

2021 report



esg



contents

year in review

- 3 chair and CEO message
- 4 materiality matrix
- 5 performance at-a-glance



environment

- 7 sustainable sourcing**
- 8 supplier engagement investigation
EcoVadis
-
- 9 sustainable operations**
- 10 Science Based Targets (SBTi)
- 11 environmental performance
- 12 responsible care®
injury & illness performance
- 13 process safety performance
transport incidents
- 14 aps
plant projects
- 15 external recognition
-
- 16 sustainable solutions**
- 18 innovative business solutions
- 22 biodegradability
- 23 upcycling
- 24 forest restoration
- 25 wildlife conservation

social

- 27 inclusion & diversity
- 28 charitable giving
accelerating women's equality
- 29 STEM
- 30 sustainable guar farming

governance

- 32 governance overview
cybersecurity
- 33 global code of conduct
compliance
ethics

2



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If you must print a copy, we recommend printing only one copy for personal use.

chair and CEO message

Ashland is at a unique inflection point in our sustainability journey.

What started as a concerted and passionate effort to advance our sustainability disciplines to positively impact the planet, has now become a critical business capability that drives our core expertise and reputation to solve some of the world's most complex problems.



As a global, consumer market-focused additives and specialty ingredients company, Ashland is acutely conscious of the power of applied science to transform the efficacy, usability, and allure of industrial and consumer products, and of the power of research and innovation to raise the standard of products' integrity and profitability. In this report, you will see how sustainability practices and disciplines are driving and enabling that complex and important work.

These challenges require a uniquely conscious and

cutting-edge approach to innovation and industry-recognized experts in every market we serve, as well as a deep understanding of consumer needs. It requires a commitment to work up and down the value chain, to deliver products and services that meet those needs while improving the quality of life on the planet.

In 2021 Ashland took a significant step forward. We committed to the Paris Climate Accord and United Nations (UN) Sustainable Development Goals. Our work is well underway, and we expect to submit our emissions reductions goals for approval by the end of 2022. In many ways, we are marking a shift to a portfolio shaped by environment, social and governance (ESG), driven by customer and consumer needs. Our new product innovations are increasingly sustainable - natural, nature-derived, biodegradable, or sustainable-in use; in addition to being focused on growth.

At the same time, we are putting the power of our people and our products closer to customers, consumers, and communities we serve. Our donation to the Anita B organization on International Women's Day and our support of the Nature Conservancy's Plant a Billion Trees reforestation program are two small examples of this focused footprint approach to targeted community relations and sustainable engagement.

2021 also saw us well on the way to establishing the one-of-a-kind, Responsible Solvers™ program. Born of our 7-year sponsorship of the Delaware STEM Educators' Awards, our STEM commitment pervades everything we do and drives Ashland's philanthropic agenda to

supporting and developing the next generation of problem-solvers, many of whom will focus their energies on the problems and programs addressed in this report.

Ashland's ESG plans are collaborative efforts that extend far beyond the walls of Ashland, across continents, countries, customers, and consumers, into farmlands and rainforests, cities, and villages. Our expertise depends on partnering with other organizations. And our success is tied to companies, governments, non-profits, and advocates who share our passion for the environment and collaborative problem-solving approach.

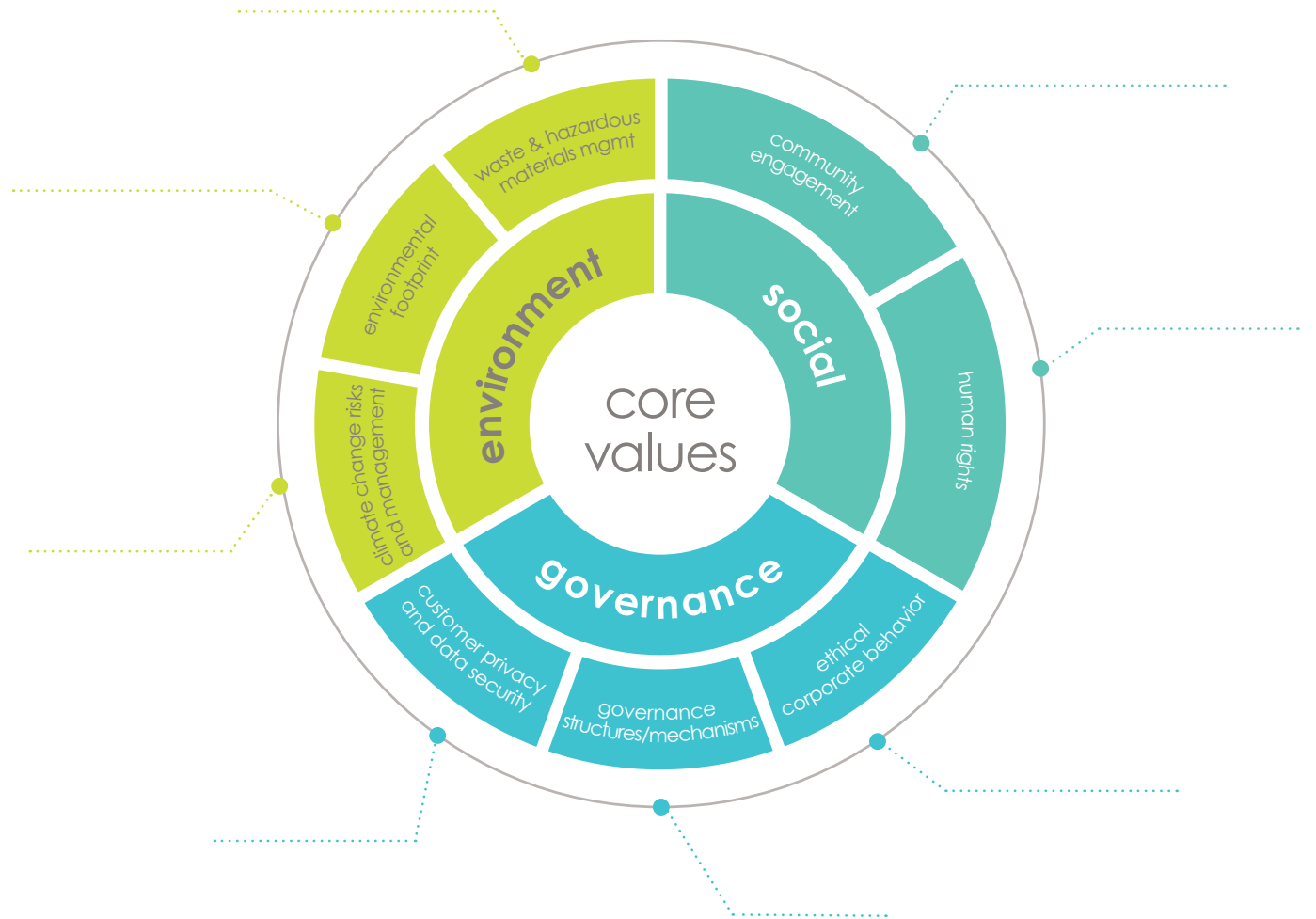
In many ways, we are marking a shift to a portfolio shaped by ESG, driven by customer and consumer needs. The next phase of our plan depends on broader engagement, deeper understanding and committed collaboration since sustainability is no longer something we do - it is a part of who we are as problem-solvers, businesspeople, and Ashland employees.

