



DS Smith Sustainability Review 2018

Redefining packaging for a changing world



The world is changing. Evolving consumer habits and new technologies are reshaping the way we buy and use products and services: smaller, more frequent grocery shops; less brick-and-mortar; more online; smaller households; less ownership; a more conscious consumer.

Packaging must adapt to these global trends.

At DS Smith, we create and deliver innovative, sustainable packaging solutions that consider the entire supply chain. These solutions energise sustainable growth – for our customers and consumers, our people, our business and shareholders, and most importantly our environment.

We are redefining packaging for a changing world.

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Top three 2017/18 highlights



Our Business

- Improved EcoVadis score, remaining in the top 5 per cent of all organisations evaluated



Our Environment

- 95 per cent of all in-scope sites across our Packaging and Paper divisions now FSC® certified



Our People

- 239 sites achieved zero accidents, reflecting our commitment to safety as our number one priority

Please see page 9 for full highlights

Packaging has never been more relevant



Miles Roberts, Group Chief Executive

As shopping habits evolve, consumer expectations change and supply chains become more complex, packaging has to work harder than ever before. Packaging is expected to transport products, build brands, delight customers and make supply chains more efficient. However, the core purpose of packaging is to protect products, keep food and drink fresher for longer, and reduce all kinds of supply chain and product waste.

The right packaging does all of this sustainably.

In doing so, innovative packaging has a key role to play in helping to address a number of global sustainability challenges – ensuring more efficient use of resources, optimising last-mile delivery in increasingly urbanised societies and reducing food and product waste as populations grow.

More needs to be done to ensure that the positive role of good, sustainable packaging is not forgotten. With increasing scrutiny of the role of packaging, we all need to do more to help tackle some of the challenges associated with 'bad packaging' by working within our industry, with government, local authorities, brand owners, retailers, recyclers, reprocessors and consumers.

Alongside designing reusable, recycling packaging solutions and continuing to reduce our operational impact, we are reaching out more into the communities in which we operate: supporting charities and community groups and fulfilling our role as a responsible neighbour. We are also continuing to focus on being a responsible employer, providing a safe, healthy working environment in which everyone has the tools and opportunity to thrive.

I am delighted to publish another Sustainability Review, launching new targets to underpin our strategic goal to lead the way in sustainability and demonstrating how we are redefining packaging for a changing world.

Miles Roberts, Group Chief Executive

Our sustainability strategy

At DS Smith, we remain committed to building a more sustainable business for the long term.

After announcing last year that we had achieved our 2020 carbon target three years early, we decided it was time to create a new set of nine ambitious, long-term targets relating to each of our priority issues to guide us towards 2030.



Our Business

Packaging impact

- Manufacture 100 per cent reusable or recyclable packaging by 2025, and grow our net positive recycling position.

Fibre sourcing

- Use 100 per cent recycled or chain of custody certified papers by 2020.

Supplier standards

- Ensure 100 per cent of our suppliers comply with our sustainability standards by 2025.



Our Environment

Carbon and energy

- Reduce our CO₂e emissions by 30 per cent per tonne of production by 2030, against a 2015 baseline.

Water stewardship

- Achieve zero water impact by 2030.

Waste and recycling

- Send zero waste to landfill by 2030.



Our People

Responsible employer

- Build a diverse, engaged and respected workforce.

Responsible neighbour

- Engage in community programmes at 100 per cent of our sites by 2020.

Health and safety

- Zero accidents.
Vision zero harm.

Read more about our strategy and targets on pages 10 and 11

DS Smith at a glance

Our purpose

To redefine packaging for a changing world

Our vision

To be the leading supplier of sustainable packaging solutions

Our culture

We have a clear set of values that we expect all of our employees to own and live by



Be Caring



Be Challenging



Be Trusted



Be Responsive

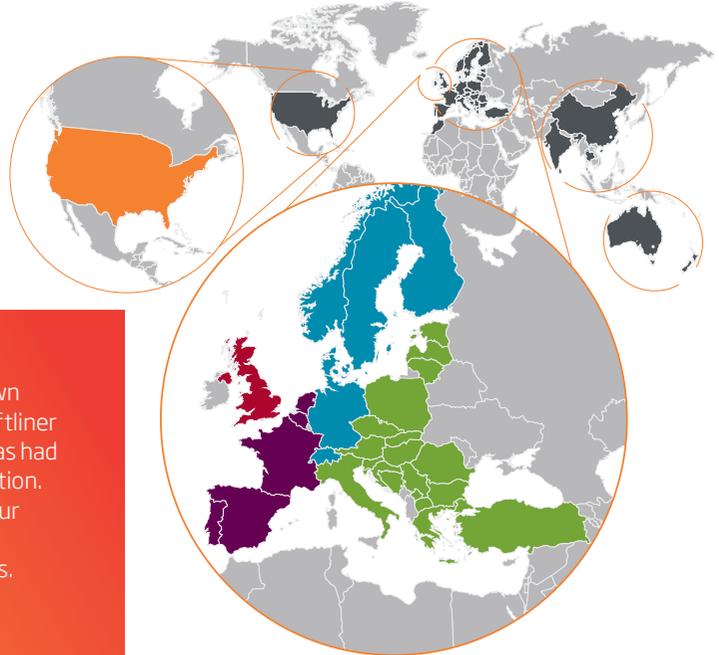


Be Tenacious

Find out more at: dssmith.com/people/culture

Our global footprint

A leading provider of corrugated packaging supported by paper and recycling operations.



New operations in the United States

As part of the acquisition of Interstate Resources, we now own 18,000 acres of timberland in southeast Georgia and one kraftliner mill in Riceboro, Georgia. This is the first time that DS Smith has had direct ownership of operations involved in virgin fibre production. Owning timberland provides new opportunities to enhance our strategic position in the packaging market and improve fibre security; however, it also comes with some sustainability risks.

The global issue of deforestation most frequently relates to unmanaged, unsustainable or illegal logging in areas of high conservation value. By contrast, harvesting timber in well-managed renewable forests is sustainable, does not harm the environment and has vital social, environmental and economic benefits. We are aware of the environmental impacts of unmanaged forestry and we mitigate these by taking the necessary action to ensure that any forests in our operations or supply chains are managed sustainably.

At our Riceboro paper mill, 100 per cent of the virgin timber used derives from sustainable sources, covered by either the Sustainable Forestry Initiative (SFI) Fiber Sourcing certification, the Programme for the Endorsement of Forest Certification (PEFC) or Forest Stewardship Council (FSC®) Controlled Wood chain of custody standards.

Work is ongoing to integrate our North American operations into our sustainability reporting and framework and, although our North American Paper and Packaging division is not within scope for the reporting period covered by this Sustainability Review, we will be reporting on it in 2019.

Managing acquisitions sustainably

As we expand into new markets and continue to grow through acquisition, we often find ourselves operating in countries where the implementation of health, safety and sustainability standards and management practices varies from those we see in Western Europe. This is both a challenge and an opportunity as we work together with new colleagues to implement our high standards and ways of working, meeting our own internal requirements and the expectations of our stakeholders. All the expertise within our Group is used to manage these operations ever more sustainably and continuously improve performance. As we continue to expand and invest to delight our customers, we are looking at options for greenfield development. Wherever we explore greenfield sites, environmental considerations are embedded into the design and build programme.

Our business

As packaging strategists, we promote longer-term strategies to create a more efficient packaging ecosystem.

Packaging

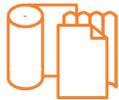


DS Smith is a leading provider of consumer packaging, with emphasis on state-of-the-art packaging design.

c. 22,800 employees

34 countries

Paper



We are a leading manufacturer of high-quality papers. Our papers are used by the packaging industry for conversion into board for making corrugated boxes.

c. 2,900 employees

10 countries

Recycling



DS Smith is Europe's largest cardboard and paper recycler, and a leading global supplier of paper for recycling. We manage over 5 million tonnes of recycling every year.

c. 800 employees

14 countries

Plastics



Our Plastics business comprises flexible packaging and dispensing solutions, rigid packaging and returnables, as well as foam products.

c. 2,000 employees

13 countries

Our business model

How we bring our business and processes together to enable our strategic vision and create sustainable value.

Redefining packaging through our circular business model

At DS Smith, our business model is truly circular with a unique capability of complementary recycling, paper and packaging operations. It is through this closed-loop system that we are able to embed sustainability into our products and services and deliver packaging solutions and recycling services that meet the evolving requirements of supply chains, customers and consumers.



Download the Annual report & accounts 2018:
dssmith.com/annual-reports

Packaging in a changing world

Growth of e-commerce and omni-channel packaging

Shopping habits are changing, with consumers spending an ever-increasing amount online. In these new, more complex and developing supply chains, packaging has to change too. Consumers, increasingly exposed to packaging, develop relationships with brands that are ever more informed by secondary and tertiary packs. The rise of the vlogger and the unboxing video means 'bad packaging' is reviewed and shared with the world. Brand reputation and packaging have never been more closely linked. Packaging in e-commerce supply chains also has to meet the potentially conflicting sustainability requirements of protecting products through supply chains with more touch points, whilst simultaneously being efficiently designed to optimise last-mile deliveries.

We extrapolated these trends to create a scenario of the world in 2025 which is set out in our video called: Caring Convenience. These are not predictions, but a plausible version of the future to demonstrate how different the future could be.

▶ [Watch the video here](#)

[dssmith.com/uk/packaging/expertise/
our-vision2/rehearsing-the-future/scenario-
1-caring-convenience](https://dssmith.com/uk/packaging/expertise/our-vision2/rehearsing-the-future/scenario-1-caring-convenience)

One third

of respondents to various packaging and e-commerce surveys globally, say disposal of excess packaging is a key frustration

We need new innovative ideas to meet changing consumer habits.

Urbanisation and demographic change

In 2008, for the first time, the world's population was evenly split between urban and rural areas. According to the World Bank, by 2050 it is anticipated that 65-70 per cent of the population will live in cities. In more developed countries this shift is coupled with a rise in single-occupant households and a growing generation of consumers embracing the sharing economy. At the same time, we are seeing a new generation of millennials emerge, increasingly expecting products tailored for them whenever they want them, wherever they are in the world, delivered sustainably in the way that is most convenient for them. These shifts impact how and where consumers shop, and what they buy. In such a rapidly changing world, the role of packaging is redefined: it has to support smaller and more frequent shops, more online purchases and enable ever more efficient, responsive door-to-door delivery.

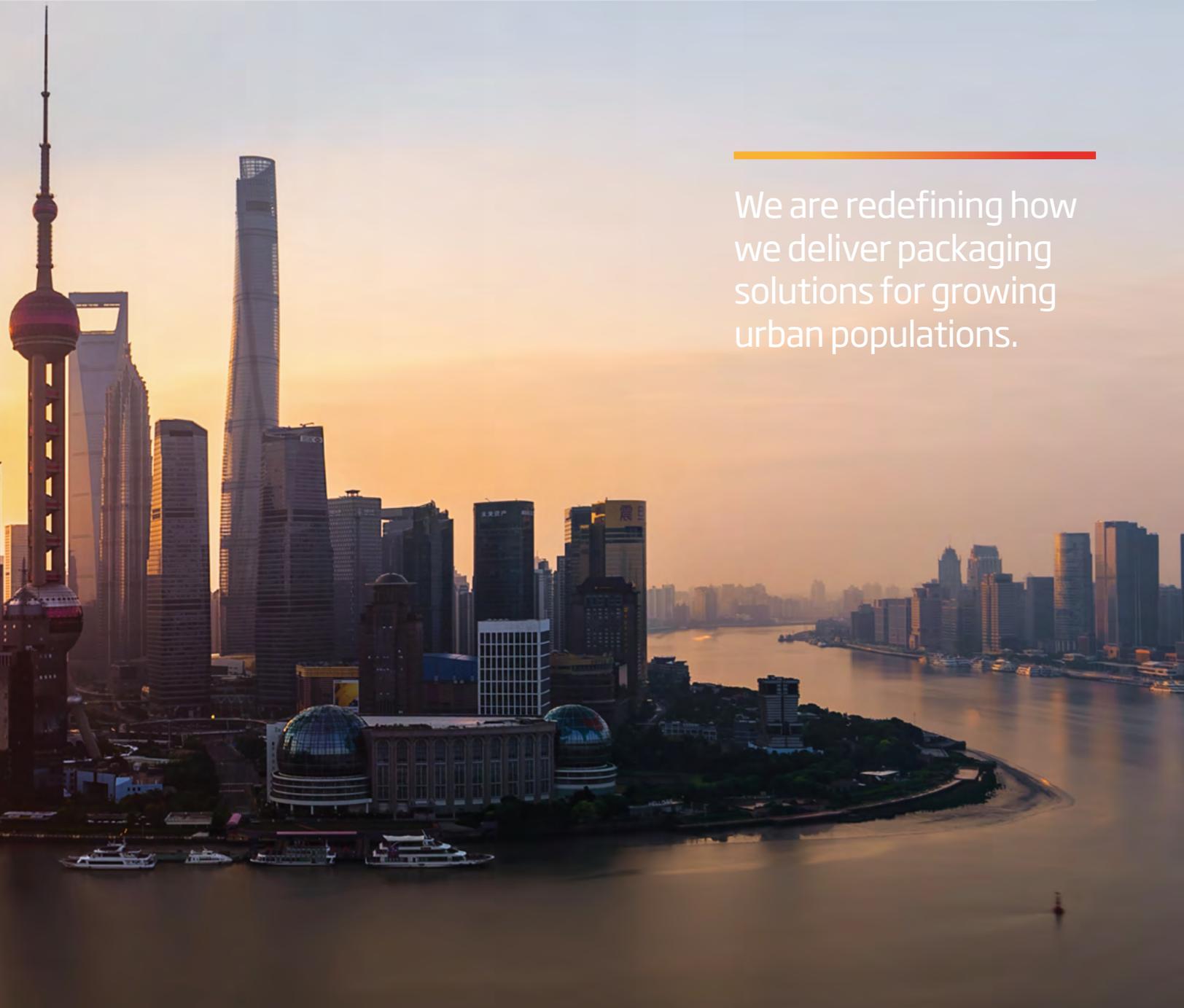
We extrapolated these trends to create a scenario of the world in 2025 which is set out in our video called: Everything is an Experience. These are not predictions, but a plausible version of the future to demonstrate how different the future could be.

