



DowFriends year-end news!

The year is coming to a close, and we want to thank you for your engagement in Dow’s digital newsletters and our first-ever virtual [North America retiree update](#) that took place in October. As we move into 2021, we will continue to find ways to keep you informed and updated with Dow news and information.

We finish the year with stories below that highlight our innovative and customer-centric mindset, our investment in becoming a more inclusive and diverse company, and our unwavering goals towards sustainability.

From your friends at Dow - we wish you and your families a wonderful holiday season.



“Our world is changing, and today’s business leaders have the ability to serve as key drivers of change. Purpose – in addition to profit – has become a necessary ingredient for exceptional business success. As we continue pursuing our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world, Public Affairs plays a key role in elevating and driving corporate brand and purpose at Dow” world.”

**- Rebecca Bentley
Vice President of Public Affairs**

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When Innovation meets Customer-Centricity everyone wins

Starting with the end in mind, partnering with our customers, and remaining laser focused on deploying the Dow innovation engine against real needs ensures that innovation leads to business success.

Start with the end in mind. A statement we've all heard and one that is particularly true when developing new products. Greater likelihood of success results when you begin a project with the result in mind. It also delivers real innovation, products that succeed and make a difference.

As highlighted in our recent [FCLTGlobal case study](#), research confirms that long-term companies outperform on financial metrics, including revenues, profitability, and stock price, as well as non-financial ones like job creation and sustainability.

With more than a 120-year history of evolution and reinvention, innovation underlies everything Dow achieves. Dow's innovation strategy remains focused on meeting customer needs.

We innovate to provide products that bring value to our customers in performance while simultaneously being more sustainable. These are not evolutionary, small changes. These meet customer needs, make good business sense and are recognized as innovative products. Higher performance creates value for our customers and creates a market premium.

Our portfolio of R&D projects, broad in scope and covering a range of time horizons, is actively managed to ensure we deliver value for our customers, returns for our shareholders and the sustainable solutions society demands. Time is an important variable. The portfolio is a mix of projects, from early stage aspirational efforts to products entering commercialization. Today's long-term projects naturally become tomorrow's short-term projects. Our scale and breadth gives us the ability to invest in transformational capabilities. Our investment in high-throughput tools and high-performance computing are two examples, developed capabilities that continue to reap benefits. These tools improve R&D effectiveness, delivering innovations faster than ever before.

Computational tools, like deep search, deep learning, high-performance modeling and quantum computing, are being pursued, capabilities being investigated that show great promise to further improve our efforts. We cast a wide net, exploring nascent technologies and partnering to solve materials challenges.



Our customer-centric approach lets us effectively collaborate and connect with our partners – from formulators to brand owners, from academics to technology partners. These efforts continue to yield innovations that address some of society’s most pressing problems and are repeatedly recognized around the world. As just a few examples of that recognition:

- ❖ For eight straight years Dow products won [R&D 100 awards](#), 44 winners over the last decade; more than any other company.
- ❖ Recognition for innovation from the [Edison Awards](#), The ICIS Innovation Awards, Design News and the [Business Intelligence Group](#).
- ❖ 10 Dow projects were just named [as finalists for the 2020 Institution of Chemical Engineers \(IChemE\) awards](#).
- ❖ Recognized for sustainability innovations by the EPA Green Chemistry Challenge, IChemE and the Business Intelligence Group.
- ❖ Winner of three [Ringier Technology Innovation Awards](#) in 2020

Starting with the end in mind, partnering with our customers, and remaining laser focused on deploying the Dow innovation engine against real needs ensures that innovation leads to business success. Our focus on the end goal, our engagement with key entities in the value chain, drives rapid success at commercial scale. Innovative products get to market faster and find receptive customers.

Independent, third party recognition validates that our products are innovative. They are a testament to a mindset that fuels Dow’s R&D pipeline and to the world-class partners we are lucky to collaborate with every day. I am proud of Team Dow and thank our scientists and engineers for their creative efforts to deliver these innovative new products that bring value to Dow, to our customers and to society.