Guillermo Novo
Chair and Chief Executive Officer
Ashland

materiality matrix

Our Materiality Assessment shows the positioning of our most material ESG topics, based on both internal and external significance. This is a portion of a larger matrix including many other ESG areas that are lower impact to us in the next several years.

To perform this assessment we used Datamaran, a data driven approach to collecting, identifying, and assessing material ESG topics. In future iterations of this assessment we will expand the assessment to incorporate key stakeholder feedback and align our materiality.



performance at-a-glance



* Employees include directly supervised contractors; these are employees defined as those employees on the entity's payroll, whether they are full-time, part-time, executive, labor, salary, hourly or seasonal employees.

** Employee headcount based on headcount report including Composites dated 8/1/2019.

***FY19 represents final TPRR and LTIR which includes recent acquisitions (Pharmachem, Avoca) and divestitures (Composites).

**** Contract employees are defined as those who are not on the entity's payroll, but who are supervised by the entity on a day-to-day basis, including independent contractors and those employed by third parties (e.g., temp agencies and labor brokers).

* 2020 and 2021 data does not include Neal, WV manufacturing site, does not include composites, does include adhesives sites.

'Scope 3 data estimation methodology was significantly refined in 2020 and 2021, resulting in a significant decrease in reported value from 2020 onward. Scope 3 data for 2020 and 2021 does not include adhesives.

	FY 2019	FY 2020	FY 2021	sustainable development goals
energy				
total energy consumption (GJ)	9,822,276	8,262,914	8,777,406	
electricity (GJ)	2,167,463	1,703,247	1,753,012	12 13
% grid electricity	22%	21%	20%	
natural gas (GJ)	5,022,211	4,530,622	4,599,542	
other fuels (GJ)	2,632,602	2,029,045	2,424,852	
GHG emissions				
scope 1 emissions (MT CO ₂ eq. emitted)	413,067	335,357.3	332,256.4	13
scope 2 emissions (MT CO ₂ eq. emitted)	288,945	257,495	246,786	
scope 3 emissions (MT CO ₂ eq. emitted)	1,445,937	626,295 ¹	682,232 ¹	
employee safety				
employees* at year-end	6,000 ⁺⁺	4,500	4,100	
employee recordable injury rate	1.01 ⁺⁺⁺	0.70	0.73	
employee lost-time incident rate	0.42 ⁺⁺⁺	0.30	0.29	
employee fatalities	0 ⁺⁺⁺	0	0	3 8
indirect contractors ^{****} recordable injury rate	1.58	0.56	0.73	
indirect contractors ^{****} lost-time incident rate	0.47	0.37	0.18	
indirect contractors' fatalities	0	0	0	
indirect contractors' hours	1,263,901	1,073,011	1,101,424	
incidents, spills, waste, and releases				
toxic release inventory (million pounds)	21	18.62	TBA	3 8 14 15
hazardous waste disposal (MT)	6,468	4,275	4,821	
transport incidents	28	13	8	
water				
water withdrawal (m ³)	15,782,291	16,363,312	15,630,197	14
community engagement				
cash and in-kind donations** (USD)	\$618,520	\$269,928	\$401,021	4 5 8 10

environment



sustainable sourcing

RSPO Supply Chain Certification
for palm-based products
by FY 2022

FSC Chain of Custody Certification
for cellulose products
by FY 2022

Fair for Life Certification
for select Aloe products

targets	deadline
100% key direct supplier EcoVadis assessment	2022
achieve RSPO supply chain mass balance certification ²	2022
achieve FSC and PEFC chain of custody certification	2022
launch responsible guar sourcing program	2022
25% renewable energy* procurement	2025



*goal is to source target percent renewable energy and/or equivalent renewable energy credits

² Freetown, MA location 2022, expanding to additional sites in 2023

EcoVadis

Ashland has partnered with EcoVadis for third-party verification of supplier sustainability self-assessments to ensure they meet their commitments to environmental, social, and ethical practices and behavior. The self-assessment focuses on environment, labor and human rights, ethics, and sustainable procurement.

the average score of Ashland's suppliers was **57.66** (out of 100), vs. the total average score of **47.9** in 2021 of all assessed companies at EcoVadis

Ashland will be working with suppliers that have performance scores below 45 so they understand the factors affecting their score and can improve and develop their sustainability programs.

Ashland's goal is to achieve 100% key supplier assessment on the EcoVadis platform by the end of fiscal year 2022.



supplier engagement investigation

Our procurement team is actively working towards establishing new targets and programs, including:

- supplier diversity targets to ensure we support inclusion across our supply chain
- additional supplier engagement on emissions reduction goals to reduce our scope 3 emissions
- expanding upon our successful pilot of the Responsible Guar Sourcing Program
- new targets within our EcoVadis program

raw material suppliers onboarded in the EcoVadis platform

FY 2020

158

representing over

71%

of our raw material spend

FY 2021

188

representing over

82%

of our raw material spend

sustainable operations



targets	deadline
publish approved Science Based Targets for greenhouse gas (GHG) emissions	2024
reduction in intensity-based energy use – 2%	2022
reduction in intensity-based GHG emissions – 2%	2022
reduction in intensity-based hazardous waste generation – 10%	2025
water targets – assessment and target setting in progress	2025
product lifecycle assessments (LCA) for 60 key products	2025



Science Based Targets (SBTi)

In February 2021 Ashland joined the global movement of leading companies to align operations with the ambitious aim of the Paris Climate Accord to limit global temperature rise to 1.5°C above preindustrial levels.

We are working with a third-party consultant and expect to submit targets to the SBTi by the end of calendar year 2022. Following our submission, the targets will undergo an approval process by SBTi, and once approved, we will publish the targets externally.

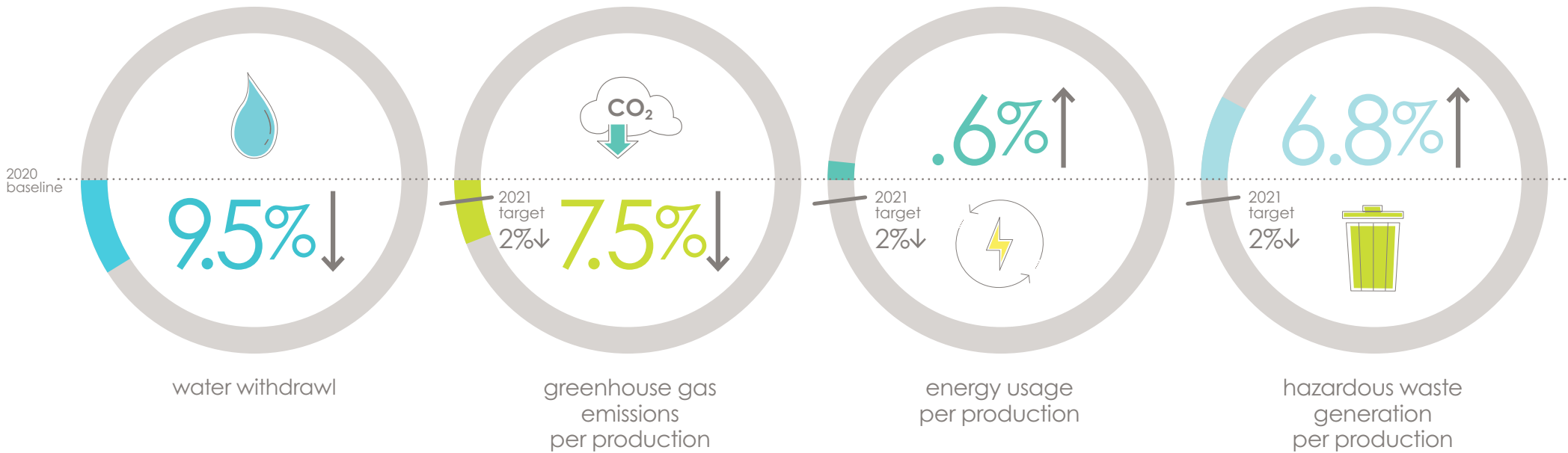
The target will be in line with the 1.5-degree Celsius warming scenario, with a 2020 baseline. These will be reduction targets in GHG, if applicable.

