DOW 125

DOWFRIENDS Newsletter

DowFriends Fall News

A Company that cares

So long summer, and hello fall! Last month, Dow was named one of the 2022 PEOPLE Companies that Care by Great Place to Work® and PEOPLE. The ranking 92 on the list of 100 companies marks the third consecutive year Dow has earned a spot on this prestigious list.

At Dow, we believe in putting people first. For generations, our people have used their unique perspectives and backgrounds to find new ways to solve challenges and exceed customer expectations in an environment of inclusion, diversity and integrity. During the last year, Dow's caring culture allowed the Company to adapt and respond to change and uncertainty with increased employee engagement, faster decision making and enhanced innovation.

Explore our latest Dow news below and learn more about Dow's commitment to creating an environment where everyone can thrive.

INNOVATIVE	CUSTOMER-CENTRIC	INCLUSIVE	SUSTAINABLE
Alongside our customers, we create the materials and solutions that transform our world.	We aim to be easy, enjoyable and effective to do business with through all our digital and personal interactions.	We champion a fully inclusive workforce that reflects the world in which we do business, because it's the right thing and smart thing to do.	In everything we do, we strive for positive impact on society and the planet.

DOW

Seek Together™

"As the world changes and evolves, we change with it and continue to care for our people and communities as their needs shift."

Alveda Williams, Dow Corporate Director of Inclusion

Hear more about the power of inclusion in Dow's Seek Together Podcast Episode 3!

Dow benefits open enrollment information

Your Dow benefits are centered around you, helping you live a healthy and vibrant life

You have flexible Dow benefits, so make the most of them. Open enrollment for U.S. retirees will be held November 1 – 16, 2022.

Retirees will be sent a “What’s New” mailer during the month of October. The Dow U.S. Benefits Site has features to help you choose the right options for your personal situation and get the most out of your Dow plans and programs throughout the year.

Be sure to make your choices November 1 – 16, 2022, on the Dow U.S. Benefits Site at https://dowbenefits.ehr.com. If you need additional assistance, please reach out to the Dow Retiree Service Center at 800.344.0661.

Go paperless by enrolling in electronic delivery for stockholder materials

Help us on our journey to become the most innovative, customer-centric, inclusive and sustainable materials science company in the world by signing up for electronic delivery of stockholder materials today.

When you sign up for electronic delivery, you’ll be able to view your stockholder materials online, including the proxy statement, annual report and related materials.

Going paperless is not only convenient for stockholders, but it also saves resources and reduces our impact on the environment.

Sign up for electronic delivery is easy. Have your tax ID number and email ready and go to https://enroll.icsdelivery.com/dow.

For more information please visit, investors.dow.com.

Dow launches interactive platform to connect the world with its end-to-end silicone solutions for 5G networks

Dow announced that it has launched 5G.dow.com, an engaging, guided selection tool that allows customers to find the application-specific silicone solutions they need for their 5G-enabled technology. The interactive platform is a powerful tool to connect current and potential customers to the Dow 5G Ecosystem – Dow's growing portfolio of solutions to help enable smart connectivity and the future of communications.

5G, or fifth-generation technology, is an exciting evolution in telecommunications, enabling unprecedented levels of intelligent connectivity with significant improvements in the quality of service, time delay, throughput speed, energy efficiency and system performance.

With product innovations and proven materials, the Dow 5G Ecosystem helps to advance this technology with Dow's robust portfolio of product options in thermal management, electromagnetic interference (EMI) shielding, adhesion, sealing and encapsulation and component molding. Dow's high-performance silicone solutions help advance both innovation and sustainability goals by offering materials with thermal protective properties, low volatile emissions, solvent-free formulations and room-temperature curing to conserve energy.

"5G.dow.com is one of many such tools being implemented across Dow globally to help provide a more customized, step-by-step journey for our customers and make it easier for them to find the most relevant information on Dow.com," said Cathy Chu, strategic marketing director, Dow Consumer Solutions. "This platform can play a significant role in enabling next-generation technologies and the future of faster, smarter, simpler connectivity. We are excited to now make this incredible resource available."