▶ [Watch the video here](#)

dssmith.com/uk/packaging/expertise/our-vision2/rehearsing-the-future/scenario-2-everything-is-an-experience

By 2050

it is anticipated that 65-70 per cent of the population will live in cities



We are redefining how we deliver packaging solutions for growing urban populations.

Food waste

As our population continues to grow, we face increasing pressure on resources. Estimates suggest that the global population is likely to reach nine billion by 2050, in which case global food production will need to increase by 70 per cent, according to the United Nations, World Bank and World Resources Institute. As we will have to produce more food with increasingly constrained resources, minimising waste will be essential.

Packaging plays a key role in protecting food and drink through long, complex supply chains. It also plays a key role in keeping perishables fresher for longer. Research by the Waste and Resources Action Programme in the UK suggests that approximately 60 per cent of household food waste arises from products not used in time. As the population grows and resources are constrained, packaging will play an increasing role in ensuring foodstuffs, and the energy, water and resources invested in them, are protected.

By 2050
global food production will need to increase by 70 per cent

We must reimagine the
linear 'take, make, dispose'
consumption model.

Consumer attitudes to packaging, waste and pollution

Public awareness of and interest in sustainable packaging are higher than ever before. According to Nielsen and Unilever, 21-36 per cent of consumers in North America and Europe say that packaging has the most significant influence on sustainable purchasing decisions. Brand owners and retailers are coming under increasing scrutiny for the decisions they make in relation to packaging materials and design. Increasingly, we have already seen a change in our customers' attitudes to packaging as they search for answers to questions about material provenance, recycled content, recyclability, end-of-life processing, reuse, production, distance travelled and weight. According to GfK, one of the largest market research companies in the world, 29-31 per cent of consumers are more willing to buy products made or packaged from recycled materials.

21-36 per cent
of consumers in North America and Europe say that packaging has the most significant influence on sustainable purchasing decisions

We extrapolated these trends to create a scenario of the world in 2025 which is set out in our video called: Asia New Deal. These are not predictions, but a plausible version of the future to demonstrate how different the future could be.

▶ [Watch the video here](https://www.dssmith.com/uk/packaging/expertise/our-vision2/rehearsing-the-future/scenario-3-asian-new-deal)
[dssmith.com/uk/packaging/expertise/our-vision2/rehearsing-the-future/scenario-3-asian-new-deal](https://www.dssmith.com/uk/packaging/expertise/our-vision2/rehearsing-the-future/scenario-3-asian-new-deal)

Public awareness of and interest in sustainable packaging are higher than ever before.

Increasingly, we have seen a change in our customers' attitudes to packaging, as they search for answers to questions about the impact of corrugated and plastic packaging, the life cycle of recyclable and non-recyclable packaging, end-of-life processing, reuse, production, distance travelled and weight.

At DS Smith, we are embracing this challenge.

As paper makers, suppliers of packaging solutions and recyclers, we are perfectly placed to identify end-to-end solutions. Through our circular business model and network of packaging strategists, we are using packaging to help organisations, consumers, cities and governments to deliver more sustainable ways of managing the growth of consumerism.

However, sustainability at DS Smith is not just driven by our customers. We also look to create long-term sustainable value for all of our stakeholders including investors, banks, regulators, employees and communities.

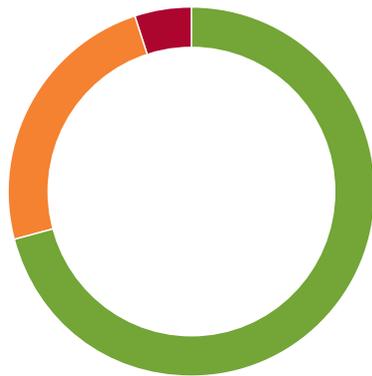
To us, this is about balancing the needs of our business, our environment and our people.

Our progress so far

In last year's review we shared a number of commitments linked to the areas where we believe we can have the greatest impact.

Throughout the past year, our work has focused on delivering against each of the commitments we made last year. An overview of our performance against these commitments can be found below.

Our progress on commitments from the Sustainability Review 2017



- Complete/on track: **71 per cent**
- Ongoing/behind schedule: **24 per cent**
- At risk: **5 per cent**

Performance since the Sustainability Review 2017

At DS Smith, we make it a priority to conduct business with openness and transparency. Last year we set ourselves some short-term commitments to drive progress across our business in areas where we can have the most positive impact. We have had great success in continuing to build our network of PackRight and Impact Centres (see pages 15 and 29), working with our customers to design brand-building packaging that creates a domino effect of supply chain sustainability efficiencies, by removing excess packaging and optimising logistics. We have also had considerable success in the implementation of our carbon reduction strategy, including roll-out of energy efficiency initiatives such as our LED lighting programme and continued exploration of and investment in fuel switching, as seen with the investment in biomass (see page 23). Whilst we have not quite achieved our target of 100 per cent of in-scope sites being FSC® certified, we are optimistic that this will be achieved in the coming months. There has also been excellent progress against the commitments we made regarding health and safety, with a particular highlight being the successful roll-out of a series of on-boarding leadership workshops.

In the areas where we are behind schedule or at risk, we have learnt a great deal about the importance of truly embedding sustainability into all business functions, supported by strong governance structures and accountability. For example, we have not made as much progress as we would like in driving our sustainability standards into our supply base, which is why we have strong plans in place supported by a new target for 2025 (see page 11).

Building on the past year's success, and taking into account what we have learnt, we have built a robust new set of targets to underpin our strategy (see pages 10-11) to lead the way in sustainability. These targets are based on time-bound, measurable action plans with increased levels of ambition in areas where we have performed well, and renewed levels of focus in areas where we have opportunities to improve.

Our 2017/18 highlights



Our Business

EcoVadis Gold

DS Smith improves score and remains in the top 5 per cent of all organisations evaluated.

95 per cent

FSC® certified across all in-scope sites within Packaging and Paper divisions.



Our Environment

Over 7 per cent

reduction of CO₂e per tonne of production in the Plastics and Recycling divisions.

26.9 per cent

reduction in waste to landfill per tonne of production in the Belišće paper mill.



Our People

Health and safety

239 sites achieved zero accidents, reflecting our commitment to safety as the number one priority.

3,500

Management Standards launched to 3,500 line managers across the entire DS Smith Group.

Our strategy to lead the way in sustainability

At DS Smith, one of our four strategic goals is to lead the way in sustainability. We are pleased to announce a range of new, ambitious, long-term targets that will help us realise this ambition.

In last year's review we announced that, in light of achieving our existing energy, water and waste targets ahead of schedule, we would review our sustainability performance targets.

Following this review, and using our materiality analysis (see page 37) as a guide, we are pleased to share a range of new, ambitious, long-term targets relating to each of our priority issues. It is through delivering against these targets, and ongoing review of our priorities and objectives, that we look to achieve our ambition to lead the way in sustainability.

"These new targets are a confirmation to all our stakeholders that we remain committed to delivering long-term, sustainable value and will continue to have high ambitions in this area. I was particularly pleased to sign off the 'Our People' targets. People are our most important asset and we must create a business environment in which our employees and their communities thrive."

Miles Roberts,
Group Chief Executive, DS Smith Plc

Our four strategic goals

To delight our customers

- Delivering on all our commitments
- Further improving our quality standards
- Driving innovation on a multinational basis

To realise the potential of our people

- Ensuring the safety of all
- Creating a place where people are proud to work and give their best
- Building individual and organisational capability

To lead the way in sustainability

- Building sustainability into our decisions
- Growing our recycling platform

To double our size and profitability

- Winning market share
- Growing with our customers
- Expanding our footprint through acquisitions and greenfield sites
- Building a resilient and sustainable business model

Our three pillars of sustainability



Our Business

Creating shared value through responsible recycling, paper and packaging.



Our Environment

Minimising our impact, from design to production and supply to recycling.



Our People

Ensuring the safety, wellbeing and development of colleagues and contributing to our communities.

"Our target to source 100 per cent of the papers that we use from sustainable sources aligns with the ambitions of a huge number of our customers as they look to manage and remove deforestation risks from their supply chains. Alongside our innovative, brand-building packaging solutions, commitments such as this demonstrate how we partner with our customers to create shared value."

Adrienne Liebenberg,
Sales, Marketing and Innovation Director,
DS Smith Packaging

"Our target to manufacture 100 per cent reusable or recyclable packaging brings a welcome, constructive challenge. Whilst we start from a strong position, it is the perfect opportunity to encourage problem-solving with our customers and partners. From senior management to our machine operators, everyone within DS Smith will have a role to play in achieving these targets."

Lucas van der Schalk,
Chief Operations Officer, DS Smith Plastics

Our targets

At DS Smith, sustainability is the foundation of our overall business strategy. These new targets, focused on the areas where we believe we can have the greatest impact, embed sustainability across our entire organisation.



“Carbon reduction and water stewardship continue to be the main improvement focus areas within the Paper division. The discussions around our new water goal were lengthy and very technical, but we recognise that water is an increasingly precious resource and we must do our bit to manage our use responsibly.”

Niels Flierman,
Operations Director, DS Smith Paper

“We aim to create a workplace where we realise the full potential of our people so that everyone can contribute to the achievement of our business goals. This way, we thrive and grow together. I am particularly proud of our aim to build a diverse, engaged and respected workforce as this encompasses so much about the culture of shared responsibility we are looking to create.”

Andy Speak,
Human Resources Director, DS Smith Plc

1. Involved in all or in part of collecting, sorting, reprocessing, managing and/or transporting a greater tonnage of material through our Recycling division than we place on the market through our Packaging and Plastics divisions.
2. To include water quality, water stress improvements and water reduction (where feasible).

A journey through our business model

As you will read in the following pages, our complementary Paper, Packaging, Recycling and Plastics businesses touch the supply chain at multiple points, over and over again.

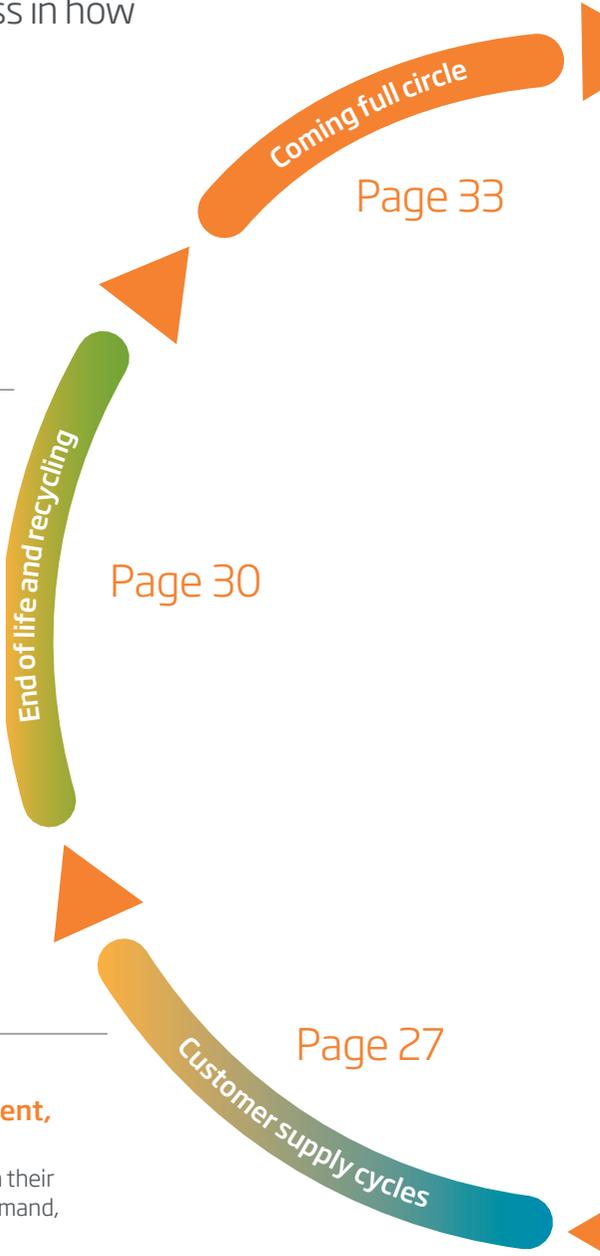
This report walks you through this supply chain: discussing key issues, being honest about challenges and sharing success in how we create sustainable value every step of the way.

Managing the end of life impacts of our products and recycling materials are core elements of our circular business model.

Paper and board have the highest recycling rate of any material in Europe with the constituent fibres capable of being recycled up to seven times. Our Recycling division, one of the largest in Europe, plays a key role in this, managing over five million tonnes of recyclable materials per annum which are a key feedstock for our network of paper mills. The net effect is that we manage for recycling a considerably higher tonnage of used fibre packaging than we manufacture.

Truly sustainable packaging solutions can set off a domino effect of efficiencies in our customers' supply cycles: making logistics more efficient, protecting products and keeping food and drink fresher for longer.

We support our customers in using packaging to unlock additional sustainability benefits in their supply chains - reducing palletisation, increased transport utility, reduced warehousing demand, fewer road miles and more efficient logistics.



Our targets

Look out for our new targets in this section. We will report progress against these targets in next year's Sustainability Review.



Our sustainable packaging solutions begin with product design and innovation.

Our global network of packaging strategists work with customers to design packaging that protects products and the resources invested, using no more material than necessary.

Page 14

Product design and innovation

Sustainable sourcing is central to our offer.

Our primary raw material - fibre - is renewable. Across the industry, roughly 88 per cent of the fibres used for corrugated board manufacture are from recycled sources, with 92 per cent of the virgin papers used deriving from chain of custody certified forests according to the European Corrugated Packaging Association (FEFCO). Our focus is on using quality, sustainably sourced raw materials, whether fibre or plastics.

Page 17

Sourcing

Page 20

Manufacturing operations

Our manufacturing operations are focused on fully recyclable corrugated solutions and plastic packaging solutions that are predominantly multi-use or made from recycled and recyclable materials.

Across our operations, we are reducing our environmental impact through investment in innovative energy reduction technologies, switching to cleaner fuel, turning waste streams into resources and managing our water impact.

Product design and innovation

Sustainable packaging solutions begin with an excellent understanding of our customers' challenges, the reality of category specifics, product design and innovation.