[A.N. Sreeram](#), Senior Vice President of Research & Development and Chief Technology Officer

The power of Pack Studios

How a vision for more collaboration sparked a powerful movement to accelerate product innovation.



Eight years ago, [Pack Studios](#) was born from a desire to further collaboration possibilities across the packaging industry. We know that a more sustainable future is made possible by working together, now. Our journey started when we launched our first Pack Studios in Freeport, Texas, and we were overwhelmed by the response. Since then, Pack Studios locations have opened around the world and most recently in Tarragona, Spain.

It’s some kind of magic to see technical knowledge and machinery brilliance come together. And that is what Pack Studios delivers. What has been equally amazing is the agility of Pack Studios throughout changing circumstances. From using the pilot scale equipment to produce needed personal protective equipment for front line workers to launching Pack Studios Live to support virtual collaboration. We’re

harnessing the power of Pack Studios to address today's challenges and deliver innovation for the future.

Pack Studios continues to grow

The Pack Studios team has worked tirelessly to bring the newest location to life, and all in the face of a global pandemic. Equipped with state-of-the-art film production and testing capabilities, [Pack Studios Tarragona](#) is designed to facilitate innovation within food and industrial packaging, health and hygiene materials, and label adhesive solutions.

This fantastic new space is already cultivating exciting projects. While we couldn't bring everyone to Tarragona, we marked this signature occasion with a virtual grand opening. The full event is available to watch here: [Pack Studios Tarragona Virtual Grand Opening](#).

The power of Pack Studios for you

So, you may be wondering, what exactly can Pack Studios do for you? Well, put simply, we collaborate to accelerate your innovation process.

Firstly, it's all about the working together.

Pack Studios supports a unique collaborative process. Key members across the value chain – from equipment manufacturers to brand owners - are connected for honest discussions. We collectively gain diverse perspectives about market needs, performance gaps, and end goals. This allows us to efficiently and effectively work together to find and test solutions - from materials, to trial fabrication, to application testing.

Then, we ideate, prototype, and test at speed.

Acceleration is the key here. By working together we can optimize trials to deliver targeted performance. At Pack Studios, brand owners can assess the value of an innovation, make market-based decisions, and launch a new product in a much shorter timeframe.

Lastly, we provide state-of-the-art facilities.

None of this would be possible without the technology and incredible network of experts. Our locations around the world offer a robust assortment of cutting-edge fabrication lines, commercial-scale packaging lines, diverse testing equipment and analytical labs, all of which are overseen and operated by experienced professionals who are passionate about helping in every possible way.

The machinery at each location promotes efficiencies at both ends of the production spectrum, helping to accelerate the commercialization process. Ultimately, our facilities allow companies to avoid shutting down production lines to test new products, saving time and money.

The power of Pack Studios where you are

We want you to consider Pack Studios an extension of your facilities. The ten [Pack Studios locations](#) around the world are strategically positioned and equipped to serve local market needs.

Just because travel is a limited option right now, doesn't mean collaboration can't happen. We're continuing to work with companies during these unprecedented times through **Pack Studios Live**. This new offering allows trials to happen via live stream as our on-site team safely carry out testing.

Let's work together to set the packaging industry up for the future. We invite you to collaborate with us at [Pack Studios](#).

[Diego Donoso](#), President, Packaging & Specialty Plastics

Dow announces Military Degree Equivalency (MDE) program for U.S. and Canada



MDE program exemplifies Dow's efforts to create a more inclusive work environment where diverse backgrounds and levels of experience are welcome and valued

Dow announced the launch of a unique program that will level the playing field for veterans with relevant military experience of E6 ranking or greater (OR6 for Canada) as equivalent to a Bachelor's degree for U.S. and Canada job postings. The E6 ranking translates to 8-12 years of experience and has generally equivalent responsibilities across all branches of the military.

The Military Degree Equivalency (MDE) program affords individuals with extensive military background the opportunity to bring their broad scope of training and education, experience in leadership and understanding of performing in high pressure situations into a successful career at Dow.

