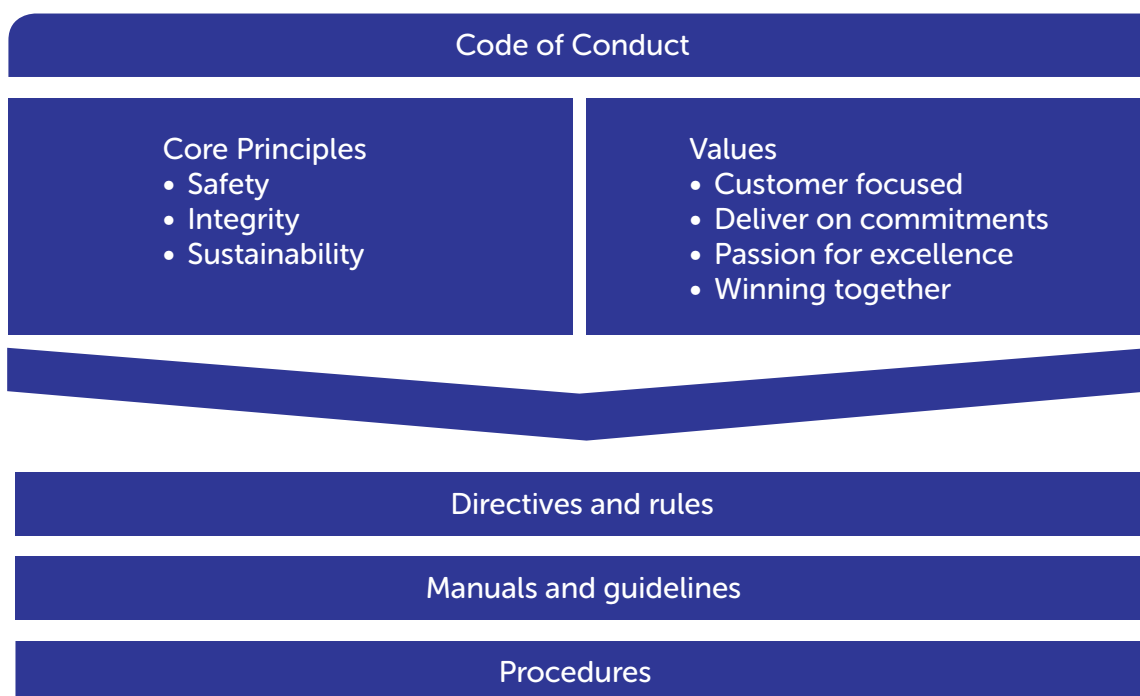
Specifically, these are: People and Process Safety, Product Safety/Stewardship, Environmental management, Employee talent management/engagement, Community involvement, and Integrity management.

More information on these programs can be found under the Environment, Social Employees, Human Rights and Honest Business sections.

# Compliance Framework

Our Code of Conduct and Business Partner Code of Conduct explain our three core principles of Safety, Integrity and Sustainability to our employees and business partners and outline what we expect from them. Both are available in 32 languages. These two Codes are supplemented by internal rules and procedures – available to employees in our Directives Portal – and by agreements with our business partners. Employees are asked to confirm compliance with the Code of Conduct as part of their annual performance evaluation, and business partners are asked to sign our Business Partner Code of Conduct or show they apply similar business principles.

All employees are required to conduct compliance trainings and our core principles and directives are communicated to employees in several ways, including a digital training program, onboarding program and compliance communications by the Compliance function. The Compliance function's legal experts provide legal advice, training and support in the field of competition law, export control, anti-bribery, privacy and human rights, and they also conduct investigations.



As part of launching Nouryon our values were updated. From October 2018 these are:

- Leading the way
- Delivering on commitments
- Growing together

The other parts of the framework remained the same in 2018. The framework serves as a guide to our employees in their daily behaviour through the Directives and rules and as a support to managers to actively drive and monitor compliance with these. Note that some directives include a reference to specific consequences if they are breached (e.g. Life Saving Rules).

The Compliance function manages the Nouryon compliance framework, which helps ensure that Nouryon businesses and functions meet the obligations of external laws and internal rules. Compliance plays a key role in supporting the Nouryon core principle and culture of Integrity, by developing rules, creating awareness through training, and managing allegations of rule violations.

## Code of Conduct

Nouryon conducts its business based on its core principles of Safety, Integrity and Sustainability

### Safety

We care about the safety of our colleagues and everyone we deal with, and focus on people, process and product safety.

- We follow the safety rules and procedures
- We follow the Life-Saving Rules
- We stop work if behavior or conditions are unsafe
- We make and distribute products safely
- We report safety concerns immediately

### Integrity

We care about conducting our business in a fair and honest way.