Achieving sustainable operations means looking closely at every aspect of how we make and deliver products everywhere around the world. It's about seeing opportunity and impact in the most common processes while being open to transformational change in other areas.



¹ baseline for 2025 reduction goals is Fiscal Year 2020

environmental performance



In 2021 we continued our efforts towards emissions reduction on an intensity basis. Through continued projects and initiatives at our sites, we reduced our GHG emissions intensity by 6% from 2020. Unfortunately, energy consumption increased by 2% on an intensity basis- we believe that some of this is a result of increased activity in 2021 over 2020 and a production mixture with increased energy demand. Hazardous waste generation increased by 8% from 2020- some of our third-party recycling operations were disrupted by the COVID pandemic and resulted in additional waste generation. We're working hard to identify alternate recycling opportunities and sharing successes with our waste management in next year's report. We continue to work towards setting science based targets and hope to announce the targets in our next report, pending review and approval by SBTi.



Responsible Care®

responsible care®

Ashland has made formal commitments to improve the environmental, health, safety, and security performance of facilities, processes, and products throughout the globe.

Our company delivers on commitments through a comprehensive Responsible Care® program. This global industry initiative advances the safe and secure management of chemical products and operations. Within Ashland, this program includes a global management system, employee involvement at every level of the organization, continuous improvement towards the goals of operating with zero incidents, ensuring compliance, and reducing our environmental, health, safety, and security impact.

[Learn more about Ashland and Responsible Care® >](#)

injury & illness performance

Cultivating a safety culture is intentional at Ashland and is best shown by our commitment to a Zero Incident Culture (ZIC). ZIC begins with the vision, values, beliefs, and actions of Ashland's leaders demonstrating that achieving zero incidents is possible. It means developing processes where compliance is the minimum expectation, allowing employees to proactively manage safety. [Ashland has safety targets in place to further support this culture and drive our incidents to ZERO.](#)

FY2021 safety KPIs performance indicator	FY2020 actual	percent reduction	targeted reduction	FY2021 actual
total preventable recordable rate (TPRR)	0.70	14%	0.60	0.73
process safety event rate (PSI)	0.55	15%	0.54	0.40
environmental incident points (EIC) ¹	58	15%	49	39

We exceeded our targets for PSI and EIC. We did not meet our targets for TPRR.

As an indication of our commitment to Responsible Care, we have obtained a third-party certification to RC14001, which includes the internationally recognized ISO 14001 certification and adds additional health, safety, security, and chemical industry requirements. Currently, Ashland has 30 international sites participating in a group RC14001 and ISO 14001 certification, and we are working toward certifying all our manufacturing locations. Also, as part of our commitment to health and safety, 17 of our sites have obtained an additional ISO 45001 certification, an international health and safety management system.

recordable occupational injury and illness rates for the last three years

employee safety	FY 2019	FY 2020	FY 2021
employees* at year-end	6,000 ⁺⁺	4,500	4,100
employee recordable injury rate	1.01 ⁺⁺⁺	0.70	0.73
employee lost-time incident rate	0.42 ⁺⁺⁺	0.30	0.29
employee fatalities	0 ⁺⁺⁺	0	0



at the end of FY 2021:

2 sites have been injury-free for more than 15 years

5 sites have been injury-free for more than 10 years
but less than 15

12 sites have been injury-free for more than 5 years
but less than 10

20 sites have been injury-free for more than 1 year
but less than 5

our manufacturing sites continue to prove that achieving zero workplace injuries is possible

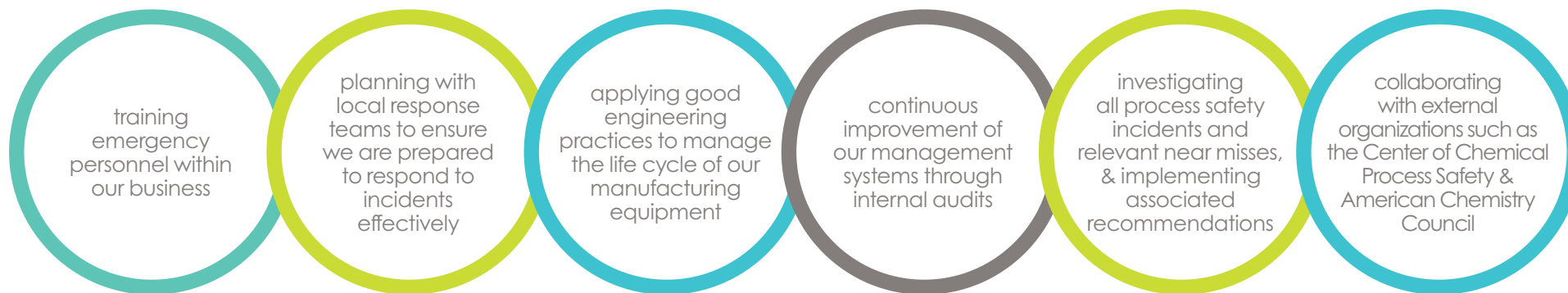


* Employees include directly supervised contractors: these are defined as those employees on the entity's payroll, whether they are full-time, part-time, executive, labor, salary, hourly, or seasonal employees.
⁺⁺ FY19 data includes Pharmachem, Avoca, and Composites. Ashland sold the Composites business during FY19. FY20 data does not include Composites.

process safety performance

Process safety management is an important piece of Ashland's zero incident culture. Our management systems are designed to prevent the uncontrolled release of hazardous substances. We aim to avoid significant incidents with the potential for serious injuries, environmental impact, and property damage. Ashland's process safety management system involves:

process safety metrics for this reporting period	FY 2019	FY 2020	FY 2021
process safety incidents count	16	11	5
process safety total incidents rate	0.23	0.26	0.12
process safety incidents severity rate	0.14	0.24	0.10



transport incidents



Ashland sets global operational expectations for transportation safety that are designed to ensure compliance with transportation regulations and to minimize the risk to people and the environment.

Ashland's common carriers are expected to be in full compliance with applicable laws and Ashland's Global Supplier Code of Conduct, have a satisfactory safety performance and be in good financial standing, as regionally determined. Carriers are assessed on an ongoing basis to minimize any potential future risk, and their performance is monitored through Ashland's incident management system. Ashland supports investigations and developing corrective action plans with carriers for incidents involving Ashland products.

67%
of our sites have gone over
1 year
with
zero
process safety incidents

51%
of our sites have gone over
3 years
with
zero
process safety incidents



Note: The values are reported based upon transport incidents that require a U.S. Department of Transportation 5800 report, transport incidents that require a report based upon the EU concerning the International Carriage of Dangerous Goods by Road (ADR) criteria and either transport incidents defined in accordance with the nationally recognized definition or definition consistent with the ICCA Guidance for Reporting Performance. These include all distributions for which Ashland has direct oversight as well as those contracted by Ashland to a third party.