"Data has shown that when veterans join Dow the broad range of experience they bring with them is directly in line with the qualities and skillset we are looking for in an employee," shared Rich Wells, Vice President U.S. Gulf Coast Operations, Site Director for Texas Operations and Managing Sponsor for Dow's VetNet Employee Resource Group. "I'm delighted to see this MDE program embraced by our Company so that we can continue to attract and retain good talent while providing even more opportunities for military veterans wanting to join Team Dow."

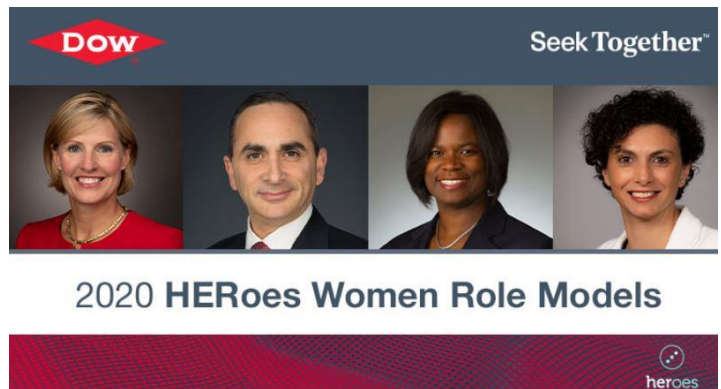
Watch this [short video](#) with Dow VetNet Executive Sponsor Jane Palmieri, President Industrial Intermediates and Infrastructure and John Lowry, Assist. Secretary Veterans' Employment and Training for the U.S. Department of Labor as they explain the business case for hiring veterans and how this MDE program will be a win-win for both veterans and Dow.

For more information, visit www.dow.com/veterans or email, fglvtnt@dow.com.

Dow leaders recognized on 2020 HERoes Women Role Model lists

Four Dow leaders receive global recognition for championing women in business and driving change for gender diversity in the workplace.

Dow announced that four leaders earned recognition on three 2020 HERoes Women Role Model lists, including HERoes 100 Women Executives List, HERoes 50 Advocates List and HERoes 100 Women Future Leaders List.



The HERoes Women Role Model lists showcase leaders who are championing women in business and driving change for gender diversity in the workplace. Honorees have achieved success in their own careers and actively used their platform to create a more diverse and inclusive business environment for women.

Dow leaders named to the 2020 HERoes Women Role Model lists include:

HERoes 100 Women Executives List, #10

Jane Palmieri, President, Industrial Intermediates & Infrastructure; Asia Pacific Oversight Executive Sponsor, Veterans Network

HERoes 50 Advocates List, #18

Howard Ungerleider, President and Chief Financial Officer Executive Sponsor, Women's Inclusion Network

HERoes 100 Women Future Leaders List, #2

Eunice Heath, EH&S Sustainability Director Site Sponsor, Global African Affinity Network, Delaware Valley

HERoes 100 Women Future Leaders List, #25

Margherita Fontana, EMEAI Purchasing Director Global Chair, Women's Inclusion Network, EMEAI

On being named to the Women Executives list, Palmieri said, "I am deeply honored to be recognized as a HERoes top female executive. I am also very proud to be an executive at Dow where inclusion and diversity is part of our Company's ambition and viewed as a business imperative. Since I began my career 28 years ago, great strides have been made in gender diversity and equity in the workplace, but there is much more to do. To drive change, it is vital that we work together to understand the challenges that women in business face today and collectively champion for respectful and equitable treatment."

Dow's comprehensive global inclusion and diversity strategy is integrated into the Company's overall business strategy. Across the Company, employees are helping to champion a culture of inclusion by acting as catalysts for advancing business success, enhancing employee engagement and activating communities for impact.

