

PEOPLE PASSION PERFORM PROTECT

2016 / 2017 SUSTAINABILITY
REPORT PUBLISHED 2018

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WE PROTECT TODAY TO ENSURE TOMORROW



The JM Experience:

We are committed to delivering positive and powerful experiences, because we are successful only when our employees and customers thrive.



The ethical compass that guides Johns Manville (JM) is directed by our four core values — **People, Passion, Perform and Protect**. These ideals compel JM to deliver powerful and positive experiences to our customers, our communities and each other. These same ideals also drive us to innovate in ways that are sustainable to our company and to the world around us.

This is JM's sixth report, and it comes at the same time we are celebrating JM's 160th anniversary. Creating a company that can stand the test of time takes fortitude and vision. Take the story of Lewis H. Brown, who was appointed to lead JM in 1929. In his first six months, the U.S. experienced the great stock market crash leading to one of the longest economic depressions in our history. Despite challenging conditions, Brown made a firm commitment to R&D. At the time, Brown emphasized that JM "should stimulate the genius of science and utilize the methods of research to improve old products and create new ones so as to continuously provide new fields of employment for the present and the coming generations." That spirit of continual innovation, growth and providing opportunities for others still shines brightly today.

An important aspect of JM's commitment to sustainability is an unwavering focus on doing things the right way. Our ethical fabric makes JM strong. Beyond complying with laws, we expect JM employees to conduct themselves with honesty and integrity, even in the most difficult of situations. This rule of thumb offered by Warren Buffett is particularly insightful:

"I want employees to ask themselves whether they are willing to have any contemplated act appear the next day on the front page of their local paper – to be read by their spouses, children and friends – with the reporting done by an informed and critical reporter."

Warren may be best known for his success as an investor, but his investing prowess is rivaled by his contributions as a leader of people. Warren's wisdom helps to inspire JM's efforts to care for our planet, people and communities, knowing that such investments inevitably lead to greater profits.

Following Warren's counsel, all of JM is working diligently to build a company we want to leave for the next generation. We are increasing the sustainability of our products and operations, and we are hiring and training tomorrow's leaders. Preparing for the future is not instantaneous or easy; it requires significant investment in innovation, research, facilities, equipment and — most importantly — our people. Over the past decade we have reinvested billions into our business and stressed the importance of safety throughout our global operations. These investments make JM more productive, innovative, competitive and sustainable.

While we reflect on our 160-year history, we acknowledge that the future will require all employees to act as stewards of the business. Guided by our core values and informed by science, we will take a business approach to sustainability that creates long-term stakeholder value. By embracing opportunities and managing risks deriving from economic, environmental and social developments, I am confident that JM will continue to thrive as the *Employer of Choice* and the *Supplier of Choice* for many years to come.

Mary K. Rhinehart
Chairman, President & Chief Executive Officer

A MESSAGE FROM JM'S CHIEF SUSTAINABILITY OFFICER



THE LONG VIEW: A PERSPECTIVE FROM JM'S VICE PRESIDENT OF R&D AND CHIEF SUSTAINABILITY OFFICER

Sustainability is the result of ambitious, and at times, arduous evolution. At JM, sustainability is powered by the desire to innovate, to push the boundaries of what can be, and to build upon the shoulders of what is. JM has a rich history of approaching sustainability in this manner, and it has allowed us to reach another milestone: 160 years in business.

JM was founded in 1858, a time when the world economy was enjoying the benefits of the first industrial revolution and the introduction of the mechanized factory. During the second industrial revolution, JM entered the fiberglass insulation business, and by the third industrial revolution, JM had become the world's leading developer of nonwoven fiberglass mat after acquiring Schuller, a German fiberglass business.

In the U.S., JM began conducting research into fiberglass in the mid-1950s and then patented a unique method of fiberizing molten glass into insulation products. This new process eliminated an energy-intensive step in the production of insulation-quality fiberglass and was a significant technological breakthrough. In the early 2000s, JM introduced Formaldehyde-free™ building insulation to the market, becoming the only manufacturer to

produce a complete line of such products. Since that time all our major competitors have followed our lead. Launching formaldehyde-free insulation demonstrated JM's leadership commitment to creating healthier living environments.