The future of connectivity starts at 5G.dow.com

Visitors entering 5G.dow.com will begin at the "splash page," which includes a brief introduction and invitation to get started on the 5G Ecosystem landing page, where they can explore by broad application area or click on specific subapplications. Throughout, "exploded" 3D video views show where Dow's silicone technology can be found in various technologies, such as: 5G-enabled consumer devices and technologies (smartphones, PCs, wearable devices and advanced driver assistance systems (ADAS), telecommunications infrastructure (base stations, optical communications, core networks) and cloud computing and data centers (servers, high-performance computing chips and other datacom devices and equipment).

End-to-end product solutions for the 5G Ecosystem

"Dow offers one of the world's broadest and most robust portfolios of silicones and silicone-based solutions for the 5G Ecosystem," said Chang Lee, Global R&D Director, Dow Consumer Solutions. "Silicones are truly remarkable, high-performance materials, with properties that can be fine-tuned to

meet specific customer requirements. They can also help manufacturers speed production, reduce energy consumption and promote sustainability. With 5G.dow.com, we're making our silicone and silicone-based solutions more accessible than ever to those seeking them for their applications."

5G.dow.com provides a streamlined, user-friendly way to connect to Dow's innovative, end-to-end silicone solutions in the following areas:

Thermal management

For thermal management of 5G-enabled smart devices, 5G base stations, cloud computing and datacenters, Dow supplies thermally conductive silicone greases, gels, adhesives and encapsulants that draw damaging heat away from electronic components.

EMI shielding

To protect sensitive electronics from electromagnetic interference that can lead to malfunctions, data loss or even failure, Dow supplies electrically conductive silicone adhesives, elastomers, coatings, emulsions and formed-in-place gaskets (FIPG) that conduct electricity while blocking EMI.

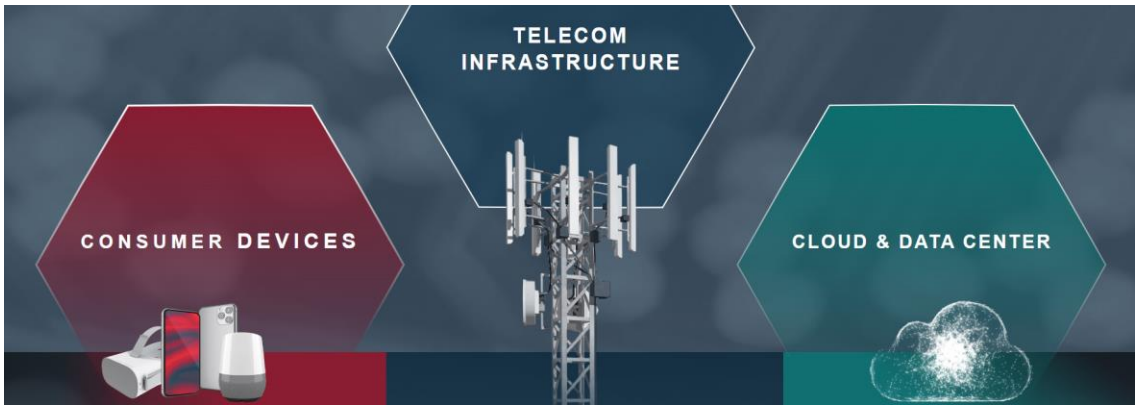
Adhesion, sealing and encapsulation

Dow's silicone adhesives, sealants, conformal coatings and encapsulants enable delicate electronic components to perform consistently, even under harsh environmental conditions. In electronics assembly, these materials deliver flexible protection against environmental contamination, vibration and thermal stress. In electronics processing, special protective tape with silicone adhesive delivers super wetting performance on rough surfaces and good bonding performance on low-surface-energy materials.

