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# The difference we make

CRODA

Sustainability Report 2018

CRODA

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### Sales

**£1,386.9m**

2017: £1,373.1m

### Core Business

#### sales growth

(constant currency)

**+3.8%**

### IFRS profit before tax

(PBT)

**£317.8m**

2017: £314.1m

### Adjusted PBT growth

(constant currency)

**+6.2%**

### Ordinary dividend

(proposed full year)

**+7.4%**

### Energy from non-fossil fuel sources

**21.1%**

Rebased 2017: 24.1%

### Raw materials from bio-based sources

**61%**

2017: 61%

### Safety

(Total Recordable Injury Rate)

**0.72**

2017: 0.71

### 1% Club volunteering hours

**5,117**

2017: 5,073



#### Cautionary Statement

The information in this publication is believed to be accurate at the date of its publication and is given in good faith but no representation or warranty as to its completeness or accuracy is made. Suggestions in this publication are merely opinions. Some statements and in particular forward-looking statements, by their nature, involve risks and uncertainties because they relate to events and depend on circumstances that will or may occur in the future and actual results may differ from those expressed in such statements as they depend on a variety of factors outside the control of Croda International Plc. No part of this publication should be treated as an invitation or inducement to invest in the shares of Croda International Plc and should not be relied upon when making investment decisions.

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# The difference we make

**For** Our customers  
Our people  
Our partners  
Our investors

The difference we make for

# Our customers

Close relationships with our customers give us the insight and impetus to create innovation ahead of the competition. We support our customers' business strategies through our products and services, positively influencing environmental and societal impacts throughout the product lifecycle.

## Intimacy

At the heart of our business model is a commitment to delivering thousands of products to thousands of customers without third party distributors. This requires an unrivalled level of customer engagement and intimacy on a global scale.

Each of our market sectors has a dedicated research, sales and marketing team who work in close collaboration with a number of departments within our customers' organisations. These touch points include: research and development, marketing, production, purchasing, quality, regulatory and sustainability. Our growth has been built on this commitment to customer intimacy, enabling us to create true partnerships based on trust and reliability. It is a key differentiator for our business and a major benefit for our customers.

## Insight

By being close to our customers, both physically and strategically, we develop a deep understanding of their business development objectives. This includes every stage of the product journey, from market opportunity and innovation, to production, packaging and delivery. The way in which we are able to leverage our knowledge of markets and product applications to provide background and context that our customers find invaluable is unique, setting us apart from our peers.

Such insight enables us to not only fulfil customer needs, but also to stay one step ahead of the competition, anticipating new consumer demands and acting quickly to help customers capture new market opportunities.

## Innovation

Our deep knowledge of global markets, and customer objectives, products and applications, is a crucial input to our innovation. Working in collaboration with customers and open innovation partners, we create the new technologies that add value to our customers' products, offering high levels of performance together with minimal negative, or even positive environmental impact.

Innovation within our business doesn't just mean inventing the new, but adapting existing science to different uses and markets, creating added sustainability and performance benefits for our customers and their consumers.

## Impetus

Speed to market is also crucial for our customers. With direct access to the required knowledge through powerful internal networking, we are able to gather diverse, innovative and experienced project teams as soon as an opportunity is identified. This can mean drawing on expertise from different market sectors, enabling cross-fertilisation of ideas.

The result is that we can mobilise rapidly to satisfy requirements and deliver quickly, keeping our customers ahead of the competition.

## Impact

We have devised a methodology to describe the benefits in use that our products bring to our customers' formulations. Our products often have positive impacts in the customer's product formulation, including increasing bio-based content, reducing carbon

footprint, and avoiding greenhouse gas emissions within its application. This information is extremely important to our customers as it helps them to enhance their sustainable product claims and their overall impact statements.

However, more than this, it is about understanding the impacts of every aspect of what we do and how we do it for the benefit of our customers, giving them information to prove the positive performance, as well as environmental, societal and ethical impacts of their products.

## In Focus: Involvement

In 2018, an independent organisation carried out interviews with a selection of our key stakeholders from around the world. The objective was to find out their true opinion of Croda and whether this aligns with our own views of our intimate customer relationships.

The overwhelming impression was a positive one, but what surprised the interviewers was the unanimous degree of warmth expressed towards us.

Key factors were:

- The detailed, friendly and helpful relationships we have with our customers
- The innovative and entrepreneurial nature of our business model
- The high bio-based content of our products, which was seen as crucial by a number of customers to the sustainable development of their own product ranges.

In summary they felt that we work with stakeholders more like an eager and nimble start-up than a large FTSE 100 listed multinational company.

The difference we make for

# Our people

Our people are the heart of our business and are concerned citizens who care about the world they live in. We want them to be passionate about the work they do for us, forging long careers as we give them opportunities to fulfil their potential, support them to give back to their local community and to have a positive environmental impact on our planet.

## As employees

The can-do attitude, family spirit and customer focus of our people is at the core of what makes our business different and is a true source of our competitive advantage. We work hard to create a stimulating, energetic and fun place to work where everyone can thrive and take pride in what they do. We challenge, inspire and support our people to reach their full potential with professional training and meaningful development programmes.

We strive to maintain a supportive work environment, and we invest significant time and money into ensuring the health and wellbeing of our employees. It is a place where people know they will be treated fairly and respected as equals and individuals; where they will be recognised and celebrated for their achievements.

This year, as part of our focus on employee health and wellbeing, we have also delivered a 'safety leadership' model to our top leaders, carried out a range of mental health programmes and have established a Diversity and Inclusion Steering Committee.

## As colleagues

Our focus is on togetherness; working as one global family, we build a culture of trust and transparency that values every colleague's unique contributions. Working in and across teams around the globe, we support, encourage and cooperate with each other, sharing our knowledge to the benefit of our customers and our business.

We create an environment where we respect and are respected by our colleagues. We recognise that we have much to learn from each other and it is our differences, the diversity within our

teams, that are the key to our inspiration and innovation and to bringing out the best in ourselves.

## As citizens

At Croda, we recognise our responsibilities to the local communities in which we operate as well as the wider societies of which we are a part. This is integral to maintaining positive relationships with the communities we operate in, as we strive to be ambassadors for the chemical industry and good citizens.

Through our 1% Club, employees have the opportunity to spend some of their work time supporting local STEM (science, technology, engineering and mathematics) education and other community initiatives. Many of our people do much more than this in their own time, and we are proud to support their drive to help good causes through raising money, volunteering and more.

## As people

There is a very strong collective concern for the planet, ethics and human rights within our business and this is what drives our work on sustainability.

We have strong occupational safety programmes, and in 2018 have worked on behavioural safety and safety leadership themes within our OHSAS 18001 safety management system. Through these activities we aim to provide a safe place of work with an interdependent safety culture.

Globally, our people work hard to ensure the traceability of our bio-based ingredients, working with our supply chain to protect from modern slavery and reduce the negative environmental impact at every stage of our product life cycle. Throughout our own business we are working hard to reduce the greenhouse gas (GHG) emissions

of our operations, the waste we send to landfill and our water consumption. We are also investing in biotechnology and bio-refineries, and are constantly innovating to improve the sustainable benefits and reduce the environmental impacts of our products. These activities ensure that our people can take pride in working for a company that puts people and the planet first.

## In Focus: Supporting the mental health of our global family

There has been, quite rightly, an increasing focus on mental health in recent years. To support our teams in this area, in 2018 all our sites across the globe participated in World Mental Health Day and International Stress Awareness Day.

The programmes varied in each location; many sites introduced yoga, aromatherapy or meditation sessions as ways of

encouraging relaxation and promoting wellbeing. Some sites also collaborated with agencies to offer tips on how to identify and deal with stress.

Thane, our manufacturing site in India, provided training on a range of mental health topics with the aim of equipping managers to identify and deal with issues as they arise. The site also established a new office space for employees to take a short break without distractions called the 'Manan' room, meaning 'contemplation' or 'thinking' in Sanskrit. Other sites gave employees opportunities to talk to mental health professionals, either in groups or on a one-to-one basis.

The difference we make for

# Our partners

Reaching out beyond our business is essential for scaling innovation and solving complex sustainability challenges. From academia and trade associations, to suppliers and regulators, by working together we harness each other's strengths and improve the outcomes for everyone involved.

## Collaborators and consultants

Innovation is a key pillar of our business model. Our Open Innovation and Smart Partnering Programmes, where we collaborate with world leading academics, universities, start-ups and technology specialists, are a crucial part of this. At any one time we are working on more than 80 of these partnerships, with almost every one having the potential to deliver a sustainability benefit.

All parties involved in these collaborations gain significant benefits: universities and other institutions gain experience and expertise in commercialising intellectual property; together we develop the unique ingredients, effects, applications and processes that add value to customers' products and can have the potential to provide solutions to some of the world's most pressing needs.

In addition, we make the difference by providing essential funding for academic research, sponsoring PhD students and giving them vital industrial experience, and carrying out workshops across our operations to inspire undergraduates and grow the next generation of industry experts.

## The supply chain

Assured supply chain integrity is a pre-requisite to operating responsibly and it is vital that we source from suppliers who share our own values and standards, in terms of transparency, traceability and ethics. We are engaging with our suppliers through our membership of the CDP (formally Carbon Disclosure Project) Supply Chain initiative, influencing our suppliers and encouraging them to set GHG emissions reduction targets. We are also investigating opportunities for offsetting unavoidable carbon

emissions through investment in projects that are relevant to our business and supply chain.

We are working with Sedex (Supplier Ethical Data Exchange) and EcoVadis to use their systems to gather supplier data on environment, labour, fair business and sustainable procurement practices to identify risks in our upstream supply chain. This is directly empowering ethical supply chains and managing risk as we, in some areas, need to support our suppliers in raising their standards in order to continue our working relationship. Our Corporate Ethics Committee sponsors our engagement and assessment of suppliers in countries where there is higher risk of modern slavery.

## Associations and peer companies

By sharing our expertise via panels, committees, forums and associations, and aligning with like-minded peer companies, we can influence positive change in sustainability. We contribute to thought leadership with government panels, regulators and trade associations in order to help establish and influence legislation, principles and standards.

For instance, we have helped to develop guidance for compliance with the Nagoya Protocol, an international agreement that aims to fairly share benefits that come from using genetic resources (GRs), the final objective being the sustainable use of biodiversity globally. We have been a constant voice in driving industry transformation to RSPO (Roundtable on Sustainable Palm Oil) certified physical supply chains, contributing to over 30 industry presentations, panel debates

and media interviews on the issues around sustainable palm oil.

We have also contributed to the development of a series of European Standards that define and measure the bio-based content of materials. This allows the renewable carbon content to be unambiguously determined and declared along the supply chain, thereby providing consumers with definitive information concerning the provenance of the products they purchase and use.

## In Focus: Growing our innovation partnership network

Our Open Innovation and Smart Partnering Programmes continue to evolve, giving us access to experts and facilities in universities, specialist research laboratories and small and medium size enterprises around the world.

We now have more than 450 partners, comprising over 100 completed and 85 ongoing projects, with activity balanced across our three core market sectors of Personal Care, Life Sciences and Performance Technologies.

Our partnership with pigments innovator Glassflake enabled the development and launch of a range of Moonshine™ ingredients in 2018, which is a new offering in colour cosmetics. We also agreed a commercial arrangement with SiSaf, a pioneering UK based bio-pharmaceutical company, which involves the use and development of SiSaf's patented bio-courier, ProSilic®, a novel drug delivery technology. Following our original investment in July 2017, we increased our holding in the multi-award-winning digital device company Cutitronics, providing an opportunity to develop design updates for its innovative CutiTron™ device.

The difference we make for

# Our investors

Addressing the world's changing needs creates opportunity as well as challenge. We seek to leverage this ethically with accountability for what we produce and how we produce it. It is how we will continue to achieve attractive financial returns with excellent environmental, social and governance performance.



## Climate change

Investors are increasingly concerned about the negative impacts of climate change on the planet and on businesses. Already a relatively low emitter of greenhouse gas emissions (GHGs), we are carrying out extensive work to mitigate against climate change and GHG emissions. For instance, in our North American bio-surfactant plant we have invested to produce a new bio-based ECO range, reducing our reliance on petrochemical feedstocks, using an increased level of renewable energy and eliminating rail transportation of ethylene oxide. We are also assessing the total lifecycle impact of our products to identify where we can make further reductions in our carbon footprint.

Our aim is to do more with fewer of the planet's precious resources. Minimising our negative impact will enable us to fulfil environmental obligations and put us in

the best position to avoid potential impact on profitability as the world seeks to achieve challenging carbon reduction targets.

## Positive impact

Increasingly important are the positive impacts of our ingredients in customer applications. From enabling the delivery of active pharmaceuticals, to improving crop yields, during 2018 we have carried out extensive work to document the benefits in use of our ingredients; how they enable the use of lower levels of active ingredients and reduce or avoid GHG emissions in their end application.

Our innovations have the power to help tackle the global challenges associated with feeding and supporting a growing, ageing population, satisfying the expectations of digitally empowered and environmentally aware consumers who

expect greater performance levels from products and services than ever before.

## Low risk and ethical

Increasingly, customers and investors measure the sustainability of not just our own performance, but that of our whole supply chain. We strive to ensure that all supply chain risks are identified, prioritised and controlled.

A sustainable business also means active management of all the risks that could affect the reliability of our service and the investment opportunity we offer. We continue to work to raise our own and our supplier standards in the areas of ethics, human rights, process safety, product safety, quality assurance and business continuity. In addition, we make sure that manufacturing sites are certified against appropriate safety, environment, quality and Good Management Practice (GMP) standards.

## Sustainable future

The United Nations Sustainable Development Goals (SDGs) provide 169 targets in 17 areas that address the challenges facing our planet, as well as creating real opportunities for the business world. We are now working with experts at the University of Cambridge to establish ambitious sustainability goals for 2030 that align with the SDGs, helping to futureproof our business and leverage new opportunities ahead of the competition.

Many of our new acquisitions align with the detailed SDG targets, for example our new vaccine business, Biosector, aligns to SDG target 3.8, providing access to safe, effective quality vaccines. Our existing businesses have great alignment with the targets too. For example, our Plant Impact biostimulants can mitigate abiotic stress in crops. This is a 'direct hit' on SDG target 2.4, providing resilient

agricultural practices that strengthen capacity for adaptation to climate change. We continue to identify more 'direct hits' on the SDG targets throughout our businesses.