- We compete in a fair and honest way
- We follow trade restrictions carefully
- We protect personal and confidential information
- We keep a clear line between business and personal interests
- We look after company property and use it appropriately
- We keep records in accordance with company policies
- We are alert to fraud and report suspicious activity
- We communicate in a professional way

### Sustainability

We care about our environment, our colleagues, our business partners and the communities we operate in.

- We recognize human rights and treat people with dignity and respect
- We recruit and manage employees fairly
- We reduce the environmental impact of what we do
- We address the concerns of those affected by our operations
- We give back to communities we operate in
- We work with business partners who share our principles

The Code of Conduct defines the way we live our core principles every day. Whether you work for or with Nouryon, these are the responsibilities and behaviours expected of everyone. It's a shared standard we can all be proud of, and an integral part of our rules and procedures.

The topics covered in the Code of Conduct are:

- People, process and product safety
- Life Saving rules
- Honest business conduct
- Fair competition
- Trade controls
- Intellectual property and confidential information
- Personal data
- Conflict of interest
- Trading in shares
- Company resources
- Record keeping
- Preventing fraud
- Proper communication
- Human rights
- Employee relationships
- Environment and community
- Stakeholder and business relationships
- Grievances

Failure to follow the Code may lead to disciplinary action, including dismissal. Breaches should be raised in a timely manner with the individual, with the individual's manager, or through the grievance mechanism SpeakUp! More information is available in the Grievance mechanism section.

An updated Code of Conduct and Business Partner Code of Conduct was launched in 2019; this report relates to the one valid in 2018.

## Business Partner Code of Conduct

We expect our business partners, such as suppliers, distributors and agents to conduct their business based on the same principles we do. Our Business Partner Code explains these core principles and specifies what Nouryon expects. All our business partners are obliged to sign this Code of Conduct.

## Grievance Mechanism

We promote a feedback culture through communication and training. An open atmosphere helps to identify issues, including concerns relating to respect for human rights. The SpeakUp! grievance mechanism offers our employees, business partners and the general public a confidential environment in which they can raise concerns relating to breaches of our Code of Conduct, including the human rights reflected therein.

In 2018 Specialty Chemicals' SpeakUp! was separated from AkzoNobel's.

# Environment

Our approach to sustainability includes a full value chain perspective. This means we look at our impacts from the extraction of raw materials, all the way through to end of life; this is called a cradle-to-grave perspective, or full product life cycle.

Sustainability is a value driver of our business. By embedding sustainability in our business processes and focusing on resource efficiency we create win-wins. We reduce our environmental impact while reducing cost for raw materials, energy, waste management or while increasing revenue, for example as a result of higher yields in our production.

To support sustainable growth we perform a Sustainability Assessment for all larger investment projects and Mergers & Acquisitions. The business cases for these projects are also tested for sensitivity to (future) carbon pricing by evaluating the impact of a carbon price.

Our RD&I function has embedded sustainability metrics in its Stage Gate process, while Commercial Excellence has developed a Sustainability Toolkit to support marketing and sales in integrating sustainability into their value propositions.

Our Procurement function uses the services of Ecovadis combined with supplier supportive visits to assess the sustainability risks and profile of our main/critical suppliers. This to manage risks linked to, for example, human rights and honest business in our supply chain.

Production-related risks due to, for example, loss of containment are described in the section on Health & Safety in the chapter on Social conditions. The risks linked to product liability are addressed under product safety also found in the section on Social conditions.

## Performance management and reporting

We report on actuals internally twice a year. We also provide an update on our high-level KPIs: Revenue from Eco Premium Solutions; Reduction in carbon footprint per ton of sales versus 2012 baseline; and Eco Efficiency parameters. The results are presented in the Program & Activities section below. For reporting of actuals we use data from our company-wide Environmental Performance Management system as well as SAP/Business Warehouse. For the forecast reports, we use our standard systems for RD&I projects and for continuous improvement and our financial outlook plans as input. The actuals and outlook serve as the basis for review at Business Unit and corporate level.



## Programs & Activities

### Eco-Premium Solutions program

As described earlier, a key focus is to develop and market innovative and sustainable products and solutions. To support this, we have the Eco-Premium Solutions; products and services that deliver environmental or social benefits when compared with competitive products. Special focus is put on those delivering benefits in our customers operations (Eco-Premium Solutions with downstream benefits).

Eco-Premium solutions must match the most common alternative on the market in all respects and exceed them in at least one of the following parameters: energy efficiency; use of natural resources and raw materials; land use; emissions and waste; safety risks; toxicity; health and well-being.

