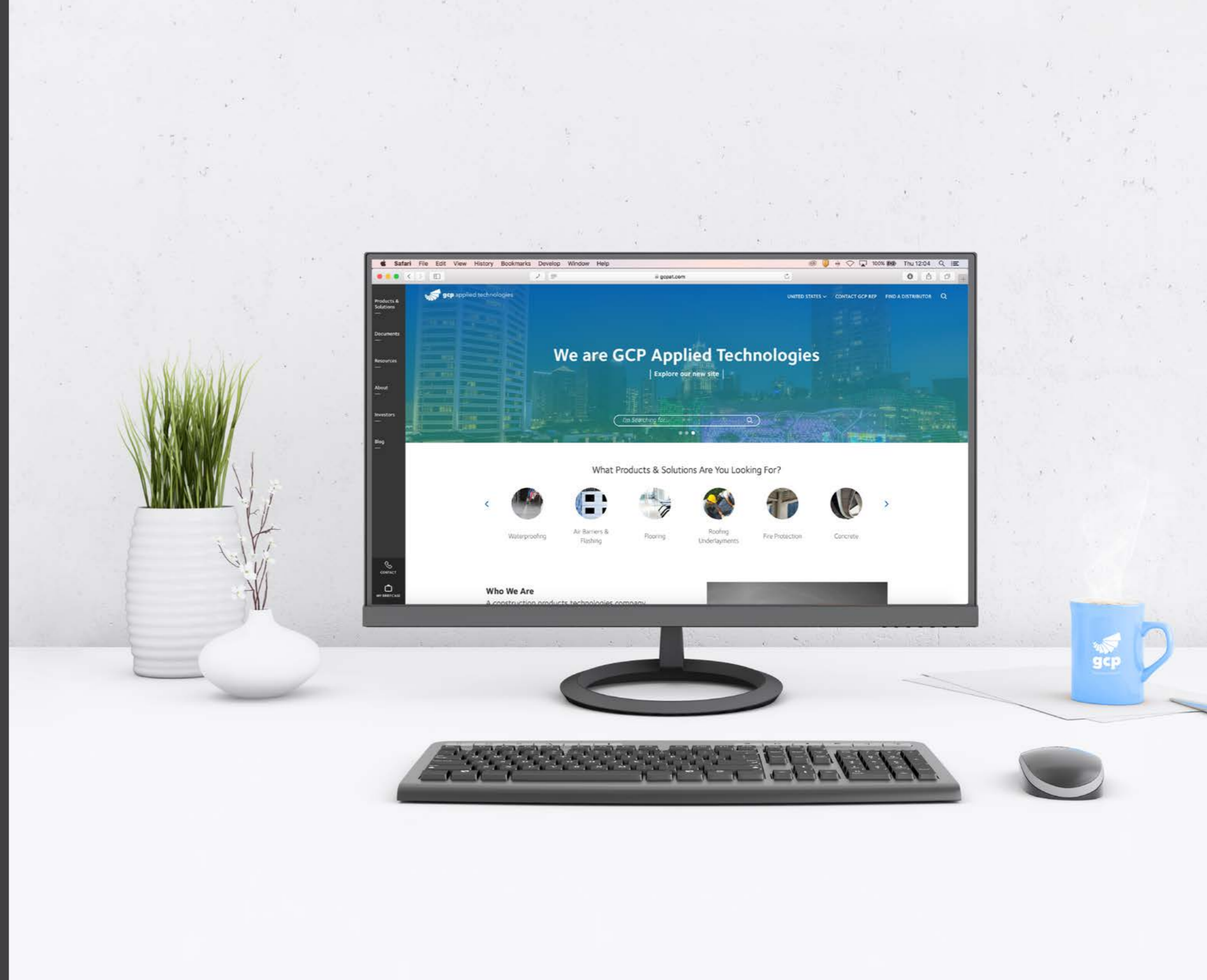


2020

 **gcp** applied technologies


Vision for a
Sustainable Future

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Randy Dearth

PRESIDENT AND CHIEF EXECUTIVE OFFICER

Construction — from new homes to major infrastructure projects — has a significant impact on our environment. As a leading manufacturer of construction technology products, we have a responsibility to make this process more sustainable. This mission is driving us to develop and deliver products that help our customers reduce their carbon footprint, decrease waste, and improve the durability of the structures they create.



In addition to the societal and environmental reasons to do so, there is profound financial value to placing sustainability at the centre of how we work. Our Fireproofing business is a stellar example.

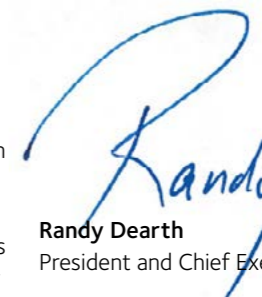
In 2019, our Fireproofing team generated millions of dollars in additional business that would not have been possible had we not invested in product certifications that support LEED (Leadership in Energy and Environmental Design) designation. A survey of architects, builders, and developers found more than 47 percent of respondents believe that by 2021, the majority of their projects will be green buildings.

What's more, a growing number of architectural firms are designing exclusively to LEED requirements. We increasingly see LEED specifications across our businesses.

For example, the U.S. Green Building Council reports that more than 2.6 million square feet of commercial building space is being LEED certified every day. This creates tremendous growth opportunities for GCP as we bring greater sustainability and transparency to our product lines. To that end, we are pursuing additional Environmental Product Declarations and transparency certifications that are aligned with industry standards that further sustainable construction practices.

GCP is using technology and chemistry to develop solutions to address today's construction challenges. On the technology front, our **VERIFI®** in-transit concrete management system optimizes mix design, reduces water and fuel consumption, and ensures high quality concrete is delivered to the job site. Chemistry helped lead to the development of our **CLARENA® RC** admixture, which has the potential to keep millions of cubic yards of concrete out of landfills. These are just a few examples of how GCP is fostering more environmentally conscious construction.

All of us at GCP are committed to environmental and social stewardship, and we are pleased to share our vision for a sustainable future.



Randy Dearth
President and Chief Executive Officer

Karen Ethier

VICE PRESIDENT OF ENVIRONMENT, HEALTH, SAFETY, AND QUALITY

Our mission is to create products and services that meet our customers' needs and enable them to save money, reduce their use of natural resources, and build stronger, smarter, more durable, and more energy efficient structures.