## In Focus: Investors experience Croda

In addition to our Capital Markets Day, which we hold every two years, we invite existing and potential investors to visit our premises across the world on a regular basis. This is a chance to meet our management teams, ask questions and see our facilities first hand. It also includes practical demonstrations of the benefits in use of some of our ingredients, to help investors understand the positive impact they can have on society and the environment. These visits are an opportunity to showcase our latest technology acquisitions, so that we can raise awareness of the growing opportunities we have gained to

accelerate growth and offer superior Return on Investment.

This openness in communicating with key stakeholders is part of our culture. It is how we work to ensure ethical and responsible operations throughout our supply chain. We believe that this same proactive approach to our investors gives them the information and experience they need.

# Making a positive difference

**“We use our smart science to innovate with our customers to meet their needs and improve lives by contributing to the challenge of the SDGs.”**

**Steve Foots**  
Group Chief Executive



In times of increasing environmental, social and economic uncertainty, we are determined to continue playing our part in meeting the global challenges and to make a positive impact. The United Nations Sustainable Development Goals (SDGs) are beginning to focus global efforts on positive change; for us in Croda they have reinforced our drive to provide solutions that support sustainable development as a moral and business imperative. We shall continue to thrive, not simply improving our own economic, social and environmental performance, but also actively creating positive change.

### Smart science to improve lives

Continuing to deliver strong and consistent financial results, together with strong and consistent non-financial results, reflects our vision, mission and values. This is now encompassed in our new purpose statement, 'smart science to improve lives'. Since the very beginning of Croda in 1925, we have understood the important part that science plays in everyday life. Over 90 years later, our unrivalled ability to innovate through 'smart science' enables us to meet our customers' and their consumers' needs. Our products have always added financial value and we increasingly recognise the positive environmental and social impact that they all have; we work to 'improve lives'.

### Sustainable solutions

During 2018, we increased focus on our contribution to the SDGs. I have been delighted with the breadth and depth of the work that has been undertaken throughout

our businesses to identify many areas in which we are making significant positive contributions. Most satisfying is that these contributions are coming from across all of our functions; not only through the application of our products, but also in the sourcing of raw materials, innovative product design, our flexible operations, and our acquisition of exciting new sustainable technologies. The measurable output of our innovation is increasing economic and shareholder value, but we are intent on further measuring our positive impact and setting ambitious targets.

### Driving innovation

Our innovation goes beyond delivering more value and benefit from ingredients with a lower environmental footprint. Today, more than ever before, we are innovating up and down the value chains. Creating new ingredients in our research centres and in collaboration with our customers, suppliers and Open Innovation and Smart Partners, we are identifying and commercialising unique opportunities that add value to our customers' products, satisfy the needs of their consumers and improve lives.

### Delivering growth

We shall continue to decouple our growth and increased shareholder value from our impact on the environment, and further futureproof our business with our capital light, carbon light, technology and intellectual property rich acquisition strategy. Following six years of collaboration developing specific applications in Personal Care and Crop Care sectors, in January 2018

we acquired Nautilus, a technology-rich marine biotechnology company based in Charlottetown, Prince Edward Island, Canada.

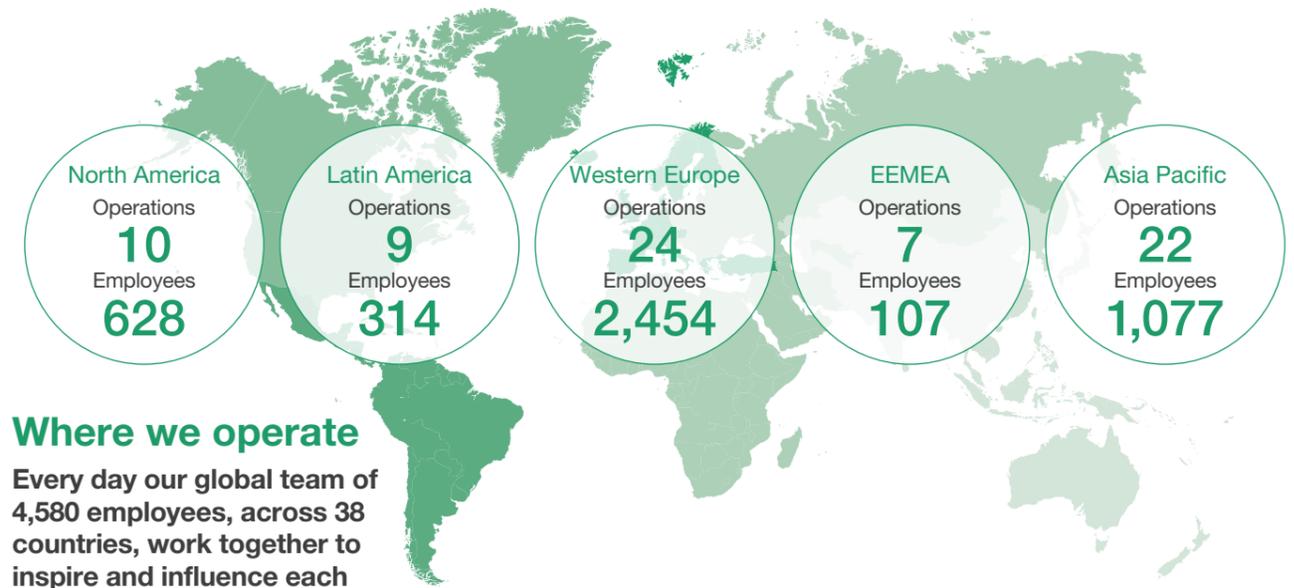
In March 2018, we acquired Plant Impact, an innovative bio-stimulant business. Using chemistry and novel molecule discovery, Plant Impact identifies ways to improve the yield and quality of crops by stimulating or moderating plant responses in both healthy and stressed crops during key growth stages. Then in late December we acquired Biosector, a vaccine adjuvant specialist, seen as a natural extension of our existing pharmaceutical excipients portfolio within our Health Care business.

### Sustainable culture

We believe that our culture and our people set us apart from our peers. Our can-do attitude, agility, family spirit and customer focus are at the heart of what makes Croda different, and a true source of our competitive advantage. I am determined that we will continue to safeguard our culture and nurture the environment that enables everyone to reach their full potential.

I would like to thank everyone across the Group for the positive contributions they make to sustainability every day.

**Steve Foots**  
Group Chief Executive



### Where we operate

Every day our global team of 4,580 employees, across 38 countries, work together to inspire and influence each other and our customers.

### Our strategy to deliver strong growth

We deliver sustainable innovation, superior performance and value to our customers and their consumers through a business strategy comprising three objectives.

<p><b>Delivering consistent top and bottom line growth</b></p> <p>Through our powerful business model we connect to fast growing markets to grow profit ahead of sales, ahead of volume.</p> <p><b>We achieve this through:</b></p> <ul style="list-style-type: none"> <li>• Our unrivalled local direct selling capability</li> <li>• A balanced global footprint</li> <li>• Accelerating sales in our core markets</li> <li>• A disciplined approach to capital allocation</li> <li>• Investing in high return opportunities.</li> </ul>	<p><b>Increasing the proportion of protected innovation</b></p> <p>Innovation is the lifeblood of our business, playing a key role in delivering sales and profit growth. Through our technical and commercial expertise, our focus is to increase the sales of new and protected products (NPP).</p> <p><b>We achieve this through:</b></p> <ul style="list-style-type: none"> <li>• Investing in our own R&amp;D</li> <li>• Expanding the number of regional innovation centres</li> <li>• Working closer with customers to better understand their specific needs</li> <li>• Identifying disruptive technologies</li> <li>• Developing our Open Innovation and Smart Partnering Programmes with universities and technology enterprises.</li> </ul>	<p><b>Accelerate our customers' transition to sustainable ingredients</b></p> <p>Sustainability connects all aspects of our business. Building on our bio-based raw material heritage, we are evolving our products, technologies and supply chain to meet customer and consumer needs.</p> <p><b>We achieve this through:</b></p> <ul style="list-style-type: none"> <li>• Creating ingredients that provide a benefit in use with reduced environmental impact</li> <li>• Better understanding the sustainable ingredient needs of our customers</li> <li>• Acquiring technology-led companies with sustainable technologies</li> <li>• Aligning our business with the United Nations Sustainable Development Goals (SDGs) wherever possible.</li> </ul>
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Read about what we have done in 2018 to deliver against this strategy and what our priorities are for 2019 in our Annual Report & Accounts.

# How we create value

We create, make and sell innovative speciality chemical ingredients, generating long term value through collaborative relationships and our commitment to sustainable innovation.

## Our sectors

### Personal Care

Focusing on active ingredients and ingredients that enhance the performance of skin, hair, sun protection and colour cosmetic products.

### Life Sciences

Comprising of three complementary businesses that offer solutions to Health Care, Crop Protection and Seed Enhancement customers.

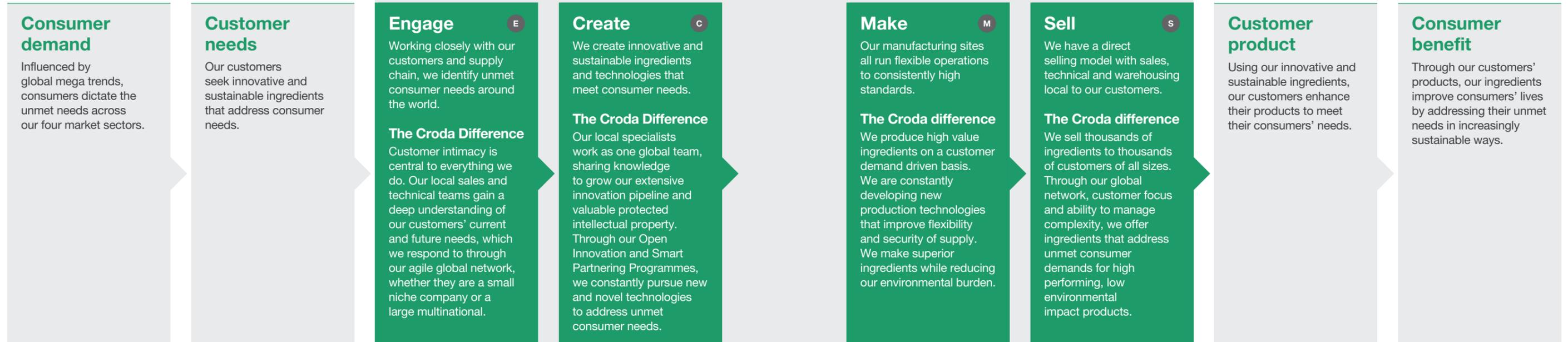
### Performance Technologies

Targeting faster growth technologies in Smart Materials and Energy Technologies and continuing to develop its presence in Home Care & Water Treatment.

### Industrial Chemicals

A small, diverse sector developing novel niche applications, selling co-streams and undertaking toll processing.

## Our value chain



**Consumer demand**  
Influenced by global mega trends, consumers dictate the unmet needs across our four market sectors.

**Customer needs**  
Our customers seek innovative and sustainable ingredients that address consumer needs.

## A powerful business model

**Engage <sup>E</sup>**  
Working closely with our customers and supply chain, we identify unmet consumer needs around the world.  
**The Croda Difference**  
Customer intimacy is central to everything we do. Our local sales and technical teams gain a deep understanding of our customers' current and future needs, which we respond to through our agile global network, whether they are a small niche company or a large multinational.

**Create <sup>C</sup>**  
We create innovative and sustainable ingredients and technologies that meet consumer needs.  
**The Croda Difference**  
Our local specialists work as one global team, sharing knowledge to grow our extensive innovation pipeline and valuable protected intellectual property. Through our Open Innovation and Smart Partnering Programmes, we constantly pursue new and novel technologies to address unmet consumer needs.

**Make <sup>M</sup>**  
Our manufacturing sites all run flexible operations to consistently high standards.  
**The Croda difference**  
We produce high value ingredients on a customer demand driven basis. We are constantly developing new production technologies that improve flexibility and security of supply. We make superior ingredients while reducing our environmental burden.

**Sell <sup>S</sup>**  
We have a direct selling model with sales, technical and warehousing local to our customers.  
**The Croda difference**  
We sell thousands of ingredients to thousands of customers of all sizes. Through our global network, customer focus and ability to manage complexity, we offer ingredients that address unmet consumer demands for high performing, low environmental impact products.

**Customer product**  
Using our innovative and sustainable ingredients, our customers enhance their products to meet their consumers' needs.

**Consumer benefit**  
Through our customers' products, our ingredients improve consumers' lives by addressing their unmet needs in increasingly sustainable ways.

## Our key assets

### Our stakeholders

- Shareholders
- Our people
- Innovation partners
- Regulators & trade associations
- Customers
- Suppliers
- Local communities
- Non-governmental organisations

[Read about our stakeholders on page 14](#)

### Culture

We are united as a global team through our culture, striving to be a fun, lively and exciting place to work, where everyone is treated fairly and equally. Our values and behaviours guide our progress, and as we constantly seek to evolve, we empower our people by recognising their commitment, creativity and innovation, affording them autonomy to develop themselves and our business.

### Innovation

Innovation is the lifeblood of our business. Success relies on our people's drive for continuous improvement, especially our technical and commercial experts as we focus on increasing our sales of new and protected products. We therefore strive to attract a diverse array of talent, develop our people and foster a can-do attitude. As we expand into faster growth markets, we are increasing the number of our innovation centres in locations where our people can get closer to our customers.

### Sustainability

Building on our bio-based raw material heritage, we are committed to sustainability across every aspect of our business. As a key differentiator, we will continue to invest in innovative product design and operations, working with our supply chain to minimise the negative impact we, and the ingredients we make, may have on the planet and maximise the positive benefits we deliver to improve lives.

### Partnerships

Through our Open Innovation and Smart Partnering Programmes with universities and small and medium enterprises, we identify unique opportunities that add value to our customers' products and satisfy the unmet needs of consumers. We are focused on innovation, with teams across our business dedicated to creating new and improved ingredients in collaboration with our customers.