Products are assessed across their lifecycle and benchmarked against current competitor solutions. The classification is revised every year by teams from Marketing and Sales, RD&I and Sustainability. The Eco-Premium portfolio is dynamic, as products cease to be classified as such when competitive solutions on the market have caught up. At the same time, new solutions are being added to the portfolio.

We continue to proactively drive the development of innovative, sustainable solutions ahead of the mainstream in the market. Our product development processes are designed to drive continuous sustainability improvement in the overall portfolio as products are updated or replaced. Eco-Premium solutions are a fundamental driver of our sustainability agenda for creating more value from fewer resources, of the products we sell, and of the processes we use to manufacture them.

We increased our revenue from Eco-Premiums Solutions to 37% of the total revenue in 2018 from 31% of the total revenue in 2017. For the Eco-Premium Solutions with downstream benefits, the revenue increased to 20% of total revenue in 2018 from 19% in 2017. The baseline year is 2012, when the share of revenue was 24% and 17%, respectively.

### Cradle-to-grave carbon footprint reduction program

Our goal is to accelerate material and energy efficiency across the value chain. We do not limit our sustainability agenda to our own operations. We work with customers and suppliers to drive a reduction in carbon emissions throughout the value chain by, for example, offering technologies and solutions to help them reduce their emissions and material use. An example is our Expancel product, a lightweight filler and blowing agent all in one, which enables considerable savings in raw material when used in different applications.

We also organize dedicated sustainability meetings with suppliers, for example to investigate possibilities for renewable raw materials. Reducing our own carbon footprint from our sites is managed in our Operational Eco-Efficiency program; more information is available in the section below. The cradle-to-grave carbon footprint includes emissions from extraction, refining and transport of our raw materials, our own production, transport to our customers, emissions linked to the use of our products at customers as well as emissions from end of life treatment. We measure it per ton of product sold and in 2018 we reached a 15% reduction in cradle to grave emissions for our products compared to our baseline year of 2012. This was an improvement from 2017 when the result was 14% reduction.

### Operational Eco-Efficiency program

Operational Eco-Efficiency is our program to increase efficiency in the use of raw materials, energy and water and to decrease emissions and waste in our own operations. These efforts benefit our business performance as well as the planet, as they simultaneously reduce operational costs, ensure our license to operate and lower our environmental footprint.

In 2018, we further improved our eco-efficiency, compared to the baseline year 2009, with improve-

ments on the individual parameters, such as waste, NOx and SOx emissions. Compared to 2009 significant reductions have been made for all nine parameters (Energy use, direct CO<sub>2</sub> emissions, Indirect CO<sub>2</sub> emissions, NOx emissions to air, SOx emissions to air, VOC emissions to air, COD emissions, Waste and Water use.

	Unit	Baseline 2009	Result 2017	Result YE2018
<b>Energy</b>				
Total energy use	GJ/t		-4%	-1%
Direct CO <sub>2</sub>	kgCO <sub>2</sub> /t	101	87	87
Indirect CO <sub>2</sub>	kgCO <sub>2</sub> /t	180	114	113
<b>Non-energy</b>				
Waste	kg/t	5.45	4.12	4.05
NOx	kg/t	0.13	0.10	0.09
SOx	kg/t	0.46	0.28	0.23
COD	kg/t	0.10	0.08	0.09
VOC	kg/t	0.06	0.06	0.06
Fresh water consumption (excl. cooling)	m <sup>3</sup> /t	2.39	1.93	2.05

#### Energy and CO<sub>2</sub> (direct & indirect) emissions

As an energy-intensive company, using renewable energy and increasing the energy efficiency of our operations are an integral part of our strategy. Using renewable energy enables us to reduce risks in our supply chains, improve our environmental footprint, and build new business opportunities in the transition to a sustainable chemical industry. By using renewable energy, we are also making our products more sustainable, thereby assisting our customers to deliver on their sustainability targets and ambitions. In 2018, energy use per ton of production increased 2.8% vs 2017, while absolute energy consumption was up 0.6% compared with last year. Electricity consumption and fuel for heating are the main drivers for greenhouse gas (GHG) emissions from our facilities. GHG emissions per ton of product were the same as last year, while absolute emissions decreased about 2%. Our total share of renewable energy in 2018 was 46%.

#### Air emissions (NOx, SOx and VOC emissions)

Most of the air emissions generated from our operations are sulfur dioxide (SO<sub>2</sub>). We have projects in place to reduce these significantly and during 2018 we started to see significant improvements with a reduction of close to 20% per ton of product vs. 2017. Compared to 2009, the emissions have decreased by 50%.