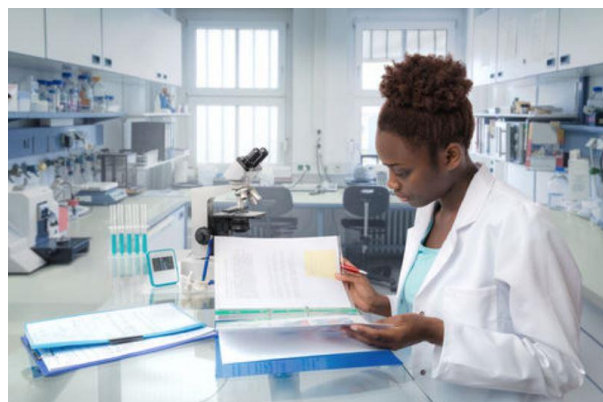
“Allies are critical in creating a more inclusive and equal world,” said Ungerleider. “Advocating for female representation at every level and ensuring that everyone feels included and can truly become their best personal and professional selves has always been important to me. I am deeply honored to receive this recognition and its testament to Dow’s inclusive core values.”

Dow invests more than \$5MM in Historically Black Colleges and Universities to enhance the Black STEM talent pipeline

Dow announced that it is investing more than \$5 million to Historically Black Colleges and Universities (HBCUs) for programming, partnership and support to enhance the Black STEM talent pipeline.

Dow is proud to partner with and support the following HBCUs with this investment:

- ❖ **Florida A&M University** in Tallahassee, Florida
- ❖ **Howard University** in Washington, D.C.
- ❖ **North Carolina A&T State University** in Greensboro, North Carolina
- ❖ **Prairie View A&M University** in Prairie View, Texas
- ❖ **Southern University** in Baton Rouge, Louisiana



“Representation and diverse perspectives are key drivers for innovation and business success,” said **Karen S. Carter**, chief Human Resources officer and chief Inclusion officer, Dow Inc. “This investment shows our commitment to strengthening and diversifying the American manufacturing and STEM pipeline and attracting a workforce equipped to lead our Company into the future.”

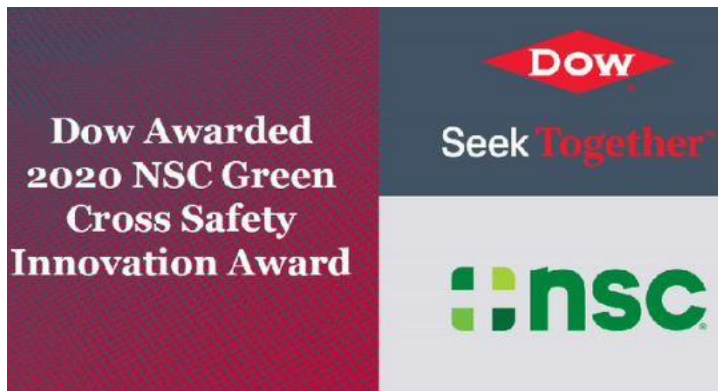
This investment is seeded by an initial \$500,000 contribution in 2020 as part of the [Dow ACTs](#) commitment designed to address systemic racism and inequality in the areas of advocacy, community and talent. The company is investing an additional \$4.6 million to expand support through 2024 in the following areas:

- ❖ **Investing to inspire and attract underrepresented minorities to STEM disciplines** by supporting STEM programming, including a partnership and additional \$250,000 grant to [Project Lead The Way](#) in support of the development of teachers and students at schools near our HBCU partners.
- ❖ **Investing to retain and develop Black students in STEM** by developing curriculum and supporting sustainable chemistry, green chemistry and functional disciplines, such as supply chain, finance and engineering.
- ❖ **Investing to build the Ph.D. pipeline of Black student talent** by supporting undergraduate, graduate, and faculty research programs. This includes funding year-long research experiences, providing Dow mentors, networking opportunities with graduate schools and exposure to industrial research.

- ❖ Investing in the [Future of STEM Scholars initiative \(FOSSI\)](#) by underwriting the education of ten students per year pursuing STEM degrees at HBCUs. Funding will provide scholarships, mentoring opportunities, and internship placements.