### The value we add

<p><b>93.7%</b> of our Rising Star products, those expected to be a top 50 seller in the next five years, have a known sustainability benefit in use</p>	<p><b>32.8%</b> increase in ordinary dividend over the past four years</p>
<p><b>28.2%</b> of our sales in 2018 were from new and protected products</p>	<p><b>50.0%</b> of the suppliers we invited to connect with us through the EcoVadis supply chain risk assessment platform did so during 2018</p>
<p><b>82.7%</b> of our people received training during 2018</p>	<p><b>43.2%</b> of our employee volunteering time was spend on science, technology, engineering and mathematics activities</p>

# The importance of engaging with stakeholders

## Shareholders

As a FTSE 100 business, listed since 1964, we pride ourselves on maintaining open dialogue with our shareholders.

### Why we engage

We recognise that the way we operate to deliver long term sustainable value is different to our peers, so it is critical that we communicate regularly with shareholders to ensure that our strategy and market trends are clearly understood.

### How we engage

Our Investor Relations team regularly answers questions and presents to shareholders. We attend investor conferences and roadshows across the world and invite groups to visit our operations to showcase our expertise. Through our website, press activities and annual reports, we keep our shareholders up to date.

### Impact of engagement

We have a loyal shareholder base in the UK and North America and are seeing growth in Europe and Asia. With sustainability central to our strategy, we are also seeing growth in investment from ESG funds.

**38**

conferences and roadshows were attended in 2018 and we presented to

**139**

shareholders face to face

## Our People

We rely on the knowhow, creativity and entrepreneurial spirit of all our people. Our ability to innovate relies on a culture of openness and trust that fosters collaboration.

### Why we engage

As an information and knowledge rich business, we ensure that everyone communicates effectively through formal and informal networks. Management regularly share important news to align our strategic direction and behaviours.

### How we engage

Our informal networks are supported by a global email notification (Croda Now), local newsletters, our global publication (Croda Way), local cascade meetings, works councils, consultation committees, webinars and culture surveys.

### Impact of engagement

Employee engagement must be two-way. Our global culture survey in 2017 had a pleasing 80% response rate, and in 2018 we held Listening Groups across all levels of our organisation to gain a deeper understanding of our people's feelings towards our business. This has informed detailed action plans for all operations.

**60**

Listening Groups were held in 2018 and

**87.6%**

of our people have, so far, received an annual appraisal

## Innovation Partners

We focus on Open Innovation and Smart Partnering, working closely with our customers, academics, university start-ups and technology enterprises.

### Why we engage

We create new technologies to add value to our customers' products and satisfy changing consumer demand. We recognise that a collaborative approach to innovation can often accelerate time to market, reduce costs and create product differentiation.

### How we engage

Our global R&D teams build partnerships to combine internal and external expertise to focus on relentless innovation. We encourage partners to approach us with their innovations at external events and by holding seminars to present our capabilities and market opportunities.

### Impact of engagement

New partnerships have helped in supporting six successive years of new and protected product sales growth. In 2018, this included: acquiring marine biotechnology company Nautilus following an open innovation partnership; investing in the university spin-out Cutitronics; and developing a strategic partnership with bio-pharmaceutical company SiSaf.

**85**

ongoing projects in 2018 and over

**450**

Open Innovation partnerships established globally

## Regulators & Trade Associations

Operating in a regulated industry, we embrace complexity. Our people have the expertise and networks to foresee and respond to opportunities and challenges.

### Why we engage

As part of our commitment to transparency and trust, we keep informed of, lead and support legislative and regulatory change. The public voice and policy makers are increasingly demanding, so we anticipate and prepare for how issues, such as climate change, will impact our business.

### How we engage

Our people, particularly product and quality specialists, are members of national and international industry associations, where our voice is highly respected. We attend meetings with local government officials and emergency services to support community needs.

### Impact of engagement

We have been involved in establishing international best practice and producing guidelines and standards to enhance consumer safety and product quality. Working with suppliers and customers, we have led in the certification of sustainable palm oil derivatives.

**220+**

active memberships of industry associations, so in 2018 we attended over

**660**

meetings across the world

## Customers

By working collaboratively with our customers, we develop innovations to meet consumer needs and deliver thousands of ingredients directly to thousands of customers.

### Why we engage

As well as being as close to our customers as possible, we add value by sharing market insight to identify future opportunities, engage R&D and provide sustainable solutions to improve performance. By becoming our customers' indispensable strategic partner, we help them satisfy their consumers' needs.

### How we engage

Each of our market sectors has a dedicated research, sales and marketing team working closely with our customers' R&D, purchasing, regulatory and sustainability departments. In addition to face-to-face meetings, we attend industry exhibitions, speak at many conferences and invite customers to our own seminars and workshops.

### Impact of engagement

Our year on year sales growth, particularly the increase in sales of new and protected products, is testament to how our people work closely with our customers. Ultimately, success is seen where, together, we improve the lives of consumers through the wide range of environmental and social benefits our ingredients deliver in use.

**23,831**

face-to-face meetings with our customers in 2018 and we attended over

**100**

industry events

## Suppliers

Supply chain integrity is a critical part of our business as we rely on our suppliers to help meet our customers' needs.

### Why we engage

In the speciality chemicals industry many supply chains are long and complex. We must source from suppliers who share our standards of ethics and transparency. Our work to characterise key physical supply chains continues to give us a major opportunity to lead on traceability and sustainability.

### How we engage

Our strong partnerships with suppliers on a global, regional and local level enable us to deliver our extensive product portfolio. We also work with our supply chain through initiatives such as CDP (formerly Carbon Disclosure Project), Sedex and EcoVadis, and oversee compliance through our Group Ethics Committee.

### Impact of engagement

Through our work with CDP we encourage suppliers to look at their sustainability credentials, with the aim of reducing CO<sub>2</sub> emissions in our supply chain. Using the scorecard systems of Sedex and EcoVadis to identify potential risks, we have meaningful conversations to empower ethical supply chains and secure product supply.

**2,500+**

meetings with our raw material suppliers in 2018, in

**19**

countries

## Local Communities

We have a responsibility to operate safely and effectively within the communities we share and to give back to these societies.

### Why we engage

Strong local relationships are essential to maintaining our social licence to operate. Our education activities support local schools, whilst enabling our people to develop new skills; helping us recruit new talent in the future; and ensuring that we have a positive societal impact.

### How we engage

We focus on three key areas. We invite local community representatives to take part in our site committees and our local teams maintain open dialogue with government officials and emergency services. Our education programmes seek to raise the profile of science, technology, engineering and mathematics (STEM), and through our 1% Club we volunteer time to support local community needs.

### Impact of engagement

Many of our operations have regular two-way conversations with community representatives to discuss our activities and the local topics that impact us both. Our STEM work is helping to improve the learning and career prospects of local people, at the same time as enhancing our reputation and helping to develop our people.

**5,117**

hours of 1% Club time recorded in 2018, with

**43.2%**

of this used for STEM activities

## Non-Governmental Organisations

The consumer voice is getting more powerful and NGOs are increasing pressure on business to take greater responsibility for their impacts.

### Why we engage

As a business to business company, it is typically our customers who receive NGO attention, but we have a responsibility to support them. Many NGOs work collaboratively to meet shared goals, although we are also proactive to understand areas of their focus to protect our reputation.

### How we engage

Engagement on the ingredients we make and how we make them is increasingly important. Areas of focus include the environmental and social impact of our ingredients and operations, our approach to bribery, modern slavery, equal pay and the living wage. Our activities include meetings with NGOs and working with our customers, trade associations and regulators.

### Impact of engagement

Since 2009 we have been the voice in driving industry transformation to certified sustainable palm oil (CSPO). We have also recently supported the development of guidelines for compliance with the UN's Nagoya Protocol and in 2017 we became a signatory of the UK Living Wage.

**30+**

CSPO presentations and interviews were given by us in 2018, and our

**14**

manufacturing sites who handle 99% of our palm derivatives are RSPO certified

# How we work

Our business strategy and sustainability programme are informed by four mega trends, which are of most importance to us, our customers and their consumers.

**Megatrend: Transparency and trust**

Today's digitally empowered and environmentally aware consumers expect more from products and services than ever before. More choice and control, more visibility, more and quicker access to information and more robust sustainability credentials. Increasingly, these expectations apply to businesses as well as the products they deliver, with demands for ethical and social accountability and transparency as they take full responsibility for the impacts of their supply chains.

**Megatrend: Changing demographics**

With global population set to reach 9.7bn by 2050, the world will face significant challenges in the years to come. As people live longer, demand for medical and personal care products to meet their needs and desires will continue to grow. Alongside this, many countries are reporting a growing 'middle class', with more people able to afford a more varied, protein-rich diet and money to spend on preventative as well as curative health care.

**Megatrend: Fragile world**

The continuing accumulation of greenhouse gases in the atmosphere is believed to be the main cause of global warming, with the predicted result that sea levels will rise by at least 30cm by the end of the century, along with more frequent extreme weather. Both affect food and water supply just when the growing global population needs it most, bringing increased international pressure to restrict climate change and use of the world's scarce natural resources.

**Megatrend: Digitalisation and interconnectedness**

Businesses must understand how digitalisation is transforming the behaviour of their customers and address the impact of how technology is making it easier for the voices of these stakeholders to be heard. Meanwhile, significant advances in digital technology offer businesses more opportunities to ethically gather and analyse data and turn it into knowledge.

Read more about our response to these mega trends in our 2018 Annual Report & Accounts pages 2 to 9.

**ISO 26000:2010**

We apply ISO 26000 to provide additional guidance and to help us drive the continual improvement of our sustainability programme. In 2018, we began implementing agreed actions from

the Bureau Veritas independent review of our alignment with ISO 26000, many of which are part of ongoing projects within our different businesses and functions. Priorities included updating our materiality assessment and further

enhancing stakeholder communication. Recognising that key to our success is continued employee engagement, in 2018 we published an internal Sustainability Handbook describing the drivers behind our programme.

**Materiality**

With the mega trends providing a high level view of the challenges and opportunities we face, our Material Areas are a list of those activities that matter most, without which we would not have a viable business long term i.e. a sustainable business. Underneath these broad areas sit many more material issues, the detail behind each Material Area.

began the review process by listing all issues relevant to our business and our sustainability programme. To help us in this exercise we reviewed the Global Reporting Initiative (GRI) indicators against which we report and carried out a peer review of materiality.

Our final list comprised over 200 issues, which we then grouped into Material Areas. This process highlighted coverage gaps within our original Material Areas, as well as some that covered many issues that would be better split into further distinct Material Areas. Therefore, we have moved from our original 10 Material Areas to 14. These were agreed upon at our Sustainability Conference in July 2018 (p27).

The definitions for all of our Material Areas can be found on page 36.

**Stakeholder engagement**

Having agreed on the new Material Areas, we needed to rank their importance to our business. This was done through our Sustainability Steering Committee, which represents our numerous disciplines and global presence.

In order to complete the matrix, external stakeholder engagement was carried out with stakeholders asked to rank our Material Areas in the order they felt we should prioritise and manage them as a responsible business. Sustainability and communication specialists, Corporate

Citizenship, carried out these interviews with representatives from our different stakeholder groups, covering customers, investors, suppliers, and industry and academic experts. Interviewees were from all global regions to fully reflect the geographic spread of our business.

Our Materiality Matrix shows the positioning of our Material Areas following internal and external stakeholder engagement. It represents the top right-hand corner of a much bigger matrix that includes many other areas not considered as material to our business over the next three to five years.

We have divided the top right quadrant of the matrix into a two by two plot, with most Material Areas falling into the top right or bottom left section. Due to the sample size used during stakeholder engagement, further differentiation between the exact positioning of the Material Areas is not indicative of their true importance and so dividing into three separate categories gives more meaning to the results.

The four Material Areas marked as squares are our differentiators, the things that really drive our business: Climate Action, Product Innovation, Product Stewardship and Customer Intimacy. It is pleasing to see an alignment between our and our stakeholders' views of the importance of these issues. The Our People Material Area was ranked slightly lower by external stakeholders than ourselves. Feedback from the interviews was that stakeholders felt we already managed this area and the corresponding issues effectively.

**Stakeholder feedback**

In addition to the ranking exercise, the stakeholder interviews highlighted some interesting points. The feedback regarding their relationship with us was overwhelmingly positive, with stakeholders regularly using the terms 'innovative' and 'natural' unprompted. There was a sense that although we are a FTSE 100 company, we work with stakeholders as though we are an eager and nimble start-up.

**"It is not entirely unknown for interviewees to tell us that they like our client. What was surprising in Croda's case was the degree of warmth expressed and the virtual unanimity of the view."**

**Peter Truesdale, OBE**  
Corporate Citizenship

It is reassuring to receive such positive feedback and endorsement of our stakeholder relationships and customer intimacy, although we will always endeavour to continually improve and increase our stakeholder engagement.

**For more details on our stakeholder engagement activities see page 14.**



# Our Approach continued

## Reviewing the SDGs

In 2018, our Executive Committee worked with the Cambridge Institute for Sustainability Leadership to develop our sustainability strategy to 2030 and achieve alignment with the United Nations Sustainable Development Goals (SDGs). Following an assessment of the relevance of the SDGs to our business, we divided the SDGs into two categories.

The 'Drivers' are SDGs that we directly contribute to through our strategy and through the sales of our products across all sectors. For example, through the sustainability benefits our products offer in use or our emission reduction targets. The 'Fundamental' SDGs are ones that we contribute to through our day to day business activities or indirectly through our philanthropic activities, so while they are important, they do not drive our strategy. Goal 17 sits between these two layers, as nearly all our contributions are dependent on partnerships between ourselves and other stakeholders.

## Material Area mapping

From this work, we carried out an exercise to map the SDGs against our Material Areas and we identified four where we contribute to many of the driver SDGs through 'The Croda Difference', as seen in the chart opposite: the circularity is an important feature as each Material Area is linked to the others.

**Product Innovation** is hugely important to us and feeds into **Product Stewardship**, as the products we design influence the raw materials we source and impact on the land use required to grow our bio-based raw materials. Product Stewardship also captures our regulatory work to ensure that the products we supply are safe and that we can provide customers with all the information they need. **Customer Intimacy** goes much further than this to ensure that we can help our customers fully realise the sustainability benefits our products deliver in the end application.