Introduction to product design and innovation

Changing consumer habits and the growth of e-commerce are fundamentally changing the way we buy and use products and services. Supply chains are evolving; speed, simplicity, efficiency and just-in-time delivery are essential. Where, when and how fast we want our products alters rapidly; next-day delivery is too slow, with consumers wanting things faster, sooner, now. The weekly grocery shop is becoming obsolete for the millennial generation, with smaller, more frequent baskets becoming commonplace. Coupled with an increasingly urbanised society where space is at a premium, this means less storage, smaller portions, smaller packs. As a result, new sustainability challenges are emerging.

Packaging has a key role to play: taking delivery vehicles off the road by supporting efficient last-mile delivery, driving resource efficiency by making fibre go further and providing a recyclable solution to an increasingly packaging-conscious consumer.

Our global network of packaging strategists, supported by our innovative Impact Centres, PackRight Centres and More From Less consultancy, work with customers to design packaging that protects products and the resources invested in them whilst making their supply chains more efficient.



Packaging impact Context

The core role of packaging is to protect products and to keep food and drink fresher for longer. In doing so, packaging makes supply chains more efficient and protects the energy and resources invested in products. The recent media and consumer focus on single-use plastics packaging has resulted in a broader discussion about the role of packaging in society.

More than ever before, the role of packaging in society is being scrutinised. Changes are being driven not only by our customers and consumers, but by regulatory developments as well.

Across Europe, new measures to incentivise good and deter bad packaging are being proposed. As supply chains change and consumer expectations and lifestyles evolve, packaging must evolve too. Sustainable packaging solutions are increasingly important and valued, but there is more that industry can do.

Real change will come from collaboration between all stakeholders, including regulators, trade bodies, councils, brand-owners, retailers, reprocessors and consumers.

Leadership in sustainability is not just about reducing the environmental impact of operational sites. Leadership goes beyond this, which is why we are committed to working on sustainable sourcing (see pages 17-19) and with our customers to manage the life-cycle impact of our products and services.

Reflecting the shift to a more circular economy and our focus on creating sustainable value for our stakeholders, we have set an ambitious goal that not only drives the sustainability of our packaging, but reflects our commitment to making recycling real.

Our target

Manufacture 100 per cent reusable or recyclable packaging by 2025.



Our performance and highlights

We are playing a key role in delivering good, sustainable packaging solutions that minimise environmental impact. As part of our sustainability strategy, we are looking to measure the impact of our products and services, and this is reflected in the target above. We believe we are starting in a strong position.

The following examples show how we are delivering against this target, creating sustainable recycling and packaging solutions for our customers.

Inspiring customers to succeed through our Impact Centres

Sustainable design has to be balanced against packaging that meets consumer expectations and retailer requirements and specifications. This is where our biggest opportunities lie.

Through our Impact Centres we challenge existing packaging. By provoking thoughtful discussion and concept generation for new sustainable packaging solutions, we demonstrate how the right packaging can increase sales, lower costs and manage risks.

DS Smith has nine Impact Centres across Europe. Whilst the focus of our Impact Centres is to work with our customers to explore the impact their packaging makes on-shelf, this unique experience also delves into how their packaging is processed and managed in the entire supply chain, as well as after use.

Performance packaging, using no more material than necessary

As consumers, we make the vast majority of our purchasing decisions based on value: what that product or service will deliver for us.

That is why at DS Smith we focus specifically on performance packaging in our corrugated products, delivering reliable packaging with no more material than necessary.

Our 'PACE' programme is focused on four key elements to deliver reliable packaging:

- Performance • Assurance • Consistency • Environment

Our patented real-time testing process enables us to have complete confidence that every box that leaves a DS Smith facility meets our customers' performance requirements, guarantees levels of performance with the most efficient use of fibre and reduces damage rates and associated resource and energy loss in supply chains.

Danish company crowned with success by using no more material than necessary and saving carbon

When approached by Danish Crown, a global meat processing company, DS Smith's packaging strategists saw numerous opportunities to create an optimised packaging solution, which reduced the customer's environmental impact at every stage of the supply cycle.

DS Smith developed a solution to switch from B-flute to R-flute, which was 27 per cent thinner without compromising carrying capacity or durability. As a result, Danish Crown reduced warehouse, handling and shipping costs by 25 per cent and is now saving 290 tonnes of carbon emissions per year due to reduced paper consumption and fewer lorries on the road.

[Find out more on our website.](#)

Implementing eco-design principles

Packaging design must balance a huge range of different criteria. These include performance, protection and visual impact on the shelf, and they are increasingly judged by sustainability criteria, such as raw material provenance and end-of-life management options. At DS Smith, we conceive and design packaging based on eco-design principles as standard procedure. As packaging strategists, this is business as usual.

Our packaging strategists, designers and More From Less consultancy are constantly creating packaging designs for our customers which ensure protection of the product whilst using only the right amount of material necessary to produce less waste, promote recycling and have a lower product or supply chain environmental impact. For example, incremental changes can reduce the carbon and water footprint of the box, and replacing tape with more innovative closing solutions or making a box easier to collapse at end of life can improve recyclability. Likewise, our plastics customers can switch from a fixed-size container to a customised, foldable, returnable plastic container to optimise load, and unlock a domino effect of carbon savings in return logistics.

Solving e-commerce challenges

Our innovative Made2fit solution is designed specifically to address one of the key sustainability challenges of e-commerce supply chains: transporting air. Shipping air is a waste of resources and makes last-mile deliveries inefficient, whilst over-packaging creates consumer frustration and leads to the unnecessary use of fibre and additional void fill materials. This all comes back to product innovation and better design. The Made2fit technology has the capability to manufacture more than 10 million box size combinations, in a multi-channel-ready process, optimising supply chain emissions and reducing waste.

Our next steps

- Fully investigate our product portfolio, identifying the areas where action is needed to ensure our packaging solutions can be either recycled or reused.
- Focus on redesign for recyclability of our products, and speciality corrugated packaging.

More information and policies

- [DS Smith 'Shopper trends unpacked', white paper](#)
- ['The benefits of packaging in an increasingly waste conscious world', opinion piece](#)
- ['Transforming e-commerce', white paper](#)
- [The empty space economy campaign](#)

Prioritising reusability, repairability and recyclability

For plastic solutions, we focus on designing lightweight, durable packaging which can protect and transport products time and time again. In many supply chains, products take thousands of journeys, lasting up to 30 years for beverage crates transporting glass bottles and up to seven years for corrugated plastic transit packaging transporting products such as automotive parts. For these products, our designers focus on reducing material complexity down to one single polymer, allowing for efficient, high-quality, 100 per cent recyclability at end of life.

We also focus strongly on circular customer services. Our mobile regrinding units regrind old crates directly at the customer's bottling facilities, increasing the recycling and transport efficiency approximately six fold. Once back at our facilities, this reground material is immediately manufactured into new crates and sent back to our customers for the next life cycle.

Another highly innovative bulk containers is our Stackabox™, a foldable container which is not only fully recyclable after coming to the end of its useful long life, but is also repairable and all 17 parts are replaceable. Parts can be ordered separately by the customer as part of the supply agreement and the flexible connections make replacing the parts easy. This modular and repairable product enables customers to fully embrace the circular plastics economy. Both of these solutions prioritise the highest segment of the waste hierarchy, reducing our customers' total need for new packaging, and decoupling them from virgin raw material consumption.

New life for Vichy Catalan's water crates

Spanish water producer, Vichy Catalan, needed to replace its old and worn out reusable crates but wanted an efficient and sustainable solution which did not require new virgin plastic.

DS Smith Plastics' injection moulded products offer a total solution approach for customers. Our mobile regrinding vehicle was parked at the customer's site where we reground 300,000 old crates. This compact recycled material was then transported back to DS Smith Plastics to be moulded into new crates and filled with returnable glass bottles.

The result was 100 per cent recycled crates, 121 truck journeys avoided through mobile regrinding, and 11,500 kg of carbon saved.

[Find out more online.](#)



Designing for a safer world

Recognising continued interest in the role of packaging and product safety, we are focused on ensuring our products are safe and that we manage the ongoing concern over different chemicals and substances in our products.

Ensuring the highest product safety standards

At DS Smith, we never compromise on product safety. Our products comply with all the applicable regulations and standards, and in the mindset of 'beyond compliance' we work closely with trade associations to develop ever more stringent and safe standards to guarantee that our customers' and consumers' needs are entirely met.

Our internal controls and product safety systems apply to the complete life cycle of our corrugated products: from the very first stages of development, through design, raw materials sourcing, manufacturing and sale to delivery and support to our customers.

All food contact manufacturing sites follow Good Manufacturing Practice and have developed robust processes based on risk assessment principles, an essential requirement to verify and ensure product compliance and safety. We ensure that we only use substances that are approved and in accordance with the applicable regulations, and we provide our customers with full information on products' hygiene and safety aspects through declarations of compliance and other specific documentation.

To ensure that we are as effective as we can be, we have developed a comprehensive training programme and deliver this to our key internal actors, both centrally and locally. In 2017, we rolled out a European Product Safety module to European sales teams and embarked on a robust training programme for all regional leads responsible for product safety.

The evolving landscape we operate in constantly brings new challenges. For example, we are seeing an increased recycling rate of historically non-recyclable products (e.g. paper-based coffee cups) and a growing shift away from plastic towards paper packaging. These trends present food safety challenges that require us to utilise our expertise and knowledge to find a balance between food safety and recyclability.

Managing our chemical footprint

In line with the REACH regulations, we continue to monitor and manage the inclusion of identified substances of very high concern (SVHCs) within our products. This year, we undertook a comprehensive exercise to build a central database of hazardous chemicals, with a focus on SVHCs. The project has been completed for the whole of our Plastics division and, as a result, we have already completed the successful phase-out of an adhesive remover, with two more substances identified for substitution.

More information and policies

For more information on how we manage the application of chemical substances in our products, and for an up-to-date overview of SVHCs in use in our business, please visit our website:

www.dssmith.com/company/sustainability/our-business/chemicals-management/

Sourcing

In parallel with sustainable product design and innovation, we are working to source our raw materials responsibly and improve the quality of secondary raw materials.

Introduction to sourcing

Over the last 25 years, there has been a proliferation of certification schemes and marketing campaigns linked to product provenance, driven by consumers who are increasingly aware of the wider environmental and social impact their purchasing decisions can have. Programmes now exist for a wide range of goods and commodities, including fruit, tea, coffee, sugar, fish, soy, palm oil, eggs, timber products and others. Paper is a material linked closely to deforestation, an emotive and consumer-facing issue, so sustainable management of forestry is key to ensuring responsibly produced timber-based products.

At DS Smith, sustainable sourcing is central to our offer. Throughout our business, our focus is on using quality, sustainably sourced raw materials, whether recycled or virgin fibre or plastics. Our primary raw material - fibre - is part of the renewable corrugated system. As such, the renewable corrugated system depends on regular inputs of sustainably sourced virgin fibre. Through this combination of design and responsibly sourced materials, we are able to offer truly sustainable packaging solutions.

High-quality, recycled raw materials

Although the focus of DS Smith's fibre sourcing and traceability projects is on ensuring sustainable sourcing of virgin fibres, our raw material consumption continues to be dominated by recycled material managed by our Recycling division.

As part of the EU Circular Economy Package, there is growing pressure to increase recycling rates. This is both positive and achievable if managed correctly. However, we must not sacrifice the quality of fibres for recycling in search of ever greater quantities. If we forget about quality in recycling, we end up with higher contamination rates. With high contamination comes unusable feedstock for recyclers - meaning that material intended for recycling will end up in energy recovery or, even worse, landfill.

This is why we persistently advocate for high-quality recycling and early segregation of recyclables. Our paper mills can only make paper from paper - not plastics, glass, metal or any other recyclable or waste material that can sometimes end up in paper and card recycling collections. We need high-quality fibres to maintain a strong, efficient DS Smith supply cycle.

In our Plastics division, sourcing high-quality raw materials is also of utmost importance. Between 30 and 40 per cent of all plastic raw materials come from post-consumer recycled sources. In 2017 alone, we sourced over 24,000 tonnes of regrind. This prevented the need for virgin materials equivalent to 381,000 barrels of oil or 1,800 recycling trucks diverted from landfill or incineration.

We also provide buy-back and take-back programmes for polypropylene (PP) and high-density polyethylene (PE) products. In fact, we source just under half of all our injection moulded PP and PE in this manner (see pages 31-32).

Percentage of plastic raw materials from recycled sources (%)

2015	22
2016	34
2017	37

Many of our products can be produced with 100 per cent post-consumer recycled sources. However, we responsibly apply a lower percentage to some products to avoid compromising product integrity (e.g. rigidity) and, in some cases, to comply with customer hygiene specifications.

Fibre traceability has long been a focus of our sustainability activities. In line with the increasing focus on plastics and recyclability by media and policy makers, we are seeking to trace where our products go at end of life, and know how they are used downstream if they are exported. We are therefore delighted to have launched a new traceability project to map the mass balance flows of plastic materials through our business. We hope to publish the results during the next calendar year.

Advocacy on secondary materials

To improve quality of raw materials and segregation, DS Smith has fed into a number of consultations around the issue of quality recycling and specific campaigns (such as on coffee cups, see page 32), written to industry, MPs and government to bring stakeholders together to find solutions. We are also regular contributors to trade and industry magazines on issues such as collection infrastructures and contamination. On a practical level, we continuously work with our customers to provide training and education to improve recycling systems.

For details of which trade associations DS Smith participates in, please see page 38.



Fibre sourcing

Context

When sourced from well-managed forests, harvested timber has vital social, environmental and economic benefits and can be a truly sustainable enterprise. However, we recognise that in some countries and regions there are issues with deforestation and illegal logging.

Due to increased consumer interest in product provenance and an urgent need to preserve habitats and ecosystems, there is a heightened scrutiny of timber and fibre sourcing. Therefore DS Smith remains committed to supporting initiatives that promote forest management and chain of custody, and ensuring, through traceable and transparent supply chains, that any virgin fibres in our products originate from sustainably managed sources.