#### Water emissions (COD)

Most of the water emissions generated from our operations are emissions of organic substances that require oxygen during decomposition; it is measured as Chemical Oxygen Demand (COD). A project to significantly reduce these emissions is in place but improvements are not expected until after 2020. There was an increase of around 6% per ton of product in 2018 vs. 2017 due to increased production at some sites.

#### Waste

Effective raw material management helps to eliminate waste in our manufacturing operations, while reducing both our environmental footprint and costs. Total waste volume and waste per ton of production generated were down by 4% and 2%, respectively, in 2018.



### Water use

Sustainable water supply is essential to life and the sustainability of our business. Our operations rely on water for manufacturing, steam generation, cooling, and cleaning. The majority of the water we use is for cooling, which is only slightly heated before being returned to the original source. Water used for cooling decreased about 10% during 2018 while the water used for production, cleaning etc. increased by 6% per ton of product. During 2018 we introduced a new tool for sustainable water management to all our manufacturing sites. The tool assigns risk levels to water sources, supply reliability, quality of discharge, compliance and social competitive factors.

### Sustainable use of energy:

We are increasing the energy efficiency of our operations through continuous improvement of existing processes as well as adoption of innovative new processes and technologies. We increase our use of renewable energy by protecting our current renewable share through contracts, participating in cost-effective, large-scale energy ventures and exploring commercially viable on-site renewable energy generation.

For example we are leading a consortium which includes Google, Philips, and DSM to develop and purchase energy from two wind parks in the Netherlands, which will provide sustainable electricity equivalent to the annual consumption of 140,000 households.

The proportion of renewable energy use in our own operations was already over 46% in 2018 compared to 33% in 2012. We will continue to focus on renewable energy to de-risk our supply chains and to create new business opportunities.

## Social conditions

At Nouryon we aim to create a diverse and inclusive workplace and to engage with our own people, our partners, and the communities in which we operate. We are a global company serving a large and diverse customer base through extensive international operations. We believe a diverse and inclusive workforce is essential to understanding our customers and achieving our ambitions of delivering innovative sustainable solutions to our customers and society.

We are committed to providing a healthy and safe workplace and to proactively protect and promote the health, safety and well-being of our employees at work and in their communities.

We find that working collaboratively with a wide range of stakeholders, such as customers, partner companies, universities, and startups is helping us become more sustainable, more innovative, and deliver more value to our customers. More about this can be found in the section on Other Social conditions. We are committed to respecting internationally recognized human rights in all our operations and throughout our value chain. More information on this can be found in the section on Human rights.

## Employees

We aim to actively embrace diversity of thought and empower people to challenge each other to be more innovative and deliver better results.

The skills, knowledge and engagement of our employees are vital to ensure that we develop innovative and sustainable solutions that help our customers and partners to grow and by that, drive our company's growth and profitability.

Our Diversity & Inclusion initiative is built around four key strategic ambitions:

- Create a sustainable and diverse workforce
- Build a strong and diverse leadership pipeline
- Sustain a highly inclusive work environment
- Enable managers to build and lead diverse and inclusive teams

### **Create a sustainable and diverse workforce and leadership pipeline**

Workforce planning is a mandatory process at strategic and operational levels to develop the organization in line with the future needs of each business, and sets the basis for our budgeting, recruitment, development and talent management processes. As part of workforce planning, we identify critical roles and focus on the succession planning of these roles to ensure business continuity. To sustain and improve our talent pipeline, we are focusing on the identification and development of our internal talent through frequent management reviews and targeted individual development plans.

Nouryon is developing an increasingly engaged, diverse and capable workforce which can deliver leading performance in the markets in which we operate. We believe it is also important that our management teams reflect the diversity of our overall workforce, because inclusive and diverse teams are better able to understand customer needs and innovate to meet their requirements. Diversity and inclusion principles have been embedded in our people management processes and leadership training.

### **Building and leading diverse and inclusive teams**

We are focused on building the functional and leadership capabilities needed to support sustainable, profitable growth. To support this we have a competency and development framework for our key functions and a Leadership Development program, which develops the leadership behaviours that are incorporated in our performance management system.

Nouryon also strives to provide access to a great on-the-job learning experiences for all employees and offers a range of trainings to our employees, classroom learning, online learning, and company required courses.

### **Inclusive work environment for engaged employees**

In response to the change agenda in the company, we have introduced a new concept of having engagement sessions with our employees. We have used the interactive "Kahoot" tool to ask questions, and engagement sessions are held quarterly. Participation is voluntarily and responses are anonymous. The responses for a team are displayed directly on a screen and a discussion is facilitated by the team lead and an action plan is made to work on improvements where needed.