Today, building and transportation energy efficiency have become key levers for addressing many global challenges, including climate change. Composites are replacing heavier alternatives such as steel and aluminum in products ranging from bicycles to automobiles and airliners. JM has applied its materials science and advanced engineering expertise to develop numerous new products and technologies for the transportation, building, recreation and renewable energy markets.

As we enter the fourth industrial revolution, Industry 4.0, technologies are causing disruption on one hand and creating opportunities on the other. Digitalization, automation and artificial intelligence are converging and pointing toward the company of the future. New technologies will enable our people, machinery and production to become more flexible and faster to respond to market demands.

In a world where the speed of technology continues to accelerate, I am confident that a proactive versus reactive approach to both innovation and sustainability will prevail. JM employees across the globe are working to confront global challenges and complex problems related to building resilience, sustainability and livability. We have the opportunity to design high-performance and cost-effective products that provide environmental and social lifecycle benefits while enhancing the end-user experience. These challenges will test our capabilities and require more innovation than our industry has delivered in the past.

We firmly believe that innovation and sustainability are inextricably linked — and critical for the future. On a global scale, JM has the capital and the scientific and engineering expertise to help address some of the world's complex issues, like energy efficiency and lifecycle durability. We will continue to take a business approach that creates long-term value for our stakeholders while contributing toward sustainable development. We have never viewed sustainability as an end state, but rather a journey. And as a 160-year old company, we are still at the beginning of that journey.

Dr. Tim Swales

Vice President of R&D and Chief Sustainability Officer

A MESSAGE FROM BERKSHIRE HATHAWAY



Warren E. Buffett
Chairman of the Board
Berkshire Hathaway Inc.



Gregory E. Abel
Vice Chairman — Non-Insurance
Business Operations
Berkshire Hathaway Inc.

COMMITTED TO BUILDING A SUSTAINABLE FUTURE

For over a decade and a half, Berkshire Hathaway has been the proud owner of Johns Manville. Being owned by Berkshire Hathaway provides JM with a valuable competitive advantage: financial strength. The benefit of financial strength is that JM may remain focused on what it does best: delivering high-quality, high-value solutions that benefit stakeholders and improve the world.

For 160 years, JM has played an important role in shaping the way we live. The ability to thrive with such longevity requires a willingness to continually learn and adapt in order to build a sustainable future. JM's strong performance reflects their commitment to long-term growth and living by their core values of **People, Passion, Perform and Protect**.

Strengthening a business year after year is no easy task. It requires ethical decision making, responsible investing and an unrelenting drive to increase productivity, promote safety and ignite sustainable innovation. It demands the development of new products as well as a workforce capable of meeting ever-changing customer needs. These efforts create success and contribute to our society in a positive, meaningful way.

In the years ahead, Berkshire Hathaway has full confidence that Johns Manville will continue delivering powerful **JM Experiences** to its stakeholders. As always, JM's core values of **People, Passion, Perform and Protect** will propel this experience. That is how JM has become a business that lasts, and that is how JM will remain a business built for the future.

HIGHLIGHTS

CAPITAL INVESTMENT

\$2 Billion Invested

Capital invested over the past 10 years to modernize and maintain plants and equipment as well as pave the way for continued growth.

SAFETY

LOST TIME INJURIES

LOST TIME INCIDENT RATE¹

-50%

-57%

From 2016 to 2017, JM had **50 percent** fewer lost time injuries and our lost time incident rate¹ decreased by **57 percent**.

JM TOTAL 2017 SAFETY INCIDENT RATE² VERSUS U.S. AVERAGE³

1.45 JM | **3.3** NATIONAL AVG.³

In 2016, **76 percent** of JM facilities had no lost time injuries and **25 percent** had no recordable injuries.

In 2017, **84 percent** of JM facilities had no lost time injuries and **29 percent** had no recordable injuries.

¹ Lost Time Rate: Number of incidents involving workdays beyond the day of injury or onset of illness that the employee was away from work because of an occupational injury or illness, per 200,000 work hours.

² Occupational Safety and Health Administration, a U.S. agency charged with the enforcement of safety and health legislation. Total Case Incident Rate (TCIR): Number of injuries and illnesses x 200,000/employee hours worked.

³ Bureau of Labor Statistics (BLS) Rate using NAICS Code 32799. 2017 data not available.