Our targets

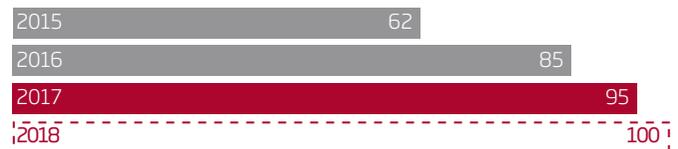
Our work on sustainable fibre sourcing splits into two key areas, and we have set an ambitious target in each:

- 100 per cent of our sites to have a chain of custody certification (FSC®, PEFC or SFI).
- Use 100 per cent recycled or chain of custody certified papers by 2020.



Our performance and highlights

Percentage of sites to have chain of custody certification (%)



In Europe, our paper mills are fed with quality inputs from our Recycling division and manufacture only recycled papers, whilst in North America our kraftliner mill sources all its fibre inputs from sustainable sources and our Reading testliner mill sources high-quality used papers. However, since the renewable corrugated system relies on regular inputs of sustainably sourced virgin fibre, certification of these sources is of utmost importance.

In 2015, we set ourselves the ambitious goal of 100 per cent of relevant manufacturing sites achieving FSC® certification by the end of April 2018. We are pleased to report that 95 per cent of in-scope sites across our Packaging and Paper divisions have achieved FSC® certification. Whilst we have missed our target of 100 per cent due to a combination of integration of new acquisitions and regional organisational challenges, this project has built up networks, processes and ways of working that will be used to enhance and embed future Group-wide certification plans. Within the year, the small number of remaining uncertified in-scope sites will become certified.

Due to our ongoing growth, we have decided to keep this as a formal sustainability target, ensuring that as we move into new regions and countries we maintain our minimum standards and ensure we continue to meet the needs of our customers.

Our focus is on using the right balance of recycled and chain of custody certified virgin papers to meet the requirements of our customers. We are working closely with a number of our customers to help them to meet their 'zero net deforestation' ambitions by 2020.

We support the FSC® standard and all other credible international fibre sourcing and chain of custody certification schemes.

Our next steps

- Undertake a gap analysis of the current status of our sustainable paper sourcing against our new target.
- Develop an action plan to ensure all paper we source comes from sustainable sources to reach our target.

More information and policies

- [DS Smith Packaging Sustainable Sourcing Guideline](#)
- [A summary of our paper mill certifications](#)

Supplier standards

Context

The growing interest in commodity supply chains is part of a broader global trend. Every facet of the modern world is being challenged to operate in a more transparent fashion, from politics to law and order, and from the media to sport. Burgeoning technologies such as blockchain and the rapid rise of big data and social media are bringing a new era of radical openness. Organisations are expected to disclose much more information than ever before. Legislation such as the Companies Act, EU Timber Regulations, UK Modern Slavery Act 2015 and Equality Act 2010 plays a high-profile role in driving this transparency.

In response, at DS Smith we are driving greater disclosure from our suppliers in order to better understand the entire supply chain and manage risks related to human rights, child labour, business ethics and environmental management.

We understand that to ensure the highest ethical standards we must look to form partnerships with our suppliers. Each and every supplier of materials and/or services to DS Smith is expected to meet certain minimum standards. Through our fibre sourcing target, we are already making strong progress in our fibre supply chain. However, as we look to drive our sustainability standards into our entire supply chain, we will focus on our full breadth of suppliers.

Our target

Ensure 100 per cent of our suppliers comply with our sustainability standards by 2025.



Our performance and highlights

Number of strategic suppliers who have signed the Global Supplier Standard

2015	36
2016	109
2017	213

We have exceeded our commitment to ensure our top 200 strategic suppliers sign our new Global Supplier Standard, with 213 having committed to adhere to our minimum social and environmental expectations. Work is ongoing to implement a supplier assessment programme, and our ambition and focus in this area are now reflected in our new target. Whilst our aim is to source 100 per cent of our papers sustainably to address the risk associated with our primary raw material, the purpose of this target is to ensure we drive similar ethical standards into our wider supply base.

In addition to ensuring current suppliers adhere to our minimum standards, we also have a responsibility to mitigate risk associated with potential new suppliers. Therefore, as we report in our Modern Slavery Statement, in areas of higher geographical risk we have required our businesses to commit to completing pre-audits on all potential suppliers. For example, in our Chinese business, vendors are audited and approved before they can supply to DS Smith.

As we dig deeper into the supply chain, we expect to encounter a range of new challenges. During the last 12 months our assurance processes have encountered one instance of child labour in a pre-audit of a prospective supplier. Identifying this issue early confirmed to us that our assurance processes are robust. We are taking the necessary steps in line with our Modern Slavery Policy to ensure child labour does not exist in our supply chain. We will be tenacious and will continue to work on our approach to address these challenges, report transparently where we find them, and engage in collaborative work to bring more influence to harder-to-reach areas of our supply chain.

Developing a culture of awareness around these issues is key. Our procurement teams and key members of the management team have received third-party training which will be extended to all new starters in these teams.

Our next steps

- Create robust methodology for assessing suppliers.
- Develop an ongoing programme of refresher courses on modern slavery and supply chain labour risks.

More information and policies

- [DS Smith Code of Conduct](#)
- [DS Smith Global Supplier Standard](#)
- [DS Smith Modern Slavery Policy](#)
- [DS Smith Modern Slavery Statement](#)

Manufacturing operations

Following design, innovation and sourcing, our core activity is to manufacture packaging solutions, ensuring we manage our environmental impact and take responsibility for our people.

Introduction to manufacturing operations

Globalisation has resulted in greater connectivity, causing our countries and cities to consume more, putting a strain on natural resources. According to the Global Footprint Network, we are currently using resources equivalent to 1.7 planet Earths.

Regulatory initiatives such as the Paris Climate Accord, EU Circular Economy Package and more recently the focus on single-use packaging are all examples of how we are becoming more aware of the challenges of consumerism.

Whilst our core business is based on renewable, sustainable fibre-based packaging, we also manufacture reusable plastic packaging and provide recycling and waste management services to our customers around the globe. Across our operations, we are reducing our environmental impact through investment in advanced energy reduction technologies, switching to cleaner fuel and turning waste streams into resources. In all of these areas, we aim to reduce the environmental impact of our business and maintain our position as a responsible employer.

Responsible employer

Context

At DS Smith, our most valuable asset is our people. Realising the potential of our people is essential for the continued growth of the business. As a responsible employer, we are conscious of the wide-reaching impact of employment relationships on individuals, their families and the communities in which they live and work. We provide direct employment and livelihoods for over 28,500 people. Through their experience and advocacy, we have an impact on their friends and family. In many cases, our production sites are located outside major cities, in industrial parks or less populated rural areas, making us a significant employer in those localities.

We also extend our impact as an employer through our broader stakeholder network of contractors, suppliers, customers and charitable partners, creating touch points to a global community.

Our target

Build a diverse, engaged and respected workforce.



- This involves measuring and looking to improve the diversity of our workforce, creating more engaging workplaces, and maintaining compliance with international labour standards through the Supplier Ethical Data Exchange (Sedex) platform.

Our performance and highlights

Diversity

DS Smith is an equal opportunities employer. Our Code of Conduct details our commitment to strive towards a non-discriminatory Group culture based on our values. We seek to build upon the talents of our global workforce without regard to gender, race, ethnic or national origin, marital status, pregnancy, parental status, sexual orientation, gender re-assignment, trade union membership, age, religion or belief, political affiliation or disability.

In addition to developing a specific action plan around gender diversity, we are working with our European Works Council (EWC) on the topic of diversity and inclusion in the broadest sense as part of the implementation of our Employee Charter. This involves the creation of working groups to boost the representation of minority groups within the employee base and ensuring there are clear channels for employees to speak to their representatives or to use our Speak Up! phone line, should they encounter any bias or unfair actions.

This year, we have published gender pay gap information for our UK businesses for the first time. The evidence in the report reflects the hard work we have put in to implement a fair and equitable policy and process when it comes to reward. What our report, and those of others in the industry, has highlighted is the need to encourage more women into jobs in the manufacturing industry. DS Smith is keen to take a leading role in promoting training, recruitment and networking opportunities to enhance the gender diversity of our workforce and to promote inclusive work practices.

Engagement

We have regular and productive meetings between our Senior Executive and the EWC. It is through that strong relationship that we launched our Employee Charter last year. This was a huge step forward in employee relations and provides greater clarity on what is expected from employees of DS Smith – and what they can expect in return. Following the official signing of the document in April 2017, it was formally launched internally at the July plenary meeting of the EWC and since then has been introduced to colleagues throughout DS Smith. A full update to all employees on our progress towards the commitments made in the Charter is planned following the next all-employee survey, as the items in the survey are used as our measures.

Over the course of the last year, we have also taken steps to engage employees in the brand and ways in which they can be advocates for DS Smith. Through our corporate Instagram account, we have invited colleagues to share their photos of holidays around the world featuring our logo, sparking some incredible creativity and enthusiasm. This same enthusiasm was applied to our current campaign promoting the recycling of coffee cups and the important role each of us can play as a consumer by segregating waste, with DS Smith employees posting images, videos and comments on LinkedIn, Facebook and Instagram on the topic.

Respect for our people

In addition to our supplier standards activities (see page 19), we have a duty to manage business ethics and labour topics in our own operations, aligned with the requirements of the Modern Slavery Act (UK). For DS Smith, our position as a strategic supplier to many of the most recognisable FMCG brands means that we have an opportunity to provide our customers with the highest level of assurance that their packaging is sustainably and ethically sourced.

We continuously maintain 100 per cent of our sites registered on the Sedex platform and completing the Self-Assessment Questionnaire. One third of our largest sites verify their answers through third-party SMETA 4-pillar audits.

Talent, careers, education and training

Working in partnership with our EWC, we have also been proactively seeking ways to retain the expert knowledge of our workforce, as many technical experts and long-service employees approach retirement. As a result, we have reinvigorated apprenticeship and graduate programmes and are tightening international good practice sharing or coordination surrounding these programmes.

Our apprenticeship scheme introduces young talent into the organisation and gives them the opportunity to become the packaging specialists of tomorrow.

Wellbeing

For many years now, we have been developing our ability to support the physical and mental wellbeing of all employees through nutritional advice, healthy food options in canteens, health check opportunities and exercise groups. This year has also seen the introduction of Mental Health First Aid training for DS Smith employees (see page 22). This internationally recognised course teaches people how to spot the signs and symptoms of mental ill health and provide help on a first aid basis. Those who attended can now feel confident to guide people towards appropriate support, raise awareness about mental health, reduce stigma around mental health and promote early intervention.

Management culture and behaviours

The DS Smith values have been explored in depth with managers at all levels through our Engaging Managers programme. Over the past few years, the programme has given thousands of managers the skills to act as positive role models and engage their teams.

Our high-performance culture is driven by our values, which promote open communication, driving for results, always looking to improve and meeting our commitments to all stakeholders. They set the behavioural code for how all DS Smith employees are expected to carry out their work and are set out in our Code of Conduct. We have also taken steps to recognise our values in action across the Group through a variety of local awards programmes. Most significantly, our Paper and Recycling businesses launched People Excellence Awards.

In addition, we have introduced nine Management Standards that list the key expectations of all DS Smith line managers relating to safety, individual performance, performance development, customer focus, communications, compliance, targets planning and control, business excellence and resourcing. The purpose of these standards is to develop a transparent, responsible and ethical business culture in the workplace.



Our next steps

- Build and implement a diversity action plan, including a Group-level measure.
- Assess and analyse site responses through the Sedex Self-Assessment Questionnaire and identify potential areas for improvement.

More information and policies

- ['DS Smith signs Employee Charter' press release](#)
- [DS Smith Code of Conduct](#)
- [DS Smith Modern Slavery Policy](#)
- [DS Smith Modern Slavery Statement](#)
- [DS Smith Gender Pay Gap Report](#)

Health and safety

Context

The safety of all people – employees, agency workers, contractors and visitors – is absolutely paramount. It is our number one priority, every day. It is the cornerstone of being a responsible business.

Our targets

- Zero accidents
- Vision zero harm



Number of Lost Time Accidents (LTAs)

16/17	132
17/18	126

Health and safety performance indicators

	2017/18	2016/17 (comparative)	2016/17 (reported)	Variance
Total LTAs ¹	126	132	113	-3.8
AFR ²	2.8	3.0	2.6	-6.7
Number of sites with zero LTAs	239	207	207	15.5

1. Lost Time Accident (LTA): accident resulting in lost time of one shift or more.
2. Accident Frequency Rate (AFR): number of LTAs per million hours worked.

Our performance and highlights

Our standards and expectations for safety go beyond the legal requirements of the countries in which we operate and are modelled to drive world-class safety performance and to achieve our goal of zero accidents. As a result, 239 of our locations achieved zero lost time accidents (LTAs) in 2017/18. Previously reported 2016/17 data has been updated to reflect all acquisitions during the financial year and overall we are pleased with the reduction in our LTA rates and our accident frequency rates. We have proactively taken steps to reduce risks and reinforce our policies, processes and safe systems of work as well as developing our safety culture. We have proactively taken steps to reduce risks and reinforce our policies, processes and safe systems of work as well as developing our safety culture.

In the following months, we will also be implementing a renewed emphasis on health and safety and widening our aim towards a vision of zero harm. The journey towards zero harm will encompass organisational, physical and cultural elements, designed to engage our people and move towards sustainable world-class health and safety performance in the years to come.

To increase safety leadership skills and to expedite the compliance with DS Smith's safety standards, we have designed a bespoke development course for key managers. This programme is currently mandatory for all new or transferring managing directors and general managers and all health and safety managers, including those joining from acquisitions. Currently, 122 Site general managers, managing directors and all site health and safety managers have attended this programme. The positive feedback we have received means that we are considering extending this course to all existing general managers and managing directors at our sites.

We have also further upgraded our global health, safety and environmental reporting system, CERTUS, providing us with greater control and richer insight into our performance in these areas whilst also reducing the number of information systems in use across the Group. This enhanced capability is designed to help us generate insights and focus on leading indicators that will help us prevent accidents from occurring in the first place. As the system continues to be embedded, an increasing focus on self-service analytics will empower our front-line staff to make more safe decisions at work.

These measures and next steps will allow us to continue the journey towards a sustainable, world class performance, supported by Boxy, our health and safety hero, and of course ensure the health and safety of everyone who works on our sites.

Our next steps

- Implement and embed our vision zero harm strategy.
- Continue to embed Group-wide health and safety standards, audit programmes and employee engagement activities.
- Extend our leadership programmes to all existing general managers and managing directors at our sites.