We particularly focus on offering products that increase efficiency and save energy, avoiding emissions and helping our customers to combat the effects of climate change through **Climate Action**. Our activities to mitigate the effects of climate change, through the reduction of our own emissions, moving to new energy-efficient technologies and increasing our use of biotechnology, all heavily influence our **Product Innovation**. Read more about our activities in this area in 'the Croda Difference' (p20).

**Our People** are of vital importance to us so this Material Area has been placed in the centre of our diagram. As it is our people who have the relationships with our other stakeholders, surrounding them within the 'How We Engage' section are the Material Areas and SDGs we approach through these activities (p25).

We have categorised several of our Material Areas as 'Doing the Right Thing' (p30). These are required to ensure that we have a sustainable business, operating safely and responsibly and providing quality products to our customers. This strong foundation allows us to drive our strategy forward.

## 2030 business strategy

By identifying our current contribution to the SDGs, we can begin to visualise how we can drive our strategy to increase our contribution towards these global goals, unlocking new business potential along the way.

We are currently developing KPIs, with associated stretch targets for each of these Material Areas based on our assessment against the SDGs. Alongside this, we are looking at how we can contribute to some of the 169 targets that sit beneath the 17 SDGs. This will help us to identify where our activities have a measurable impact and help us find ways to increase our positive contributions to the SDGs.

## United Nations Sustainability Goals

### Drivers

Those we directly contribute to through our strategy



Where our partnerships have an impact

### Fundamentals

Those we impact through our activities



## Material Areas



## Telling our sustainability story

Our sustainability programme is divided into:

- The Croda Difference** p20: These differentiating Material Areas are the focus of our sustainability programme.
- How we engage** p25: Material Areas focusing on people, brought together as they are at the centre of everything we do.
- Doing the right thing** p30: The activities covered under these Material Areas enable a sustainable business.

# The Croda Difference

From climate change and globalisation, to feeding and caring for an ageing population, we have a key role to play in ethically and responsibly meeting the global challenges of the future. A major differentiator from our peers is our heritage of using bio-based raw materials. Lanolin, the very first product we made, is a natural and sustainable ingredient created as a result of processing sheep fleece for textile industries. Over 90 years later, 61% of our raw materials come from natural, bio-based sources.

By purposefully adapting to reflect changes in our operating environment, we have divested ourselves of many capital intensive, environmentally challenging businesses, particularly those with a higher dependence on fossil feedstocks. Our focus today is on delivering more benefit from less input, making a positive impact and further futureproofing our business with our capital and carbon light technology and intellectual property rich acquisition strategy.

Our overarching objective is to continually increase economic and shareholder value while reducing our environmental impact. This reflects our ongoing determination to constantly adapt and reshape our business, so that wherever we operate in the world, and whoever we serve, we make a positive difference, The Croda Difference.

## Highlights

**61%**

of our raw materials were from bio-based sources in 2018, an industry leading position

**A-**

CDP rating for Forests in 2018

**700,000**

tonnes of GHG emissions were avoided through the use of just four of our product families in application during 2018

## Product Innovation



Key to The Croda Difference is product innovation. Through close collaboration with our partners and customers, we design new products that help them meet their ever more demanding performance and sustainability needs. Our continued innovation in these areas is driven by our understanding of the intrinsic sustainability of our products, using techniques such as Life Cycle Assessment (LCA).

We continue to focus attention on the sustainability of our raw materials and seek to use bio-based instead of fossil-based feedstocks wherever possible. For us, the sustainability credentials of our raw materials extend to carbon footprint, land use, social accountability and equitable sharing of benefit in supply chains. During 2018, our raw material consumption comprised 91% organic and 9% inorganic origin. Within our organic origin raw materials, 65% were bio-based, coming from renewable crops and biotechnology, and 35% non bio-based.

Since 2012, we have measured the compliance of our new products with the 12 Principles of Green Chemistry (Anastas, P. T.; Warner, J. C.; Green Chemistry Theory and Practice, Oxford University press, New York, 1998). Our innovation pipeline delivered 57 new product launches in 2018 across our

businesses, with an average score of 11 out of 12 of the Green Principles, together with 65% average bio-based organic content.

### Life Cycle Assessment

During 2018, we have mapped the steam and electricity distributions across some of our manufacturing sites to gain a greater understanding of the energy requirements of different processes. This data is used in our cradle-to-gate LCA calculations for new and existing products and will help us to evaluate which processes or chemistries have the greatest impact on our product carbon footprints. LCA data will also help to support capital expenditure proposals for investments in renewable energy generation or novel energy efficient processes. The mapping of our manufacturing sites will continue into 2019 and beyond.

2018 also saw a focus on the LCA calculations of our rapeseed oil derived products, following verification of the carbon sequestration figure for our purchased rapeseed oil. On leaving our gate, some of these products are still carbon-negative, having removed more CO<sub>2</sub> from the atmosphere during the growth of the raw materials than has been emitted during their manufacture.

### External recognition

In January, we were awarded EcoVadis Gold Status for the fourth time, confirming

our place in the top 1% of all chemical companies assessed by EcoVadis and ranking as 'outstanding' in environmental and labour practices.

In May, we received the EU LIFE 'Best environmental' award for our innovative glycerine fermentation project at our Gouda manufacturing site in the Netherlands. This project has resulted in a reduction in their greenhouse gas (GHG) emissions of around 25%, due to the partial replacement of natural gas with bio-gas created from crude glycerine, a by-product of the major processes on the site.

In June 2018, recognition for our focus on carbon management came when we won the UK Chemical Industries Association 'Low Carbon Award'. Success in this area came as a result of our stretching carbon emission intensity reduction target, which is underpinned by continued investment in increasing energy efficiency and moving to more non-fossil energy sources across our operations.

In December, we were voted most admired company in the British chemical sector for the second year running, as well as being named third most admired company in Britain. The awards, determined by peer review, analysts and City commentators, recognise key factors critical to business success across 12 categories, including quality of management, financial soundness and quality of products and services.

### Product Innovation: Nautilus Biosciences

Sustainably using the sea's resources, known as Marine Biotechnology and Blue Technology, is inspiring us to produce new ingredients that will contribute to meeting the global food and health care challenges while minimising the environmental impacts of supply chains. Until recently, the almost limitless potential of these bio-resources remained largely untapped. However, our 2018 acquisition of Nautilus is applying scientific knowledge to living microorganisms, such as bacteria and fungi, from marine sources in order to develop a host of new ingredients and production processes.

Unlike compounds extracted from petrochemically derived feedstocks, or plants and field crops that can result in land use change and deforestation, the harvesting of marine bioresources by Nautilus has no impact on the

environment in which they are found. As living, growing microorganisms, only a few microscopic cells are required to produce many tonnes of the bacteria or fungi that make the desired end product.

Nutrients, including sugar and amino acids, that support the growth of microorganisms in closed, controlled tanks are sustainably derived either from existing production processes where there is global excess, or from by-products of other manufacturing, such as brewing and paper production. Moreover, because the process uses living organisms, conditions are milder, fewer chemicals are used and it is less hazardous than many traditional chemical processes.

The number of compounds from marine organisms found in personal care products, agrochemicals and medicines



Robotic technology at Nautilus

will increase rapidly over the coming years. Their discovery by Nautilus and production by Croda through low impact, biological manufacturing processes will play a significant role in marrying corporate responsibility goals with consumer sustainability demands and lead to new, high value commercial opportunities.

# The Croda Difference continued

## Product Stewardship



From the sourcing of our raw materials right through to the delivery of a safe product to our customers, we are committed to responsible stewardship at every stage of the supply chain, ensuring that all relevant legislation and registrations are met.

### Sustainable palm oil

At Croda, we prefer to use bio-based feedstocks because they can deliver a lower carbon footprint than fossil-based alternatives. In all cases, natural feedstocks are sourced from crops that are well established and widely grown; in fact, in 2018 we measured the total land use footprint attached to our major crop-based raw materials. However, the potential

environmental issues of deforestation and loss of biodiversity surrounding palm oil production make end-to-end engagement in supply chains vital to ensure transparency and sustainable practices throughout.

Attempting to substitute palm derivatives in the manufacture of ingredients may have superficial marketing appeal, but it is undesirable for the following reasons:

- Palm is the most efficient oil crop, and attempting to substitute its use with lower yielding alternatives could potentially exacerbate the environmental issue of deforestation as growers require more land to achieve the same yields from possible alternative crops
- NGOs and customers do not support palm oil substitution; rather, they advocate taking responsibility for supply chain integrity and supporting sustainable palm

### Supply chain mapping: Sourcing areas

Proportion of sourcing

● 0% ● <1% ● 1-5% ● 5-10% ● 10-20% ● >20%



- The personal care sector uses so many different palm oil derivatives (they are found in 70% of the world's personal care products) that it would not be feasible to substitute them.

All major personal care consumer companies are members of the Roundtable on Sustainable Palm Oil (RSPO) and have made enormous progress in adopting sustainable supply chains. Despite being such a low-volume consuming industry (personal care consumes just 2% of the world's palm oil output), its influence has been huge, effecting positive change beyond the boundaries of its own sector.

While palm derivatives represent less than 20% of our raw material volumes, we have continued to lead the ingredient supply industry in taking responsibility for our supply chains and the transformation to sustainable palm derivatives. We fully support the RSPO, with all of our relevant manufacturing sites processing >99% of our global palm derivative volumes RSPO Supply Chain Certified.

In 2018, we further strengthened our commitment by working with an independent organisation to confirm and verify the transparency of our supply chains. This work involved collecting data from major suppliers, responsible for 80% of the volume of palm oil derivatives we use. We have identified the mills associated with this volume, including location and GPS coordinates. With 99% of the volume originating from Malaysia and Indonesia, ongoing risk assessment of the sourcing areas will ensure progress towards fully sustainable and deforestation-free sourcing by 2020.

## Customer Intimacy



Inclusion of our products in customer formulations can offer many kinds of benefits in use: social, economic and environmental, for both our customers and their consumers. For new products launched during 2018, 67% have a known sustainability benefit in use. Last year, we began to quantify the avoidance or reduction of GHG emissions associated with the use of our products by our customers or consumers in the end application.

This work has been driven through the formation of a Product Sustainability Sub-Group of our Sustainability Steering Committee, bringing together representatives from all of our businesses who each have close relationships with our customers and an understanding of the applications our products are used in. Although we have thousands of product and customer combinations, we have already uncovered large emissions savings through specific case studies.

### Perfad™ friction modifiers

Included at very low levels in engine oils, we have proven that our friction modifiers can increase vehicle fuel efficiency by 1%. Just 1 tonne of our Perfad friction modifiers can be used in 50,000 vehicles, so assuming an average distance of 20,000 km between oil changes, the avoided emissions associated with the increase fuel efficiency of these vehicles equates to more than 1,700 tonnes of CO<sub>2</sub>e.

### Coltide Radiance™

Our studies have shown that including Coltide Radiance at low levels in fabric softener means clothes can be washed up to twice as many times before fading or becoming bobbly. Just 1kg of Coltide Radiance is enough to be included in the wash of 195kg of clothes throughout their lifetime. If we assume that 10% of clothes are disposed of due to washing damage, then this 1kg of Coltide Radiance will have avoided the manufacture of 19.5kg of cotton and polyester clothes, avoiding over 450kg CO<sub>2</sub>e emissions and saving 150,000 litres of water.

## Customer Intimacy: Plant Impact



Our foliar sprays enable 100% sustainably produced cocoa

We acquired a business called Plant Impact during 2018, an organisation that develops chemical biostimulant foliar sprays and seed treatments that can help farmers to sustainably increase output. This relatively new technology uses novel chemistry that works with nature to help the plant efficiently direct more of its resources into creating yield and increasing quality. This method of working in harmony with plant responses helps to mitigate the effects of stresses, such as variations in climate. For example, periods of higher than usual temperatures at key crop growth stages can have a devastating effect on yield.

As well as increasing overall yield for farmers, the quality improvement gained from using chemical biostimulants ensures that a larger proportion of the crop is suitable for sale, reducing waste. Safe to use and environmentally non-toxic, the result is productivity and profit for farmers, without the need to use more land. Extra water or fuel is also not required with these chemical biostimulant applications as they are compatible with traditional farming treatments, so can be applied together.

In West Africa, small-holder cacao growers using these foliar sprays have seen an average yield increase of 40% over the past four years. The technology is now being seen by several major cocoa processors and chocolate manufacturers as a key part of their well-publicised commitments to create 100% sustainably produced cocoa.

## Climate Action



The need to address society's impact on climate change through a global reduction in GHG emissions is a hugely important aspect of our strategy and 'The Croda Difference'. Our work in this area is driven by our own operational emissions reduction targets, alongside an understanding that our impact on emissions also encompasses our upstream and downstream supply chain, which includes our high usage of bio-based raw materials. This is in addition to the emissions avoided through the performance benefits our ingredients offer when in use by our customers and their consumers.

### Our carbon strategy

In this context, we use the term 'carbon' as shorthand for carbon dioxide (CO<sub>2</sub>). CO<sub>2</sub> is the main source of GHG emissions, the key contributor to climate change. Climate change is a major threat to global sustainability and we are determined to reduce the contribution we make to GHG emissions in the atmosphere by several means:

- Reducing our energy use overall by investing in more energy efficient processes, such as biotechnology and

novel plant equipment, and running them more efficiently

- Using a lower percentage of fossil fuels to meet our heating requirements. For example, reducing our current reliance on burning natural gas as a heat source by using renewable electricity for heat production and re-use through heat storage and recovery
- Purchasing electricity only from non-fossil sources, which is now available in an increasing number of countries in which we operate
- Using renewable crops that have absorbed CO<sub>2</sub> from the air as raw materials
- Selling products that when included in customer formulations reduce the CO<sub>2</sub> emitted in use
- Encouraging our suppliers to measure the CO<sub>2</sub> emitted during manufacture of our raw materials and share their plans for reduction
- Using internal carbon pricing to encourage investment in carbon reduction capital expenditure projects.