On a personal note, I would like to recognize the contributions of Andrew Savitz, a key contributor to the development of GCP's sustainability strategy, who passed away during the writing of this report. I think he would have been proud of the final product.

Our sustainability goals are two-fold: to operate our business in a way that is conscious of protecting the environment, and to continue to innovate in ways that support sustainable construction. While we have made much progress, there is much work ahead of us, both within GCP and across the industries we serve.

There is significant demand in the construction industry to build environmentally-friendly structures. At GCP, we endeavour to be part of the solution.

To be successful, sustainability cannot be a separate entity that lives apart from the rest of the organization. It must be infused into all that we do. As much as innovation and fiscal responsibility play a role in all business decisions, so must our impact on the environment.

This involves considering environmental impacts as we make decisions about everything from setting R&D priorities to optimizing the raw materials in our products, driving efficiencies in our plants and offices worldwide, and embracing more sustainable shipping and logistics methods.



Initial steps we've taken include:

- Forging industry and academic partnerships that drive sustainable innovation
- Forming an Executive Committee on Safety and Sustainability that brings together stakeholders from key functional areas across the organization
- Engaging employees around the world to uncover where we can have the most impact
- Determining key metrics to assess the environmental impact of our manufacturing plants

But this is merely a start. Building on this foundation, we will be working to identify precise goals and action plans and will report on our progress. We are committed to sustainable growth that will benefit all our stakeholders, as well as generations to come. We look forward to sharing these positive outcomes with you.

Karen Ethier
Vice President of Environment,
Health, Safety, and Quality

Our Vision for a Sustainable Future

This document is intended to share our work on these fronts to date as well as our vision for improving sustainability in the future, both within GCP and for our customers around the world.

GCP is a leading global provider of construction products technologies that include admixtures and additives for concrete and cement, the **VERIFI**® in-transit concrete management system, high-performance waterproofing products, and specialty construction products. GCP products have been used to build some of the world's most renowned structures.

As a building technologies leader, we are inspired to influence how the world is built. As citizens concerned about protecting the environment, we are further inspired to drive sustainable building practices. We are tackling environmental challenges by investing in:



PRODUCTS

That reduce the environment impact of construction.



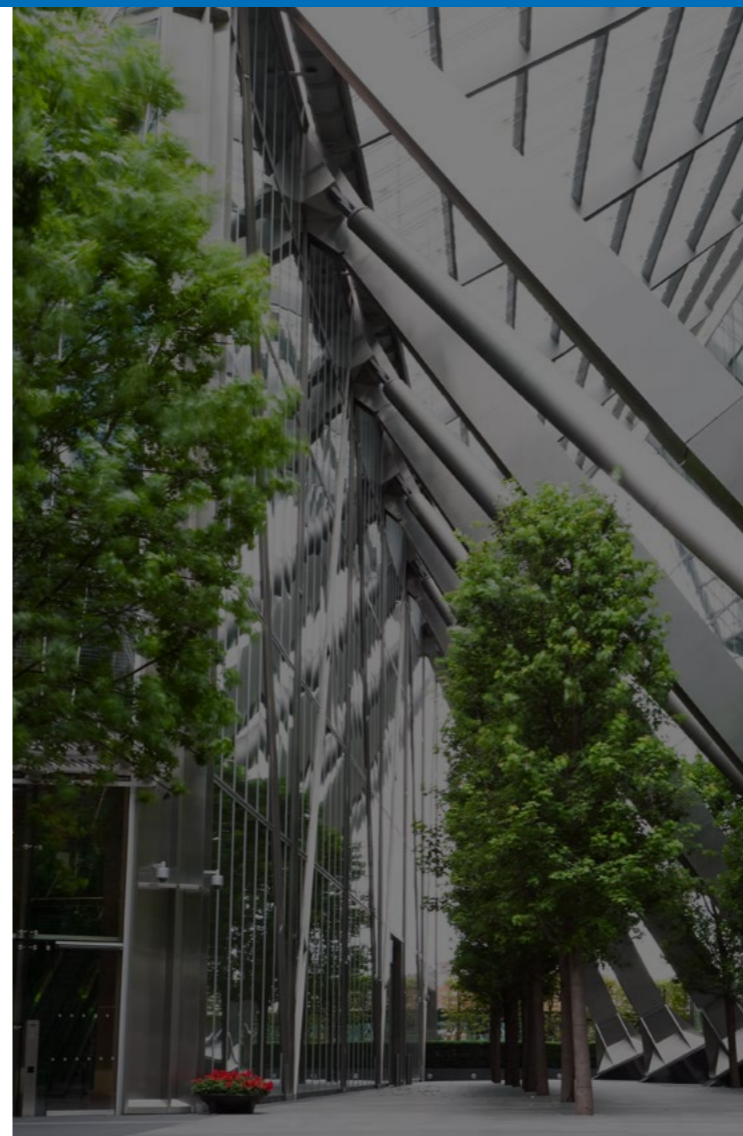
PEOPLE

Who believe in protecting our air, water, and earth.



PROCESSES

That reduce our manufacturing footprint.



ENVIRONMENT, HEALTH, AND SAFETY.