More information and policies

- [DS Smith health and safety website](#)

Mental Health First Aid training

One of our largest packaging sites in the UK has taken an important step towards zero harm by focusing on mental health. Every year, approximately one in four people will experience a mental health issue and Mental Health First Aid England estimates that each year mental health accounts for almost 70 million sick days. In response, our Fordham, UK site has delivered Mental Health First Aid training to management employees, with further training planned in the new year for further UK sites.

Recycling LGV driver lone worker devices

Leading the way in zero harm initiatives is the UK Recycling Division. All LGV Drivers have been equipped with a "Lone worker risk management device" which acts as an SOS fob with inbuilt fall detector, tilt alarm and GPS to alert a team of specialist support staff in the event of an accident. Whether the drivers are on-site or off-site, on the road networks or at a third party facility the device significantly improves speed of emergency response.

Carbon and Energy Context

Climate change is one of the biggest global issues and presents businesses of all sizes and in all industries with both a unique range of market opportunities and a significant array of challenges. We are aware of the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD), based in part on the Paris Climate Accord. At present, we believe that we report against many of the recommended criteria through our annual submission to the CDP. Over the coming year, we will review our reporting against the criteria and will look to disclose more in future reports.

Energy use is one of the main sources of emissions. We have both efficiency and financial incentives to reduce our own emissions and the emissions of upstream supply chains. Businesses are increasingly being held to account on this performance by investors and customers, as well as having to comply with international agreements and domestic regulations aimed at reducing global emissions of greenhouse gases, which provide regulatory incentives.

Our target

Reduce our CO₂e emissions by 30 per cent, per tonne of production, by 2030 against a 2015 baseline.



Our performance and highlights

Carbon emissions per tonne of production (kg of CO₂e per tonne)



At DS Smith we are committed to reducing our emissions. To best demonstrate our progress as we continue to grow through acquisition, we measure and report our emissions relative to production. Our approach to achieving our ambitious emissions reduction target is split into two areas, with approximately 15 per cent of carbon reduction to be achieved through each of:

- fuel switching
- energy efficiency initiatives.

CO₂e emissions per tonne of production have increased by 5.2 per cent. This is due to a combination of increased use of natural gas at our paper mills caused by less burning of alternative fuels such as reject plastics, and a focus on performance papers and packaging which, whilst using less fibre and providing better-performing packaging, are more carbon-intensive per tonne of production.

Production by volume has increased during the last year; however, production by weight has decreased slightly, reflecting our focus on lighter, higher-performance papers and packaging. In the Packaging division, in order to meet customer specifications and sustainability ambitions, we have been optimising our fibre use so that we use no more fibre than necessary. However, energy requirements do not reduce in direct correlation with paper weight reductions, which has led to an increase in our energy

intensity per tonne of production. Nevertheless, we remain in a positive position against our long-term target, showing a 1.5 per cent reduction in carbon intensity against a 2015 baseline.

Our absolute carbon figures rose by 4.4 per cent primarily due to the acquisition of 11 further sites, primarily in Northern Europe and Iberia. As we continue to grow through acquisition we expect this upward trend to continue, although we consistently strive to reduce emissions per tonne by as we embed our high standards of energy management into newly acquired sites.

Despite these trends, we have seen success across our Recycling and Plastics sites. Both divisions have reduced their Scope 1 emissions by over 7.0 per cent, and Scope 2 emissions by 13.2 and 9.1 per cent respectively.

We are also exporting more energy than last year through our paper mills, reaching a total of 892 GWh, which is 4.5 per cent up from 2016. This is primarily due to the investment and operational developments at our Combined Heat and Power plant in Lucca.

Energy efficiency initiatives also continue to make strong progress. Our most significant project in this area is the replacement of high bay lighting with LED lamps. Last year, we reported that the UK deployment was complete, with in excess of 8,000 lamps installed across 35 sites, and we are now delighted to report that this has resulted in a saving of 6,201 tonnes of CO₂e. We are also pleased to report that deployment has now been completed in Italy, with in excess of 5,000 lamps installed across 13 sites.

Our next steps

- Refresh our climate change risk register, in light of the TCFD recommendations, and report on our findings next year.
- Implement ISO 15001 across 100 per cent of sites by 2019/20, thereby creating an effective mechanism for cascading responsibility for carbon reduction to individual sites.
- Install LED lighting in Germany, France, Spain and Poland in next stage of global roll-out.

More information and policies

- [DS Smith Sustainability Policy](#)
- [DS Smith CDP Climate Change submission](#)

Värnamo biomass boiler

DS Smith's first major biomass boiler is now being built at Värnamo box plant, Sweden, as part of a carbon reduction strategy based on switching to alternative, low-carbon fuels.

By partnering with Värnamo Energi, a local district heating company, the site can replace the existing gas-fired boiler with a boiler powered by locally sourced biomass – to provide at least 95 per cent of the site's steam requirements. This move will guarantee a supply of renewable, low-cost energy for 15 years and is expected to reduce the site's emissions by approximately 2,200 tonnes of CO₂e per annum.

Water stewardship

Context

Water plays a critical role in our business, particularly in the paper production process. Fibres are transported through the production process, from pulp to paper, using water, and then superheated steam is used to dry the paper. Water is also used to dilute starch in our corrugated plants, which then bonds several layers of paper together to create board, and in all facilities for cooling machinery and cleaning. As a water-intensive business, it is important that we consume, recycle and treat the water we use responsibly and efficiently so that we minimise our impact when we return water to the natural environment and that we comply with all legislative requirements.

Our target

Achieve zero water impact* by 2030.



* Including measures for water quality (zero non-conformances with consents to discharge), water stress improvements (all operational sites in water-stressed areas to have a mitigation plan in place) and water reduction where feasible (all paper mills to perform at or below internal performance benchmark).

Our performance and highlights

Water effluent per tonne of production (m³ per tonne)

2015	2.4
2016	2.3
2017	2.5

Our primary water stewardship priority is quality. At DS Smith, over 80 per cent of the water we extract for our own purposes is returned to be treated via our own or municipal effluent treatment. The remaining water is lost by evaporation during the paper making process or through starch dilution. The largest consumer of water in our business is our Paper division, where we use wastewater treatment systems to ensure that the effluent we discharge is purified, ecologically safe and meets all regulatory requirements. All our sites monitor COD, BOD and AOX levels, pH and suspended solids, which is a key element to managing performance to prevent pollution incidents and ensure water is returned back to the environment in the same or better condition than when it was extracted. At some sites, we also treat wastewater on behalf of the local community. During 2017 we treated a total of 608,000 m³ of water effluent on behalf of third parties. However, production was up by 3 per cent in our Paper division during 2017, resulting in an absolute water effluent increase of 4.95 per cent.

Our second water stewardship priority is to manage our facilities that are in areas of high water stress. Most of our mills are located in areas where water is plentiful, with the exception of Lucca. We manage this site closely to ensure that we remain within extraction limits, and have specific localised risk identification, mitigation and management plans in place to use water more sustainably and efficiently.

Finally, our third priority is to reduce total water consumption. Predominantly, our water is sourced from boreholes (53 per cent) and surface water (42 per cent). This is the most difficult area to tackle as water is crucial to our business and our production

levels continue to increase. There is also a delicate and highly technical balance to be maintained, as reducing water use leads to an increase in energy consumption. Based on industry benchmarks, we have identified an optimum level of water use of 6.5m³/tonne of production.

Our next steps

- Create an updated water stress map to more accurately monitor, measure and mitigate any sites exposed to high water stress risks, by 2019.
- Identify paper mills operating above our defined water use benchmark and work to bring them in line with this standard.

More information and policies

- [DS Smith Sustainability Policy](#)

Paper mill improves local water conditions

DS Smith's De Hoop paper mill in The Netherlands has a unique system which allows 'waste' water to be treated, purified and recycled back into the paper-making process. The mill part-owns Industriewater Eerbeek, a specialist water treatment facility in the town that uses industry-leading technology to remove unwanted materials and treat the water before returning it to the mill. This arrangement has been closing the water loop since 2016, meaning less groundwater is extracted and fewer additional additives are required. As a result, water levels in Eerbeek Spring are raised and biodiversity benefits.

Decommissioning Silverton paper mill

At DS Smith, we are aware of the impact our operations and supply chains can have on biodiversity. Whether it be building new greenfield sites or responsibly managing decommissioned sites, we are committed to high standards of biodiversity management.

This is best demonstrated by our work to transform Silverton mill, a former DS Smith paper mill located in the south of England, which closed in 1999 after a manufacturing history lasting over 200 years, back into a natural environment. After dealing with contamination, abandoned buildings and river re-meandering, countless birds, fish and mammals have returned to the site. DS Smith has received a glowing report from the National Trust and the Best Biodiversity Enhancement Award.

[Find out more on our website.](#)



Recycling and waste

Context

In a world of rising raw material prices and ambitious recycling targets, it has never been more important to be as resource-efficient as possible. Businesses must find ways to reduce waste, use renewable materials where it is advantageous, and create closed-loops systems maximising opportunities to extract the most value from waste materials through recycling and recovery.

Our target

Send zero waste to landfill by 2030.



Our performance and highlights

Waste to landfill per tonne of production (kg per tonne)



Waste is a resource at DS Smith. We apply this principle not only to our circular business model, but also to our everyday operations.

As a Group, we send over 60 per cent of our waste to recycling. Almost all our packaging facilities are equipped with underfloor conveyor belts, which transport 636,000 tonnes of pre-consumer off-cuts per year back to paper mills as high-quality feedstock. Similarly all our Plastics sites are equipped with regrinders which can recycle off-cuts, damaged products and samples immediately and return the material to production within four hours.

One of our biggest highlights on recycling and waste is the significant improvement in our paper mill in Belišće. This site is a great example of the longer term impact of embedding our minimum environmental standards into acquired sites, delivering a reduction in waste to landfill of 26.9 per cent in 2017.

The impact of the China import ban has unfortunately had a negative effect on our overall landfill figures due to higher levels of contamination at our paper mills. In the wake of a global capacity issue caused by the China import ban we have taken more mixed paper recycling feedstocks into our mills that have produced a higher waste yield. Therefore waste to landfill has increased by 21.0 per cent in absolute terms, and by 22.0 per cent per tonne of production. Other fluctuations year on year can be caused by new acquisitions and unique circumstances such as site renovations. Our focus on high quality raw materials therefore remains top priority as we hope to recover the impact of the China import ban in the coming year.

Whilst timber fibre can be recycled at least seven times, when fibres become too short and are no longer strong enough to manufacture quality papers, they are rejected by our mill operations. In some countries, these waste fibres are used to generate energy at on-site anaerobic digesters or biomass boilers to power our paper-making, or at off-site energy-from-waste facilities. However, in the UK, France, Italy and The Netherlands we send the remaining fibres to either the agriculture industry

to provide bulk and nutrients to the land, or to the construction industry to be an additive to cement. We think this is an excellent way of ensuring the full value is extracted from our materials.

The quality of fibre we receive has a huge impact on our waste stream and for a significant period of time one of the most problematic waste streams for our paper mills has been plastic. Approximately 32,000 tonnes of plastic are extracted from our pulping process per year – based on an average contamination rate of 3 per cent before the impact of the China export bans. These are a mixture of films and fragments which were thought to be previously unrecyclable. However through collaboration with our Plastics division, we found a way to recycle these plastics to create low-grade polyolefins which are being manufactured into new products.

Our next step

- Produce an internal 'zero waste' roadmap.

More information and policies

- [DS Smith Sustainability Policy](#)

BedKind turns waste into a resource

During 2017, DS Smith launched BedKind – an animal bedding brand which creates a high-value product from manufacturing by-products.

Clean off-cuts from cardboard packaging production are collected, cut into two centimetre squares, dust extracted and bagged at our DS Smith Packaging plant in Blunham, UK. BedKind is highly absorbent, naturally insulating and 100 per cent compostable. Its minimal dust means that it is primarily targeted for use with horses, but is suitable for a wide range of livery stock.

[Find out more on our website.](#)

Paper mill closes the loop on plastic

DS Smith Aschaffenburg paper mill in Germany is now providing the raw material for DS Smith Plastics' production facilities. Aschaffenburg mill has developed technology to separate plastic rejects from its paper pulp and sends them to a DS Smith Plastics site in Karlovac, Croatia where new technology means they can be recycled and used in a new award-winning product, Beaulex®.

[Find out more on our website.](#)



Responsible neighbour

Context

Although we directly impact the lives of 28,500 employees, the scale of our business and our joined-up approach means we are able to tackle big challenges faced by the wider communities in which we operate and in which our employees live. As a caring and responsible business, we partner with our local communities. Fuelled by entrepreneurial spirit, our people are constantly seeking solutions. We know our people value being able to use their skills to give something back and support the future of their local environment.

Our target

Engage in community programmes at 100 per cent of our sites by 2020.



Our performance and highlights

Community engagement

In previous years, community engagement in the form of fundraising, volunteering, charity support and other activities has been primarily site-led and employee-led. This approach has been largely successful: however, as we continue to grow as a business we understand the importance of being more strategic in this area.

DS Smith is therefore in the process of developing an ambitious, unified and radically boosted community engagement strategy with a target to increase the number of sites involved to 100 per cent by 2020. This strategy will include new charity partners and a common framework to enable sites to join together and work towards common projects and initiatives.

Charitable Foundation

In addition to site-led and employee-led charitable giving, DS Smith also operates a Charitable Foundation which provides financial support to charities that align with our own activities and values.

The foundation primarily supports charities engaged in improving or conserving the environment and those providing training and educational opportunities. In 2017, a total of £190,000 was donated by the Charitable Foundation.

Our next steps

- Develop a global strategy for our involvement in the community that fits our corporate purpose and values.
- Create a framework to guide our sites towards common projects and initiatives.

More information and policies

- [DS Smith Charitable Foundation website](#)

Opening doors for young people in the UK

As a member of the Alliance for YOUth, DS Smith has partnered with the EY Foundation to create opportunities to engage with young people from lower socioeconomic backgrounds and help us to build a more diverse talent pipeline.