Through a combination of these initiatives, our strategy is to reduce GHG emissions associated with our burning of fossil fuels and purchased energy by 80% by 2050, compared to a 2006 baseline, and by 50% by 2030. At the end of 2017 we calculated



Brazil has the greatest biodiversity in the world

## Product Stewardship: Biodiversity as an opportunity for partnership

Brazil has the greatest biodiversity in the world, representing 20% of the total species of the planet (water and land) and in 1998 the country ratified the United Nations Convention on Biological Diversity. The Convention has three main goals: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources.

We are developing ingredients using sources derived from Brazilian biodiversity and the greatest challenge of regulatory compliance in biodiversity

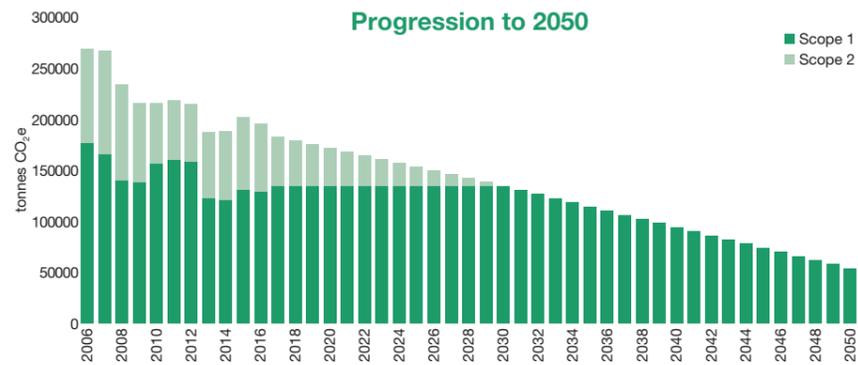
is that each country defines the mechanisms of regulation. We have a responsibility to assure our customers of the compliance of our products and our Product Safety and Regulatory and Affairs (PSRA) department has registered more than 70 products with the Ministry of the Environment. This enables our customers to register their final products using our ingredients from these sources. The complex process was achieved through many meetings and training sessions with our customers, receiving their recognition and acknowledgement of us as a key supplier for new product developments.

## The Croda Difference continued

### Climate Action continued

that our emissions had already reduced by 32% from 2006.

The graph shows the forward projection of our GHG emissions to 2050 and the contribution of scope 2 carbon (mainly emissions associated with the generation of our purchased electricity) and scope 1 carbon (almost all natural gas). The targeted reduction is in line with UK government and European Council targets and broadly compatible with the UN's Paris Agreement or COP 21, as well as supporting SDGs 7 and 13.



#### Raw material scope 3 models

To understand and report our scope 3 emissions with ever-greater accuracy, in 2017 we began calculating carbon footprints for four of our largest raw material streams: ethylene oxide, rapeseed oil, woolgrease and fish oil. Engaging with suppliers, working with Carbon Smart and using literature data, we mapped the processes

involved in our upstream supply chain before our raw materials reach our factory gates. The product impact tools developed mean that for a given tonnage of raw material purchased we can now calculate the associated scope 3 GHG emissions.

The data gathered has been used in the calculation of our own product carbon

footprints and provides us with much more information as to where the largest carbon impacts lie within our raw material supply chains. This can help inform decisions around raw material choice in new product development. In 2018, we have continued this work and developed three further product carbon footprints for key raw materials: stearyl alcohol, stearic acid and sorbitol.

#### Sustainability at our Cowick Hall headquarters

To reduce our GHG emissions and our reliance on fossil fuels at our global headquarters in the UK, we have formed a Cowick Sustainability Steering Committee and worked with several energy solutions companies to decide the best pathway for our journey towards carbon neutrality.

The result is that we will now invest in on-site sub-metering, which will allow us to accurately measure the energy consumed by each building, including our laboratories, to define peaks in energy consumption at different site locations and analyse seasonal variations. This sub-metering will gather

vital information to inform our strategy to go carbon neutral in the future. We aim to directly link the data collected to display screens across site, allowing employees and visitors to see the energy they are using in real time. This visibility of data is aimed at triggering behavioural changes to energy consumption and is an important initial step towards reducing our GHG emissions.

In addition to this work, the newly formed Cowick Biodiversity Committee has worked with an external specialist to develop a woodland walk on-site. The project involves employee volunteers who are preparing the walkways and who



Cowick Hall allotments

will also be responsible for looking after new bird feeders, along with implementing many other biodiversity initiatives. A number of employees have also tended to their own allotments within the site's walled garden and grown some impressive fresh produce.

### Our People



At the heart of our business, and The Croda Difference, are our people. We want our people to enjoy working for us and to enjoy the work that they do, forging long, rewarding careers and fulfilling their potential. We work hard to create a stimulating, energetic and fun place where everyone can thrive, offering training and development opportunities to support everyone's goals. We do this because

we recognise that our people's can-do attitude, family spirit and customer focus is at the heart of what makes Croda different and a true source of our competitive advantage.

Following extensive work in 2018 to refresh our values, the philosophy that drives our behaviours 2019 will see their relaunch to the business. These values focus on togetherness; working as one global family, building a culture of trust and transparency and valuing everyone's unique contributions. They will speak to our philosophy of taking care

of the communities that we serve, the environment and each other.

Our values will also reflect our desire to relentlessly innovate across everything that we do, so that we can serve all our customers in an agile and effective way. These values are a continuation of the cultural journey that we have been on since we began in 1925, though we hope that this rejuvenation will help us meet the challenges of the businesses' 2030 goals, and enable us to continue to attract and retain amazing people.

## How We Engage

Our people are at the heart of everything we do at Croda, fostering close relationships with our customers, our local communities, our suppliers and other stakeholders. Our culture provides a fun and inclusive working environment to allow the creativity and innovation of our talented employees to thrive. We understand the business value of diversity of thought, and in 2018 we established a Diversity and Inclusion Steering Committee: a global network of ambassadors to promote best practice and activities in this important area.

We look to continually train and develop our employees, monitoring global training hours annually. We are a knowledge rich business and we pride ourselves on our relentless innovation. Careful knowledge stewardship is required to ensure that we retain all of the business-critical knowledge that is held across the organisation. Digital tools are being developed to help us here, along with effective succession planning.

There is an increased need for transparency within our supply chains, and we must partner with our suppliers to achieve this. In 2018, we joined the CDP Supply Chain initiative, engaging

with our largest suppliers to encourage them to set greenhouse gas (GHG) emissions reduction targets.

Our 1% Club programme continues to be successful, with 5,117 hours spent in our local communities volunteering in 2018, many of these in schools encouraging children to study science, technology, engineering and mathematics (STEM) subjects to help develop the next generation of scientists.

#### Highlights

**82.7%**  
of our people received training during 2018

**5,117**  
employee 1% Club hours volunteered during 2018

**50%**  
of the suppliers we invited to connect with us through the EcoVadis supply chain risk assessment platform did so during 2018

# How We Engage

## Our People



Our People are at the heart of everything we do and are responsible for the continued growth and success of our business. To make sure they are fully supported to achieve their potential, and to continue delivering against our business strategy, in 2018 we conducted a review of our Human Resource (HR) strategy and updated our people goals as follows:

- Continually improve and promote the health and wellbeing of all our employees
- Protect and promote the Croda culture to ensure it continues as a source of our competitive advantage
- Provide meaningful career development and training to enable everyone at Croda to fulfil their potential
- Attract talented individuals that bring knowledge and experience, and enrich our culture
- Increase diversity and create an inclusive environment, so that every person has opportunities to progress and to give their best
- Ensure the retention of skills and knowledge within the business to protect and grow our pipeline of innovation and technology enhancements
- Develop and maintain positive relationships within the communities in which we operate, in order to be an ambassador for the chemical industry and a good citizen.

### Global Employee Culture Survey

In 2017, we launched our first Global Employee Culture Survey, which was completed by 80% of employees around the world. The survey was designed to test the elements of our culture that are important to us and that we believe set us apart from our peers. From this, and the Listening Groups that followed, several global as well as local themes and actions were identified, which we have continued to implement and deliver locally in 2018: the status of actions has been tracked using a traffic light scorecard system with all our major sites showing a 'green' status.

As a result, a number of innovative and meaningful changes have been made at a local level:

Improvement required	Actions taken
<b>Provide more options for flexible working</b>	All locations have been tasked with finding ways to do this. For example, all North American manufacturing sites have implemented 'summer hours' to prolong weekends over the summer, and our Campinas manufacturing site in Brazil has implemented a new flexible working policy extending flexible hours and home working.
<b>Create a fun environment with sports and social events</b>	Many locations have implemented or extended sports and social events. For example, our operations in China have set up a sports club, and in North America all manufacturing sites have introduced new social activities including summer picnics and trips to watch baseball games.
<b>Better recognise individual contribution</b>	Our team in Asia have created and implemented a recognition menu; a compilation of many ways a manager can recognise a 'job well done'. Also, our Atlas Point manufacturing site has implemented an Employee of the Month programme.
<b>Better definition of career opportunities and development</b>	We have developed career paths for several of our functions that will help employees identify ways to develop and move their careers forward.
<b>Better sharing of information and knowledge</b>	We have seen an increase in the establishment and use of Global Best Practice Teams, as well as the extension of management 'walk arounds' at many sites.
<b>Better management of change</b>	Our Chocques manufacturing site in France has led the way by implementing specific training for leaders in change management.

### Performance and development

In 2018, we introduced a new Performance Management System as part of a wider implementation of a new integrated global HR system called 'MyCroda'. During 2018, 4,020 employees started using this system, and over 95% entered their objectives into the system. So far in the first two months of 2019 87.6% of those had an appraisal to recognise their achievements and identify training needs. We have also introduced a complementary new Learning Management System, which will greatly increase the number of online training courses available across the business in multiple languages.

To support the delivery of our suite of development programmes for managers and aspiring leaders, in 2018 we also partnered with Ashridge-Hult Business School which is helping us update and expand the content within a number of the programmes we offer.



### Our People: Sustainability Conference

In July 2018, our annual Sustainability Conference was held over two days in York, UK, and attended by the largest number of stakeholders to date, with members of the Executive Committee joining along with the Sustainability Steering Committee, business heads and other senior managers from Asia, Latin America, Europe and North America.

The main objectives were: to introduce and evaluate different methodologies for measuring and reporting on our net sustainability impact; to review our Material Areas and Materiality Matrix (see page 17); and to update attendees on corporate strategy and progress. The event was launched with a keynote speech from our Group Chief Executive, Steve Foots, including an update on the work the Executive Committee has been doing with the Cambridge Institute of Sustainability Leadership (CISL) around our 2030 strategy to contribute to the United Nations Sustainable Development Goals (SDGs) (p19).

Several external guests also attended, including:

- PRé consultants, who introduced Social Life Cycle Assessment to demonstrate how we could evaluate the social impacts of our products. Founder Mark Goedkoop commented: "We really enjoyed the open atmosphere and constructive debate, as well as the high ambitions"
- Route2 introduced the Total Impact Value Assessment methodology and Gordon Rogers, Head of Sustainability at Yorkshire Water, presented on how they had integrated this methodology into their sustainability reporting in order to quantify the net positive impact they have on society
- Key customer DSM provided an insight into how an internal carbon price works for their organisation.

## Diversity & Inclusion



As a truly global company, it is important that, at Croda, we provide an inclusive work environment that ensures everyone, whoever they are and wherever they are in the world, can be supported to give their best.

A key issue for us, and many of our industry peers, is the underrepresentation of women in senior positions. Improving this is a primary objective of our business. To assist with this important goal, and to see how we can better provide the right environment and support for diversity in our teams, in 2018 we established a full-time role of Diversity and Inclusion Manager and set up a Diversity and Inclusion Steering Committee.

The role of the Steering Committee is to provide a global network of ambassadors for diversity and inclusion (D&I) who will shape our work, share ideas and best practice and help to promote activities in this area. The Committee meets on a quarterly basis and is made up of representatives from our five regions and three core market sectors.

The first set of actions for the Steering Committee was to approve a set of D&I principles and to review the combined action plans for the short term. For 2019, we will be establishing a resource website, hosted on our intranet, which will be available to all employees. The website

will look to raise awareness, highlight training opportunities (using the newly implemented Learning Management System), provide tools and give guidance on areas such as unconscious bias and inclusive behaviours. We have already started work in this important area at several of our operations:

- Our Chocques manufacturing site in France held their first Diversity Day, attended by over 100 employees and featuring a series of short sketches presented by professional actors on themes of gender equality, disability, cultural and social diversity
- Our UK operations have implemented balanced short-listing, which will aim for 50% female and 50% male candidates at our recruitment events. Where this hasn't been possible, our teams are looking to understand why and what can be done to address this
- In Asia, each operation conducted an awareness session that included a diversity self-assessment review. This session will now form part of our new starter inductions
- Many of our employees have been involved in activities to encourage women of all ages to consider STEM (science, technology, engineering and mathematics) subjects and careers
- We have added aspects of D&I into our Management Development Programmes for roll out in 2019, including fairness and equality, cultural awareness and embracing different working styles and behaviours.



# How We Engage continued

## Knowledge Management



Innovation is a key strategic pillar for us at Croda. It is our internal knowledge of our technologies, the ingredients we produce and how they are produced that gives us a competitive edge; therefore, protecting and retaining this knowledge is very important to the sustainability of our business. In support of this, we have developed career paths that provide development, not only in traditional leadership roles, but also for technical and scientific specialists. This will ensure that we provide our employees with fulfilling career opportunities outside the traditional career ladder. These career paths will be implemented in 2019.

In addition, we are integrating knowledge retention tools and techniques within our mainstream leadership programmes and, in 2019, we will include a specific module in our Management Essentials Programme.

Finally, we have ensured that the security of information and knowledge is maintained, and we are committed to achieving zero breaches of information from our IT systems. Work was completed to ensure that we were prepared for the EU GDPR legislation as well as ensuring that, on an ongoing basis, every protection is provided to our current systems.

### Knowledge Management: Global product assurance

Our Product Assurance Department (PAD) handles daily customer requests for information relating to our products. With thousands of products made all over the world using thousands of raw materials, sometimes each one from multiple vendors, making sure that we have accurate and easily accessible up-to-date information stored can be a challenge.