A fully inclusive workplace and world is imperative to effectively doing business as a global company. Dow continues to champion inclusion, diversity and equity; and through our partnerships, we aim to expand opportunities and provide support to those pursuing STEM careers.

Dow Awarded 2020 NSC Green Cross Safety Innovation Award



Dow announced that it has been awarded the 2020 National Safety Council (NSC) Green Cross for Safety® Innovation Award.

Dow received the NSC Green Cross for Safety® Innovation Award during the 2020 Green Cross for Safety Awards virtual celebration on October 1 for its Aerial Lift Safety Project, for approaching a lasting challenge and developing a transformative response to the problem.

[Green Cross for Safety Awards](#) recognize individuals and organizations for their contributions to the advancement of safety in the workplace, on the road, and in homes and communities. Dow was recognized.

“Safety is at the forefront of everything Team Dow does. It is imperative that we evaluate challenges and look for new opportunities to find solutions,” said Mary Draves, vice president of Environment, Health and Safety, and chief sustainability officer. “I am proud of Team Dow for implementing a new safety process and grateful for the recognition from the National Safety Council.”

Dow’s Aerial Lift Safety Project worked to prevent serious injuries with aerial lift equipment and improve upon original equipment manufacturers (OEM) technology. Dow partnered with OEMs and leasing companies to develop and implement next-generation solutions. Dow participated in field trials for the three OEMs, developing proximity sensor options and integrated automatic controls, and deployed all three into its North American sites with plans to fully globalize equipment in 2020.

"National Safety Council award winners don't just aim to check off a box for safety. These leaders understand that they must prioritize safety at every level of decision making. We are proud to honor each of our nominees and our incredible winners, all of whom are committed to working alongside NSC to save lives, from the workplace to anyplace." Lorraine Martin, President and CEO of the National Safety Council.

Dow continues to push for technology developments to improve safety for its workers and contractors. Visit nsc.org/awards for additional information about the National Safety Council Awards.

Aligning to the United Nations Sustainable Development Goals



This year marks the start of the Decade of Action to deliver the [United Nations' Sustainable Development Goals \(SDGs\)](#) by 2030. It is a critical period to accelerate responses to the world's greatest challenges – from ensuring food security to reversing climate change.

Despite the impacts of COVID-19, Dow is joining other companies that have aligned their sustainability commitments to the SDGs and are accelerating their actions to

commit to climate action. Introduced in 2015, the 17 UN SDGs serve as a universal framework to foster collaboration to solve the world's most challenging tasks in sustainability.

“We developed our 2025 Sustainability Goals in a parallel path with the development of the SDGs,” said Mary Draves, chief sustainability officer and vice president, Environment, Health & Safety.

“Because 95% of the world's manufactured goods are touched by chemistry, our industry is a critical enabler of technologies that can help make the SDGs a reality. Connecting our strategies with the global priorities of the SDGs have helped guide us to even greater innovation, efficiency, and scale of impact through collaboration.”

At several levels, our [2025 Sustainability Goals](#) and [new sustainability targets](#) impact each of the 17 SDGs, but there are a few goals, in particular, where we have the ability to make a larger impact. **Below is a look at some key areas where Dow is taking actions to help advance the SDGs:**

We're listening to our customers and the value chain to drive sustainable chemistry innovation and transform our portfolio to have more products with positive impact. We also are focused on increasing the positive net impact of our products, based upon knowledge of where our feedstocks and energy are from, our processes, how our products are used by customers, and how they are treated at end-of-life.

Examples

- ❖ The **ratio of positive impact of products** across all markets continue exceed burdens by three times. We also continue to improve our sustainable chemistry performance and report progress annually.
- ❖ Technologies such as **Dow PRIMAL™ Bio-based Acrylic Emulsions** are using renewable ingredients to replace petroleum-sourced material with plant-based carbon. In paints they deliver excellent properties, have ultra-low odor, low VOC, low emissions and help improve indoor air quality by capturing formaldehyde, a known air pollutant.

We're contributing to advancing materials for renewable energy, including photovoltaics, while increasing the proportion of renewable energy used in our production.