EMPLOYEE TRAINING

	2016	2017
Employee Development	102,000 Hours	67,000 Hours
Safety and Environmental	66,000 Hours	67,000 Hours
Total Training Hours	168,000 Hours	134,000 Hours

In addition to extensive safety and environmental training, JM employees receive training in IT and software, languages, leadership & management, personal development, regulatory & compliance, technical skills, product knowledge and production equipment. A special focus on frontline leadership training in the plants resulted in a higher number of employee development hours in 2016.

JM's **OSHA Voluntary Protection Program (VPP)** Status stands at 11 with facilities re-certified in Jacksonville, FL (2016), Scottsboro, AL (2016) and Fernley, NV (2017). Plattsburgh, NY and Spartanburg, SC applied for VPP status in 2017. VPP status requires implementation of safety and health management systems as well as maintaining injury and illness rates below national Bureau of Labor Statistics averages.

Plant Name	Year First Awarded
McPherson, KS	2007
Tucson, AZ	2007
Macon, GA	2007
Willows, CA	2008
Jacksonville, FL	2008
Richland, MS	2010
Fernley, NV	2010
Lewiston, ME	2012
Scottsboro, AL	2013
Richmond, VA	2015
Belgrade, MT	2016
Plattsburgh, NY	Applied in 2017
Spartanburg, SC	Applied in 2017

SOCIAL IMPACT

CHARITABLE CONTRIBUTION TRENDS⁴

\$477,000 IN 2013	\$501,000 IN 2015	\$640,000 IN 2017
\$463,000 IN 2014	\$592,000 IN 2016	

SCHOLARSHIP CONTRIBUTION TRENDS⁵

\$21,000 IN 2013	\$20,000 IN 2015	\$22,000 IN 2017
\$18,000 IN 2014	\$22,000 IN 2016	

⁴ Numbers have been restated from prior reports to ensure consistent methodology.

⁵ Figures do not include tuition reimbursement for JM employees.

VOLUNTEERING OVERVIEW

	2013	2014	2015	2016	2017
Projects	165	171	167	217	268
Volunteer Hours	7,247	8,612	9,255	10,968	12,428
Volunteers	2,134	3,283	3,232	4,005	4,692

HEALTH AND WELLBEING

2020 HEALTH AND WELLBEING GOAL: Support employee health and wellness such that overall employee biometric results are maintained or improved, and expand programs offered to address mental as well as physical wellbeing.

PROGRESS: JM continues to enhance health and wellbeing resources for employees and their families across the globe.

13K Services rendered by JM's wellbeing/Employee Assistance Program (EAP) provider.

52% Percentage of U.S. employees participating in on-site biometric screening events.

32 Locations with on-site biometric screening events.

⁶ ISO 14001 is the international standard that specifies requirements for an effective environmental management system.

⁷ Manufacturing Rate Change: the annual change in total manufacturing production volume.

⁸ GHG Intensity Change: the annual change in greenhouse gas emissions relative to the total manufacturing production volume.

COMMUNITY INVESTMENT

2020 COMMUNITY INVESTMENT/VOLUNTEERISM GOAL:

Increase employee volunteerism at JM by 20 percent (based on a 2015 baseline).

PROGRESS: GOAL ACHIEVED (2 YEARS EARLY)

- Goal Achieved: 200 community service events annually by 2020
- Goal Achieved: Volunteer a total of 11,100 hours annually by 2020
- Goal Achieved: 3,878 volunteers participate annually by 2020

VOLUNTEERING TRENDS YEAR-OVER-YEAR (2016/2017)



VOLUNTEERING TRENDS INCREASE OVER BASELINE YEAR (2015)



ENVIRONMENTAL MANAGEMENT SYSTEM

JM FACILITIES CONFORMING TO ISO 14001⁶ AS OF 2017

36 + **6** = **42**

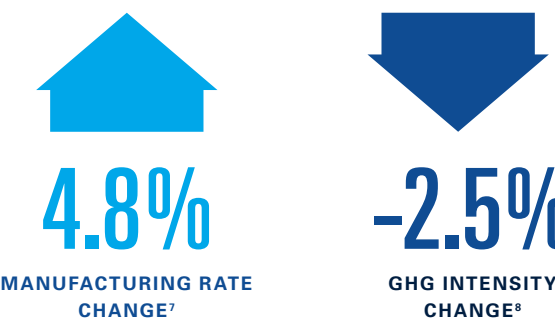
NORTH AMERICA

EUROPE

TOTAL

GREENHOUSE GAS INTENSITY (GHG)

YEAR-OVER-YEAR 2016/2017



ORGANIZATIONAL PROFILE

Johns Manville, a Berkshire Hathaway (NYSE: BRK.A; BRK.B) company, is a leading manufacturer and marketer of premium-quality products for building insulation, mechanical insulation, industrial insulation, commercial roofing, roof insulation and fibers and nonwovens for commercial, industrial and residential applications.