In 2018, we launched a global project to ensure that this product information can be immediately located and passed on to customers when requested. We began by identifying 169 different data points for each product covering areas such as regulatory, health and safety, impurities, origin, carbon and water footprint details.

## Community Education & Involvement



We recognise our responsibilities to the local communities in which we operate as well as the wider societies of which we are a part. A key Community Education and Involvement initiative is to allow employees to dedicate up to 1% of their work time volunteering within their local community through our 1% Club. In 2018, our employees donated 5,117 hours of 1% Club time, with 43.2% of this time used to carry out science, technology, engineering and mathematics (STEM) activities, either through visits to local schools or school events. Several of our operations have also opened their doors to students, offering insight and information on what it is like to work in industry. These STEM activities also support our business objective of developing the scientists of tomorrow who we will depend upon for our future success.

Some examples of how we have worked within our community are:

- Students from the local area at our Nettetal site in Germany were involved in office and warehouse tours, followed by some hands-on activities to see our ingredients in action



Students visiting our Mill Hall site

- At our Mill Hall manufacturing site in North America students studying Environmental Law and Policy were given an opportunity to learn about how an industrial facility manages environmental risks
- Members of the Croda Middle East team and their families recently participated in 'Dubai Cares'. The aim of the programme was to provide children and young people with access to quality education, particularly in developing countries
- In the UK, one of our employees based at our Cowick Hall headquarters spent two days of their 1% Club time at the charity Daisy Chain, packing and readying donated toys and items for the charity's May Day Family Fun Day. The charity provides support, activities and educational placements to children and adults with autism.



Packing donated items for Daisy Chain Family Fun Day

### Rimba Raya project

In 2018, we continued our support of the Rimba Raya Project in Kalimantan, Indonesia, through the purchase of carbon offsets to render the manufacturing process of our Beauty Actives Business carbon neutral.

Rimba Raya is a biodiversity reserve with a 30 year lifetime that is protecting a large area of tropical rainforest, previously lined up for conversion to palm oil estates. The revenue being generated through purchased offsets is being used to create viable community based employment

alternatives to deforestation. There are also other social development benefits such as the distribution of clean water filters, and establishing community libraries to support literacy skills and education in environmental conservation.

Introduced in 2017, this is our first carbon offsetting project and while we are currently offsetting a relatively small proportion of our emissions, this project has helped to show what can be done. It has also provided scope for further offsets across other parts of our business, complementary to our internal carbon reduction projects and community investment activities.



Rimba Raya funded community solar panels

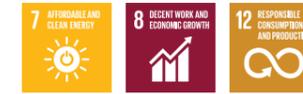
### Supplier Partnerships: Crodaron® Green Caviar

Our Crodaron subsidiary has partnered with a supplier in the Philippines to ensure the sustainable sourcing of a dried algae called *Caulerpa Lentillifera*, which is the key raw material in their Green Caviar ingredient. The project also aims to help develop this Philippine market.

The algae is cultured in a pond to remove any soil impact and where it can be better controlled. After harvesting, the first sorting is carried out in the pond to give the optimal quality of the algae, and the low-impact drying process uses the natural power of the sun and requires no man-made energy. All of these steps, along with packaging and shipping, are locally managed by algae farm employees.

Our collaboration is based on fair practices. We have direct contact with the supplier and have put in place a five year contract with guarantees about price and minimum order quantity. The contract revalorises the algae price in comparison to the food industry (+60%) and we pay for 100% of the order before the harvest to allow the supplier to efficiently conduct their business.

## Supplier Partnership



We build strong relationships with our suppliers, viewing our supply chains as an extension of our own operations. Through our practice of sustainable procurement, we choose to purchase in a way that favours the suppliers and raw materials that create positive outcomes for our planet and the global community.

### CDP Supply Chain

In order to gain a greater understanding of the GHG emissions within our supply chain, in 2018 we became one of only 115 companies to join the CDP Supply Chain initiative.

During the year we held a live supplier webinar to explain the CDP disclosure process, our reasoning for adopting this and our ongoing emission reduction activities. Forty-seven of our top suppliers by volume responded to the CDP Climate Change questionnaire, a 52% response rate, with 17 allocating their emissions

to the volumes of goods we purchased from them during 2017. This data is providing us with real insight into our scope 3 GHG emissions from these purchased goods and services. Of the suppliers who responded, 39% currently report on their operational emissions, 34% have an emissions reduction target and 14 of our suppliers had reduced their emissions during 2017.

Forty-three of the invitations we sent out were first-time invitations to the suppliers in question and 41 of these were only asked to respond by us. CDP's statistics show that by the time a supplier is disclosing through the CDP for the second or third time, the likelihood of them having set emission reduction targets or having carried out emission reduction initiatives increases significantly. Therefore, in 2019 we will continue to engage with our suppliers to increase our response rate, as well as encouraging more of our suppliers to work to reduce their emissions and, in turn, reduce our own upstream scope 3 emissions.



Caulerpa Lentillifera

In working with this supplier we are:

- Ensuring respect for human rights, by prohibiting child and forced labour, paying fair prices, ensuring no discrimination and increasing transparency within the supply chain
- Enabling the supplier to offer its workers a healthy and safe work environment, with easier algae farming, improved work conditions for the harvesters and improved packaging to avoid repetitive manual processing
- Helping to protect the environment and local biodiversity through the harvesting of reasonable quantities

only, the respect and rehabilitation of protected mangroves and through raising employees' awareness

- Supporting the supplier and the local population in a poor rural zone of the island, and opening up the European market to this supplier to increase their sales.

The supplier visited our Crodaron manufacturing site in Chanac, France for three days to learn about our operations and to undergo training in the highest safety and quality standards, including best hygiene practices.

# Doing the Right Thing

There are several fundamental areas of our business that allow us to operate safely and sustainably, providing a solid foundation on which to grow, continue to innovate and be different.

The safety of our employees and neighbours is of paramount importance to us. In 2018, all manufacturing sites globally implemented our behavioural safety system. We are also increasingly focusing on the mental health and wellbeing of all employees, with awareness campaigns and training taking place across the Group.

2018 saw us meet our target of ensuring that all Process Risk Reviews for high hazard processes across our operations meet the corporate standard. This has involved a rigorous review of nearly 200 processes and a huge effort by our in-house Group Safety, Health and Environment (SHE) team.

We strive to minimise our impact on the environment through a focus on reducing water consumption, minimising energy usage, reducing greenhouse gas (GHG) emissions and reducing waste across our operations. Where we are investing in new infrastructure, we are

incorporating sustainability from the very beginning of the project, at the design stage, utilising techniques such as SUSOP® (SUStainable OPerations) to ensure that all aspects of sustainability and resource efficiency have been considered.

Globally, our manufacturing sites have robust and comprehensive quality management systems in place to ensure that we supply high quality products, on time in full, with the exceptional service our customers rely on.

## Highlights

**9.8%**

reduction in greenhouse gas emissions intensity since 2015

**17.8%**

reduction in waste to landfill since 2015

## Completion

of all Process Risk Reviews to internal quality standard

## Environmental Stewardship



In 2016, we established five year targets against a 2015 baseline for the reduction of our environmental impacts to land, water and the atmosphere. In 2018, our water consumption was 3.4% lower than the baseline year of 2015 and we were awarded a B- by CDP for our water disclosure, reflecting our management of water reporting and conservation. With the commissioning of the bio-surfactants plant, making ECO products at our Atlas Point manufacturing site in North America, their water consumption increased, therefore while we have reduced our overall consumption since 2015, there is progress to be made to hit our target of a 10% reduction by 2020.

Our manufacturing site in the water stressed region where our Mevisa site is situated, near Girona, Spain has continued to reduce water consumption through completion of their closed-loop cooling system, as well as through the re-use of water from the on-site effluent treatment plant. Further water reduction initiatives are planned across our manufacturing sites to enable us to achieve this important target.

2018 saw a further reduction in our waste sent to landfill: we have now achieved a 17.8% reduction since 2015, exceeding our 2020 target of a 10% reduction. In 2018, seven of our manufacturing sites sent zero waste to landfill.

Volatile Organic Compound (VOC) emissions have increased by 4.1% since 2015. Our VOC emissions are very small and the type we emit, typically solvents such as ethanol, have little or no known global warming potential. However, we continue to measure them to minimise losses to the environment and we will continue to progress towards our 2020 target of a 10% reduction.

### GHG emissions

Since our 2015 baseline year, total scope 1 and 2 greenhouse gas (GHG) emissions have risen by 9.0%. Within this, our scope 1 emissions have increased by 17.4%, while we have seen a 6.3% decrease in location based scope 2 emissions.

These figures must be viewed within the context of our bio-surfactants plant being commissioned to produce our bio-based ethylene oxide (EO) in 2018, at our Atlas Point manufacturing site in North America. Bringing the manufacture of one of our largest raw materials in-house in this way has moved the emissions associated with its manufacture from our scope 3 inventory into scope 1, resulting in an increase that looks dramatic compared to our baseline pre-EO manufacture. Once we have installed extra combined heat and power (CHP) capacity to burn more landfill gas at this site, we will be able to manufacture the EO more efficiently and using a larger proportion of renewable energy.

We have made good progress in reducing our scope 2 emissions. Since October 2018, all UK sites are now sourcing 100% renewable electricity, along with Mevisa in Spain and Gouda in the Netherlands. In 2018, our market based scope 2 emissions were 45,974 tonnes CO<sub>2</sub>e, a greater than 20,000 tonne CO<sub>2</sub>e reduction when compared to location based emissions.

In 2018, we scored a B from CDP for our climate change response, recognising management in our approach to our GHG emissions reductions.

### Energy use

Since 2015, our overall energy use has increased by 14.9%, due to our continuing production expansions, in particular the commencement of bio-based EO production at Atlas Point. During this time, our energy intensity figure has fallen by 5.2%, a measure of our efforts to increase efficiency.

In 2018, 21.1% of the energy used came from non-fossil fuel sources. We expect this figure to increase next year as we install more CHP capacity at Atlas Point.

### GHG emissions

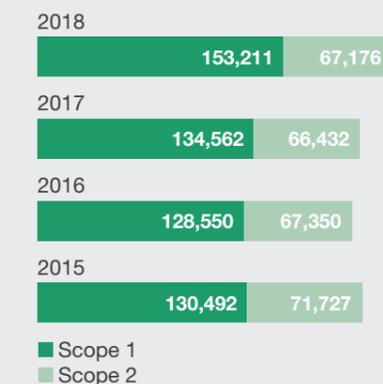
Since 2015, our baseline year, total scope 1 and 2 GHG emissions have risen by 9.0%. Within this, our scope 1 emissions have increased by 17.4%, whilst we have seen a 6.3% decrease in scope 2 emissions. Read more about the reasons behind these changes above.

We are reporting location based scope 2 emissions in order to directly compare to our baseline year of 2015. However, our verified market based scope 2 emissions, which reflect our efforts to purchase renewable electricity, were 45,974 tonnes CO<sub>2</sub>e in 2018.

<sup>1</sup> Scope 1 emissions are calculated using the International Energy Agency's published conversion factors for the tonne equivalents of CO<sub>2</sub>. Scope 2 emissions are market based (location based for 2015 and 2016)  
<sup>2</sup> Value added is defined as operating profit before depreciation and employee costs at 2015 constant currency

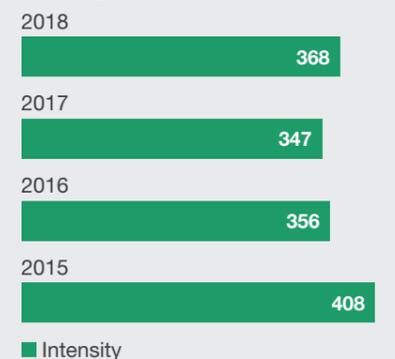
Our chosen measure of GHG emission intensity divides our GHG emissions by value added<sup>2</sup>: a measure of our business activity. Since 2015, our GHG emissions intensity has fallen by 9.8%, illustrating how we are decoupling growth from our environmental impact.

### GHG emissions (TeCO<sub>2</sub>e)<sup>1</sup>



Our scope 1, 2 and 3 GHG emissions are verified by Carbon Smart. Their formal Independent Verification Statement is available at [www.croda.com/carbonverification](http://www.croda.com/carbonverification)

### GHG emissions intensity (TeCO<sub>2</sub>e/£m)



# Doing the Right Thing

## Process Safety



Process safety is about keeping our manufacturing sites safe and legally compliant. It is a key Material Area to us as we take the safety of our employees and the communities in which we operate very seriously. As part of this, we invest in equipping all our employees with thorough training to manage and react to an incident, should one ever occur on site.

In 2018, we achieved our target of having all our Process Risk Reviews meet the corporate quality standard following independent assessment by our specialists in the Group Safety, Health and Environment (SHE) department. A Process Risk Review is required for a manufacturing process where the risk of a fatality has been identified as being the worst-case outcome from an accident.

In total, almost 200 processes were identified and rigorously assessed. The corporate standard requires that a thorough risk assessment is completed using a multi-disciplinary team of people and a recognised methodology appropriate to the level of hazard of the process. Where required, action plans are implemented to minimise the possibility of harm to people and the environment.

### Atlas Point incident

At the end of 2018 an incident unfortunately occurred at our Atlas Point manufacturing site in North America involving a release of ethylene oxide. The advanced safety features incorporated into the plant design, including monitors and automatic water deluges, enabled the facility to be shut down safely and securely, containing the release with no injuries to the local community or our employees on site: five employees working on site at the time of the incident sought medical advice as a precautionary measure in the week after the incident and one individual was placed under observation.

Before the plant was commissioned, we worked with local emergency services and first responders to ensure that they understood the plant, what it produced,

All Process Risk Reviews are subject to a five year renewal period and include: consideration of operating experience in the intervening period; changes made to plant and equipment; relevant incident history from both inside and outside the company; technology changes; and any changes made to industry guidance and recognised good practice.

Two years ago, we introduced a measure to help highlight opportunities for improvement in our operational process safety performance. The Process Safety Incident Rate is plotted at site level and records all types of incidents, such as demands on relief streams and plant control systems, rather than purely losses of containment. An internal measure was chosen following a review of externally used benchmarking conventions, due to their focus on losses of containment and the large reporting threshold quantities relative to the material volumes found on our manufacturing sites.