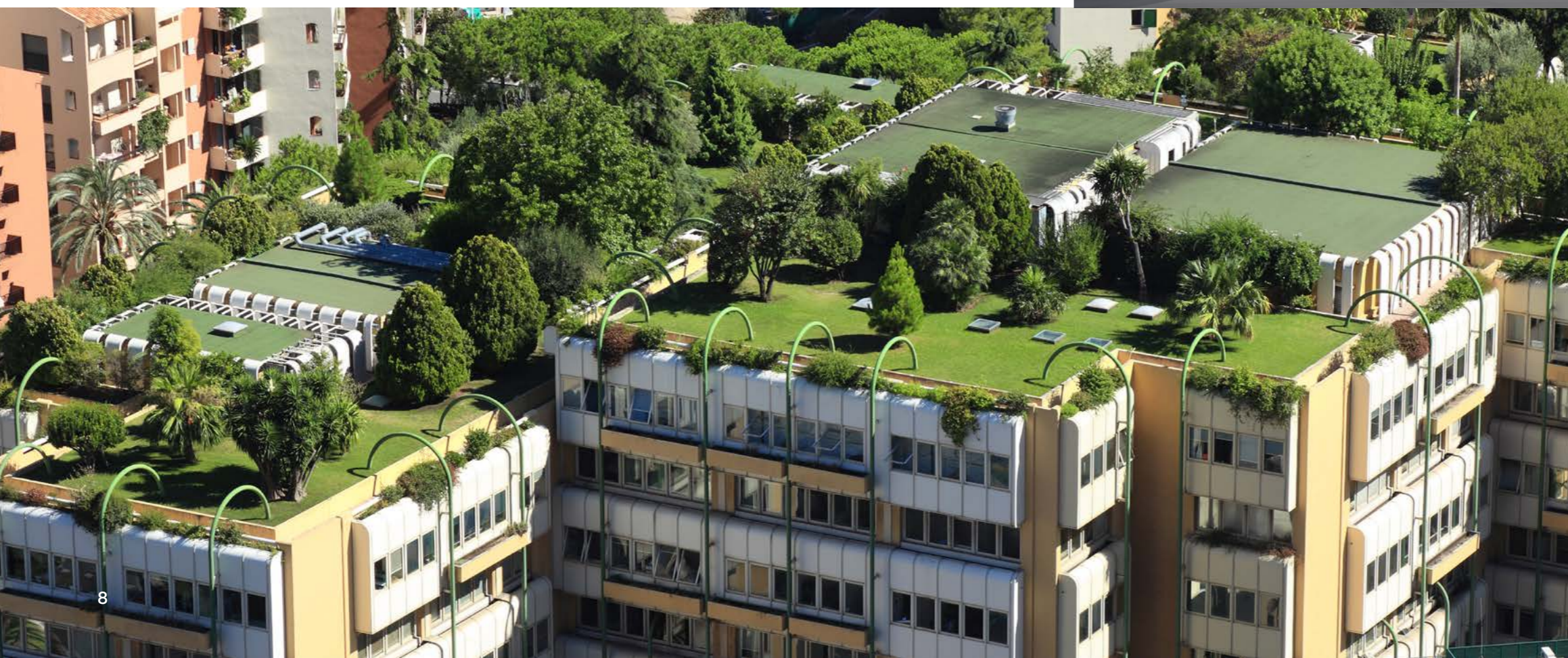
The mission of our Environment, Health, and Safety (EHS) team is to be a real-time, hands-on resource to deliver innovative policies, standards, and programs to ensure the health and safety of our colleagues, customers, and communities in which we operate, and to protect the environment in which we live.

We drive excellence in environment, health and safety, and product stewardship while balancing our governance responsibilities to the company and the board of directors.

We coordinate our efforts through an audited EHS Management System that meets international ISO 14001 and OHSAS 18000 standards. Twenty-six percent of our manufacturing locations are certified to ISO 14001 and seven percent to OHSAS 18000. We continue to pursue additional certifications.

We seek to continually improve our EHS performance by setting objectives around reducing injuries with the goal of "No One Hurt," which means a recordable incident rate of zero. We continuously look for ways to reduce safety hazards to avoid situations that could lead to safety risks. These efforts include monitoring of our EHS metrics and providing training to our employees, contractors, and customers.

While safety and environmental protection are ultimately the responsibility of each of us, GCP incorporates EHS and ethical standards into the planning and execution of our business.



SECTION ONE

Products

The most positive impact we have on the environment is by developing products that make construction – and the manufacture of construction materials such as concrete – more energy efficient and less wasteful.

When we empower our customers – including contractors, concrete and cement producers, and architects – to use products that reduce their carbon footprint and extend the life of their projects, we make an exponential difference around the world.

GCP is currently driving sustainability in two key construction segments:

SPECIALTY CONSTRUCTION CHEMICALS:

- Lowering energy consumption in cement production
- Reducing the amount of cement needed in concrete to further lower carbon dioxide (CO₂) emissions
- Using big data to deliver more sustainable concrete
- Keeping returned concrete out of landfills

SPECIALTY BUILDING MATERIALS:

- Increasing energy efficiency by controlling air flow in and out of structures
- Improving the longevity and durability of structures, thus reducing waste
- Delivering products that support LEED building certification



GCP's Specialty Construction Chemicals

LOWERING ENERGY CONSUMPTION IN CEMENT PRODUCTION

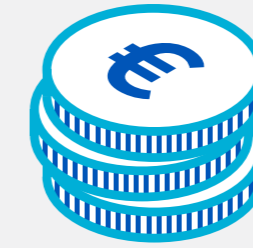
The Royal Society of Chemistry found that "concrete is the single most widely used material in the world, and it has a carbon footprint to match." Cement is the key ingredient in concrete, and is the source of approximately 8% of the world's industrial CO2 emissions, according to the think tank Chatham House.

GCP's products are designed to help lower the carbon footprint across the entire concrete industry. For example, we develop and sell industry-leading grinding aids and quality improvers to lower the amount of energy needed to produce cement, and have been doing so for decades. Cement producers around the world rely on these additives to operate their cement mills more energy efficiently and to increase the output from their cement mills while reducing cost and emissions.

Our **TAVERO®** and **OPTEVA®** cement additives enhance the efficiency of cement grinding, reducing CO2 emissions

REDUCING THE AMOUNT OF CEMENT NEEDED IN CONCRETE TO FURTHER LOWER CO2 EMISSIONS

GCP produces water reducers, including our **ADVA®**, **CONCERA®**, **MIRA®**, and **ZYLA®** products. These admixtures disperse cement particles evenly in a concrete mixture, leading to more efficient use of cement, and improvement in workability during placement. With these dispersive properties, less water and cement are needed in concrete mixes, while still achieving the required compressive and flexural strengths for the project.



**€600,000 +
IN ALLOWANCES**

A cement plant in Europe, utilizing the **OPTEVA® CO2ST®** reducing cement additive and producing 700,000 tons per annum of cement, avoided emitting approximately 27,000 tons of CO2 per year. This is equivalent to taking more than 5,000 cars off the road every day. And with a EU Emissions Trading Scheme (ETS) CO2 price of €24/t, this is worth allowances of more than €600,000 per year.



**ELECTRICITY SAVED
DAILY**

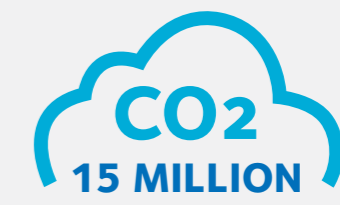
Approximately 3,000 megawatt hours of electricity per day are saved daily through the use of our **TAVERO®** and **OPTEVA®** additives around the world.