Component molding

In component molding, Dow's LSR materials provide a range of performance properties, aesthetics and processing options. Dow's portfolio includes non-post-cure LSRs, self-lubricating LSRs, fluoro LSRs and optically clear LSRs. The outstanding flow properties and wide range of durometers of Dow's LSRs enable components to be produced with tight dimensions, thick and thin details and consistencies from soft to firm. SILASTIC™ MS series Moldable Silicones offer high luminous transmittance, low haze and scatter and better heat and UV resistance than optical-grade plastics for light guide applications in smart devices.

Dow's portfolio of silicone technologies is available worldwide. To learn more, visit dow.com/electronics



Dow and Mura Technology plan to locate Europe's largest advanced recycling facility at Dow's site in Böhlen, Germany

Facility expected to be the largest of its kind to date in Europe, and the first of its kind in Germany

Dow, the world's leading materials science company, and Mura Technology, the global pioneer of an advanced plastic recycling solution, announced the next step in their ongoing collaboration to help solve the global plastics waste issue and advance circularity. Mura plans to construct a new facility at Dow's Böhlen site in Germany – the latest in a series of planned facilities across the U.S. and Europe to rapidly scale advanced recycling of plastics – and the first expected to be based at a Dow site. This project is targeted for a final investment decision by the end of 2023.

Mura's new Böhlen facility in Germany, which is expected to be operational by 2025, would deliver approximately 120 kilotons per annum (KTA) of advanced recycling capacity at full run-rate. This and the other planned units expected to be constructed across Europe and the U.S. would collectively add as much as 600KTA of advanced recycling capacity by 2030 – and position Dow to become the largest consumer of circular feedstock for polyethylene production globally.

"The continuation and growth of Dow and Mura's collaboration is another example of how Dow is working strategically to expand and build momentum around securing circular feedstocks and supporting breakthrough advanced recycling technologies," said Isam Shomaly, Dow business vice president for Feedstocks and Commodities.

"We continue to increase Dow's capacity to use recycled content as feedstock and continue to invest in the most effective technology available to enable our circular business model for plastics," said Diego Donoso, president of Dow Packaging & Specialty Plastics. "The diversification of our feedstock slate and decarbonization of our assets will enable the achievement of Dow's goal of a sustainable, low-carbon future and meet strong and growing customer demand for circular polymers. This will be a significant step forward to decrease our dependency on virgin fossil-based feedstocks."

The planned facility builds on Dow's ongoing collaboration with Mura, first announced in 2021, with an initial project to construct the world's first plant using Mura's HydroPRS™ process, located in Teesside, UK, which is expected be operational in 2023 with an initial 20KTA production line. The Böhlen, Germany, site, expected to be co-located with Dow's manufacturing facilities, would enable a significantly larger capacity for plastic waste and considerably increase the supply of fully circular feedstock to the industry. This circular feed, derived from plastic waste currently destined for incineration or landfill, would reduce reliance on virgin fossil-based feedstocks and would enable Dow to produce a recycled plastic which is in high demand from global brands, particularly for high-end sensitive markets like food and medical applications.

Dow aims to take advantage of co-location benefits, which could significantly reduce the cost of scaling advance recycling facilities. In addition, co-location of Mura's facilities at Dow locations would be expected to reduce carbon emissions by minimizing transportation of the offtake and as gas output from the advanced recycling process can be converted back to plastics, thereby ensuring no by-products go to waste.

Steve Mahon, chief executive officer at Mura Technology, said, "Combating the global plastics crisis requires innovative solutions which can drive a circular economy. Mura's collaboration with Dow has led to the largest commitment across the industry to date, showcasing the urgency from industry leaders to adopt scalable solutions such as HydroPRS that will transform the plastics industry worldwide. Dow's continued support for Mura Technology has led to a highly financeable commercial arrangement and the deepening collaboration will allow both companies to achieve their stated ambitions in the advanced recycling space.