This year, to act on the information highlighted by the Process Safety Incident Rate, several teams were established to identify potential process improvements, such as pressure relief streams, trip and alarm system activations, losses of containment and the potential for fires. Each team is peer group led and comprised of senior operational and engineering employees from selected manufacturing sites around the world.

the nature of the processes and how to manage a release should one occur. Such thorough training and information sharing meant that during the incident, first responders were able to quickly assess and work with our employees to help contain the release and prevent harm. This quick and collaborative response ensured that the plant was shut down safely and the release contained, enabling all our site operations, except for the ethylene oxide manufacturing plant, to continue operating as normal.

We are currently working with independent experts to conduct a thorough investigation into the incident and identify any preventative actions that can be put in place, before it is brought back on stream in a safe and timely manner.

## Quality Assurance



Our customers rightly expect the same quality and standards from all our businesses and from each of our global manufacturing locations. We can be supplying individual multinational customers from multiple manufacturing sites, and as a global business we seek to standardise and unify the quality standards to which we operate in all parts of the world. ISO 9001 and ISO 14001 standards are a pre-requisite for our manufacturing sites, together with OHSAS 18001.

For our manufacturing sites producing personal care ingredients, we implemented EFCI GMP standards with 14 sites certified globally. Although this is a European standard, we chose to implement it in America and Asia, exemplifying our uniform and consistent approach to quality.

Similarly, for our sites manufacturing health care excipients, we have EXCiPACT certification in all regions. Beyond these, our certification for other increasingly important and differentiating standards, including RSPO and Halal, extend to our sites in all regions.

For our recently acquired subsidiaries and our larger non-manufacturing sites, great progress has been made to implement ISO 9001 with 66% of designated locations having achieved certification this year and the remainder due in early 2019. These improvements have been accelerated by utilising in-house expertise in quality management systems from nearby sites that already hold ISO 9001, which has provided superb development opportunities for our personnel to extend their skills and abilities into different operations.

This networking has ensured that our systems are now more integrated and standardised across the Group, aiding delivery of excellent and consistent levels of customer service. Further work on integration of our sites' quality systems will continue through internal initiatives in 2019 and beyond.

Our drive to utilise the plan-do-check-act cycle to drive improvements in operational efficiencies continues, with several existing processes and ways of working being reviewed and revised. New approaches based on quality risk assessments are being designed and implemented to aid these enhancements. Our objective is to ensure we are a trusted and reliable supplier to our customers.

## Health, Safety & Wellbeing



### Behavioural Safety

In 2018, all sites completed full implementation of our Behavioural Safety Programme. In addition, all line managers and supervisors involved in performing regular behavioural safety observations have given feedback and, based on their evaluation of risk in their respective workplace, improvement areas have been identified. Although focused primarily on our manufacturing sites, many also included consideration of laboratory operations and office safety and trained people working in those areas as observers in the Programme. Highly flexible, the Programme can be deployed across all sites, regardless of size and complexity, and is managed by a multi-disciplinary team on each site.

With the sponsorship of our Group Chief Executive, Steve Foots, in 2018 we also introduced our own Safety Leadership Improvement Programme (SLIP). This behaviour modification programme focuses on management and leadership behaviours, rather than frontline activities. It is built around a model for safety-related behaviours based on the four themes of standards, risk management, involvement and communication.

Although the model itself is applicable to all levels in an organisation's structure, at the global leadership conference attendees identified the critical behaviours that are specific to senior leaders in the company and agreed how they might be measured. Senior leaders now monitor their own activities and report their successes and failures back to the Executive Committee on a quarterly basis. This enables us to track progress and identify where more specialist advice and guidance might be appropriate. Further work to expand the use of the model to other levels in the organisation is already planned for 2019.

Led by the team at our Thane manufacturing site in India, the same behaviour modification model was used in employee annual appraisals at all levels, with feedback given to help them improve their performance, and other training and development needs identified. The scheme devised at Thane has subsequently been adopted by a number of other sites in the Asia Pacific region.



Thane's 'Manan' room

Our Total Recordable Injury Rate (TRIR), which is the number of recordable injuries for every 200,000 hours worked, has increased slightly to 0.72, from 0.71 in 2018. However, we are confident that we will meet our 2020 target of 0.6 as these behavioural safety programmes begin to show positive results through changes in employee behaviour.

During 2018 our Group SHE team hosted three regional SHE Managers' conferences last year: in Europe, the Americas and Asia Pacific. The established site SHE Managers also welcomed representatives from our newly acquired companies, including Enza Biotech, IonPhasE and Plant Impact, as well as from our non-manufacturing sites including sales offices, warehouses and laboratories. Attendees held workshops on topics including environmental management, health and wellbeing, process safety, changes in safety management system standards, the Behavioural Safety Programme and warehouse traffic management.

### Wellbeing

We take our responsibilities to protect and enhance the wellbeing of everyone in the Croda family very seriously and in 2018 we developed many new initiatives in this area. Most of our operations ran campaigns to encourage healthy eating and exercise. The January pedometer challenge at our Global Headquarters, Cowick Hall, in the UK was a highly competitive event with participants averaging 11,359 steps a day. This has now become a regular feature of the Cowick Hall calendar.

All of our operations across the globe participated in World Mental Health Day and International Stress Awareness Day, held in October and November 2018, respectively. Programmes varied across each location, but many sites introduced yoga, aromatherapy and meditation sessions as ways of encouraging relaxation and promoting wellbeing. Some sites teamed up with external agencies to offer tips on how to deal with stress and help managers to identify stress in their teams.

Thane, our manufacturing site in India, provided training on a whole range of mental health topics supporting managers to identify and deal with issues as they arise. The site also established a new quiet office space without distractions called the 'Manan' room, meaning contemplation or thinking in Sanskrit. Other sites brought in mental health professionals to talk to employees in groups or one-to-one. Many of these programmes will now continue in 2019.



Employees taking part in Chair Yoga

Responsible Business



Our commitment to operating our business and conducting our relationships with third parties in a responsible, transparent and ethical way is embedded in our culture and applies across the entire Croda family.

We seek to meet and extend the requirements of the UK Bribery Act worldwide, and to this end we have a global Anti-Bribery and Corruption Programme that is overseen by our Group Ethics Committee, which consists of members of our Executive team. Reporting regularly to the Board, the Committee promotes the importance of ethics and compliance throughout our business, and is implemented through our global ethics network of colleagues from our finance and legal operations.

In addition, the Programme considers the compliance risk associated with every third party vendor we engage. Our ethics network also meets with all third parties who interact with government agencies on our behalf, in order to ensure that they understand, and have policies in place to meet, our compliance requirements.

Many tools and mechanisms are in place to support the Programme, including online gift registers, whistleblowing hotlines, which have recently been expanded to include external third parties, and an anti-bribery and corruption near miss reporting tool. Online training is further complemented with face to face workshops for managers and those employees whose roles might expose them to higher ethical risks. In 2019, we will launch a new Code of Conduct, which sets out how we expect all employees to behave and includes sections on ethical business behaviour.

Our ethical agenda and commitment are supported by a planned programme of colleague communications throughout the year, with regional and global management also setting the tone as they visit our locations globally. Our annual internal audit programme has a dedicated governance section, with certain operations considered higher risk also benefitting from a peer-review by a member of the ethics network.

**Sustainable procurement**

ISO 20400 defines sustainable procurement as: "procurement that has the most positive environmental, social, and economic impacts on a whole life basis." When practising sustainable procurement, organisations purchase in a way that favours suppliers and products that create positive outcomes for our planet and the global community.

We view our supply chains as an extension of our own operations and require our contractors and suppliers to adopt the same standards and principles. Awareness of supply chain risks has progressed in recent years to the point where it is now an industry expectation that an appropriate level of due diligence is performed in identifying and mitigating these risks. In this context, sustainable procurement is a strategic priority for us and supply chain transparency is an essential part of this. In 2018 we spent time training our global procurement teams to ensure that sustainability is integrated in our procurement processes.

We adopt a risk based approach in engaging with suppliers using methodology based on the supplier's country of operation and the activity performed to identify highest risk suppliers.

We took the decision in the second half of 2017 to partner with EcoVadis and use their Corporate Social Responsibility (CSR) Rating Methodology. In 2018 we carried out a pilot trial with them targeting our top 100 suppliers by value, plus a further 42 high risk suppliers from across all our regions. This work is currently ongoing, but 50% of the invited suppliers connected with us during the year through the platform.



Artist's impression of our new UK warehouse, to be built in Goole, UK.

# Delivering sustainability

All our employees play a part in delivering our sustainability programme.

**Delivering sustainability, at every level of our business**

Our two most senior committees, the Board of Directors and Group Executive Committee, are ultimately responsible for our economic, environmental and social performance. They maintain an active role in ensuring that sustainability remains an integral element of our business strategy.

Our Vice President (VP) of Sustainability reports to our Group Chief Executive and President of Operations and manages our Global Sustainability Team. With the support of an Executive Sponsor, he also chairs our Global Sustainability Steering Committee, which is composed of functional experts and regional representatives.

The role of the Steering Committee is to develop our Sustainability Strategy in response to global mega trends (p16) and to communicate progress made on the various components of our sustainability programme, as well as providing guidance to line managers on sustainability matters.

**Reporting progress**

We have 60 reporting operations covering the whole Group, each with a Sustainability Champion who reports progress against our targets and a set of key performance indicators (KPIs). Along with details from our Material Area Owners, this information is communicated to the Group Executive Committee on a quarterly basis. The Board of Directors also receives quarterly summary reports, along with bespoke presentations on key sustainability topics throughout the year, as it is an integral part of their agenda.

**Strategic review**

In early 2018 we began engaging with the Cambridge Institute of Sustainability Leadership (CISL) to discuss our ambitions in sustainability and further develop our agenda. Preparation involved CISL consulting with a wide range of our stakeholders (p14) in order to gain perspectives and inform the agenda.

A two day workshop involving CISL and our Group Executive Committee in July initiated a programme of ongoing work on our ambitious 2030 targets. We held our annual sustainability conference

in July to review the CISL work and our alignment with United Nations Sustainable Development Goals (SDGs). Decarbonising our business remains a priority and in 2018 we engaged with our top 100 suppliers through the CDP Supply Chain initiative (p29). We also established an internal working group to determine carbon savings attached to customers' application of our products (p23).

**Applying ISO 26000**

In 2018, we began implementing agreed actions from the Bureau Veritas third party review of our alignment with ISO 26000 Corporate Social Responsibility guidelines. Priorities included updating our Materiality Assessment and further enhancing stakeholder communication (p14).

**2018 reporting parameters**

This report covers the sustainability performance of Croda International Plc for the period 1 January 2018 to 31 December 2018. The scope of this report is all wholly owned operations, plus those operations where we have significant management influence due to a majority shareholding. Unless otherwise stated, the data provided throughout this report is for continuing operations.

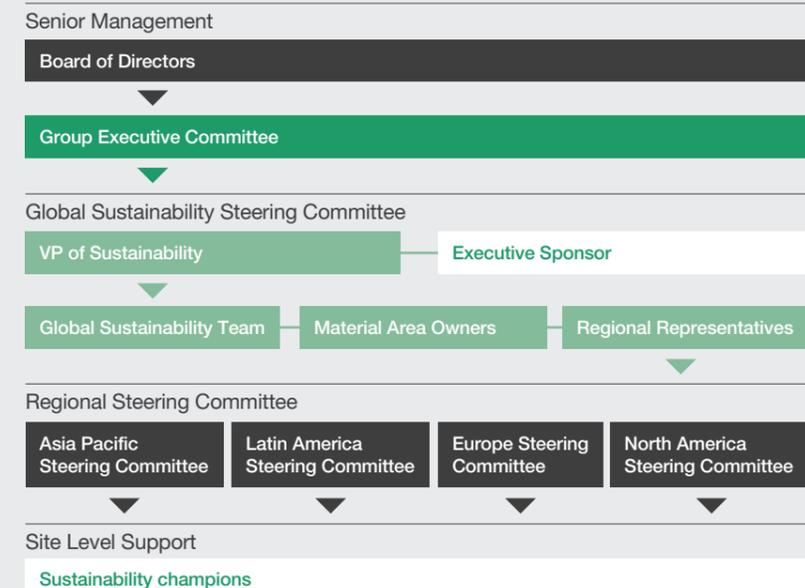
Following six years of collaboration to develop specific applications for skin care, hair care, and crop care, in January 2018 we acquired Nautilus, a technology-rich marine biotechnology company based in Charlottetown, Prince Edward Island (p21). In March 2018 we acquired Plant Impact, an innovative crop enhancement business that uses chemistry and novel molecule discovery to identify ways to improve the yield and quality of crops by stimulating or moderating plant responses in both healthy and stressed crops (p23). In late December we acquired Biosector, a vaccine adjuvant specialist and natural extension to our existing pharmaceutical excipients portfolio. Due to the timing of these acquisitions, their activities are not currently in the scope of our sustainability programme.

**Environmental Stewardship: SUSOP® Sustainability Studies**

To help ensure sustainability is considered from the very start of new projects, in 2018 we trialled two SUSOP® (SUStainable OPERations) studies for different expansion projects within the business, working with BPE, the UK licence holder. SUSOP® is a new project risk and opportunities approach to sustainability, similar to safety and hazard analysis techniques, such as HAZOP, in the context of engineering design. It is a structured process of multi-disciplinary workshops and supporting analysis conducted at the early phases of industrial projects. At the heart of SUSOP® is a systematic and rigorous step-by-step procedure that ensures critical environmental, community and social issues are identified and then translated into real operating designs and practices that deliver new innovative solutions.

SUSOP® studies align all elements of a project to the Five Capitals Model: Natural, Human, Social, Financial and Manufactured. Sustainability goals can then be set around these five areas. The opportunities and risks associated with each goal are captured, prioritised and used to generate action plans. As sustainability is fundamental to our business strategy (p11), it is important that for any future projects we consider all aspects of sustainability, to ensure that we can meet our current and future corporate sustainability targets. The focus of the two 2018 studies were the new UK warehouse project and expansion at our manufacturing site in Chanac, France. New ideas were generated and, where possible, implemented into the design. In 2019, we plan to carry out further studies across our operations.