## Health and Safety

Nouryon strives to deliver leading performance in health, safety, environment and security (HSE&S) with a vision to reach zero injuries, waste and harm through operational excellence. Our programs and activities on environmental impact reduction is presented in the section Environment; this chapter address the Health and Safety activities.

We are committed to providing a healthy and safe workplace through the use of sound occupational health and hygiene principles to anticipate, recognize, control and eliminate those hazards which may

pose a risk to our employees or contractors; to proactively protect and promote the health, safety and well-being of our employees at work and in their communities.

Nouryon has a leading HSE&S management system driving continuous improvement through operational excellence in all aspects of HSE&S management including procedures, training, self-assessments, annual improvement planning and independent internal audit, as well as promoting learning across the organization. Our common processes require each site and business unit to develop their own safety improvement plan annually. Sites that are lagging in performance receive additional support from the central HSE&S organization.

A number of indicators are used and reported by each site every month for the Health and Safety performance. These include:

- Total reportable injury rate (TRR) for our own employees and contractors, respectively
- Lost time injury rate for employees and contractors, respectively
- Loss of primary containment level 1 and level 2, respectively
- Process safety event level 3
- Occupational illness cases

Developments are presented under each section below.

We also aim to drive improvement by proactively reporting on:

- Near misses – an event which had no impact but had the potential to result in injury, ill-health, or damage to assets or the environment
- Hazards – any condition or situation that could potentially harm people, product, or the environment

During 2018, implementation of a new supporting software for the Nouryon HSE&S management system was started: the HSE&S suite. This has been designed as an intuitive and user-friendly platform where the core HSE&S processes are digitized and through which available data can be analysed and utilized for learning. The HSE&S suite will drive operational HSE&S excellence and will be further expanded during the coming years.

The strategic priorities set for 2017-2020 are to drive:

- Continuous improvement of HSE&S processes to achieve leading maturity levels
- The implementation of the HSE&S management systems to achieve zero losses of primary containment and zero regulatory actions
- A commitment-based HSE&S culture and embedding operational excellence to achieve our vision of zero injuries, waste and harm

Our multiyear projection is on track to meet the targets set. During 2018 the focus has been on contractor safety, and this will continue in 2019.

## **Health**

As well as ensuring a safe working environment, healthy working conditions and managing illness-related absenteeism, Nouryon also fosters employee health and well-being as part of the company health strategy and occupational health program. Examples include industrial hygiene programs at site level and the promotion and use of the wellness program as well as the health profile assessment offered at the sites.

## **Safety**

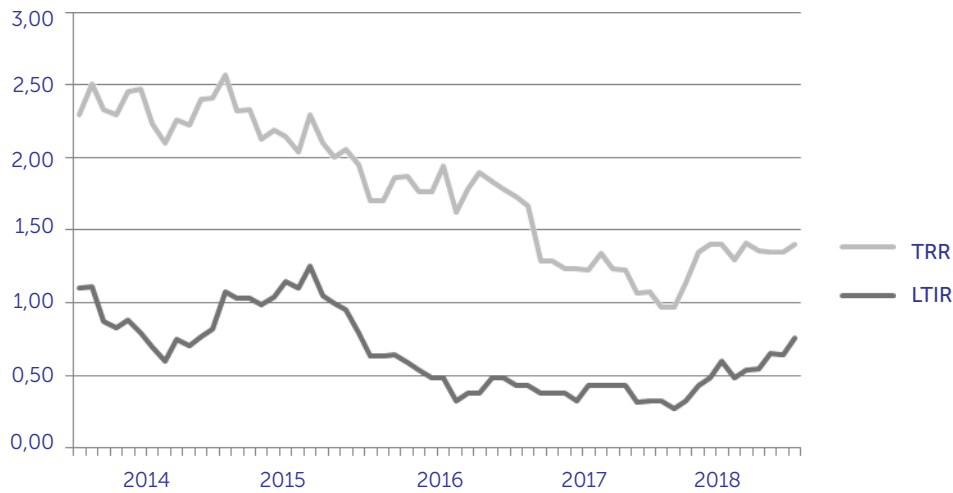
Safety is a core principle of Nouryon and our goal is to continuously improve our performance for the benefit of our people, contractors, customers, neighbours and the environment. The core processes in our safety program are people safety, process safety and product safety.



## People safety

It is Nouryon's aim to have zero injuries and it is our belief that every injury is preventable. We have succeeded in reducing the number of incidents considerably over the years.