"Dow's commitments to accelerating a global circular plastics economy is exemplified through deploying HydroPRSTM at the newest advanced recycling facility in Germany, which will enable us to dramatically increase recycling capacity. Through our collaboration and Dow's extensive global reach, we can accelerate the pace and scale at which a circular plastics economy becomes a reality worldwide."

Mura's HydroPRS™ (Hydrothermal Plastic Recycling Solution) advanced recycling process is unique, as it uses supercritical steam to convert most forms of plastics – including flexible and multi-layer plastics, which have previously been deemed 'unrecyclable' – back into the original oils and chemicals from which they were made. These can then be used to create new, virgin-equivalent plastic products which are even suitable for food contact packaging.

With Mura's process, the same material can be recycled repeatedly, meaning it has the potential to eliminate single use plastic and prevent it from going to landfill or being incinerated. This has additional carbon benefits, with advanced recycling processes expected to save approximately 1.5 tons of carbon dioxide per ton of plastic recycled, compared to incineration and reducing reliance on fossil-based feedstocks.

See explanatory video on the HydroPRS™ Process here.

Click here for video on Dow's drive for a circular economy for plastics.

Dow, X-energy to drive carbon emissions reductions through deployment of advanced small modular nuclear power

Dow and X-energy collaborate on intent to provide process heat and power at one of Dow's U.S. Gulf Coast facilities by ~2030

Dow the world's leading materials science company, and X-energy, a nuclear energy innovation company, announced that they have signed a letter of intent which will help Dow advance its carbon

emissions reduction goals through the development and deployment of X-energy's advanced small modular nuclear technology in the U.S.

Dow and X-energy will collaborate with the intent to deploy X-energy's Xe-100 high-temperature gas reactor technology at one of Dow's U.S. Gulf Coast sites – which is expected to be operational by approximately 2030. The Xe-100 reactor plant would provide cost-competitive, carbon free process heat and power to the Dow facility. Dow also intends to take a minority equity stake in X-energy, working with the company to deploy small modular nuclear technology.

"Advanced small modular nuclear technology is going to be a critical tool for Dow's path to zero-carbon emissions and our ability to drive growth by delivering low-carbon products to our customers," said Jim Fitterling, Dow chairman and chief executive officer. "X-energy's technology is among the most advanced, and when deployed will deliver safe, reliable, low-carbon power and steam. This is a great opportunity for Dow to lead our industry in carbon neutral manufacturing by deploying next-generation nuclear energy."

X-energy's Xe-100 is a Generation IV, high-temperature gas reactor built on decades of research, development and operating experience. Each reactor is engineered to operate as a single 80 megawatts (MW) electric unit and is optimized as a four-unit plant delivering 320 MW electric. The reactor can provide clean, reliable and safe baseload power to an electricity system or support industrial applications with 200 MW thermal output per unit of high pressure, high temperature steam. Click here to see how the Xe-100 reactor works.

"Nuclear energy has always offered the promise of broad economy-wide decarbonization. Today's announcement marks an important step in turning that aspiration into reality," said Clay Sell, X-energy chief executive officer. "Dow has a remarkable 125-year history of bringing innovative solutions to the market, and their leadership is a critical driver in meeting decarbonization goals in the energy intensive industrial sector. X-energy is proud to combine our leading nuclear technology with Dow's production capabilities to deliver a global materials supply chain that is safer, cleaner and greener than ever before."

The United States Department of Energy has recognized that advanced small modular nuclear reactor technology is a key part of the Department's goal to develop safe, clean and affordable nuclear power options. In 2020, X-energy was selected by the U.S. Department of Energy's Advanced Reactor Demonstration Program to deliver a four-unit Xe-100 plant in Washington state, which will make it among the first operational grid-scale advanced reactor plants in North America.