That's equivalent to the daily energy consumption of 100,000 U.S. households.



**600
MILLION TONS OF
TREATED CEMENT**

GCP water reducing concrete admixtures globally treat approximately 600 million tons of cement, resulting in approximately 100 million tons of CO2 reductions.



TONS SAVED ANNUALLY

Our **TAVERO®** and **OPTEVA®** additives reduce CO2 by approximately 15M tons annually.

That's equivalent to taking more than three million cars off the road every day.

USING BIG DATA TO DELIVER MORE SUSTAINABLE CONCRETE

In its report *Making Concrete Change: Innovation in Low-carbon Cement and Concrete*, the Royal Institute of International Affairs stated, "Given the rapid emissions savings needed for a climate-compatible cement and concrete sector, understanding the potential for disruption in the sector...is vitally important," noting the potential for data and digital tools to enable these shifts. Our **VERIFI**® in-transit concrete management system is a notable example of this type of disruptive technology. It is the first-ever technology to address inefficiencies in the concrete delivery process by actively managing concrete from batch plant to job site.

Leveraging **VERIFI**®'s in-transit control and business intelligence data, our customers can develop and execute mix optimization programs that reduce cement in their mixes. This reduction in cement lowers the carbon footprint of each load of concrete.

The consistency of concrete can fall out of specification during the delivery process for many reasons, causing it to be rejected when it arrives at the job site. This inefficiency costs concrete producers money and relegates tons of rejected concrete to landfills. When the concrete is on the job site, the contractor will often add extra water to

make sure the concrete will be workable. However, this can weaken the concrete. To overcome this problem, concrete producers often over-design the concrete (i.e., pre-emptively add excess cement) to ensure each batch meets its strength requirements.

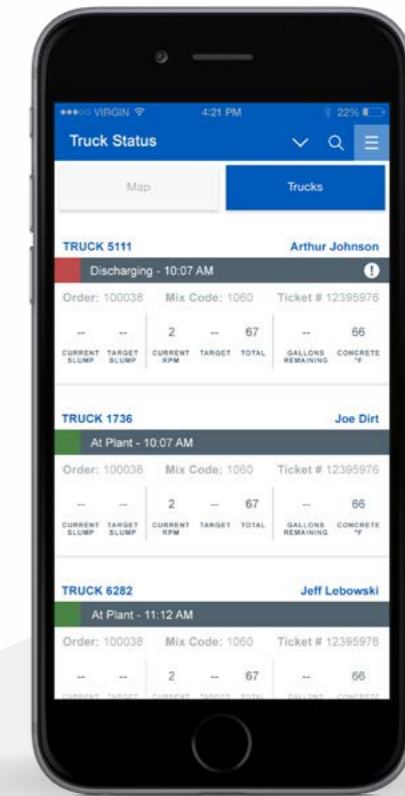
Using real-time batch data, the **VERIFI**® system cuts down on the number of rejected concrete batches and does away with the need for excess cement and water.

The system encompasses in-truck sensors, automated injection hoses, and data intelligence. It collects real-time data about the concrete properties as the concrete batch travels to the job site, and automatically adds exactly the right amount of water and admixture, as needed and if necessary, to keep and deliver the concrete as it was specified.

This results in higher quality concrete being delivered to the job site, with far fewer rejected concrete loads, less water and admixtures consumed, and less fuel and time wasted driving back and forth with replacement batches of concrete

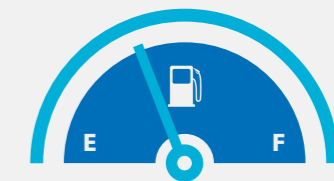
Real-world benefits

Ready-mix plants are using the **VERIFI**® in-transit concrete management system to save fuel and reduce their carbon footprint.



600
LESS PASSENGER
VEHICLES ON THE ROAD

One **VERIFI**® customer reduced their cement use by six million lbs. (2,271 metric tons). That's the equivalent of taking 600 U.S. passenger vehicles off the road for a year.



450,000
GALLONS OF FUEL
SAVED

Eight GCP **VERIFI**® customers reported a 10% reduction in the energy used for drum rotations of concrete trucks. This reduction saved an estimated 450,000 gallons of fuel in a year.

This is equivalent to the annual gasoline usage of 1,000 U.S. residents.

KEEPING RETURNED CONCRETE OUT OF LANDFILLS

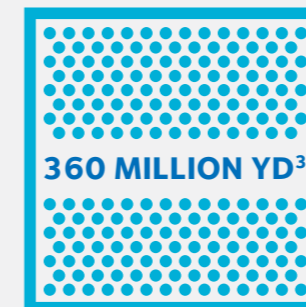
When trucks containing concrete return to the plant, the concrete is typically used to make large blocks or dumped on the ground and allowed to harden. Eventually the large piles of hardened concrete are crushed and hauled away to be landfilled or recycled into base material.

Our **CLARENA® RC40** admixture makes it easy to convert returned concrete into recycled aggregate. When a truck returns to the production site with returned concrete, the driver simply adds **CLARENA® RC40** into the truck drum to produce recycled aggregate. This recycled material can then be sold as high quality, compacted base, or used as a partial replacement for aggregate in fresh concrete.

This innovative solution keeps returned concrete out of landfills, reduces labour costs, lengthens the life of quarries, and provides concrete producers with an additional source of revenue.

Reducing waste has never been more important

CLARENA® RC admixtures help our customers do just that.



OF CONCRETE PRODUCED ANNUALLY

The National Ready Mixed Concrete Association (NRMCA) estimates that of over the 360 million yd³ of concrete produced annually, 1-5% are returned to the producer.



ABILITY TO RECYCLE RETURNED CONCRETE

Using our **CLARENA® RC** admixture can keep returned concrete out of landfills, by easily turning each cubic yard of returned concrete into two tons of usable recycled aggregate.

Specialty Building Materials Products

DELIVERING PRODUCTS THAT SUPPORT LEED CERTIFICATION

Many municipalities earn attractive incentives when the buildings they specify achieve LEED certification. This issue is also of critical importance to architects and developers.