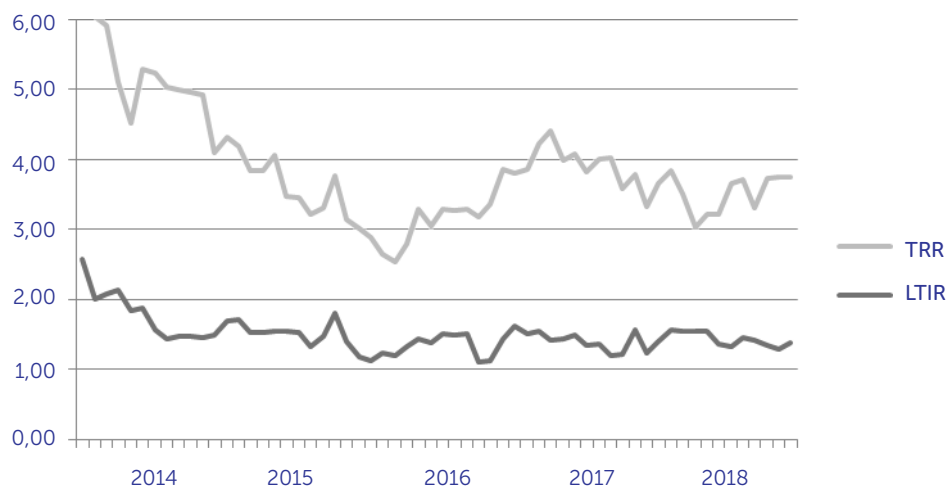
The main KPIs for people safety are Total Reportable Injury Rate (TRR) for own employees and Lost Time injury rate (LTIR). The graph shows the the development since 2014.



The total reportable rate (TRR) is the number of injuries, including fatalities, resulting in a lost time case, restricted work or requiring medical treatment by a competent medical practitioner per 1 000 000 hours worked.

The lost time injury rate (LTIR) is the number of injuries resulting in a lost time case per 1 000 000 hours worked. Temporary workers are reported together with employees since day-to-day management is by Nouryon.

Total Reportable Injury Rate and Lost Time Injury Rate for contractors is shown below.



The contractor total reportable rate (TRR) is the number of contractor injuries, including fatalities, resulting in a lost time case, restricted work or requiring medical treatment by a competent medical practitioner per 1 000 000 hours worked.

The contractor lost time injury rate (LTIR) is the number of contractor injuries resulting in a lost time case per 1 000 000 hours worked

This improvement in safety performance is based on having robust processes in place and being consistent in applying and improving these processes at all our locations. The main programs to support this are:

**Life Saving Rules:** The purpose of the Life-Saving Rules (LSRs) is to prevent a fatality or serious injury to employees, contractors who work for the company and visitors, by ensuring a safe work environment and safe behaviour. The Life-Saving Rules are eight basic safety rules that are mandatory for all colleagues and our contractors. In addition, we have one Golden Principle – Stop work if conditions or behaviors are unsafe.



**Golden Principle:** Stop work if conditions or behavior are unsafe



Use fall protection when working at height



Wear a seatbelt in motor vehicles when provided



Obtain authorization before disabling safety equipment



Do not use alcohol or drugs at work



Check equipment is isolated before work begins



Make sure moving machinery is guarded



Work with a valid work permit when required



Obtain a permit for entry into a confined space

**Behavior Based Safety:** Nouryon's Behaviour Based Safety (BBS) is a safety improvement process identifying critical behaviours and inducing changes in behaviour of employees and contractors resulting in the reduction exposures to hazards. The observations are done regularly and in a structured way based on the location's observation strategy. The BBS process is implemented at all locations.

**Process safety**

Nouryon has developed a process safety management (PSM) framework for all operations, following industry standards and best practices. Implementation of the framework at site level is phased according to inherent risk.

Process safety performance indicators are aligned with international best practice. A loss of primary containment (LoPC) is the main process safety indicator at manufacturing sites, with two levels of severity. As a leading indicator, we also measure process safety events (PSEs), which are minor leaks or occurrences that could lead to more severe LoPCs.

	2017	2018
LOPC Level 1	16	24
LOPC Level 2	65	68
PSE Level 3	3656	3814

All incidents are investigated to determine potential trends and to implement preventive controls.

In 2018, we continued to raise awareness and improved reporting of the process safety indicators. The total number of LoPC Level 1 and 2 increased in 2018, compared with 2017. The increase was partly due to increased awareness and improved reporting. During 2018, initiatives intended to improve working practices were introduced, for example an even greater focus on sharing learnings between the Business Units.

The number of PSE Level 3 incidents (minor spills and leaks, which are readily controlled on site and have no regulatory notification requirement) increased, illustrating the desire to report, investigate and learn from process safety near misses, which creates more opportunity for learning and prevention.