JM serves markets that include aerospace, automotive/transportation, appliance, commercial/residential construction, HVAC, pipe and equipment, filtration, waterproofing, building, flooring, interiors and wind energy. JM has three strategic business units: Engineered Products, Insulation Systems and Roofing Systems.

In business since 1858, JM holds leadership positions in many of the key markets we serve. JM products are sold to customers in 83 different countries. JM is headquartered in Denver, CO, and operates 43 manufacturing facilities located in the United States, Canada, Germany, Slovakia and China. The company achieved sales of approximately \$3 billion in 2017. Aggregate worldwide employee wages and cost of employee benefits totaled nearly \$695 million in 2017.¹

¹ JM global employee wage and benefit information calculated using exchange rate data as of 12/31/2017. Exchange rate per \$1 USD = 1.255 CAD; .833 EUR; 6.504 CYN.

OPERATIONS MAP

2017 JM OPERATIONS AT A GLANCE



5
COUNTRIES



3,900
CUSTOMERS



13,000
SUPPLIERS



15,000
PRODUCTS DELIVERED*

* Products delivered is defined as any unique material that results in a customer invoice.

2017 GLOBAL WORKFORCE

7,500 EMPLOYEES WORLDWIDE

WORKFORCE BY EMPLOYMENT TYPE



WORKFORCE BY GEOGRAPHIC LOCATION



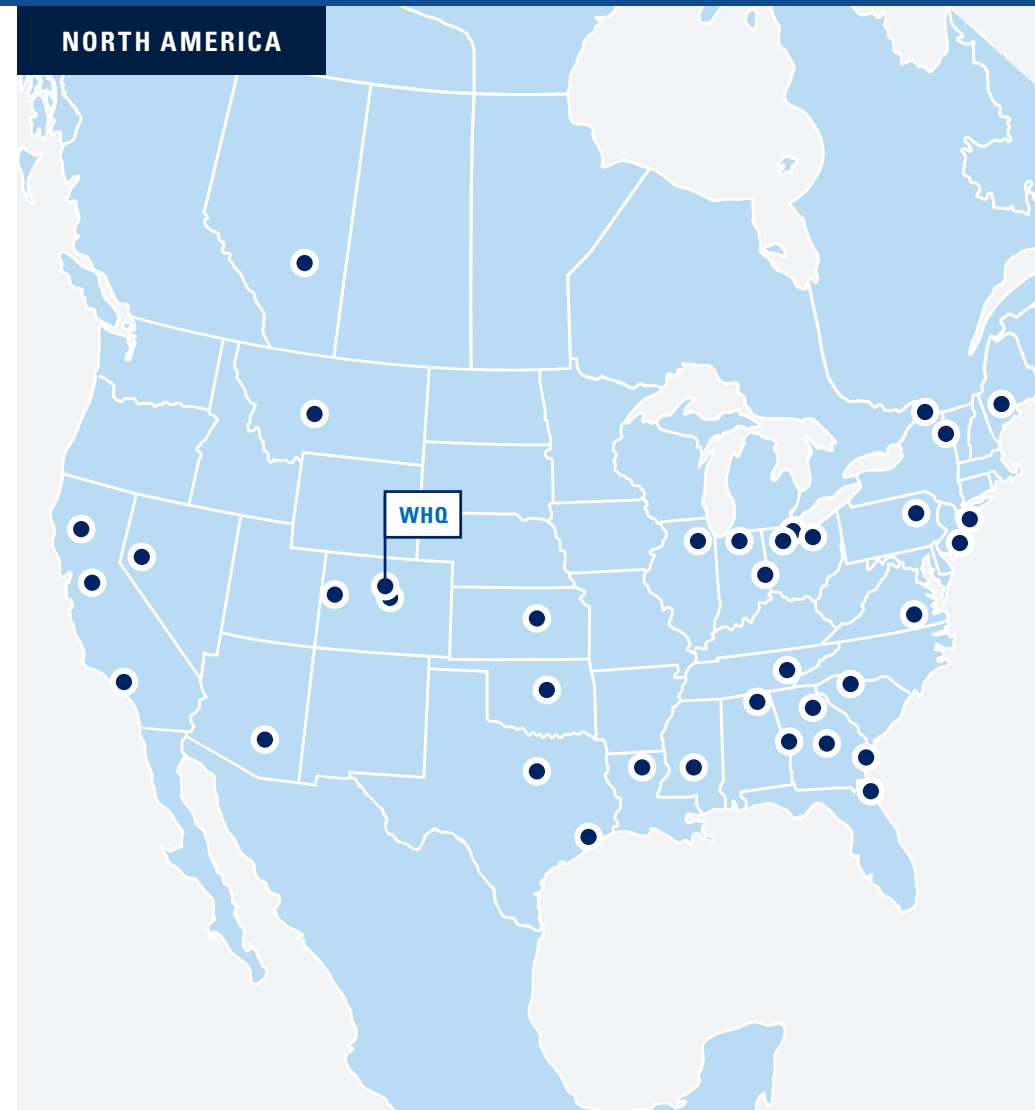
SALARIED EMPLOYEES BY GENDER



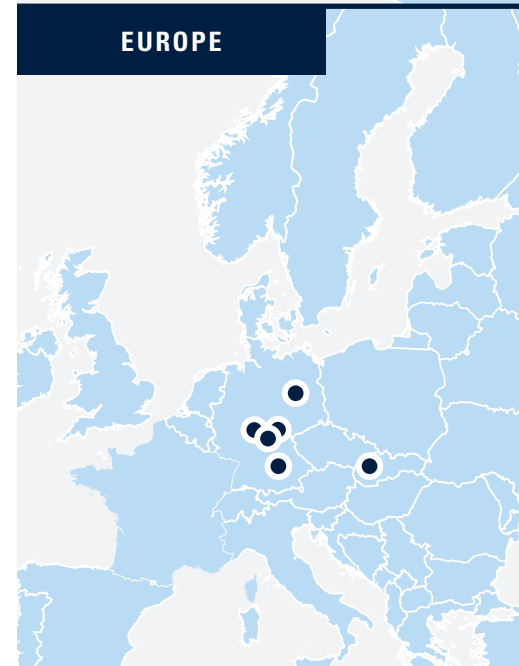
HOURLY EMPLOYEES BY GENDER



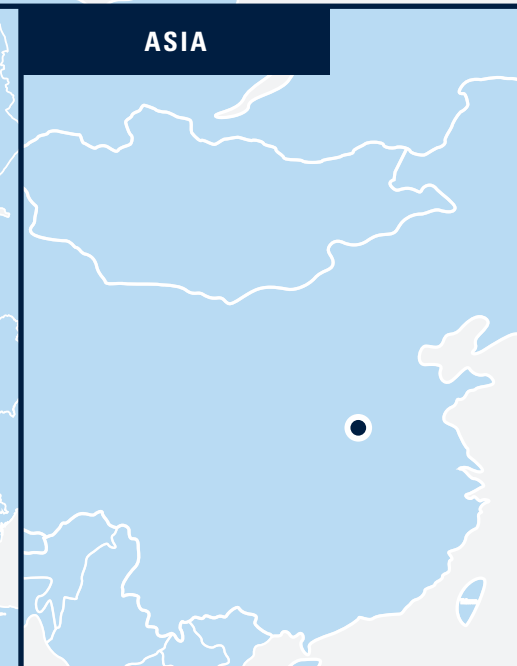
NORTH AMERICA



EUROPE



ASIA



WORLD HEADQUARTERS

Denver, CO

TECHNICAL CENTERS

Littleton, CO	Bobingen, Germany
Waterville, OH	Wertheim, Germany
	Trnava, Slovakia

ENGINEERED PRODUCTS

Tucson, AZ	Luoyang, Henan, China
Richland, MS	Berlin, Germany
Defiance, OH	Bobingen, Germany
Waterville, OH	Karlstein, Germany
Spartanburg, SC	Steinach, Germany
Etowah, TN	Wertheim, Germany
Cleburne, TX	Trnava, Slovakia