Small modular nuclear represents a key technology to enable energy-intensive industries to decarbonize. And this announcement marks an additional step in Dow's efforts to deliver 30% reduction in scope 1 and 2 carbon emissions since 2005 by 2030, on its path to achieving carbon neutrality by 2050. In 2021, Dow announced plans to build the world's first net-zero (scope 1 and 2 emissions) carbon emissions integrated ethylene cracker and derivatives site in Fort Saskatchewan, Alberta.

It also builds on Dow's efforts to continue transitioning its sites and operations globally to cleaner power. Last year, the Company expanded its access to renewable power to more than 900 MW and obtained more than 25% of its purchased electricity from renewable sources. Today, Dow is among the top 20 users of clean energy among global corporations.

Dow's comprehensive "INtersections" ESG report provides more detail on the Company's continued efforts to reduce carbon emissions around the world.

Dow recognized with four Sustainability Awards from the Business Intelligence Group

Dow's global sustainability efforts were recognized with four prestigious 2022 Business Intelligence Group (BIG™) Sustainability Awards. The Sustainability Awards honor those people, teams and organizations who have made sustainability an integral part of their business practice or overall mission.

Dow leaders honored with BIG™ Sustainability Awards:

Sustainability Hero of the Year (Executive):

Eric Peeters, Vice President for Sustainability, Performance Materials & Coatings

In addition to his growth-oriented leadership, Eric has demonstrated a commitment to helping the industries that Dow touches reach new levels of sustainability by ensuring low-carbon solution innovation and sustainable pioneering processes remain at the core of everything the Company does.

Sustainability Champion of the Year (Non-executive):

Isabelle Van Reeth, Research Fellow and Skin Care Global Technical Leader

Isabelle leads global technology research and development for the skin care and Anti-Perspirant and Deodorant segment. In this role, Isabelle is helping advance Dow's goal of providing safe materials for a more sustainable planet by initiating partnerships that will expand Dow's portfolio and deliver the next generation of bioderived and biodegradable home care and personal care solutions.

Dow solutions honored as BIG™ Sustainability Products of the Year:

LUXSENSE™ Silicone Synthetic Leather

The world's first silicone-based luxury synthetic leather material. Across industries, from fashion to automotive, brands are looking for solutions that will help meet aesthetic and performance demands and enhance sustainability when compared to synthetic and traditional leather alternatives. Through innovation in materials science, LUXSENSE™ is soft to the touch, odorless, more sustainable to produce, extremely durable and naturally fire retardant.

MaizeCare™ Clarity Polymer

A COSMOS by Ecocert-approved bio-based and biodegradable polymer for sustainable hair care styling applications. The starch-based ingredient with fixative and film-forming properties can help create crystal clear formulations with a non-tacky feel during styling. Beyond hair care, it can also be leveraged to provide a variety of benefits in color cosmetic applications.

“These four BIG Sustainability Awards perfectly showcase Dow’s commitment to a more sustainable industry and continued progress towards our 2025 Sustainability Goals,” said Mauro Gregorio, President, Dow Performance Materials & Coatings. “Congratulations to all team members working on MaizeCare™ and LUXSENSE™, and to Eric and Isabelle for their exceptional leadership in unlocking new levels of sustainability for Dow, our customers, partners and brand owners.”

“We are proud to reward and recognize Dow for their sustainability efforts,” said Maria Jimenez, Chief Nominations Officer, Business Intelligence Group. “It was clear to our judges that their vision and strategy will continue to deliver results toward a cleaner, more sustainable world. Congratulations!”

How can the mobility industry incorporate more circular solutions?

Discover how the advanced recycling approach and collaboration delivered a pioneering circular foam for the automotive industry

Enhancing sustainability across the vehicle lifecycle enables products to deliver multiple benefits while contributing to a lower carbon footprint.