As part of the programme we will be providing early career support to a group of young people across our London, Northampton, Devizes and Livingston sites. As part of the course, they receive one to two weeks of work experience on site, followed by six to ten months of mentoring with our employees. After a further two weeks of intensive skills training with the foundation, the young people will receive a Chartered Management Institute accredited qualification in team leadership, fully funded by DS Smith. The programmes provide development opportunities for existing DS Smith employees who work with and mentor the young people, creating real benefits to all involved.



Romania strengthens Eco Stuff partnership

For over two years, DS Smith Packaging sites in Romania have been supporting the Eco Stuff charity to help to educate the community, encourage creativity and inspire positive action to protect the environment.

Last summer, designers from our Timisoara packaging site worked tirelessly to create an award-winning cardboard giraffe Lucretia, and this year an aeroplane, for Eco Stuff's 'Make it! Race it! Recycle it!' - a competition to race boats made of recyclable and reusable materials down the Bega River to raise awareness of World Environment Day. Continuing this partnership in Spring, our employees in Romania once again supported the charity by participating in the Lunca Timişului Trophy 60km mountain bike event. Over 300 competitors from Romania and abroad raised money to support a children's Zero Waste Summer Camp in summer 2018.

This ongoing partnership is an example of our employees' passion to support the environment and education - exactly the attitude and values we will foster through our new target.



Customer supply cycles

As supply chains become more complex, not least through the rapid rise of e-commerce, it is increasingly important to ensure packaging is designed to meet the needs of each specific chain.

Introduction to customer supply cycles

Following the design, sourcing and manufacturing stages of our closed-loop business model, the focus is to work with our customers to ensure their packaging is working to its full potential to reduce the impact of the supply chain, again and again. We call this supply cycle thinking - where supply chains become supply cycles.

Supply cycle thinking

Context

The right packaging should be an enabler of more efficient supply cycles, working in harmony with both the product and any primary packaging. With an increasing focus on end-of-life management of packaging and single-use plastics in particular, it is important to recognise the role that well-designed packaging can play across the supply cycle.

The potential of secondary packaging is often underestimated by brands. Not only do we design products that tackle challenges of reusability and recyclability (see pages 14-15), our packaging is designed to drive efficiencies. As one of Europe's leading suppliers of consumer and secondary packaging, we understand that marginal gains can lead to winning results when multiplied on the size and scale of our customers' supply cycles.

Truly sustainable packaging solutions can set off a domino effect of efficiencies in our customers' supply cycles, making transport and delivery more efficient and reducing supply chain environmental impacts, whilst continuing to protect products and keeping food and drink fresher for longer, and ultimately reducing waste and improving recycling. We partner with our customers to realise these supply cycle sustainability benefits.

Our target

Whilst we have not set a formal target in this area, we are continually looking to create packaging solutions that deliver positive sustainability impacts for our customers by making supply chains more efficient.



More Sales



Lower Cost



Risk Managed

Our performance and highlights

Supply cycle thinking is central to our business offering, saving customers hundreds of thousands of tonnes of carbon through packaging solutions which create winning supply chain efficiencies.

Our next step

- Explore ways to measure the full supply cycle impact of our packaging and the role it plays in making supply cycles.

More information and policies

- ['Box-to-box in 14 days' video](#)
- [DS Smith Packaging supply cycle thinking website](#)
- [DS Smith Plastics supply cycle thinking website](#)

Furniture manufacturer makes recyclability of packaging a priority

Puustelli Group Oy manufactures its high quality kitchen furniture in Harjavalta in western Finland to supply customers in Finland, Sweden, the Baltic States and Russia. It is also well known for striving to be responsible and sustainable in every area of its business.

Previously, all 2,000 different fixtures of Puustelli furniture were packed using plastic corner covers and stretch film. The solution was not in keeping with the company's environmental objectives and did not provide sufficient protection to products during transport. This in turn caused indirect costs in the form of damaged goods and wasted resources.

In partnership with Puustelli Group, DS Smith packaging strategists developed seven different sizes of corrugated packaging to cover the entire range. This resulted in tremendous savings in terms of ordering, warehousing and implementation and avoided 32,000 kg of plastics from going to landfill each year.

[Find out more on our website.](#)



Supply cycles in action

Packaging

As an integrated paper, packaging and recycling business, we bring the circular economy to life. Our recycling operation manages over five million tonnes of recyclable materials per annum. The majority of this is fed into our network of recycled paper mills, which in turn supply our pan-European packaging manufacturing sites.

Not only do we have a focus on recycled raw materials and solutions that are themselves recyclable (see page 17), but we look to use packaging to reduce the environmental impact of our customers' supply cycles. Incremental changes to packaging design can have a knock-on effect through a supply chain, improving operational efficiencies, reducing waste and cutting emissions. We support brand-owners to explore how their packaging is processed and managed after use, tracing material and energy usage all the way from design to production and through to end use and recycling.

A simple example of this is how shaving 5mm off one customer's standard secondary corrugated packs allowed for a greater number of packs on the pallet and pallets per lorry, leading to fewer lorries on the road per year and hundreds of tonnes of carbon emissions avoided. This sort of supply cycle thinking is our way of shaping the circular economy and transforming supply chains to focus on more cyclical resource systems.

Plastics

The current legislative and media focus on single-use plastics is causing many organisations to question the role of plastics in supply chains. At DS Smith, we do not believe that plastic in itself is the problem, instead it is the poor waste management and inappropriate use of the material that should be addressed. These discussions around the role of plastic in supply chains are also bringing to the surface interesting studies and information about the positive role that well-designed plastic packaging can play in protecting products by reducing waste, increasing logistics efficiencies and driving down costs through supply chains.

For example, there are a limited number of applications where product safety and hygiene leave single-use packaging as the only available option. For example, in the wine supply chain, DS Smith Bag-in-Box products are 80 per cent lighter than glass, producing significantly less waste and reducing transport energy by a fifth according to our third-party life cycle assessment. Similarly, in other liquid supply chains the Bag-in-Box is on average 54 per cent lighter than the next best alternative and its flat-pack properties provide significant carbon and cost savings in the supply chain. These carbon savings far outweigh the benefits of a multiple-use product.

In supply chains where durability, extended lifetimes and multiple life cycles are favoured, reusable plastic packaging certainly still has a very strong role to play. For example, in the automotive supply chain, products of the same model, size, shape and weight are shipped back and forth between locations. In order to balance durability with supply chain efficiency, DS Smith's collapsible Stackabox™ improves the efficiency of return logistics and has a lifetime of approximately seven years before being reground and recycled into a new Stackabox™.

Efficient supply cycles for HELL Energy Drink

Riding a wave of 30 per cent annual growth, HELL Energy Drinks wanted DS Smith to design a new pack to increase differentiation, work more efficiently in its warehouses, and reduce damage during distribution.

By switching to a thinner R-flute corrugated cardboard for the drinks trays, our packaging strategists were able to provide a 6 per cent saving on cost through a 55 per cent increase in number of products per pallet, 33 per cent less packaging handling in the warehouse and an immediate increase in warehouse space enabling higher sales. This led to carbon savings during distribution, a win-win for the environment and the profit and loss account.

[Find out more on our website.](#)



Value, convenience and sustainability pour into the European lubricants market

There is increasing pressure on the automotive and petroleum industries to improve their sustainability credentials from numerous stakeholders, including vehicle maintenance sites, which struggle to manage limited space and large quantities of contaminated plastic waste. Last year, thanks to Fuchs Silkolene and DS Smith Rapak, a new solution hit the shelves, for the first time in Europe, to meet the needs of the industry.

The Bag-in-Box is light, stackable and space-optimised, providing extra shelf space and utilising up to six times fewer pallets, significantly reducing trucks on the road and generating carbon savings. The anti-glug pour enables more hygienic filling and ensures maximum evacuation of the product, resulting in less oil waste. At end of life, the outer box is 100 per cent recyclable, and the plastic bag produces five times less waste than rigid plastic alternatives.

[Find out more on our website.](#)



PackRight Centres

Through our network of 33 PackRight Centres, we embed the sustainability requirements of packaging early in the design stage. When specifying packaging, each stage of the value chain should be considered, from the source of new raw materials, supply chain impact (palletisation, transport etc.) to shelf life and the end-of-life disposal of the new material.

Each PackRight Centre is a hub of expertise and creativity, where we are focused on delivering concrete projects in the short to medium term. In a PackRight Centre, we invite our customers for collaborative discussions and workshops, and our skilled people deploy the PackRight creative tools, to achieve tangible results. We integrate deep insight from our customers' businesses and design advanced solutions that will improve performance throughout the entire supply chain, whilst keeping environmental impact at a minimum. We will continue to grow this network, with plans in place for further centres in the USA, France and Iberia, which will enable our customers to succeed with the optimum packaging and minimum environmental impact.



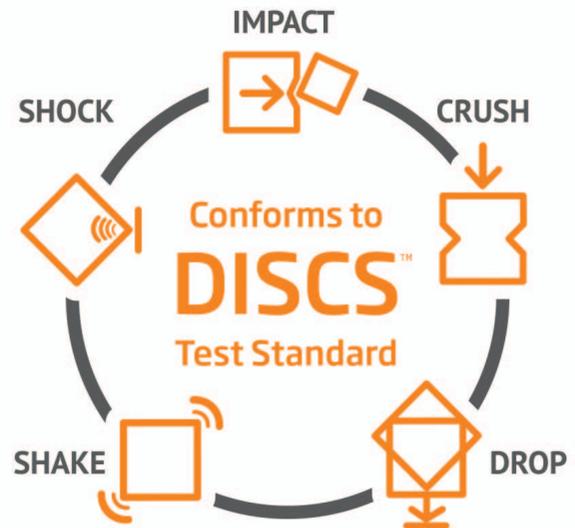
E-commerce

E-commerce supply chains give rise to a specific set of sustainability challenges. E-commerce supply chains can include up to 50 touch points, far more than in traditional brick and mortar retail chains. This means the packaging has to work harder to protect the product and prevent resource loss. At the same time, over-packaging, empty space, excessive void fill and the efficiency of last-mile deliveries provide unique sustainability challenges - and at DS Smith we love a challenge.

We are also focusing on the 'first mile of recycling'. As more and more packaging ends up in households, due to the rise of e-commerce, we are working with customers, regulators, governments, councils and reprocessors to explore the new recycling infrastructure needed to make sure that consumers can readily recycle the increased packaging coming into their home.

DISCS

DISCS is our unique, patented solution to test the durability of packaging designed to protect products (and the resources invested in them) through complex e-commerce supply chains.



There are three test levels for customers to choose from, depending on whether a package is delivered straight to the customer first time, delivered and returned or delivered with three failed attempts and then returned.

This technology unlocks a host of sustainability savings in the e-commerce supply cycle. Transport packaging can be specified accurately to meet the needs of the product, eliminating resource inefficiency. Packaging is also designed to protect the product through complex e-commerce supply chains, reducing damage and supporting product returns without the need for further packaging. Our DISCS testing also enables optimisation of logistics, with protected products taking up no unnecessary space in delivery vehicles.

Transport and logistics

Our primary focus is to work with brand-owners to meet their own carbon emission targets while also optimising their supply chain. The impact of our own transport and logistics is relatively small in comparison to the impact of our customers' global supply cycles. However, this is becoming an increasingly important area for us as the footprint of our business grows and so does our fleet of own and third-party vehicles. Our latest activity in this area has been to specify all new vehicles as 'Euro6' standard, and we are in the process of setting a further strategy for improvements.

End of life and recycling

All packaging and products eventually reach end of life and must be designed to enable high-quality segregation and recycling.

Introduction to end of life and recycling

Traditionally, global economies have been based on a linear model of 'take, make, dispose', which promotes poor resource management. However, an increasing number of stakeholders have been joining together to build a new circular economy focused on extracting maximum value from our resources and prioritising the highest levels of the waste hierarchy.

Reflecting this attitude, in the last year governments have been investigating ways to eliminate single-use packaging, which operates on a linear model. Working with stakeholders from across the packaging value chain, they are exploring ways to create a system that further incentivises more sustainable packaging solutions.

Recycling and waste

Context

We realise that environmental and economic benefits come hand in hand when both our customers and our own business use resources in a more circular manner by designing better products that complement recycling infrastructure. As a business committed to zero waste to landfill, as well as a market-leading provider of recycling and waste management services, we see waste as a resource.

Our target

Grow our net positive recycling position.



Our performance and highlights

Over the period covered by this review, our Recycling business in the UK won 'Paper Recycler of the Year' at one of the industry's leading award ceremonies. As the UK is our largest market for paper for recycling, this was a significant achievement that underlines our commitment to both innovation and quality.

Two major milestones stand out from the past year. In September, the Recycling division launched a new product, Bedkind, using waste cardboard off-cuts from our packaging production operations to make premium, dust extracted, cardboard animal bedding (see page 25). In addition to product innovation, we have also risen to consumer challenges such as the Coffee Cup Recycling challenge in the UK (see page 32). Through collaboration with our Paper division, we have found a way in which we can recycle coffee cups at our mills – something that until now has not been able to happen in traditional recycled paper mills. We are working hard with government, producers, collectors, and industry bodies to find more ways to get coffee cups to our mills and avoid them ending up as litter. And finally, we have been growing our Recycling business in less developed recycling markets, such as South East Europe. By bringing our recycling expertise, we can have a significant impact in improving recycling performance, meaning that more materials that can be recycled are recycled, and not lost to energy from waste or landfill.

Closing our corrugated loop

Waste is a resource at DS Smith. Paper and board off-cuts from our packaging operations make up a significant amount of our production waste. Paper fibres in general have the highest recycling rate of any packaging material in Europe. According to the European Federation of Corrugated Board Manufacturers (FEFCO), 88 per cent of corrugated packaging is collected and recycled. Our recycling and paper-making operations play a key role in this system, making finished paper products for use in our packaging plants – closed-loop recycling at its very best.

Our recycling, paper and packaging operations are closely integrated. Our Recycling division manages over five million tonnes of recyclable materials per annum, which provides the core feedstock for our network of 10 paper mills across Europe. This fibre can become new packaging within 14 days. This is our closed-loop, circular business model in action.

Our focus is on ensuring we extract the full value from materials, focusing on quality for recycling and ensuring that materials intended for recycling are recycled. The net effect is that the tonnage of used materials we manage for recycling is considerably higher than the tonnage of packaging that we manufacture.