The Ashland Production System builds on our Zero Incident Culture using a structured, disciplined lean management system. The goal of APS is to increase the safety and efficiency of our manufacturing operations, resulting in a decrease in our environmental footprint.

aims of APS:

- zero** accidents
- zero** spills
- zero** defects
- zero** re-work
- zero** late shipments
- zero** air freight
- zero** SMOG
- zero** emergencies
- zero** surprises

As of the end of FY2021, we have implemented APS and its principles in **10** of our manufacturing sites. We have begun, or plan to start, implementation at 3 additional locations during fiscal year 2022. More sites will be onboarded in the future.

plant projects

Our manufacturing team incorporates sustainability into our overarching strategy for investments and capital projects. In FY 2021, over **170 projects** were completed (> \$35 million value) that contributed to a reduction in our environmental footprint. Below are a few examples of these achievements.

Calvert City, KY

Our Calvert City site increased dry air storage by installing a new 10,000-gallon tank. With more reliable air supply, the site is saving approximately 645,000 kWh annually.

The site replaced its air dryer desiccant to reduce regeneration frequency from every 4 hours to every 24 hours. This saves approximately 60,000 kWh annually.

Additionally, Calvert City installed variable frequency drives (VFDs) on several pumps to achieve more consistent water pressure and better temperature control of waste treatment. These VFDs combined will save approximately 433,000 kWh per year.

These improvements increase the reliability of the utilities provided to the production units at the Calvert City Kentucky Plant, while reducing our energy footprint. In total, the site will save 1,147 MWh through these improvements—enough energy to power about **104 homes** per year.



Merry Hill, NC

Our Merry Hill site has several initiatives in place to reduce our environmental footprint. The team utilizes biomass boilers as much as possible to reduce usage of diesel fuel, decreasing our reliance on fossil fuels. Our sage and other botanical operations save waste materials to be used as fertilizer, thereby

giving back to the farmland and reducing materials sent to landfills. The site also continuously monitors its processes for leaks and has control devices installed to recover as much solvent as possible.



Doel, Belgium

Our Doel site invested in a cogeneration system. Its new natural gas motor generates electricity with heat recovery for drying and pre-heating processes. More efficient electrical generation reduces our

footprint by 2 megawatts annually—enough energy to power approximately **1,300 homes** per year. The recovered heat reduces our footprint by 3 megawatts annually.

Zwijndrecht, Netherlands

Our Zwijndrecht site optimized a sludge thickener which reduced waste sludge disposal from the wastewater treatment plant by over 18%.

The site also reduced steam pressure, replaced a shrink foil unit, and debottlenecked a chilled water system. These improvements combined will save our Zwijndrecht site over 1,692 MWh annually—enough energy to power approximately **154 homes**.

Cubreva, Brazil

In June 2021, Ashland Brasil and Brasol, a Siemens company, completed the implementation of a 60 kilowatt-peak solar power plant at Ashland's Cabreva, SP facility. The project occupies roughly 150 square meters of rooftop space and can generate over 83,000 kilowatt-hours per year. The solar power system results in a **carbon offset of 58.8 metric tons per year**, the equivalent of planting 1,000 new saplings.

external recognition

While Ashland doesn't actively seek out awards and recognition, we value the opinions of our customers, industry peers and partners. It's a testament to Ashland's teams of solvers who spend their professional lives seeking out challenges and delivering solutions that spark innovation and fuel impact.





sustainable solutions

reduce or eliminate the use, generation, or risk of hazardous substances on the planet

promote societal health and wellness

environmental waste reduction, circularity, responsible use/re-use of resources

targets ¹	deadline ²
>90% GP from sustainable solutions*	2025
>70% GP from natural or nature-derived ⁺ ingredients	2025
>80% new product launches from sustainable solutions*	2025
>70% of natural or nature-derived ⁺ ingredients are based on sustainably sourced raw materials	2025

Ashland defines sustainable solutions as the design of products and efficient processes, through innovation and the best available science





Problem-solving is a team activity. One that starts with a question that leads to a challenge and ends with an impactful solution.

Listening, learning, seeking, collaborating, and delivering - that's where Ashland's expert solvers shine. Our collaborative, hands-on approach makes it easy to work head-to-head and side-by-side with customer teams around the world to understand their technical challenges, to reveal the "why" behind the "what."

At Ashland, innovation is a passion that never sleeps. That is why customers bring our solvers their complex seemingly unsolvable challenges. They know that together, our solutions will help shape the future of their markets in ways that beautify, protect people and the planet, limit or eliminate pollution, and help fight disease, all while mitigating supply chain and logistics disruptions. And with research and development sites around the world, we can proudly say that the sun never sets on Ashland innovation.

Our focused footprint and local experts partner with customers and suppliers to responsibly and sustainably improve people's lives. Together, we unlock solutions that make medicines safer and more effective, make paint more durable and easier to use, and help create personal care products that harness the power of nature itself.

Megatrends provide a peek at the next set of unsolvable challenges. In areas where we focus, Ashland's award-winning teams of scientists and engineers continue to deliver dynamic solutions that can and will unlock new markets and increase sales for customers around the world.

It's more than a process. It's passion married to purpose where we listen, learn, seek and collaborate. A place where we can deliver solutions with a nature-positive mindset, transparent governance discipline, and a fierce commitment to improving the lives of people in every corner of the world.



personal care

Every Ashland employee knows that putting the power of people and products to work for- and with- nature is an awesome and awe-inspiring responsibility. Even as 85 percent of our personal care products are naturally sourced and derived, Ashland goes even further by offering some of the most advanced biodegradable solutions on the planet. Why? Because we understand that a nature-positive approach actually fuels a business model where sustainable...

[read more >](#)



life sciences

Simply put, from pediatrics to geriatrics, Ashland is responsibly solving for a healthier population.

Working collaboratively with our customers, our problem solvers serve as the 'expert's experts' — trusted advisors helping our partners develop safe, high quality, effective ingredients. Our calling enables formulations that protect, improve and support lifesaving medicines so that from childhood to advanced age...

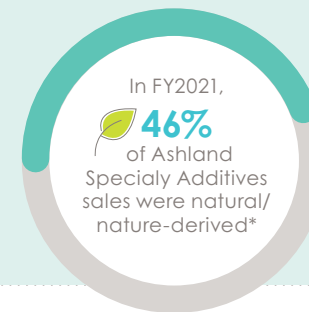
[read more >](#)



coatings

Growth in today's architectural coatings market means that safety, beauty, and protection cannot be mutually exclusive. Ashland's sustainable, water- and cellulose-based additives play important roles in paints that support vibrant colors, exceptional durability, all with low to no odor and zero VOC's, for smoother application and better coverage...

[read more >](#)



personal care

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Even as 85 percent of our personal care products are naturally sourced and derived, Ashland goes even further by offering some of the most advanced biodegradable solutions on the planet. Why? Because we understand that a nature-positive approach actually fuels a business model where sustainable sourcing and supply are the norm — a place where every player in the value chain respects people and planet.

It is an approach that requires innovation strategies fueled by a conscious to cutting-edge approach to solutions that protect our families and our environment for generations to come.