Examples

- ❖ Dow is the **leading customer of clean energy** in our sector and amongst the leading 25 worldwide companies for renewable power use. Across the world, we have contracts for power procured by wind, solar, hydropower, biomass and landfill gas.
- ❖ The global photovoltaic (PV) industry continues to grow. And the industry needs modules with longer service life and better reliability. [ENGAGE™ PV Polyolefin Elastomers \(POE\)](#) contribute to clean energy by providing opportunities for exceptional long-term performance and reliability.

We contribute to the built environment and design advance materials and coatings that make structures more resilient, energy efficient and use less resources to build.

Examples

- ❖ We are developing an [array of chemistries, formulations and materials](#) that enhance performance, durability and sustainability across the entire built environment. Technologies include silicone structural glazing that enable durable and high-performing designs and polyurethane systems that deliver high-performance insulation solutions.
- ❖ Through our [carbon partnership](#) with the International Olympic Committee, we are collaborating across the value chain to accelerate the adoption of resource-efficient building options that contribute toward a lower carbon future.

Throughout our operations, we are engaged in the transition from a linear economy to one that redesigns, recycles, reuses and remanufactures to keep materials at their highest value use for as long as possible.

Examples

- ❖ We are engaged in numerous initiatives to “[close the loop](#)” and ensure that no plastic ends up in the environment or is lost to landfill. One such project is our partnership with Fuenix for the supply of a new feedstock made from recycled plastic waste, to produce new Dow polymers.
- ❖ We are working with industry peers, associations, governments, non-governmental organizations, brands, retailers and consumers to [stop the waste](#) and help stem the tide of plastic waste before it reaches our oceans. This includes investments in Circulate Capital’s Ocean Fund – the first fund and incubator preventing ocean plastic – and the Alliance to End Plastic Waste, which has committed more than \$1.5 billion to developing and scaling solutions for a world free of plastic waste.

Material science will play a critical role in contributing to a lower-carbon future. We are actively addressing the issue of climate change through a variety of initiatives, including energy efficiency, reducing the footprint of our operations and products, and developing innovative solutions to avoid downstream emissions.

Examples

- ❖ We are maintaining our absolute GHG emissions at or below our 2006 baseline, though we have grown exponentially.
- ❖ We are actively investing in technologies to manufacture our products using less resources. For example, we recently announced the retrofitting of a mixed-feed cracker in Louisiana with proprietary technology to produce propylene. This will reduce energy use and GHG emissions by up to 20 percent versus conventional technology.

Connell and Dow "Team Up to Clean Up" With Hand Sanitizer Produced Locally in Myanmar

Two international chemical giants recently used their expertise and local connections to provide a supply of premium hand sanitizer to the people of Myanmar during the COVID-19 outbreak.

Connell and Dow made the presentation of two million milliliters of FDA-approved sanitizer on July 23, 2020, to Minister of Health and Sport Dr. Myint Htwe. The Department of Public Health will distribute the sanitizer, packaged in 1,000-milliliter bottles, to four government hospitals.



Production of the high-quality hand sanitizer was a collaborative effort. "We teamed up to clean up as a local response to the worldwide pandemic," said Connell Country Manager Lars Larsen.

Connell, a marketer and distributor of specialty chemicals and ingredients in the Asia-Pacific region, donated the main ingredient, 98% ethanol, along with additives of hydrolyzed jojoba ester and moisturizer. Dow, a global materials science company, contributed ACULYN™ 22, a Dow product that helped to give the sanitizer a pleasant, non-tacky feel. The sanitizer was produced and bottled in Yangon.

Local production of the sanitizer for donation to the government has now sparked plans to offer the new sanitizer in Myanmar as a commercial product.

"This is a good, appealing, responsible product that stacks up to anything offered on the world market," Larsen said.

Accordingly, the next step will be to go from producing institutional-sized bottles to small samples that can be distributed as part of a local marketing effort. "We were happy to team up with Dow on our donation effort," Larsen added. "Now we look forward to working to provide the people of Myanmar with a great product going forward."