At DS Smith, we work with brands and retailers to apply the waste hierarchy and ensure that all materials that can be recycled are actually recycled. Every tonne of recyclable fibre we collect from customers offsets the need to harvest a tonne of virgin raw material.



Box-to-box in 14 days

To demonstrate the crucial role of our Recycling division in our business, we launched our 'Box-to-box in 14 days' video earlier this year. The footage follows the two-week journey of paper fibres around DS Smith's supply cycle and demonstrates how corrugated packaging is circular by nature.

By recycling the paper fibres in our cardboard, we are making recycling real and can save over 360,000 trees every year from being cut down.

[Watch the video on our website.](#)

Closing our plastic loop

For plastic materials, we also embrace the waste hierarchy. Our product portfolio focuses on multiple-use products, enabling our customers to reuse packaging for as long as possible. Our crates have been known to be used for up to 30 years, and our rigid transit packaging lasts up to seven years with repairable, spare parts infrastructure.

The recycling infrastructure for plastic is much less developed than that for corrugated, which is why at DS Smith we focus on closing our own loops. All our rigid and foam sites offer take-back from customers once our products finally reach end of life. These sites are also all equipped with regrinders that can recycle the material and create new products within a couple of hours.

In the beverage industry, we take this a step further. Our injection moulding facilities, which manufacture beverage crates, have mobile regrinding units. We take recycling right to the customer's door: creating efficiencies, reducing carbon emissions and decoupling our customers from raw material consumption. Our flexible packaging is the most complex when it comes to recycling. The PE bags are designed for recyclability (see page 28) recycling rates in Europe reaching approximately 31 per cent, according to Plastics Recyclers Europe. The challenge is raising awareness about end of life recycling options. Therefore, we are taking responsibility to raise awareness and partner with our customers to educate them about separation of materials and end-of-life options across the world.

Customer buy-back expands in Slovakia

One of the biggest challenges for reusable plastic packaging is customer hygiene requirements, resulting in single-use application of products designed for multiple use. In response, DS Smith Plastics Slovakia has introduced a buy-back programme that collects single-use polypropylene (PP) from customers.

Thirty-five companies have embraced this new programme, with DS Smith buying back a total of 747 tonnes per annum and operating at full capacity on our regrinding machines. One customer, BA Glass Bulgaria SA, is a leading glass bottle manufacturer which uses extruded PP sheets from the DS Smith Plastics Slovakia site as layer pads to transport its glass bottles between locations. The company now supplies DS Smith Plastics with 30 tonnes of PP per month.

[Find out more on our website.](#)



Our next steps

- To continue to grow in capacity, geographical spread and connectedness with packaging sales from our Recycling division so that we can close more loops with our Packaging and Plastic customers.
- Work with stakeholders across the recycling value chain to improve recycling infrastructure, driving for more, high-quality recycling.

More information and policies

- [DS Smith Recycling closed-loop recycling services](#)
- [DS Smith zero waste solutions](#)

Managing our customers' waste

We have been innovators in the recycling industry for over 40 years. DS Smith Recycling is one of Europe's leading paper and cardboard recycling companies, providing a fully integrated recycling and waste management service.

Collaboration throughout the supply cycle is essential in creating a real circular economy. By partnering with customers, we enable them to apply the waste hierarchy to their own business and identify key opportunities to reduce, reuse and recycle their waste.

Closed-loop customers

Through our recycling, paper and packaging operations, customers benefit from closed-loop fibre packaging opportunities. We make millions of new box products from the used boxes we collect, and for other materials we facilitate a consolidated offering across all waste and recycling needs – so, whether it is paper, card, food waste, plastics or coffee cups, we help our customers maximise recycling and minimise waste.

Food waste

According to the Food and Agriculture Organisation a third of all food in the world is wasted, estimated at around 88 million tonnes in Europe every year. This represents huge costs to companies. Packaging is one of the ways that food waste can be prevented, by protecting food from damage and prolonging shelf life. However, retailers and brands are increasingly facing huge pressures to reduce packaging and packaging waste, at the same time as reducing food waste.

At DS Smith, we are in a unique position to support customers, as our divisions touch every point of the food supply chain. Our Packaging division works with customers to use the optimal amount of material necessary to protect the product, prevent food waste and minimise packaging waste. Then, as part of our integrated recycling and waste solution, the Recycling division manages food waste at back of store with retailers - keeping it out of landfill and separate from other recycling streams.

Coffee cups

Every day in the UK, one in five of us visits a coffee shop. Every year, 2.5 billion single-use cups are thrown away - enough to reach around the world more than five times. Currently, we only recycle one in every 400, while just 1 per cent of consumers bring their own reusable cups.

Following months of in-depth research and trials, we have found a solution to the coffee cup recycling challenge at our state-of-the-art paper mill in Kemsley, also the largest recycled paper mill in the UK.

We still have some challenges to overcome, because there need to be improvements in the infrastructure to segregate and collect coffee cups from consumers all over the UK. Please take a look at our website to find out how we will be working with the coffee cup supply chain through policy makers and coffee lovers across the UK to build a sustainable, long-term recycling solution.

Plastic

Across brands, retailers and consumers, there is a growing concern about plastic packaging waste streams. At DS Smith, we provide a range of services to help brands and retailers tackle this material.

Our fully integrated recycling and waste management system includes the collection of plastic. This is still a very new area of our business, but over the last two years we have managed an average of over 10,000 tonnes per annum. We have taken a leading role in tracking these materials beyond export to ensure traceability of our plastic supply chain (see page 17).

Aside from our recycling services, in the product design and innovation section of this review (see page 25) we report how our rigid plastic and foam manufacturing locations are equipped with on-site regrinding capabilities and our mobile regrinding units. These serve a growing list of customers for whom we provide take-back services, recycling their products at end of life and turning them into new packaging. Similarly, all our foam sites have community collection bins for expanded polystyrene, preventing approximately 30 tonnes of waste expanded polystyrene going to landfill each year.

Tesco's continued success on food waste

DS Smith and Tesco have fostered a strong and successful partnership on food waste since 2014. By working together, both companies have implemented a successful backhaul model for a number of years, where all stores return materials such as cardboard, polythene, bakery waste and animal by-product waste to central hubs for recycling.

Latest projects have included the creation of 'walking floor' trailers, which maximise the amount of waste that a trailer can carry at any one time. This resulted in a 15 per cent reduction in spend and a 25 per cent reduction in waste arisings per annum. The project also improved environmental performance, as fewer vehicle movements led to a significant reduction in CO₂ emissions, because backhauling the waste streams reduces the number of vehicles needed.

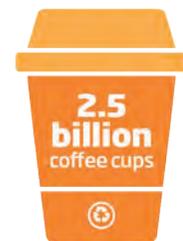
[Find out more on our website.](#)

Trials proved that when coffee cups are segregated and collected separately, we can produce



blended into traditional feedstocks of paper for recycling at the mill

DS Smith could recycle up to



at Kemsley Mill annually

Proper segregation improves Kolorcraft's recycling rate to 62 per cent in one year

DS Smith worked with Kolorcraft to improve its existing recycling processes. Implementing segregated collections ensured that larger quantities of material and a higher quality of recycle could be sent for reprocessing.

This meant that the company benefited from the twin environmental and economic benefits that come with high-quality recycling systems. Dramatic improvements were realised within just six months, with recycling rates rising from 29 per cent to 52 per cent overall, and going on to achieve a recycling rate of over 60 per cent within the first year.

[Find out more on our website.](#)

This brings us full circle in our business model

Designing for recyclability, sourcing sustainable materials, reducing the impact of our manufacturing, creating packaging that makes supply chains more efficient and playing a leading role in recycling is what we do everyday.

We combine the circular nature of corrugated packaging with our integrated, closed-loop business model.

As our products reach the end of their useful life, the materials are ready to re-enter the supply cycle in the form of raw materials.

Turn back to page 14 to loop back to the beginning of our business model and start again.

Delivering innovative packaging solutions for a changing world

A commitment to transparency remains at the heart of our business and performance reporting. As a Group, we comply with the principles of good corporate governance and understand the importance of being trusted by our stakeholders to operate in an ethical manner.



Iain Simm, Chairman of the Sustainability Steering Group

As we continue to grow by delivering innovative game-changing packaging solutions for a changing world, we are committed to doing so in a way that balances the priorities of our business, our environment and our people. Increasingly, stakeholders are interested not just in what we do, but how we do it. Living our values, we align with best practice in our management of sustainability and are committed to the principles of good corporate governance.

We have refreshed our stakeholder engagement exercise this year to ensure our assessment of sustainability challenges and opportunities takes into account the priorities of partner organisations. This insight has been invaluable in the development of our new sustainability targets (see pages 10-11), ensuring we focus on the areas in which we can have the greatest impact whilst also creating sustainable value for our stakeholders. As Chairman of the Sustainability Steering Group, I am very happy with the progress we have made against existing carbon and FSC® targets and am excited by the broad set of new targets that underpin our strategy, as we look to achieve our strategic goal to lead the way in sustainability.

I am pleased that our continued focus on sustainability has received widespread external recognition over the past year. We have again been included in the FTSE4Good Global Index, achieved 'Management B' scores in each of the forest, water and climate change CDP assessments and improved our score in the EcoVadis benchmark, retaining the 'Gold Award'. We have also been recognised in a number of prestigious awards ceremonies (see page 38) and at this time of focus and change in the packaging industry, are taking a leading role in shaping the agenda through our ongoing engagement with a wide range of trade associations.

"Living our values, we align with best practice in our management of sustainability and are committed to the principles of good corporate governance."

As part of the wider business community, I am pleased to reaffirm DS Smith's commitment to the following high-level international standards:

- United Nations Global Compact
- United Nations Declaration of Human Rights and the Convention on the Rights of the Child
- International Labour Organization Eight Fundamental Conventions
- Organisation for Economic Co-operation and Development Guidelines for Multinational Enterprises.
- United Nations Sustainable Development Goals

Whilst not yet formally integrated into our overall business strategy, we are also continuing to align our sustainability activities with the United Nations Global Goals.

Finally, I am delighted that we have again produced a sustainability review that is aligned with the Global Reporting Initiative (GRI) best practice sustainability reporting guidelines. This reflects both our commitment to operating ever more sustainably, and to being transparent about the progress we continue to make.

A handwritten signature in black ink, appearing to read 'Iain Simm', written in a cursive style.

Iain Simm,
Chairman of the Sustainability Steering Group

One common ethical standard

The DS Smith Code of Conduct sets out our ethical position on key topics. It describes common rules which apply to all of our employees, and provides guidance on our approach to ethical business practices, environmental values, and human and labour rights. It is made available to all employees as part of their induction, and has been translated into 27 languages.

Ethics and compliance

Ethical business conduct and compliance with local, national and international legislation are fundamental to our way of doing business. Embedding an ethical approach to business is increasingly a licence to operate and a condition of trading. Building trust in our stakeholders and protecting our reputation are crucial, and lead to repeat business and sustainable financial growth. Monitoring ethics and compliance and providing annual training to our employees are the responsibility of our legal teams. However, all employees are encouraged to report suspected misconduct, non-compliances or unethical behaviour.

Sustainability governance

At DS Smith, the responsibility for our sustainability performance is governed at the highest levels. As introduced at the beginning of this report, one of our four corporate goals is to 'lead the way in sustainability'. The Group Chief Executive is ultimately accountable for progress on this goal, strategy and other sustainability-related issues, but delegates management to other groups, as listed below.

Managing sustainability risks

At DS Smith, sustainability-related risks are embedded in everything we do. Since 2014, the Corporate Services function has combined legal, risk, safety and sustainability.

Since then, governance of these topics has become more embedded into how we respond as a Group to the complexities of operating in a global market with increasing stakeholder interest in our ethics, how we manage emerging risks and the manner in which we deliver our performance and results. Through our processes, we identify risks and gather timely information allowing us to implement mitigation plans, reporting and monitoring measures and assign roles and responsibilities.

With these practices, we believe we are now a more resilient organisation. We also see that in all aspects of our activities there is a growing interplay between how we manage our principal risks and our sustainability priorities.

Specifically, we are able to connect our efforts on sustainability to support our broader risk management efforts in order to:

- minimise business disruption due to tightening regulations on energy, water and fibre usage
- avoid the impact of prolonged labour unrest, or failure to maintain satisfactory labour relations
- prevent reputational damage due to the increasing social concern surrounding the broad range of packaging issues
- minimise the increased costs arising from climate change, extreme weather events and the impact of our approach to energy management.

Using the above criteria, our risk management and sustainability teams work together to apply the precautionary principle by identifying and classifying risks that could impact the integrity of the business. Our biennial materiality analysis forms a key part of this risk identification and prioritisation. Through the guidance of our executive management, we establish sustainability priorities focusing on those risks that are most relevant to our global and divisional operations.

Governance framework



New leadership for sustainability

Vision, leadership and accountability are key to enabling the business to respond to the changing expectations of stakeholders and equipping us to achieve our strategic goal and targets.



“The recent focus on packaging presents us with a unique opportunity. There is widespread customer and consumer interest in creating innovative, sustainable packaging and as an industry we have the chance to communicate the positive role that packaging plays in society.”

Q Tell us about the targets underpinning your strategy to 'lead the way in sustainability'

I am really pleased to have been involved in building this robust set of new targets to underpin our strategy. We have engaged a wide range of stakeholders, identifying their priorities and balancing these against the areas in which we believe we can have the greatest impact. Alongside increasing our ambition and focus in areas like water and waste, we are particularly excited by our target to manufacture only reusable or recyclable packaging by 2025.

Q The recyclability of packaging is a hot topic at the moment. What should the industry be doing?

We are heavily involved in industry conversations to find balanced and practical solutions to these challenges, joining up with stakeholders from across the packaging value chain. Clear and consistent recycling infrastructure is key in ensuring source-segregation of materials for recycling. This improves the quality of the material collected, simplifying reprocessing and, ultimately, helping to produce a better quality, higher value recycled raw material - whether fibre-based or plastic. In turn, this helps to stimulate recycled material markets, supporting investment in infrastructure - a virtuous cycle.

Q You mention plastics. What is your view on the current plastics debate?

I think the position is more nuanced than is currently being portrayed. Yes, there are clear challenges around single-use, hard-to-recycle plastic packaging that need to be addressed. However, we should not lose sight of the positive role that good, reusable or recyclable plastic packaging can play in protecting products, reducing food waste and making supply chains more sustainable. Across the industry this message has not been well communicated to consumers.