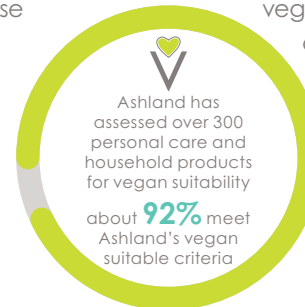
antaron™ eco gel


easy incorporation of nature-derived water resistance for light feeling sunscreens

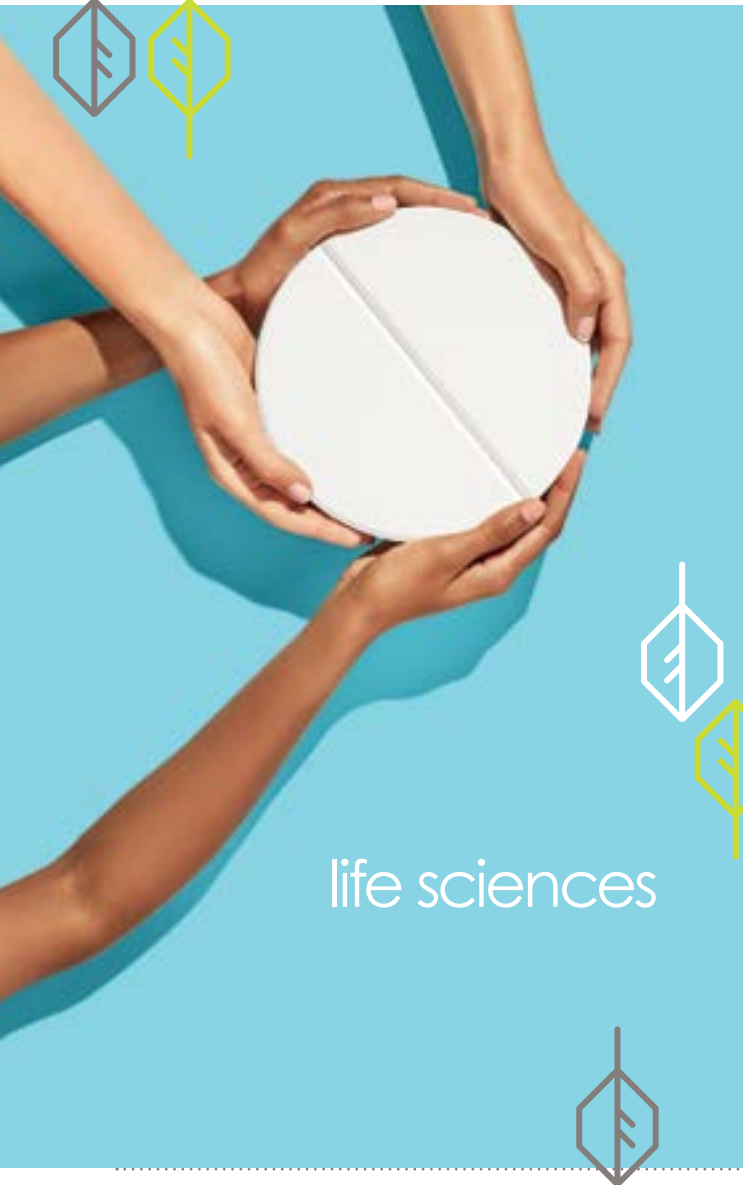
Antaron™ eco gel starts with a globally compliant film former that is based on sustainably sourced wood-derived cellulose. This unique ethylcellulose provides excellent water resistance and light formula aesthetics. To make it easier for formulators to take full advantage of the benefits, we incorporated ethylcellulose into a biodegradable sun care solvent. The resulting gel can easily be added into a formula, saving energy for formulators and during production.

lubrajel* oil PF hydrogel

Nature-derived¹, biodegradable Lubrajel Oil PF hydrogel is a multifunctional moisturizer that provides high slip to formulations and a light after-feel to the skin. It is preservative free, vegan-suitable and has a high natural origin content of over 95.5%. The light, dimethicone-like feel that Lubrajel Oil PF hydrogel provides makes it an excellent choice as a silicone alternative. This easy-to-use hydrogel is also cold processable.




Ashland has assessed over 300 personal care and household products for vegan suitability
about **92%** meet Ashland's vegan suitable criteria



life sciences

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Working collaboratively with our customers, our problem solvers serve as the 'expert's experts' — trusted advisors helping our partners develop safe, high quality, effective ingredients. Our calling enables formulations that protect, improve and support lifesaving medicines so that from childhood to advanced age, consumers' day-to-day lives are more comfortable, healthier, and enjoyable.

At the same time, our commitment enables tablets, the most affordable drug delivery systems available, to be made faster, stronger, and lighter, helping lower the cost to pharmaceutical manufacturers while improving the health of people in all corners of the world. Our coatings can mask taste and make medicine easier to swallow. And Ashland's expertise in controlled release functionality and long-acting injectables means patients can take less medicine, fewer times, with less cost, in more comforting and tolerable ways.

Ashland's diagnostic films help improve patient outcomes for critical treatment needs and our nutrition and nutraceutical offerings support people in their quest for healthier life choices. In agriculture, Ashland is focused on helping farmers grow more food, on less land by increasing the efficacy, and lowering usage rate of crop protection products.


 coatings

Growth in today's architectural coatings market means that safety, beauty, and protection cannot be mutually exclusive.

Ashland's sustainable, water- and cellulose-based additives play important roles in paints that support vibrant colors, exceptional durability, all with low to no odor and zero VOC's, for smoother application and better coverage.

That same nature-positive approach led us to develop solid paint additives that cost less to ship, are lighter, and pack more efficiently for transport. It's an approach that extends far beyond our walls with carbon reduction strategies that use less energy and water in our manufacturing processes. It's an approach that enables the creation of lighter, water-free ingredients that use less energy to ship. One that delivers additives that increase the hiding quality of paints so that there is less paint on the wall, that lasts longer, all of which means less paint transported on our roads and rails and a smaller carbon footprint.

In industrial applications, Ashland leads in enabling water-based industrial systems that can reduce solvent levels.

Inside our operations, we are actively evaluating the growing challenge of how to use more renewable energy from the sun and wind and how to effectively store energy on a large scale. At the same time, the growing market for electric and hybrid vehicles is driving an ever-growing need for longer-life batteries to expand the driving range. And we are in the middle of this seismic change. As a leading supplier of a wide range of specialty additives and ingredients critical to the rapidly growing energy market where Ashland's unique binders for high-capacity silicone-based anodes in lithium-ion batteries, are enabling superior cycle performance and yielding longer battery life.

In the end, Ashland understands that innovation, driven by purpose, founded on collaboration and grounded in evidence-based decision-making, is the future of a greener economy and a more sustainable world. Our people and planet approach isn't lip service. It is a replicable discipline that puts the power of our people and products in the hands of the customers and consumers who know more, expect more, and are willing to invest in problem-solving and in problem solvers.



biodegradability

In-house biodegradability testing is conducted at Ashland's Bradford, U.K. site. This enables us to support our customers with biodegradation data on existing products and enables Ashland to develop new products that are specifically designed to meet international standards for biodegradation. We are continuously advancing our capabilities to expand our range of innovative, sustainable product lines.

We have 4 aquatic biodegradation assays currently available in Bradford: OECD 301F and OECD 301D for readily biodegradability, OECD 302B for inherent biodegradability, and OECD 306 for seawater biodegradability.

During fiscal year 2021, **17** commercial products and **73** INNOVA project materials were tested with these 4 assays. We also expanded the capacity of the 301F and 302B assays by purchasing more vessels.

We also introduced a composting biodegradation assay (ASTM D5338).