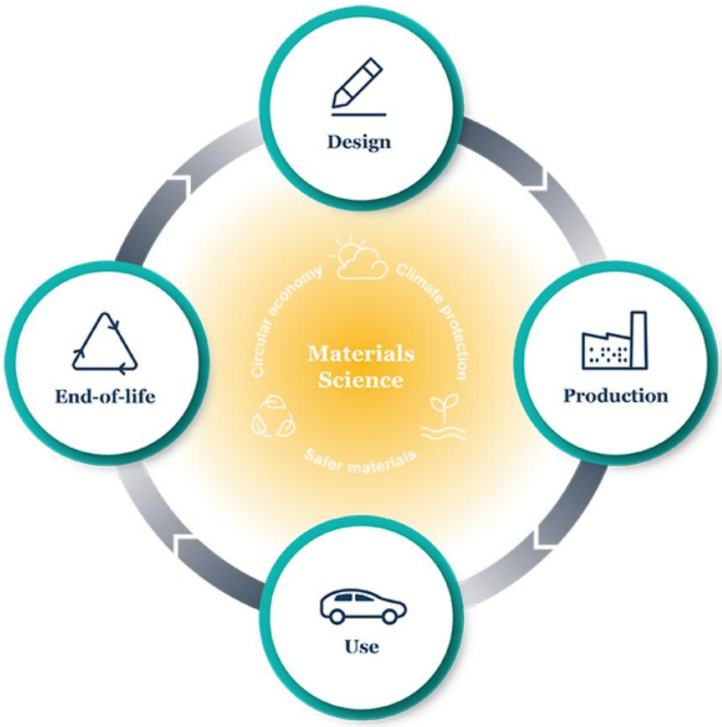
Unprecedented change

The automotive industry is experiencing a period of unprecedented change as it seeks to reduce carbon emissions and become a circular economy using recycled products. Yet, new products may require re-certification, slowing down adaptation.

At Dow, we are tuned into the automotive industry and understand its strong desire for a more sustainable business model. This is why we want to help the industry accelerate a wide range of solutions which can close the loop along the vehicle lifecycle, helping to introduce technologies that are more sustainable to produce, use and retire. And without any loss in quality and performance.

Enhancing sustainability across the vehicle lifecycle enables products to deliver multiple benefits while contributing to a lower carbon footprint. At Dow, we believe this really begins at the design stage. Choosing the right raw material is key to addressing challenges in a sustainable way since conventional feedstock has been sourced from fossil fuel.

Finding an alternative feedstock doesn’t happen overnight. But thanks to existing close collaborations between Dow and our automotive partners, we have sourced recycled waste material from the sector itself and by applying a mass balance approach with external certification from ISCC+ we are enabling closing the loop for the automotive industry.



Closing the loop

This is where an independently certified approach called mass balance comes in. Part of Dow's broader sustainability approach, it allows the tracing of recycled material from the raw material through to the final product. By incorporating this type of material, it has been possible to reduce the amount of fossil fuel used in the feedstock, thus reducing the overall carbon footprint.

Dow pioneered this approach by applying it to our existing SPECFLEX™ polyurethane range that offers suppliers a solution for products with 55% recycled content and overall better lifecycle analysis profile compared to fossil-based fuel, including lower carbon footprint in production phase, without the need to re-qualify or re-certify products. This benefits society according to ISO 14044 standards, by creating circular polyol and displacing fossil fuels. With this enhanced circularity, we call the new range SPECFLEX™ C.

Circularity without re-qualification

Dow engaged with leading automotive suppliers Adient and Autoneum to apply the power of collaboration and unlock the potential of the mass balance approach. Adient, a market leader for seating in the automotive sector, and Autoneum, the leading acoustics and thermal management supplier, readily agreed to pioneer and validate the new range.

Both Adient and Autoneum are incorporating SPECFLEX™ C into their existing products without having to adapt formulations or processes.

Thanks to the mass balance approach, new solutions enable suppliers and their OEM customers to benefit from the circularity value of the foam matched and meet the market demand for low carbon products and the highest regulatory standards without any compromise.