The focus for 2019 is on contractor and process safety; an extensive campaign of trainings will be held for management and production sites.

### **Product safety**

Product stewardship is our approach to ensure that product safety is considered throughout the value chain – from raw material extraction, R&D, manufacturing, transport, marketing and application all the way through to end-of-life and/or recycling. We aim to deliver value to Nouryon and our customers by ensuring regulatory compliance in every region where we operate, and to continually develop safer and more sustainable solutions for the market through our pro-active approach.

Our industry-leading and multiple award-winning Priority Substance Program has a track-record of allowing Nouryon to promote the use of safer and more sustainable products and to take action to manage potentially harmful substances in advance of legislation, future-proofing our products against changes in regulations.

The program reached a milestone in 2018 when we completed our review of all substances identified in the final project phase for risk assessment. We screened approximately 2,500 unique substances used for our products as part of the program, resulting in detailed analyses of more than 70 substances, of which some now are prohibited, while some have restricted use within our products. The program is now considered to be fully embedded in the company, forming part of normal operational activities in the key functions that control raw materials used in our formulations.

### **Other social conditions**

We see partnership as a key for our success and for accelerating our evolution into an even more sustainable business. We engage with external stakeholders and partners to build capability and momentum to support the transition towards a sustainable economy. We believe that these partnerships enable us to have an impact on creating economic, environmental, and social value, thereby contributing to the achievement of the UN Sustainable Development Goals (SDGs).

We have formed partnerships with several startups and other companies to pursue innovative bio-based chemicals, including Photanol for chemicals from photosynthesis; Itaconix for bio-based polymers; Royal Cosun for chemicals from sugar; and Avantium for chemicals from wood.

We are also leading a consortium which includes Google, Philips, and DSM to develop and purchase energy from two wind parks in the Netherlands, which will provide sustainable electricity equivalent to the annual consumption of 140,000 households

In Rotterdam, the Netherlands, we are making important steps towards the circular economy by exploring the feasibility of converting waste to chemicals, together with Air Liquide, Enkern, and the Port of Rotterdam

During 2018 we also launched our second edition of Imagine Chemistry, which is our open innovation challenge where we invite startups, scale-ups, universities, and other partners to work with us as equal partners to tackle some of our most urgent chemistry-related challenges and turn innovative ideas into reality. Winners of the challenge can receive joint development agreements, research agreements, or support from Nouryon's experts.

# Human rights

Nouryon respects the human rights of people. This applies to our employees, people we work with and people that are affected by operations or our products and services. We are committed to complying with the Universal Declaration on Human Rights, the UN Guiding Principles on Business and Human rights and the Declaration of Fundamental Principles and Rights at Work of the International Labour Organization. These contain such rights as equality and non-discrimination, freedom of expression, just and favourable remuneration, prevention of forced and child labour, the right to association and collective bargaining and more.

Due to our large product portfolio, international commerce with numerous trade partners all over the world and contact with authorities in countries where we operation (+70 countries), inherent compliance risks exists in the fields of human rights both in our own operations but also in our supply chain. The four major risks are presented below.

Compliance with our integrity principles, including human rights principles, is the basis for our success as a respected company by our customers, employees and communities. It is managed through our Code of Conduct, Business Partner Code of Conduct and our Grievance mechanism; more detail is available in the section on compliance. We want to provide a working environment where people feel they are trusted and treated fairly and with dignity and respect both in our own operations and also at our business partners

While we respect all human rights equally and take all human rights impacts seriously, we have prioritized (potential) human rights impacts in accordance with the UN Guiding Principles. These are the so-called salient human rights issues; those that are potentially at risk of the most severe negative impact through our activities or business relationships. After an internal and external stakeholder consultation process conducted in 2016, we identified four salient issues on which our human rights due diligence is focused; Health and safety in our value chains; working conditions for our employees; discrimination and harassment in our operations; and modern slavery in our supply chain. Our salient human rights issues have not changed following the separation from AkzoNobel.

## Health and safety in our value chain and connected communities

We have made the health and safety of people one of our core principles. As part of AkzoNobel, we made a human rights risk assessment and based on this, we were aware that we needed to conduct further due diligence into our products. Due to the nature of our products, we acknowledge there is an inherent risk of impacting the human rights of end-users. In 2018, we reached a milestone with our Priority Substance Program by completing 100% of priority substances identified, screening more than 2,500 raw materials in the process. Our Priority Substance Program has kept us ahead of chemical legislation and helped us make our portfolios safer and more sustainable.