Our biodegradation teams use this data to support biodegradation claims for new product launches and better understand the environmental impact of our products. Through a combination of internal testing, analyzing/reviewing historical biodegradation results, assessment of structural and physiochemical compositions, and read across acceptability, our teams have determined biodegradation classification for **215** materials in the Ashland portfolio.

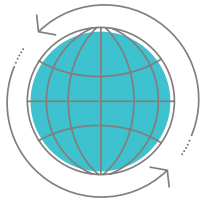
biodegradation testing equipment at our Bradford, UK research and development (R&D) facility



Biochemical Oxygen Demand (BOD) bottles in the incubator for use in the OECD 301D methodology, a respirometry test that predominantly measures biodegradation by dissolved oxygen and testing.



Respirometers for use in the OECD 301F methodology, an aerobic biodegradation test that determines the biodegradability of a material by measuring oxygen consumption.



upcycling

Ashland implements principles of circularity by creating products using upcycled materials—materials from a diverted waste stream, which would otherwise be discarded. This concept allows us to reduce waste in other manufacturing processes while delivering effective products for our customers. Ashland is committed to researching and introducing more circularity-related solutions moving forward. This table outlines existing Ashland products which utilize upcycling.

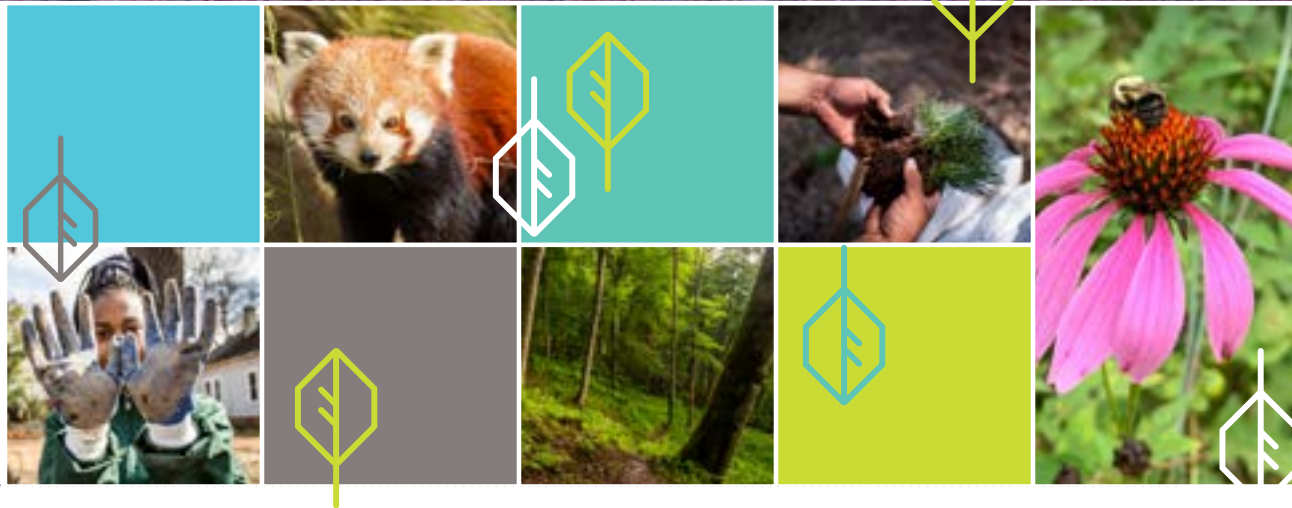
product name	natural origin source	primary use of natural source	upcycled waste/byproduct
ederline™ biofunctional	apples	pulp used for food & drink	waste apple seeds and skin
perenityl™ biofunctional	pears	pulp used for food & drink	waste pear seeds and skin
d'orientine™ biofunctional	date palm	date pulp used in food products	waste date kernel
suberlift™ biofunctional	oak tree	cork used to make cork toppers	waste cork oak
aquarize™ biofunctional	rice	food	by-product of processing raw rice
vegetal ceramides BCG™ biofunctional	rice	food	by-product of processing raw rice
achromaxyl™ biofunctional	colza seeds	pulp used to make colza oil	waste colza seeds
oleanoline™ IS biofunctional	olives	food	waste leaves
phytoRNx baobab™ biofunctional	seeds	baobab oil used for food	waste baobab seeds
elixiance™ biofunctional	pink pepper tree	pink pepper berries used for decorative purposes	waste leaves and twigs
cb2-skin™ biofunctional	patchouli	essential oil	waste patchouli
marine hydrolyzed collagen A™ biofunctional	fish	fish for food industry	waste fish skin
santalwood™ biofunctional	sandalwood	essential oil	waste wood chips
selected cellulosic products sourced from cotton linters	cotton	cotton used for textiles, animal feed, cottonseed oil	by-product from cottonseed oil mills

forest restoration

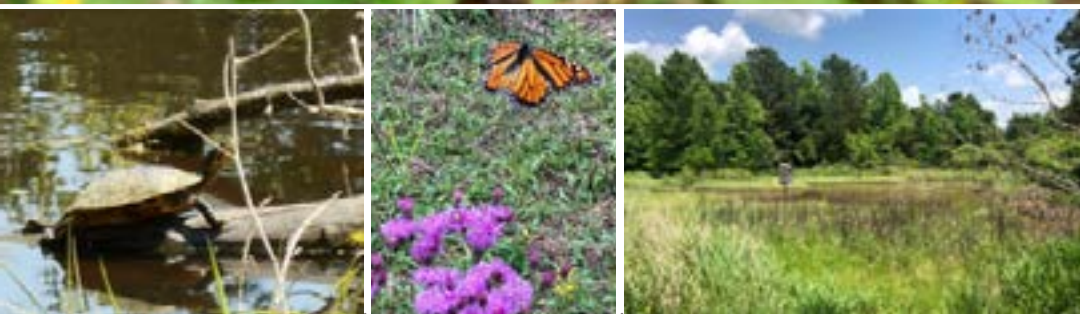


To further our ESG agenda and to celebrate Earth Day 2021, Ashland announced the company's commitment to support a collaborative forest restoration effort of The Nature Conservancy to help Plant a Billion Trees by 2030. This advances the broader development goals of the United Nations, including the Sustainable Development Goal for Life on Land.

Ashland's donation was used to plant approximately 10,000 trees in Brazil, China, Mexico and the United States. These are key regions where Ashland operates and there is need for reforestation and sustainable farming education. Mature trees can absorb up to 48 pounds of carbon dioxide per year, so once mature, these plantings could result in up to 480,000 pounds of carbon dioxide offsets annually*.



*tree facts at arborday.org



wildlife conservation

Ashland's commitment to environmental conservation and stewardship via collaboration with Wildlife Habitat Council (WHC), a non-profit, non-lobbying organization, dates back nearly a decade with the implementation of environmental conservation projects at select sites. WHC's certification program is the only voluntary sustainability standard designed for biodiversity enhancement and conservation education activities on corporate lands. Our work with WHC improves the environmental and social impacts of the company's operations on our communities. Ashland's conservation efforts expanded this year with the addition of three new sites to the existing WHC program portfolio, for a total of seven certified sites. Two sites have achieved gold certification, and five sites are certified silver.