Q What role can consumers play in helping to improve recycling rates?

As an increasing proportion of our shopping is transacted online, we all end up with more packaging in our homes. These valuable packaging materials are often more difficult to segregate and collect than they are from retailers and distribution centres. Consumers therefore have a key role to play in segregating their waste streams to support quality recycling collections. One of the benefits of the DS Smith Group having complementary Paper, Packaging and Recycling divisions is that we can see the situation at every stage of the cycle and take a bigger-picture view about what will actually work to deliver the results we all want.

Q What is the next big challenge?

As we have reflected on in this review, packaging has to adapt to be relevant and value-adding as the world evolves. From e-commerce to omni-channel packaging, alternative materials to radical end-of-life solutions, the opportunities abound. The challenge is to embed sustainability principles as we explore these opportunities and redefine packaging for a changing world.

A handwritten signature in black ink that reads "Emma Ciechan".

**Emma Ciechan,
Director of Planning, Performance Management
and Sustainability**

Deciding what matters most

Communication with our stakeholders is an essential building block of our sustainability strategy and activities. A wide range of stakeholders enable us to highlight key topics to further develop, challenge and validate our priority areas of activity and focus.

Understanding our stakeholders

Our sustainability strategy (see pages 10-11) continues to be developed based on a range of strategic internal and external measures with medium-term targets and action plans. However, sustainability trends vary greatly from fast-moving trends such as the current focus on plastics which require us to take quick and immediate action, to longer-term trends such as reducing emissions.

Therefore, to complement the strategy, we undertake a biennial engagement exercise, called a materiality analysis, to identify, understand and monitor the upcoming sustainability concerns for a range of our external stakeholders, including customers, investors, banks, regulators and employees.

This year, in order to refresh our findings from 2016, we expanded our stakeholder scope to include a much wider range of strategic suppliers and customers of our Plastic business, and once again engaged internal audiences to sense-check the findings. The titles of our material issues have also been altered subtly in order to better reflect our activities in each area.

As a result, we can summarise the key interests of our stakeholders (right) and have updated our materiality graph (below).

Investors, banks and regulators

Key interests

- Packaging impact, see pages 14-16
- Fibre sourcing, see page 18
- Health and safety, see page 22
- Responsible employer, see pages 20-21
- Water stewardship, see page 24

Customers

Key interests

- Packaging impact, see pages 14-16
- Supplier standards, see page 19
- Fibre sourcing, see page 18
- Supply cycle thinking, see pages 27-29
- Recycling and waste, see page 25 and 30-32

Employees

Key interests

- Packaging impact, see pages 14-16
- Responsible employer, see pages 20-21
- Responsible neighbour, see page 26
- Health and safety, see page 22

Materiality analysis



External recognition and influence

We value the chance to have our performance assessed by external organisations and benchmarks. It is important to maintain a balance between reviewing our own performance, being assessed through external benchmarks and sharing our leadership expertise.

Performance in benchmarks



Included in the FTSE4Good Global Index, indicating DS Smith as a long-term, sustainable investment.



Included in the VigeoEiris Index, indicating DS Smith as a long-term, sustainable investment.



Participated in annual MSCI assessment demonstrating good corporate governance to investors.



Achieved a strong score of 'Management B' in the Carbon Disclosure Index (CDP) for each of the three assessments (climate change, forests and water).



Increased EcoVadis score, achieving Gold once again and putting us in the top 5 per cent of all companies who submitted.



Participated in the World Wildlife Fund for Nature's Environmental Paper Company index scoring 71.7 per cent of total achievable scores. Out of three subcategories, DS Smith scored 100 per cent of all available points in the fibre sourcing category, an improvement since the last assessment.



Submitted to FEFCO database for Life Cycle Assessment 2018 report.



Continuously utilised the Sedex platform to ensure compliance with international labour standards.

Influencing our industry

The regulatory environment for packaging and packaging waste has been highly active over the last year. As an industry leader, we must be responsive to these developments, protect the reputation of packaging, and enable global leaders to better understand our industry.

To achieve this, we are members of the following organisations:

- WRAP (Waste and Resources Action Programme)
- DEFRA (Department for Environment, Food and Rural Affairs)
- FEFCO (European Federation of Corrugated Board Manufacturers)
- CEPI (The Confederation of European Paper Industries)
- CPI (The Confederation of Paper Industries)
- The Packaging Federation
- INCPEN (Industry Council for Research on Packaging and the Environment)
- EUROPEN (The European Organisation for Packaging and the Environment)
- BPF (British Plastics Federation)
- National trade associations

Awards

During 2017, we received widespread recognition of our sustainability performance, with all four divisions winning an award. In June 2017, our Packaging division was awarded the Deliver2 sustainability award, closely followed in December by the Paper division winning the Environmental Leadership Award at the Pulp and Paper International (PPI) 2017 Awards, hosted at the CEPI European Paper Week. More recently, DS Smith Recycling UK was awarded 'Paper Recycling Business of the Year' and our Plastics division won Plastics Recycling Award Europe with Beaulux®. In addition, our circular business model was highly commended by the World Economic Forum's 'The Circulars' awards, and our sustainability team was highly commended 'Sustainability team of the Year' at the Ethical Corporation's Responsible Business Awards.



2018 FINALIST



About this review

This review provides a comprehensive description of the governance of sustainability issues within DS Smith, and how our strategy, targets and performance are monitored.

Commitment to transparent reporting and benchmarking

DS Smith remains committed to transparent reporting. For this reason we have widened the depth of our data reporting this year. Statutory data remains in both the Annual report & accounts 2018 and this report, but further detail can be found in our online databook, Modern Slavery Statement and Gender Pay Gap report. Similarly, for the second year running, this report has been prepared in compliance with Global Reporting Initiative (GRI) Sustainability Reporting Standards (Core), in line with best practice.

Following the release of the recommendations of the Task Force for Climate-Related Financial Disclosures (TCFD) by the G20 Financial Stability Board (FSB) in 2017, DS Smith is taking the opportunity to refresh its climate change risk register in light of the advice offered and engage with investors on this emerging framework. We will report on our findings next year.

We also continue to submit to a wide range of highly reputable third-party platforms including the Carbon Disclosure Project, EcoVadis and Sedex, which allow us to sense-check our performance against the rest of the industry.

Statistics and scope

Unless otherwise specified, any statistical information referred to in this review covers the calendar year January to December 2017 and refers to all 243 manufacturing sites that we have owned since January 2017. The following indicators have been externally verified:

- energy consumption
- greenhouse gas emissions
- raw material usage
- water consumption
- waste
- discharge to air and water; and
- production

Environmental incidents

During the year, we received notification of breaches or minor environmental incidents at six sites. There were zero major incidents (defined as incidents of significant impact reportable to local or national authorities, or incidents potentially resulting in legal prosecution) reported for the period of this report.

Assurance Statement

Verification Statement from Bureau Veritas UK

Bureau Veritas UK Limited (Bureau Veritas) has been commissioned by DS Smith Plc. (DS Smith) to provide an independent opinion on the following environmental performance indicators: energy consumption, greenhouse gas emissions, raw material usage, water consumption, waste, discharge (to air and water) and production for calendar year 2017. The reporting boundaries cover DS Smith's global operations.

Based on our verification activities and scope of work, nothing has come to our attention to suggest that the reported data do not provide a fair representation of environmental performance across the DS Smith Group for the defined period.

DS Smith should be commended on its approach to environmental data collection, including the use of a central reporting system, clear responsibilities at Head Office and site levels, frequent data gathering, and the existence of an audit trail from source evidence to reported data at the sites visited.

A full verification statement including methodology, limitations and exclusions can be found on the DS Smith website:

dssmith.com/company/sustainability/our-environment/performance



**BUREAU
VERITAS**

Bureau Veritas UK Limited

May 2018

Environmental performance indicators

A summary of our environmental performance can be found below.

For further detail, please find our data book available to download:

dssmith.com/company/sustainability/our-environment/performance

Group greenhouse gas emissions 2017

KPI	Unit of measurement	2015 (published)	2016 (published)	2016 (adjusted)	2017	% variance
Scope 1	Kt CO ₂ e	1,678	1,570	1,576	1,660	5.3
Scope 2	Kt CO ₂ e	355	333	348	352	1.2
Emissions from energy exports	Kt CO ₂ e	348	299	299	317	5.8
Total CO ₂ e (net energy export)	Kt CO ₂ e	1,686	1,604	1,624	1,695	4.4
Energy exported	GWh	962	852	854	892	4.5
Total production	Kt nsp	8,059	8,209	8,302	8,234	-0.8
Waste to landfill	Kt	87	98	97	118	21.0
Total water effluent	Mm ³	19	20	19	20	5.3
CO ₂ e per tonne of production	kg CO ₂ e/tonne nsp	209.0	195.4	195.7	205.9	5.2
Water effluent per tonne of production	m ³ /tonne nsp	2.4	2.4	2.3	2.5	7.0
Waste to landfill per tonne of production	kg/tonne nsp	10.7	11.9	11.7	14.3	22.0

Comments on the data:

1. Based on data from 243 in-scope sites. There are 124 sites which require fossil fuels for their production process (paper mills, corrugators, plastics plants) and the remaining 120 smaller sites use just electricity in their processes (sheet plants, recycling and logistics depots and warehouses).
2. Figures from all years are based on data from sites we owned for the entirety of that year. The 2017 data is based on sites we have owned since 1 January 2017. The 2016 figures '2016 (representative)' are restated from last year to include data from sites added to the 2017 scope to give a representative like-for-like comparison. We have shown the 2015 published figure as it is the baseline year for our target, and the published figure for 2016 to show the performance of the business from last year. The same calculations have been applied for all years.
3. Total production is the sum of printed reels and paper reels from our paper mills; plastics production (all types) from our Plastics sites; recovered fibre and other materials collected and processed through our Recycling depot network; and boxes and sheets sold to third parties from our Packaging sites and other types of packaging production from these sites.
4. DS Smith collects and reports environmental data in accordance with the guidelines of the Global Reporting Initiative and the Greenhouse Gas Protocol (GHGP), to the extent that this is practicable.
5. The CO₂ and CO₂e emissions were calculated using the UK DECC 2016 factors for all fuels and the UK national grid. Emissions from other national grids use the DECC factors (IEA) from 2015.
6. Where available, we use the emissions factor for bought electricity from the supplier of energy to our business (Scope 2 Market Value). If this figure is not reported, the country emission's factor from the IEA is used instead (Scope 2 Location Value).
7. The CHP that supplies our Witzenhausen paper mill with steam is fired predominantly by biogenic fuels. The emissions factor for this site has been estimated as 32.06 kg/MWh of CO₂e.
8. The CHP that supplies our Belišće paper mill and Corrugator with steam and electricity is fired by a combination of natural gas and flare gas. The emissions factor for flare gas is estimated to be 240 kg/MWh of CO₂e.
9. Scope 3 emissions, external to DS Smith but involved in the supply cycle for the Group's products and services, are not included.
10. The waste figures relate to waste generated by our operations; they do not include waste that is collected from external sources for recycling.
11. Where water effluent figures are available from meters and invoices, they are used here, otherwise they are calculated to be 50 per cent of the water abstracted and brought on-site. Some of our paper mills have their own waste water treatment plants and treat water for third parties. This water flow is measured and subtracted from our total effluent figures.

GRI Index 2018

This GRI content index has been prepared in accordance with GRI Sustainability Reporting Standards (Core) in reference to the DS Smith Sustainability Review 2018 and DS Smith Annual report & accounts 2018.

General Standard Disclosures

	Page Number and Links	External Assurance		Page Number and Links	External Assurance
Organisational profile			Stakeholder engagement		
102-1	AR pg. 136	Yes	102-40	SR pg. 37	
102-2	SR pg. 3, AR pg. 2		102-41	GRI report*	
102-3	AR pg. 139, 150	Yes	102-42	SR pg. 37 and GRI report*	
102-4	SR pg. 2, 3		102-43	SR pg. 37	
102-5	AR pg. 138	Yes	102-44	SR pg. 37	
102-6	AR pg. 17-21		Reporting practice		
102-7	AR pg. 3, 5, 35, 75, SR pg. 3	Yes	102-45	AR pg. 88-92	Yes
102-8	AR pg. 24 and GRI report*		102-46	SR pg. 12-13, 39	
102-9	GRI report*		102-47	SR pg. 37 and GRI report*	
102-10	AR pg. 6, 12, 32, SR pg. 2	Yes	102-48	SR pg. 40	Yes
102-11	SR pg. 19, 35		102-49	SR pg. 40	Yes
102-12	SR pg. 34		102-50	SR pg. 40	Yes
102-13	SR pg. 38 and GRI report*		102-51	GRI report*	
Strategy			102-52	SR pg. 39	
102-14	SR pg. 1, 10-11		102-53	SR back cover and website	Yes
Ethics and integrity			102-54	SR pg. 39	Yes
102-16	SR pg. 2, 35 and GRI report*		102-55	SR inside back cover	
Governance			102-56	SR pg. 39	Yes
102-18	SR pg. 34-35				

Key

SR = Sustainability Review 2018, and if external assurance column contains "Yes", please find statement on SR pg. 39

AR = Annual report & accounts 2018, and if external assurance column contains "Yes", please find statement on AR pg. 81-87

* Our Sustainability Review 2018 content is defined by the topics which our internal and external stakeholders collectively found to be most important, during our materiality analysis in 2017. However there are some further aspects and indicators which are also material to our business. We have reported our actions on these aspects in our GRI disclosure report which can be found here: dssmith.com/company/sustainability/sustainabilityreport/GRI-disclosure-report

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Online communications

Results and presentations, investor and shareholder information are available in the investors section of our website:

dssmith.com/investors

Annual reports

Current and archived annual reports are available in the investors section of our website:

dssmith.com/investors/annual-reports

People

DS Smith is made up of a team of c. 28,500 employees across 37 countries. More information about our people and career opportunities is available in the people section of our website:

dssmith.com/people

Sustainability

Current and archived sustainability reports are available on the company section of our website:

dssmith.com/company/sustainability

DS Smith worldwide

Find out more about our global divisions and the countries in which we operate and get in touch with us:

dssmith.com/contact/locations

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