This is just the starting point to becoming more sustainable. Dow continues to work with a wide range of value chain members to innovate for sustainability. To learn how we can help you meet your sustainability goals with SPECFLEX™ C, contact us.

Back on the career track: ReAction program helps employees return to the workforce

Dow's new ReAction Program is helping people who have taken an extended career break return to the workforce. Individuals relaunching their careers often face obstacles that are more complex than regular job-searchers. They may need to build back confidence, reinvigorate their networks and upskill or reskill – all on top of worrying whether they will still be able to balance family or personal needs.

The ReAction Program is aimed at individuals interested in returning to work after two or more years off for reasons such as military service; starting, raising or caring for a family or family members; community service; recovery from an illness; entrepreneurial ventures; continuing education; and other personal or professional pursuits. The program provides customized onboarding and orientation sessions and mentorships by experienced Dow business and functional leaders to help people transition into a full-time role. Just as important, managers are working with program participants to design a schedule that provides flexibility, if needed.

"People who have stepped out of the workforce for extended periods often have questions, such as: 'Are my skills still relevant?' 'How do I get started?' 'How will I be there for my family?'" said Taesia Shello, global talent acquisition diversity leader at Dow. "The ReAction Program offers an integration period based on the needs of the person that helps them return to work and build a long-term career with Dow."

ADDRESSING A GROWING NEED

Currently, the ReAction Program is being piloted among Dow's Manufacturing & Engineering and Integrated Supply Chain groups in North America. For participants, the program's mentorship helps them gain the skills and tools they need to be successful on the job, while also feel more connected and supported within their work group.

Candance Brooks, a senior Operations IT business process specialist at Dow, had 20 years of work experience when, in 2016, she moved to another state with her husband and became a work-at-home mom. Once her children reached school-age, she decided to return to the workforce.

"I searched over a year, and then I happened upon the ReAction Program," said Brooks, who was part of the program's first cohort in 2021. "It was exactly the program that I needed, as I was having great difficulty finding my next role. I have been granted an opportunity to work with a group of talented and diverse individuals at a global company. My mentors are supportive and experienced leaders. The ReAction Program has been an absolute blessing and a win for my career."

Chelsie Lange, a Basics production coordinator at Dow, found the ReAction Program helped her return to a career at Dow after she left the company and decided to stay home to care for her two daughters.

“When I saw the ReAction Program position posted, I was excited for the opportunity to go back to Dow, and our family was in a better position for me to pursue a full-time opportunity,” Lange said. “Through different career opportunities, the ReAction Program brought to light the great culture and opportunities that Dow provides – and I’m grateful to be a part of it!”

For Dow, the ReAction Program is an opportunity to attract experienced, skilled and diverse workers. The program comes at a time when career breaks are becoming more commonplace, especially among millennials and younger generations. According to research by ManpowerGroup, 84% of millennials anticipate taking a career break for childcare, eldercare and other reasons.

“As a site leader, we are continuously looking for talented individuals with different perspectives and backgrounds,” said Nicholas Powell, site manufacturing director at Elizabethtown, Kentucky. “I am extremely excited about the ReAction Program and what it offers the individual, site and Dow.”

GROWING WITH DOW

The COVID-19 pandemic has triggered a growing realization that there’s no one-size-fits-all approach to the workday or a career path. In response, Dow has launched Design Your Day, which allows employees flexibility to choose when to work remotely and when to attend on-site activities based on project work and role needs.

Likewise, the ReAction Program is part of a cultural shift in which Dow teams are learning to be more hands-on in helping employees brush up their skills after career breaks and more agile in accommodating flexible schedules, said Shello.

“Make no mistake: we are in the manufacturing industry with 24-hour operations globally,” Shello said. “However, our people are our most important asset. To carry out our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world, we realize flexibility in important. This program helps us think outside of the box and find that balance, where possible.”

Learn more about Dow's ReAction Program

Form # 736-02138-01-1022 Dow