Old York Road site
Hopewell plant



Hattiesburg plant
Jacksonville
research center
009 landfill
former Brunswick plant



social

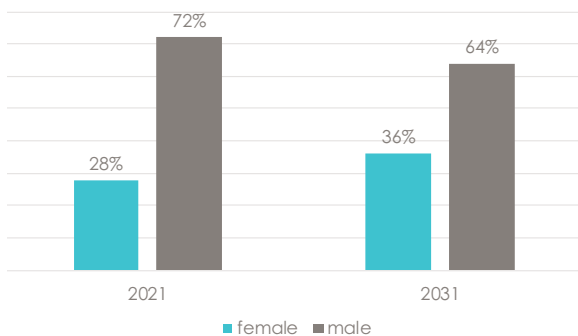


inclusion and diversity (I&D)

Ashland embraces inclusion and diversity. We are actively seeking to strengthen both the diversity of our workforce and the inclusiveness of our culture. We focus significant resources on recruiting, developing, and retaining diverse talent and commit to creating a collaborative environment of acceptance and innovation.



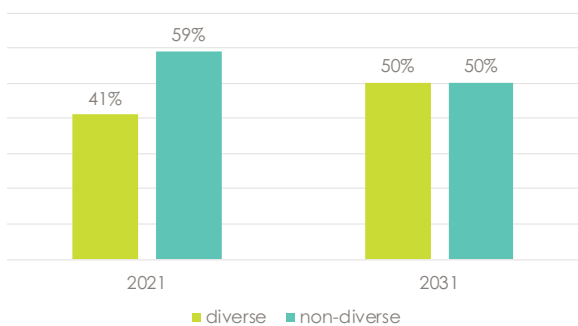
global gender progress & commitment



global diversity 10-year action plan:

- focus on a culture of inclusion and work practices that support females
- actively seek to hire, retain and promote females globally
- identify opportunities to make manufacturing roles more appealing to females

US diversity progress & commitment



10-year action plan:

- retain diverse talent /decrease departure rate of diverse employees
- increase diverse hiring in the U.S. to an average of 61% annually (manufacturing & non-manufacturing combined)

diverse = diverse males & all females
non-diverse = white males



We envision Ashland as a welcoming organization where people of all sexual orientations and gender identities can be their true selves and feel empowered to achieve their full potential. APAN strives to attract and retain an inclusive workforce by engaging Ashland employees to be allies for their LGBTQ+ colleagues. APAN also works to educate the Ashland community on why supporting our LGBTQ+ community is critical to the company's continued success.

Our goals are to empower individuals by fostering an inclusive work environment, educate employees about the LGBTQ+ community to understand the relevant issues that impact members of the community, and engage the community to celebrate how each individual's uniqueness contributes to a stronger, more dynamic and higher performing workforce.

accelerating women's equality

Each year to celebrate International Women's Day, the Ashland Women's International Network (AWIN) recognizes women employees with Business Impact Awards (BIA). The BIA winners are women who represent all regions and many functions across the company and whose achievements include strong customer focus, enabling greater efficiencies, implementing new systems, securing new business and more.



In 2021 Ashland raised the visibility of nineteen exceptional women and recognized their positive contributions to our company. In their honor, Ashland made a \$20,000 contribution to the Anita B. organization in support of their mission to recruit, retain and advance women in technology as well as the organizations that employ them.



mobile ophthalmic van, India



Lar Cristão at Cabreúva, Brazil



A Packet of Rice program, Singapore



charitable giving

Ashland has a long and proud history of working hard to make a positive impact on communities in need. Many of our solvers volunteer and donate to support global and local charitable organizations.

Ashland employees in North America and India participated in an employee giving campaign in which employees could choose to donate to select charities through Ashland's online giving platform. The company also matched those funds at a rate of 50 cents on the dollar.

science, technology, engineering and math (STEM)



stem

Science, technology, engineering and math (STEM) pervade every part of our lives and are critical to our business success. Ashland has put a stake in the ground on STEM education and will focus our philanthropic initiatives on STEM and STEM-related programs.

In doing so, we will broaden its awareness and access for women and minorities globally. Our programs are intended to increase employee engagement while increasing social equity and equity in compensation for the people we impact, elevating the communities and significant portions of economies in which we operate.





STEM and sustainable guar farming



SEHGAL
FOUNDATION

Ashland partnered with the Sehgal Foundation in June 2021 on a pilot program for the sustainable farming of guar in Rajasthan, India.

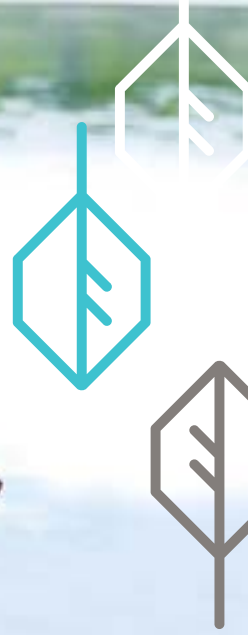
The collective goal was to increase the volume of guar harvested annually through educational programs and scientific solutions for sustainable farming, while respecting the sourcing relationships and local cultures of small village farmers in Rajasthan, India. The relationships are important to Ashland because we use guar to formulate specialty ingredients for personal care, life sciences and coatings applications.

The pilot included 250 farms from 10 villages. Using science, technology, engineering, and math (STEM) and modern technologies, farmers were taught sustainable agronomic practices and water conservation. The program's successful results include helping farmers lower their production cost while increasing their crop yield by approximately 30 percent. In addition, the program has helped increase farmers' income, thus expanding the local economy in the small villages.

At the same time, Ashland's commitment to gender equality led to specific training focused on the local female population to empower them, improve their technical knowledge and skills, and help elevate their standard of living. Based on the success of the pilot, Ashland is moving forward with plans to increase the number of farms to 5,000 by 2025.



governance



governance

raising transparency, avoiding conflicts of interest and honing compliance policies beyond foundational elements of doing business

<p>increased management and board ESG literacy</p>	<p>increased gender and ethnically diverse board</p>	<p>embedded ESG topics in board/committee agendas and charters</p>	<p>new board members focused on transparency</p>
<p>ESG transparent management systems</p>	<p>strengthening compliance and auditing reporting</p>	<p>strengthening engagement with industry advocacy group</p>	<p>executive compensation tied to performance metrics</p>

cybersecurity

Cybersecurity is an increasingly important topic for companies around the world. Ashland is dedicated to protecting our data and intellectual property, and we follow all applicable data privacy laws. We take reasonable steps to protect information from loss, misuse, unauthorized access, disclosure, alteration, and/or destruction. Our Director of Cybersecurity and IT teams have a comprehensive security program in place, including:

- annual security trainings for employees
- change management processes
- audit logs
- antivirus and malware protection
- firewalls
- risk assessments
- regular updates to operating systems
- access controls
- and more

global code of conduct



Our Global Code of Conduct is the foundation of everything we do. It details our core values of integrity and ethical behavior that define Ashland's Way of doing business. It applies to all employees, officers, and members of the Board, and it guides us on how to carry out our daily activities in accordance with our values and applicable laws and policies.

We have zero-tolerance policies for the use of child labor, forced labor, human trafficking, or land-grabbing practices. We refuse to do business with subcontractors, business partners, and suppliers who engage in these practices. We expect all relevant third parties to hold themselves to similar standards when acting on Ashland's behalf. Ashland takes appropriate measures when we believe third parties have not met our expectations or their contractual obligations.