INSULATION SYSTEMS

Phenix City, AL	Belgrade, MT
Tucson, AZ	Edison, NJ
Willows, CA	Penbryn, NJ
Fruita, CO	Defiance, OH
Brunswick, GA	Cleburne, TX
Winder, GA	Houston, TX
Richmond, IN	Richmond, VA
McPherson, KS	Innisfail, AB Canada
Ruston, LA	

ROOFING SYSTEMS

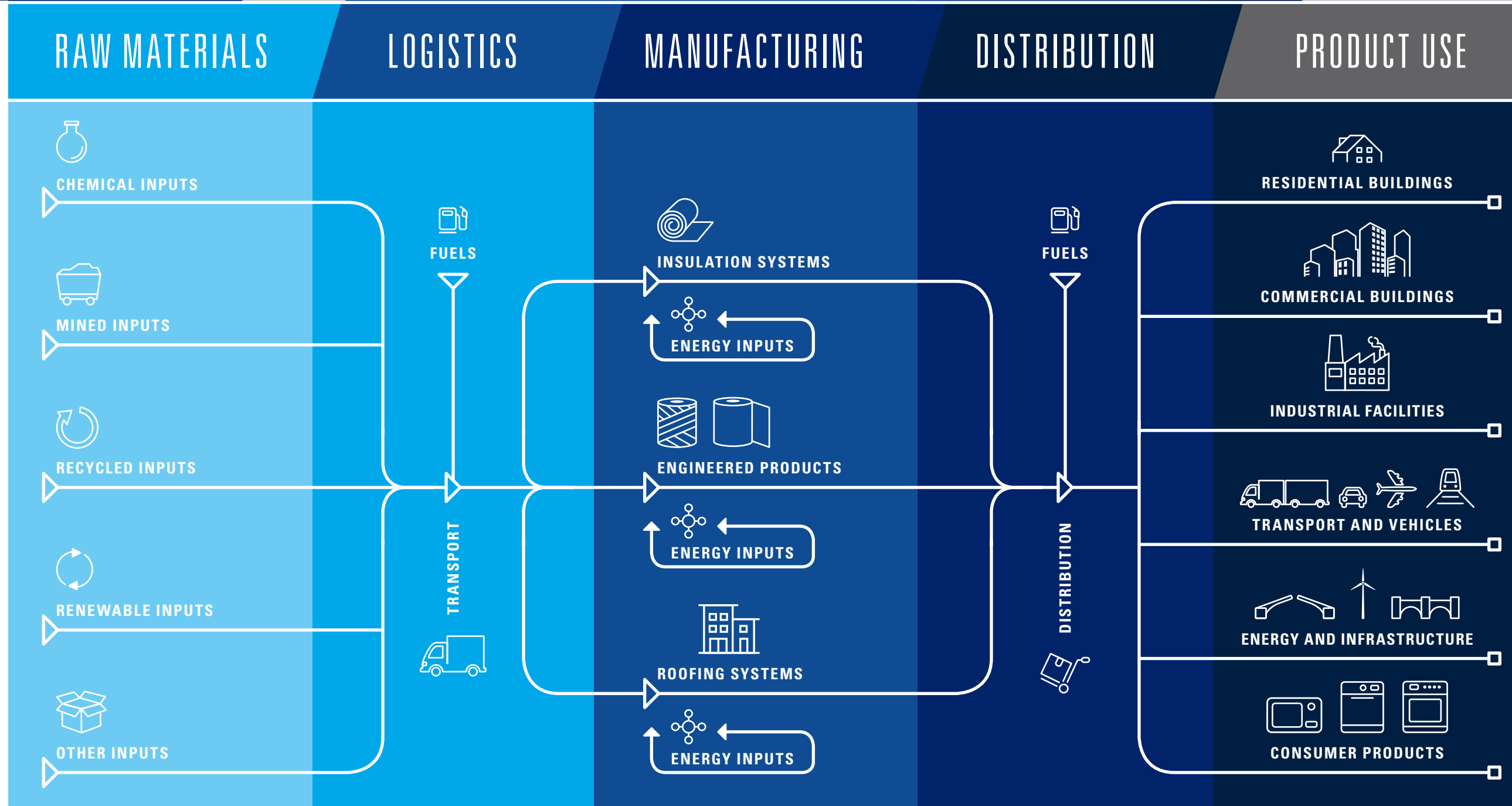
Scottsboro, AL	Fernley, NV
South Gate, CA	Plattsburgh, NY
Tracy, CA	Milan, OH
Jacksonville, FL	Oklahoma City, OK
Macon, GA	Hazle Township, PA
Rockdale, IL	Cornwall, ON Canada
Bremen, IN	
Lewiston, ME	