The 94,000-member American Institute of Architects (AIA) states that “rising sea levels, extreme weather events, and the degradation of natural resources are a direct result of increased carbon levels, which threaten national security and global economies. They disrupt the balance of ecosystems and undermine public health. They threaten to transform our planet irreparably and compromise our future...designing and constructing buildings that can combat the greenhouse effect will improve our chances of repairing our planet while creating a healthy, resilient, and regenerative future. Our goal, as set forward by AIA and partners like Architecture 2030, is net-zero emissions in the building sector by 2050.”

Using our specialty building material products can help our customers to design and construct greener, more sustainable buildings. For example, choosing **MONOKOTE®** fireproofing products can potentially help projects achieve LEED 2009 and V4 credits under the Building Design, Construction, and Interior Design and Construction rating systems.

GCP initiated the development of Product Category Rules (PCR) and Environmental Product Declarations for Fire Protection categories with the American Society for Testing and Materials International (ASTM) / the National Centre for Sustainability Standards. The PCR committees included

representatives from government, academia, small and large manufacturers who represented a majority of the market, suppliers, and users of the standard.

Many of our flagship brands, including a wide selection of **MONOKOTE®** fireproofing, **PREPRUFE®** waterproofing, **PERM-A-BARRIER®** membranes, and **ICE & WATER SHIELD®** roofing underlayments, have Declare labels and/or are Red List Free. Using GCP products with Environmental Product Declarations enables builders to gain one LEED point.

INCREASING ENERGY EFFICIENCY BY CONTROLLING THE AIR FLOW IN AND OUT OF HOMES

When homes are not properly sealed, cold air seeps in around windows and doors while warm air escapes. In addition to potentially being uncomfortable for the home's occupants and introducing the possibility for water intrusion, this air leakage results in high heating and cooling bills.

Our **VYCOR® enV-S™** water and air resistive barriers improve home energy performance. By protecting against air leakage as well as wind-driven rain, while allowing the wall system of the house to “breathe,” **VYCOR® enV-S™** weather barriers reduce heating and cooling costs, prevent mould, and protect a home's structural integrity.

As noted by the award-winning home builders Sweenor Builders, frequent collaborators on 'This Old House', “these building envelope products, combined with our building methodologies, are contributing factors to getting an airtight seal. That will cut the costs to heat and cool the home considerably.”

IMPROVING THE DURABILITY OF STRUCTURES TO REDUCE WASTE

Builders and designers are always seeking new ways to extend the life of structures they construct. A longer structure life reduces the need for costly and resource-intensive replacements, renovation, and repair. GCP's products are relied on by builders and designers to help that improve the durability of buildings and other structures.

Our **ELIMINATOR®** bridge deck waterproofing system, for example, has been tested to support a 120-year design life. This is particularly important at a time when many communities are grappling with crumbling infrastructure, including bridges. The American Road and Transportation Builders Association reports that more than 47,000 bridges in the U.S. are in dire need of repairs.

Steel and concrete bridges can deteriorate due to water infiltration, chlorides from winter salt application, and frost. The **ELIMINATOR®** system protects against these corrosive effects. GCP also provides an array of above- and below-ground waterproofing systems that can help improve the durability of commercial buildings, airports, tunnels, mass transit systems, and more.

PROFESSIONAL GUIDANCE FOR GREATER SUSTAINABILITY

Our Technical Services team advises home builders on specifying and installing products that maximize energy savings and lower home heating and cooling costs for the future homeowners. Studies find that home buyers are willing to pay more for sustainable homes. A survey by the University of California, Berkeley and the University of California, Los Angeles, revealed that, on average, green homes sold for 9% more than comparable homes. In addition, the National Association of Home Builders found that 81 percent of consumers would prefer an ENERGY STAR-rated home.

Working closely with cement and concrete producers, our Technical Services team provides advice on optimizing the use and reuse of materials and selecting custom admixtures that both improve durability and sustainability, and create extra financial value for the customer.



SECTION TWO

People

We're proud of our employees, who are working to build better communities around the globe. As stewards of the areas where they live and work, GCP team members contribute in myriad ways, such as aiding storm victims, reducing their own environmental footprint, and supporting associations that advance sustainability in our industry.





COMMUNITY SUPPORT

We believe in the power of community to make a difference in peoples' lives. Our employees demonstrate this on many fronts, giving their time to foster a joy of learning in youngsters and to help those in need, near and far. For nearly two decades, GCP employees have joined the Boston-based Making Strides Against Breast Cancer Walk. During that time, GCP and our employees have donated more than \$117,000 to fight this disease.

Beginning in 2018, a GCP team was also proud to support our Walk Hero, Anna, a very spirited five-year-old who is currently a patient at the Jimmy Fund Clinic at Dana Farber Cancer Institute. Anna was diagnosed with Shwachman-Diamond Syndrome, a rare autoimmune disorder. Together, GCP and our employees have raised nearly \$18,000 to support finding a cure for this disease.

Our employees around the world join together to support worthy causes, including the Susan G. Komen 5K for Breast Cancer Awareness, Toys for Tots, and the Hayden's Heart 5K to address congenital heart defects in children.

Many GCP employees also take advantage of our paid time off benefit to volunteer with a non-profit organization in their community. Our team members use this time to mentor children in under-served communities, collect donations for a local food pantry, teach students with visual and hearing impairment, support local veterans, and more.

Many of our offices and plants globally have active Green teams, which focus on waste reduction, recycling improvements, and neighbourhood clean-ups. During our Cambridge-based 2019 Sustainability Week, initiatives included electronics recycling, information on sustainable eating, sign-ups for a bike-to-work program, as well as beautification projects at our headquarters facility site and a local community reservoir.

Our locations regularly coordinate with local emergency responders for training, drills, and community outreach. Our manufacturing operation in North Bergen, NJ practices rescue training annually with their local fire department. GCP's plant in Mount Pleasant, TN performed an emergency drill with Maury County's emergency responders to prepare for a potential crisis.

KEY COLLABORATIONS

GCP's R&D leaders have formed partnerships with academic and industry professionals who are pursuing a common purpose: Reducing the environmental impact of construction.

We sponsor the National Ready-mixed Concrete Association (NRMCA), which is working with its ready-mix members to track their carbon footprint. Using life-cycle assessments, they have determined that their members have reduced their carbon footprint by 13 percent over five years.

In 2019, the American Concrete Institute awarded GCP's Global Innovation Director, Cement Additives, Josephine Cheung the Wason Medal for Materials Research for her research paper on the use of fly ash in concrete. Using fly ash enables producers to lower the amount of cement needed in the mix, thereby making the concrete less CO₂ intensive.