**Sustainability Management Structure**



# 2018 performance

Material Area	Description
Climate Action	Aligned to United Nations Sustainable Development Goals (SDG) 13 of the same name and encompassing our efforts to combat climate change through reductions in scope 1, 2 and 3 emissions.
Community Education & Involvement	Encouraging and helping develop younger generations, with a particular focus on science, and maintaining a strong relationship with our local communities all over the world through community engagement.
Customer Intimacy	Fostering close relationships with our customers to identify and find innovative solutions for unmet needs globally.
Diversity & Inclusion	Embracing the differences of a multi-skilled, multi-ethnic and multi-geographical workforce through an inclusive environment.
Environmental Stewardship	Focusing on reducing our water consumption and minimising waste production across our operations, as well as maximising re-use and recyclability of packaging.
Health, Safety & Wellbeing	Protecting the health and safety of our employees and promoting wellbeing throughout the organisation.
Knowledge Management	Retaining, protecting and effectively storing knowledge and data within the Company.
Our People	Attracting and developing the right people in the right roles and maintaining equality for all; ensuring we act as one global team to continue our growth and success.
Process Safety	Ensuring that our operations remain safe and legally compliant through effective leadership.
Product Innovation	Providing our customers with sustainable products through relentless innovation, using metrics such as bio-based raw material content, cradle-to-gate carbon footprint and the 12 Principles of Green Chemistry.
Product Stewardship	Responsible sourcing of our raw materials, maximising our use of bio-based raw materials and land use productivity, and ensuring the supply of safe and sustainable products through regulatory leadership.
Quality Assurance	Supplying customers with high quality, trusted products on time and in full, minimising waste and ensuring consumer safety.
Responsible Business	Operating in a responsible and ethical manner through the entire value chain by engaging with our stakeholders and remaining transparent.
Supplier Partnership	Understanding and managing supply chain risk through sustainable procurement activities and close collaboration and engagement with suppliers.

● Met   ✕ Not met   ● Ongoing   ○ New

Target	Maturity	Status	2018 Progress Summary
<b>Governance</b>			
Implement agreed actions from the third party review of our alignment with ISO 26000 Corporate Social Responsibility guidelines.	2018	●	Following an internal workshop to prioritise Bureau Veritas' actions, many of these have now been completed, with a few in progress. 2018 highlights include our Materiality review, and the development and launch of an employee sustainability handbook. In 2019 the gap analysis will be reviewed and further actions picked up if necessary to ensure our continued alignment to ISO 26000. (p35)
<b>Climate Action</b>			
Reduce total Group energy intensity by 5% from 2015 baseline.	2020	●	We are ahead of target to achieve our five year energy intensity plan, which is calculated by dividing energy consumption by 'value added' (operating profit before depreciation and employee costs). By the end of 2018 we had achieved a 5.2% reduction compared to 2015. (p31)
Generate 27% of the Group's total energy requirements from non-fossil fuel sources.	2020	●	This continues to be a challenging programme for us. In 2018, 21.1% of our energy was taken from non-fossil fuel sources. The proportion of energy derived from non-fossil fuels has been adversely affected by increasing energy use at Atlas Point, along with reduced output from the landfill gas-fired CHP units. 2019 will see installation of further capacity for energy generation from landfill gas at Atlas Point, which will contribute towards further progress against this target. (p31)

Target	Maturity	Status	2018 Progress Summary
<b>Climate Action</b>			
Reduce total Group scope 1 and 2 carbon intensity by 10% from 2015 baseline.	2020	●	We are currently ahead of this target, with a 9.8% reduction in scope 1 and 2 GHG emissions intensity at the end of 2018 compared with 2015, highlighting our ability to decouple growth from our impact on the environment. (p31)
<b>Environmental Stewardship</b>			
Reduce total Group VOC emissions by 10% from 2015 baseline.	2020	●	Although our Group VOC emissions are small, we still monitor progress against this stretching reduction target. In 2018, our VOC emissions had increased by 4.1% since 2015. Reduction strategies are in place at the relevant production assets to help us reach our target. (p31)
Reduce total Group water withdrawal by 10% from 2015 baseline.	2020	●	We are making progress towards this target, with water consumption in 2018 3.4% lower than the baseline year of 2015, although the start up of our bio-surfactants plant has led to a significant increase in water usage at our Atlas Point manufacturing site. (p31)
Reduce Group waste to landfill by 10% from 2015 baseline.	2020	●	We are currently ahead of target as waste to landfill decreased by 17.8% between 2015 and 2018, with seven of our manufacturing sites sending zero waste to landfill. (p31)
<b>Process Safety</b>			
Ensure that all Process Risk Reviews are compliant with our internal quality targets.	2018	●	This target was completed in 2018, with all Process Risk Reviews (almost 200) conforming to the Group quality standard. (p32)
Conduct an independent review of our Process Risk Reviews (PRR) for high hazard processes.	2020	●	We are on track to complete this target by 2020. We are currently implementing further improvements highlighted during quantified risk assessments of our highest hazard category of processes. We are underway with completing peer reviews of our remaining high hazard processes. (p32)
<b>Health, Safety and Wellbeing</b>			
Achieve a sustained OSHA Total Recordable Injury Rate (TRIR) in the top quartile of chemical manufacturing companies with more than 1,000 employees.	2020	●	We are on track to reach our 2020 TRIR target of 0.6. In 2018, TRIR was static at 0.72, however, with our Behavioural Safety programme now fully implemented at all sites, we still anticipate meeting our 2020 target. (p33)
Top management, regional leadership teams, business leadership teams and all operations management shall conduct regular behavioural safety observations.	2018	●	In 2018, through implementation of the Safety Leadership Programme, the participation of senior management in safety has increased markedly, with regular participation in audits, and extension of safety risk awareness to offices and laboratories as well as manufacturing sites. (p33)

# Material Area Performance Summary continued

● Met   ✕ Not met   ● Ongoing   ○ New

Target	Maturity	Status	2018 Progress Summary
<b>Product Stewardship</b>			
Develop and implement a standardised process for identification and management of upstream supply chain risks.	2018	●	EcoVadis has been trialed during 2018 as a platform to engage with and risk assess our suppliers. Regional procurement champions have worked closely with our suppliers and consultants. By the end of 2018 50% of our top 100 by value and highest risk suppliers have engaged with us through the platform. (p34)
Only supply RSPO certified palm oil ingredients subject to the feasibility of the supply chain.	2018	✕	The transition to RSPO certified sustainable palm is near complete with over 8000 customer/product combinations in place in our consumer products business and we will continue to work towards a target of supplying 100% RSPO certified ingredients to customers across all of our businesses. (p22)
Work with a third party independent organisation to increase traceability of our palm derived raw materials ensuring progression towards zero deforestation in our palm oil supply chains.	2020	●	Good progress has been made against this target. For 80% of our global palm oil derivative volumes, we now have 90% traceability back to mills, with all locations mapped including GPS coordinates. (p22)
<b>Supplier Partnership</b>			
Profile the greenhouse gas emissions of our top 30 suppliers, using the CDP supply chain methodology.	2018	●	We achieved this target, receiving 47 responses from suppliers completing the CDP Climate Change Questionnaire. Through further engagement during this year, we hope to see this response rate increase, and to start working with our suppliers to encourage them to set their own emissions reduction targets. (p29)
<b>Customer Intimacy</b>			
Characterise and quantify the sustainability benefits to our customers of our most important product application types.	2018	●	During 2018 we have focused on several industry important application areas, developing case studies and calculating the avoided emissions associated with our products in use. We found over 700,000 tonnes of avoided emissions through sales of products into just four applications in 2018. This work will continue into 2019, looking at further application types. (p23)
<b>Product Design</b>			
Develop an ingredient sustainability database for key product families, to facilitate efficient information sharing with our customers.	2018	●	A trial database has been completed, for the top five products from each business, enabling our sales representatives to provide customers with instant information on the sustainability credentials of some of our key product families. Over the next few years this work will continue until we have an up-to-date database for all of our products. (p28)
Using Life Cycle Assessment techniques, characterise the relevant environmental and social impacts of key product families.	2018	●	We have completed this target, although work in this area will continue. With the appointment of specialist resource in this area, we have developed in-house capability to conduct Life Cycle Assessments of our products and carry these assessments out in business priority. (p21)

Target	Maturity	Status	2018 Progress Summary
<b>Quality Assurance</b>			
Ensure that designated larger sales and distribution sites attain ISO 9001:2015 standards, and that smaller locations are able to share the quality systems and expertise of neighbouring accredited sites.	2018	●	Following on from the good progress made in ensuring that our recently acquired sites and larger non-manufacturing sites in the Group have implemented their own quality management systems in accordance with ISO 9001 requirements, 66% of designated locations have achieved their certification this year, with the remainder due early 2019. (p32)
<b>Our People</b>			
Address agreed actions from the 2017 global employee culture survey.	2018	●	This target has been met. All results have been rolled out globally and every location is working on action plans to address the specific issues raised locally; tracking is via a global scorecard process that is updated regularly and presented to our Executive Committee. (p26)
Ensure that all employees have a formal annual appraisal.	2018	✕	A new system called 'MyCroda' was fully launched in 2018. With 4,020 employees moving onto the new platform during the year, 87.6% of which received an appraisal during the first two months of 2019, this target will roll over into the 2019 appraising period. (p26)
Implement a Management Capability Programme to increase the capability of every manager within our business in the areas of developing and retaining talent, knowledge sharing and maximising business performance.	2018	●	This programme is being rolled out globally and additional modules particularly relating to resilience are being designed. (p26)
<b>Diversity &amp; Inclusion</b>			
Implement the agreed actions to increase the number of women in leadership positions.	2018	●	A set of actions has been agreed with the Board and Executive Committee and are in the process of being completed. A global Diversity and Inclusion Steering Committee has been created, to report into the Sustainability Steering Committee. (p27)

## 2030 targets

During 2018, our Executive Committee spent time working with the Cambridge Institute of Sustainability Leadership (CISL), developing our sustainability strategy to 2030, ensuring our alignment to the United Nations Sustainable Development Goals (SDGs).

As part of this ongoing work, sustainability targets are currently being developed, linking back to the targets under the SDGs, to mature in 2030. These stretching targets will drive our current and future sustainability programme. We expect these targets to be finalised during 2019.

Whilst our current environmental targets stretch to 2020, the majority of our sustainability targets matured at the end of 2018. Many of these will continue to be progressed during 2019, and we have reported their current status in the above Performance Summary.

It was therefore a deliberate decision to avoid setting any new short term targets this year, until the 2030 strategy work had been finalised. Once we have launched our 2030 targets, additional new short term targets may also be developed to help us reach these longer term 2030 goals.

## Global Reporting Initiative

Our 2018 report is in accordance with the GRI standards: Core for the period 1 January 2018 to 31 December 2018. Throughout this report, look for the green reference boxes as shown below, which indicate where information against our chosen GRI disclosures can be found.

### GRI Standard Number

Read our full 2018 GRI report online at [www.croda.com/GRI](http://www.croda.com/GRI)

# Report abbreviations

<b>£m</b>	Million pounds sterling	<b>ISO</b>	International Organization for Standardization
<b>®</b>	Registered trademark	<b>IT</b>	Information Technology
<b>bio-EO</b>	Bio-Ethylene Oxide	<b>kg</b>	kilogram
<b>CDP</b>	Formerly 'Carbon Disclosure Project'	<b>KPI</b>	Key performance indicator
<b>CEO</b>	Chief Executive Officer	<b>LCA</b>	Life Cycle Assessment
<b>CHP</b>	Combined Heat and Power	<b>NGO</b>	Non Governmental Organisation
<b>CISL</b>	Cambridge Institute for Sustainability Leadership	<b>NPP</b>	New and Protected Products
<b>CO<sub>2</sub></b>	Carbon Dioxide	<b>OBE</b>	Officer of the Order of the British Empire
<b>CO<sub>2</sub>e</b>	Carbon Dioxide Equivalent	<b>OHSAS</b>	Occupational Health and Safety Assessment Series
<b>COP 21</b>	United Nations Paris Climate Change Conference in 2015	<b>PAD</b>	Product Assurance Department
<b>CSPO</b>	Certified Sustainable Palm Oil	<b>PhD</b>	Doctor of Philosophy
<b>CSR</b>	Corporate Social Responsibility	<b>Plc</b>	Public Limited Company
<b>D&amp;I</b>	Diversity & Inclusion	<b>PRR</b>	Process Risk Review
<b>ECO</b>	Environmentally Conscious Option Range of bio-based products	<b>PSRA</b>	Product Safety and Regulatory Affairs
<b>EEMEA</b>	Eastern Europe, Middle East and Africa	<b>R&amp;D</b>	Research and Development
<b>EFfCI</b>	European Federation for Cosmetic Ingredients	<b>RSPO</b>	Roundtable on Sustainable Palm Oil
<b>EO</b>	Ethylene Oxide	<b>SCC</b>	Supply Chain Certified
<b>EXCIPACT</b>	Certification scheme for pharmaceutical excipient suppliers	<b>SDG</b>	Sustainable Development Goal
<b>FSC</b>	Forest Stewardship Council	<b>Sedex</b>	Supplier Ethical Data Exchange
<b>FTSE</b>	Financial Times Stock Exchange	<b>SHE</b>	Safety, Health and Environment
<b>GDPR</b>	General Data Protection Regulation	<b>SLIP</b>	Safety Leadership Improvement Programme
<b>GHG</b>	Greenhouse gas	<b>STEM</b>	Science, Technology, Engineering and Mathematics
<b>GMP</b>	Good Manufacturing Practice	<b>SUSOP®</b>	SUStainable OPERations
<b>GPS</b>	Global Positioning System	<b>Te</b>	Tonne
<b>GR</b>	Genetic Resources	<b>TM</b>	Trademark
<b>GRI</b>	Global Reporting Initiative	<b>TRIR</b>	Total Recordable Injury Rate
<b>HAZOP®</b>	Hazard and Operability Study	<b>UK</b>	United Kingdom
<b>HR</b>	Human Resources	<b>UN</b>	United Nations
<b>IP</b>	Intellectual Property	<b>USA</b>	United States of America
		<b>VOC</b>	Volatile Organic Compound
		<b>VP</b>	Vice President