When doing business with a third party, Ashland has a formal process in place to initiate the due diligence review process. This process is required prior to entering or renewing a contractual relationship with a person or entity supporting Ashland's international business operations.

training

Training is required annually of all employees on our Code of Conduct. Our mature and robust training program uses a variety of methods for employees to complete training including instructor-led, targeted,

and online. The majority of Ashland's global employee population completes online training with an overall passage rate of **85%** in the following areas:

- anti-boycott compliance
- anti-corruption compliance
- code of conduct**
- competition & anti-trust
- data privacy: global edition
- diversity & inclusion
- preventing workplace harassment

Various employee groups completed instructor-led and targeted training in the following areas:

- anti-corruption compliance
- code of conduct
- competition and anti-trust
- gifts and entertainment
- protection of intellectual property
- trademark protocols
- travel and expenses

Additionally, all employees and Board of Director members must sign a certification form that demonstrates understanding of the Code and their commitment to it.

[learn more >](#)

compliance

Ashland manages our business ethics and compliance in several ways, including:

secure, confidential, third-party whistleblowing mechanism through 1-800-ASHLAND

routine training of all employees on our Code of Conduct

Chief Compliance Officer who oversees adherence to the Code in all business operations

all ethics incidents are investigated thoroughly and disciplined accordingly

ethics and compliance policies are available to all employees

ethics ambassadors

As an extension and enhancement to Ashland's Ethics and Compliance Policies and Programs, Ashland has created a Global network of "Ethics Ambassadors" as an added resource for employees and to integrate our global ethics and compliance program into business operations at the local level.



board of directors

Guillermo Novo

Chair and Chief Executive Officer*,
Ashland Inc.

Steve D. Bishop**

Former CEO, Procter & Gamble Health Care

Brendan M. Cummins

Former CEO, Ciba Specialty Chemicals

William G. Dempsey, Ph.D.

Former Executive Vice President,
Global Pharmaceuticals, Abbott Laboratories

Suzan F. Harrison**

Former President, Global Oral Care,
Colgate-Palmolive Company

Dr. Jay V. Ihlenfeld

Former Senior Vice President,
3M Company

Wetteny Joseph

Chief Financial Officer and Head
of Business Development Zoetis

Susan L. Main

Senior Vice President and Chief Financial Officer,
Teledyne Technologies Incorporated

Jerome A. Peribere

Former President and CEO,
Sealed Air Corp.

Ricky C. Sandler

Chief Executive Officer, Chief Investment
Officer, Eminence Capital, LP

Janice J. Teal, Ph.D.

Former Group Vice President and
Chief Scientific Officer, Avon Products Inc.

executive leadership

Guillermo Novo

Chair and Chief Executive Officer

Eric N. Boni

Vice President, Finance and Principal
Accounting Officer

Karl Bostaph

Vice President, Manufacturing

Min Chong

Senior Vice President and General Manager,
Specialty Additives and Intermediates

Eileen Drury

Senior Vice President and
Chief Human Resources Officer

Ashok Kalyana

Senior Vice President and General Manager,
Life Sciences

Osama Musa, PhD

Senior Vice President and
Chief Technology Officer

Xiaolan Wang, Ph.D.

Senior Vice President and General Manager,
Personal Care

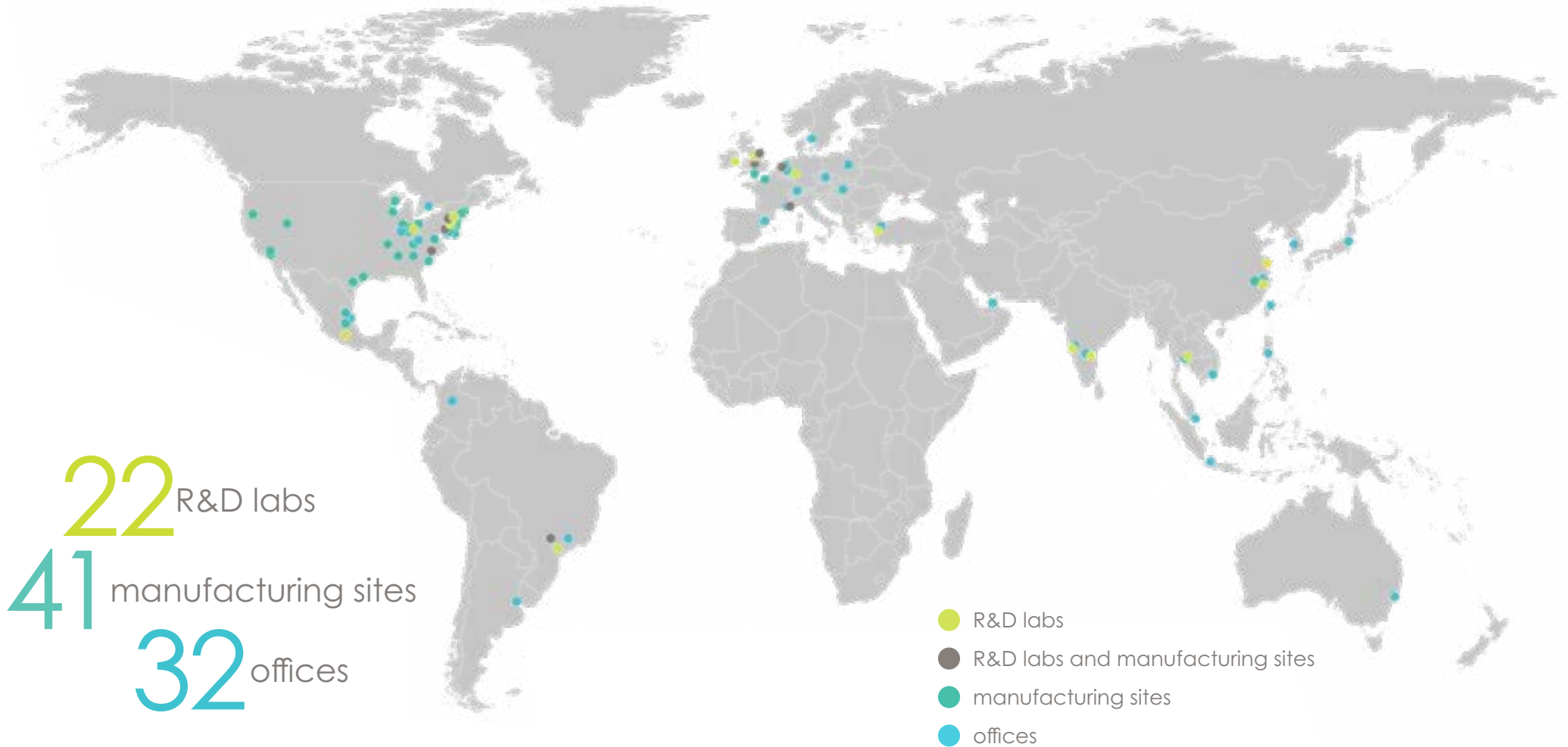
J. Kevin Willis

Senior Vice President and Chief Financial Officer

P. Yvonne Winkler von Mohrenfels

Senior Vice President,
General Counsel and Secretary

2021 global footprint



global headquarters

Ashland inc.
8145 Blazer Drive
Wilmington, DE 19808 USA
Tel: +1 859 815 3333

regional centers

Asia Pacific
Shanghai, China
Tel: +86 21 2402 4888

Europe, Middle East, Africa
Schaffhausen, Switzerland
Tel: +41 52 560 5500

Central, South America
São Paulo, Brazil
Tel: +55 11 3649-0455

ashland.com/sustainability

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