GCP's Vice President of Smart Technology and IoT Susan Dalton is a sought-after speaker for industry events and podcasts that focus on how leveraging big data can help to

lower water and energy consumption in the delivery of concrete. *Connected World Magazine* named Ms. Dalton to the 2019 Women of M2M and IoT list, which comprised of some of the most influential and successful women in the technology sector.

Our Principal Scientist Ted Sibbick has served as president of the Society of Concrete Petrographers since 2018. This organization was established for professionals who use petrographic analysis techniques to evaluate the quality of concrete. These techniques are essential to guide our researchers in developing cement additives and concrete admixtures for sustainable construction.



PHILANTHROPY

As a corporate citizen, GCP is also committed to giving back to the community, supporting children in need, as well as educational programs. At our headquarters facility in Cambridge, MA, GCP donates annually to the Cambridge Community Centre, Cambridge Youth Soccer, the Greater Boston Habitat for Humanity, and numerous other charities.

Each year, GCP's Charitable Giving Program also awards scholarships to five children of employees. Each of the award winners can receive up to \$12,000 through this four-year scholarship program, which is independently managed by Scholarship America®. We also donate GCP products to aid in disaster relief.

FLEX SCHEDULES

Our headquarters in Cambridge recently began a 9/80 program where employees work a compressed work schedule consisting of eight 9-hour days with every other Friday off. This program saved almost 25,000 miles of driving during the pilot in the summer of 2019 - enough miles to circumnavigate the globe at the equator. Based on this success, we've now made 9/80 a year-round program.

DIVERSITY AND INCLUSION

We are committed to diversity and inclusion for all. A formal GCP Diversity & Inclusion Council was established in 2019. They work actively to identify areas of improvement within GCP, and have a cross-functional leadership team committed to ensuring an inclusive workplace for all employees. The council is championing the creation of employee resource groups. These groups will develop policies that further inclusion and equity efforts and serve as a resource to executive leadership on issues of culture, climate, equity, inclusion, and diversity in our workplace.

BOARD DIVERSITY

Since its inception as a public company in early 2016, GCP has prioritized gender diversity on its board. GCP's original board was comprised of four men and four women directors, an equal 50% split among non-executive members of the board. As we have grown as a company and the board composition has changed, this commitment has continued. Currently there are three female directors on the nine-member team. An original board member, Elizabeth Mora, sitting chief administrative officer of the Charles Stark Draper Laboratory, Inc., was recently elected chairman of the board by her peers.

In its 2019 "Measuring Success" report of Massachusetts public companies, the Boston Club recognized GCP for having a board of directors on which women hold at least 30% of the seats. As noted by Boston Club Executive Director Constance Armstrong, "there is no shortage of qualified female candidates, a fact that GCP Applied Technologies' nominating committee clearly has recognized. We believe that having a critical mass of women directors will provide significant value to GCP going forward, and we thank you for your leadership in this regard."

Women on Boards also recognized GCP as a Winning "W" Company for two consecutive years for gender diversity on our board of directors.



PHOTO BY GEORGE MARTELL



SECTION THREE

Processes

Throughout 2019, GCP invested in projects focused on increasing efficiency in three primary areas: improving operations, reducing waste, and implementing a process for tracking our use of natural resources. These investments improved our financial performance while reducing our environmental impact, increasing safety, and benefiting the communities in which we work and live.

Our 2019 investments included installing more energy efficient heating and cooling units and replacing fossil fuel-powered equipment with electric equipment. These actions reduced our energy use while preventing pollution and saving money.





Major Efficiency Steps in 2019

IMPROVING OPERATIONS

- Right-sized our manufacturing footprint and product distribution network
- Built a new SCC plant in Thailand, replacing an older operation. The new plant is more efficient and modern, with full LED lighting, wet scrubbers on all mix tanks, and recycling of scrubber spray water
- Improved secondary containment in our process and storage areas in Chicago and Vancouver
- Installed new HVAC equipment in Passirana, Italy and Jurong, Singapore to improve air quality while reducing energy consumption and emissions
- Upgraded dust and noise control equipment in Ezhou and Chongqing, China and Incheon, Korea
- Replaced forklift trucks with ones that are more energy efficient in Chicago, Vancouver, North Bergen, Los Angeles, and Ezhou, China
- Continued to upgrade lighting to LED for better visibility, lower maintenance, and lower electricity usage at our plants in Houston, Chicago, and Ezhou, China

REDUCING WASTE:

- Continued a multi-year, multimillion-dollar project to upgrade storage and process equipment at GCP and customer locations to prevent releases to the environment. This involved hundreds of tank and equipment replacement projects at customer locations and major storage tank replacements at our Houston, TX and Lithonia, GA plants. Since 2016, the number of spills at GCP manufacturing plants and our customer sites has decreased by 43%
- Recycled more than 65% of the waste generated on-site at our Cambridge, MA headquarters
- Installed bulk raw material handling equipment and provided recyclable bags at our Lithonia, GA plant, eliminating the disposal of thousands of paper bags
- Established a rework area in our Bedford Park, IL plant to facilitate the reclamation and reuse of materials used to manufacture our VERIFI® equipment
- Recycled 20 tons of cardboard, bags, paper, plastic bottles, and cans at our North Bergen, NJ plant
- Installed a wastewater treatment system in our Jurong, Singapore concrete lab to collect and reuse wastewater after treatment

MEASURING OUR USE OF NATURAL RESOURCES

In 2019, we embarked on an effort to quantify our use of electricity, natural gas, and water. A global, multi-functional team established 2018 as our baseline. This involved collecting and analysing data from 50 facilities in 23 countries.

In general, our operations are not energy intensive. Other than comfort heating and cooling, our SCC plants operate batch production processes using pumps, mixers, and storage tanks. The SBM plants are slightly more energy intensive as they generally use continuous production lines and often require heating the process equipment and raw materials to manufacture our waterproofing membranes.

We are analysing our 2018 baseline and our 2019 actual performance to identify opportunities to reduce our environmental footprint. We are looking for efficiencies that can be shared across common production lines. In 2020, we will expand our data collection efforts by establishing our waste baseline and will report on that metric in 2021.