As part of the stakeholder assessment in our self-assessment process and audit used in our HSE&S management system, we also assess the relationship with our neighbours and communities surrounding our production sites. This helps us to identify locations where we could run a higher risk in terms of impacting surrounding communities.

## Working conditions for our employees

We believe that our employees are crucial to the success of our company. We will not achieve leading performance unless employees believe that Nouryon is a great place to work, are engaged and feel valued. We must therefore offer decent working conditions, including fair working hours, reasonable salaries and appropriate bathroom and restaurant facilities.

With respect to working hours and compensation, we ensure that we comply with laws and are fair and just. We respect individual rights to freedom of opinion and association, and we respect the right to collective bargaining and co-determination.

Our global presence results in a breadth of laws covering employment, since these differ from jurisdiction to jurisdiction. The Nouryon Legal Group has a dedicated in-house employment law specialist supporting business management and the HR function. The specialist keeps track of developments in the field of employment law and develops and offers necessary training and training material as well as revising policies and procedures where necessary. Employment laws vary significantly among jurisdictions. In some, employment law advice may need to be given in cooperation with commercial lawyers in the relevant jurisdiction or outside counsel.

To emphasize our commitment, we use the Safe Water, Sanitation and Hygiene Pledge (WASH) of the World Business Council for Sustainable Development (WBCSD). We have carried out due diligence into the sanitary conditions of our locations, using the WASH Pledge implementation material. This assessment is now integrated into our HSE&S management system and will be monitored and acted upon accordingly.

### **Discrimination and harassment in our operations**

At Nouryon, we strive to foster a culture of dignity and respect, free of any kind of harassment or discrimination. No tolerance for discrimination and harassment is also part of our Code of Conduct, which all employees must comply with. We also regularly follow up the psycho-social workplace environment through anonymous surveys. We use our grievance mechanism, SpeakUp!, to manage possible cases of harassment or discrimination; more information is available in the Compliance section.

### **Modern slavery in our supply chain**

Slavery, servitude, forced labor and human trafficking (modern slavery) are infringements of human rights which have a profound negative impact on people's lives. Nouryon has a zero-tolerance approach to modern slavery of any kind. This is managed through our Code of Conduct and grievance mechanism. For our supply chain it is managed through our Business Partner Code of Conduct, in which we impose the same standards and expectations on our business partners as on our own employees, and seek to actively support them in their implementation where needed.

To ensure this we have a four-step process:

- Screening – Due diligence investigations are conducted to establish that the business partner and its directors do not have a history that conflicts with the behavior we would expect
- Contracting – All business partners are required to sign our Business Partner Code of Conduct and appropriate compliance contract clauses are put in place in the contracts
- Coaching – Business partners are coached in what we expect from them and how they can develop an equally sustainable operation
- Monitoring – The behavior of our business partners are assessed by our business teams on a yearly basis in the supplier evaluation process to secure it is in accordance with our core principles

More information is available in the Compliance section.

## **Honest Business and Anti-corruption**

Integrity is one of our core principles. We are committed to conducting business in a lawful, fair and honest way and we expect the same from our business partners. This means we apply the highest ethical and legal standards to everything we do.

Due to our large product portfolio, international commerce with numerous trade partners and contact with authorities, inherent compliance risks exists in the fields of competition law and anti-bribery.

We believe in competing on the merits of our products and do not make, offer or authorize bribes or conduct any other form of unethical business practice. Thus, we do not make facilitation payments,



even where it is accepted practice. Compliance with our integrity principles is the basis for our success as a respected company by our customers, employees and communities. This is managed through our Code of Conduct, Business Partner Code of Conduct and our Grievance mechanism. More information is available in the Compliance section.

### **Risk identification and prioritization**

We identify compliance risks through several processes, such as Enterprise Risk Management, monitoring of legal developments, business partner audits and value chain due diligence. As part of our risk management, every business and major function identifies its inherent and residual compliance risks and reports this to the leadership team.

We use several processes and tools to screen business partners, activities and acquisition targets. For example, we have a business partner screening tool, which enables employees to perform a compliance check on potential new suppliers, agents and other high risk business partners. We also have a sanctioned party and country screening tool, which is interfaced with ERP systems and automatically screens parties and transactions against sanctioned parties and country lists.

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# Nouryon

We are a global specialty chemicals leader. Industries worldwide rely on our essential chemistry in the manufacture of everyday products such as paper, plastics, building materials, food, pharmaceuticals, and personal care items. Building on our nearly 400-year history, the dedication of our 10,000 employees, and our shared commitment to business growth, strong financial performance, safety, sustainability, and innovation, we have established a world-class business and built strong partnerships with our customers. We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Eka, Dissolvine, Trigonox, and Berol.