	2018	2019	DELTA
WATER (1)	97.78 gal/MT prod	100.00 gal/MT prod	(2.22)
ELECTRICITY	32.34 kwh/MT prod	37.22 kwh/MT prod	(4.88)
NATURAL GAS	0.19 MMBTU/MT prod	0.21 MMBTU/MT prod	(0.02)

(1) - Water is a key raw material in our SCC products. MT prod - Metric tons produced

SUSTAINABILITY OF OUR LOGISTICS AND SUPPLY CHAIN

As part of our vendor qualification process, we require all large vendors to sign our Supplier Code of Conduct. GCP is committed to operating with the highest standards for business ethics, human rights, environmental protection, and worker’s rights, and we expect our business partners to share this commitment.

We continue to seek new ways to optimize our supply chain. For example, our primary transportation vendors Odyssey and Kenan Advantage Group, Inc. have taken numerous steps to reduce their environmental footprint.

Odyssey:

- Reduced mileage (and thereby fuel consumption) by 12% by optimizing carrier routing
- Increased capacity by 11 percent by increasing the liquid bulk payload of trailers
- Participate in the EPA’s SmartWay program to advance supply chain sustainability by measuring, benchmarking, and improving freight transportation efficiency
- Participate in the TFS (Together for Sustainability) partnership/audit program, the de facto global standard for environmental, social, and governance performance of chemical supply chains

Kenan Advantage Group:

- Deployed idling reduction and speed governor technologies on its vehicles
- Invested in low-rolling resistance tires to reduce energy loss as the tires roll, and retread technologies that extend the life of tires
- Using or testing alternative fuels and enviro-engines
- Implemented initiatives, including recycling of batteries, motor oil, coolants, scrap metal/wood, tires, spill pads, and wash/wastewater
- Employed software for tracking driver sustainability performance and initiated an incentive program to reward drivers for sustainable driving practices



SAVING HUNDREDS OF THOUSANDS OF DOLLARS THROUGH SCRAP REMOVAL

At our Mt. Pleasant, TN plant, we invested in a slitter machine that allows us to cut rolls of our **VYCOR**® flashing and waterproofing products more efficiently with less waste. We estimate this will save more than \$350,000 a year in scrap and disposal costs.

ELEMENT	ESTIMATED SAVINGS
TRIM SCRAP REDUCTION	\$238,000
LINE 2 SCRAP REDUCTION	\$50,000
IMPROVED RUBBERISED ASPHALT THICKNESS CONTROL	\$47,000
CONSUMABLE ITEM REDUCTION	\$24,000
CORRUGATE COST SAVINGS	\$19,000
TOTAL:	\$378,000

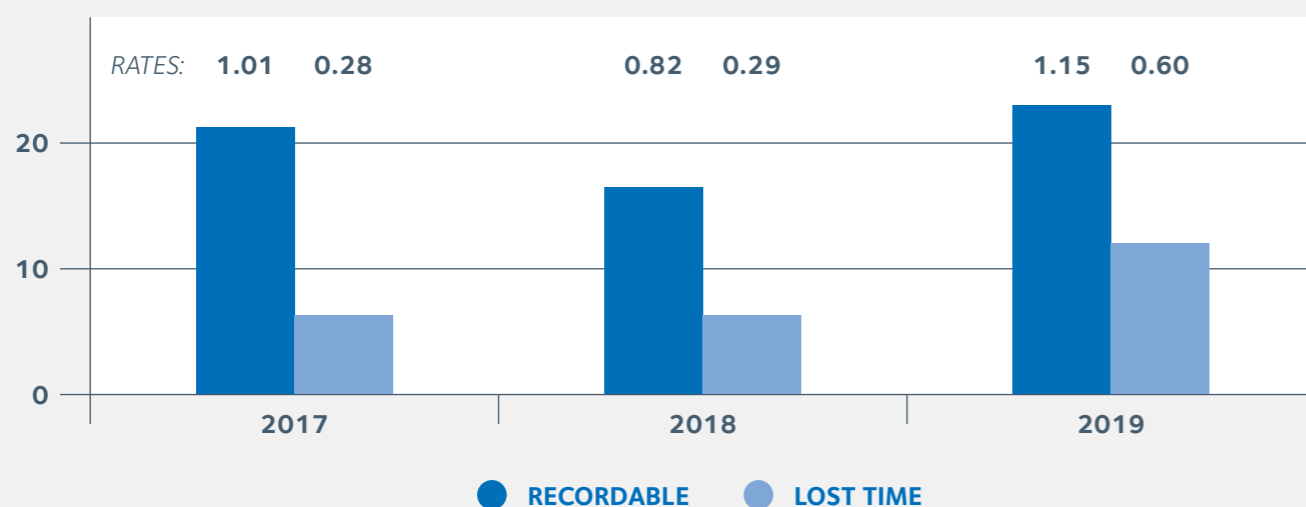
EHS Performance Metrics

SAFETY

We set ambitious goals, using key performance indicators to track, measure, and report on our progress.

We continuously look for ways to reduce risk and to avoid situations that could lead to exposure. These efforts include monitoring of our EHS metrics and providing training to our employees, contractors, and customers. Our expectation is that employees, contractors, and visitors return home as safe and healthy as when they arrived at the start of the day.

We routinely track incidents that have a potential to result in serious or life altering injuries and implement corrective actions, even if no one was injured, and foster a work environment that encourages employees to participate in and contribute to our workplace safety initiatives. GCP has not had an employee or contractor fatality in more than 13 years and we are dedicated to maintaining that record.



We use the US OSHA definitions to classify incidents globally. We calculate an incident rate normalized to 100 employees.

	2017	2018	2019
INCIDENTS WITH POTENTIAL FOR SEVERE OR LIFE ALTERING INJURY	0.78	0.72	0.60

ENVIRONMENT

We strive to reduce our environmental impact and, through our products, assist our customers to reduce theirs.

We track releases to the environment greater than 19 litres or 5 gallons, below any legal reporting requirement.

	2017	2018	2019
RELEASES TO ENVIRONMENT	15	12	14
RELEASES TO CONTAINMENT	40	35	39
TOTAL RELEASES	55	47	53

Of the 41 releases to the environment reported from 2017–2019 noted in the previous chart, none exceeded a reportable quantity as defined by US EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations.

We track all incidents that require reporting to a government agency. We also track notices of violations and any fine, notice, or other regulatory action by government agencies at the federal, state, or local level.

REGULATORY METRICS

	2017	2018	2019
GOVT. REPORTABLE INCIDENTS	2	0	2
NOTICES OF VIOLATION	5	8	9
FINES AND PENALTIES	\$3,695	\$6,539	\$1,430

SECTION FOUR

Above and Beyond

We're pleased to share additional ways that GCP teams around the globe are going above and beyond to support our sustainability vision, strengthen our business infrastructure, and deepen our commitment to neighbours in need.



Applied Technologies in Action

We apply technology to help customers solve complex manufacturing and construction challenges and to bring greater efficiency to their operations.

GCP DASHSM REAL-TIME PRODUCT SELECTION

Launched in late 2019, the GCP DASHSM real-time product selection application helps cement producers optimize their cement manufacturing process. The application makes the process of identifying the right cement additives more efficient. When our sales reps visit with a customer at a cement plant, they enter data about the plant's business and technical needs into the GCP DASHSM iPad app, generating product recommendations on the spot.

GCP is able to then present a live, real-time model predicting how their cement will perform with each recommended additive, identifying anticipated strengths and other characteristics. This optimization enables our clients to increase operational savings and reduce their carbon footprint.

GCP PLUS

Our new online ordering system, GCP Plus, transforms the way we engage and connect with our customers. For the first time, customers can order building materials online, track their order status, and connect to GCP customer service virtually. The platform is accessible 24/7 from a laptop, mobile device, or tablet, and we have seen an impressive adoption rate from our customers using the service.



Partnership with MIT is Enhancing our Sustainability Efforts

GCP is a member of the MIT Concrete Sustainability Hub (CSHub) and is an active member of its Industry Advisory Council. The CSHub focuses on big-picture research to address major issues facing the building and construction industry, with a focus on concrete and asphalt. This interdisciplinary team works across concrete and infrastructure science, engineering, and economics to develop breakthroughs that will achieve durable and sustainable homes, buildings, and infrastructure. One example is its research into the costs, energy usage, and CO2 footprint of different materials and building types over the full life of a building. Two senior members of GCP's R&D team have participated on the Technical Advisory Board.

MIT hosted a working session focused on how best-in-class companies implement new technologies, including some emerging technologies for concrete construction. Thirty concrete industry executives, including representatives from GCP's Specialty Construction Chemicals team, as well as MIT faculty from the Sloan School of Business, the Civil Engineering Department, and the Department of Architecture participated.

Notable discussion topics included a technology for casting highly conductive concrete for zero-emission buildings, and an app for using routine car trips to assess road quality and the impact on fuel efficiency.

As a member of the MIT Industrial Liaison Program, GCP employees participate in industry-focused seminars and events, including showcases of MIT-related spin-off companies, many of which are creating new sustainable technologies. One recent showcase featured weather forecasting technology that will help construction managers ensure they're placing concrete during proper temperature windows, to help prevent the cost and waste of failed placements.



GCP Aids Small Business Owner with Hurricane Recovery

Sid's Grocery in the Bahamas is the primary grocery store on Green Turtle Cay. When Hurricane Dorian hit, the store's entire roof, including the truss system, was blown away. One of the most intense tropical cyclones in history, Hurricane Dorian ravaged the small community.

Most residents, including the owners of Sid's, lost their homes, yet they were committed to re-opening the store for the community's sake. They focused on re-opening the store to begin restoring normal commerce on the island for groceries and produce, and to provide a central location for providing relief supplies to island residents.

Although the roof was gone, the building was found to be otherwise structurally sound, so they set to work planning how to re-sheet the roof and new substrate. Many organizations, including the Green Cay Foundation, Key West Cares, Water Mission, volunteers from the Church of Eleven 22, and GCP Applied Technologies, joined together to aid in the restoration efforts.

GCP donated 16 rolls of **ICE & WATER SHIELD® HT** (high temperature) roofing underlayment, which protects against wind-driven rain. Additional building supplies to frame and install the new Galvalume 5V roof were donated by individuals,

building suppliers, organizations, and churches. **"ICE & WATER SHIELD®** proved itself in the Bahamas through Hurricane Dorian," said David Pfeffer of the Church of Eleven 22, who partnered with Millennium Metals, Dixie Plywood, Coastal Oak Construction, and others to help restore the Abacos.

A team of a dozen volunteers flew to the island to provide construction assistance. "GCP's donation to re-roofing Sid's Grocery provided the benefit of easy installation for the team, and the comfort for the grocery store owners in knowing it would provide years of water protection in the storms to come," Pfeffer said.

Sid's re-opened quickly, enabling them to get back to serving the community.

"The owners of Sid's were overwhelmed by the generosity of GCP and others that donated all the materials to completely re-roof the grocery store," Pfeffer said. "The donation has made a gigantic impact to restoring commerce on the island."



Stepping up for Sustainability

We're pleased that members of the GCP team continue to expand their knowledge of green building practices and foster sustainable practices in the industries we serve.

GCP Account Manager Lisa Barnard serves on the advisory board of the U.S. Green Building Council (USGBC), which works to transform how buildings are designed, constructed, and operated. She is also a LEED O+M (operations and maintenance) professional.

Lisa Barnard and Chris Forgey, Business Director, Specialty Flooring and Director Design Advantage, are LEED professionals; John Dalton, Manager of Technical Services for Fireproof Products, is a LEED Green Associate, and Michael Fletcher, Director, Account Management – Admixtures and **VERIFI®**, is a LEED BD + C (building design and construction) professional.

Al Schyman, Director, Global Logistics, is a member of the Sustainable Purchasing Leadership Council, which convenes

buyers, suppliers, and public interest advocates to develop programs that simplify and standardize sustainable purchasing efforts by commercial organizations.

Klaus Alexander Rieder, Global Innovation Director, Concrete Division, and Josephine Cheung, Global Innovation Director, Cement Division, are current members of the Steering Committee and active members of the Industrial Advisory Board of Nanocem, a consortium of nine industrial and 24 academic partners. The consortium aims to grow the basic knowledge needed to develop new cementitious materials, to prepare the next generation of researchers, and to help find solutions that will further reduce the environmental impact of cement and concrete.



Josephine Cheung



Klaus Alexander Rieder



Chris Forgey



John Dalton



Al Schyman



Lisa Barnard



Michael Fletcher



Thank you for taking the time to read our vision for a sustainable future. For all current news visit your local GCP website.