Being the *Supplier of Choice* means delivering the *JM Experience* every day through our procurement practices. We are committed to cross-functional collaboration, which results in better demand planning and inventory management. This helps JM achieve cost savings while delivering ongoing benefits to our customers.

JM procures over 50,000 materials and technical products from nearly 13,000 suppliers worldwide and transports thousands of products to customers all over the globe. JM spends over \$1.5 billion per year on purchasing materials and goods and services on three continents. Purchased goods include sand, soda ash, borates, chemicals, recycled glass cullet and renewable carbohydrate-derived binders used to manufacture premium-quality building materials and specialty products. Although JM does not have a formal policy giving preference to local suppliers, we competitively bid local suppliers within a manufacturing plant's geographic area. In 2017, JM sourced approximately 91 percent of its global spend locally.¹ We also obtain numerous services from suppliers such as utility providers. JM partners with an energy management firm on a variety of services to achieve a stable, cost-effective operational energy program.

Customers rely on JM to manage operations and supply chain activities in a manner that supports economic growth, respects nature and positively contributes to social wellbeing. With this in mind, we audit major suppliers to ensure they're operating within legal limits and following agreed-upon contractual requirements. We also ensure that they're complying with JM's Code of Conduct. When auditing for compliance, we are especially vigilant when it comes to environmental, ethical and human rights issues.

¹ JM defines local as "in country" based on the "order-from address" of the supplier.



RAW MATERIALS HIGHLIGHTS:

- 13,000 suppliers
- 91 percent of global spend sourced locally
- Supplier guidelines screen for the following:
 - Illegal Child Labor
 - Conflict Minerals
 - Ethical Behavior

LOGISTICS HIGHLIGHTS:

- JM supports Truckers Against Trafficking as a Silver Level Sponsor
- JM shortens distances between regional offices and suppliers
- JM uses intermodal transportation

MANUFACTURING HIGHLIGHTS:

- All North American and European plants implemented the ISO 14001 environmental management system
- Energy consultant used to optimize consumption and costs

DISTRIBUTION HIGHLIGHTS:

- Delivered 15,000 different JM products
- Distributed products in 83 countries

PRODUCT USE HIGHLIGHTS:

- 3,900 customers globally
- Complete line of building, HVAC, pipe, equipment and original equipment manufacturer (OEM) insulation solutions
- Comprehensive set of solutions for low slope roofing systems
- Extensive range of fibers as well as synthetic and glass fiber nonwovens

JM stakeholders possess great insight. Establishing dialogue with stakeholders helps JM to operate more effectively, understand market conditions and mitigate risk. By working together, we improve the *JM Experience* both internally and externally. **G4-26**

As part of the sustainability reporting process, a cross-functional JM team identifies stakeholders and prioritizes their needs. Surveys are administered to gather input from across the organization and capture the perspectives of customers and suppliers. From there, in-depth discussions take place so our cross-functional team can fully understand the various points of view. JM actively monitors industry-specific information from peers as well as international platforms (such as GRI, the Sustainability Accounting Standards Board and the United Nations) to refine engagement methods and foster an increasingly inclusive sustainability culture.

GOVERNANCE

JM is a privately held subsidiary of Berkshire Hathaway, guided by our strong values — *People, Passion, Perform and Protect*. These core values create the foundation for the *JM Experience* and guide our decision making every day.

JM's Chairman, President & CEO Mary Rhinehart reports to Greg Abel, Vice Chairman of Berkshire Hathaway. The heads of our businesses and functional areas, including our Chief Sustainability Officer, report to the CEO. The executive team is responsible for the development, approval and updating of JM's purpose, value statements, strategies, policies and goals related to economic, environmental and social impacts. JM's CEO is responsible for evaluating the performance of her direct reports with respect to meeting economic, social and environmental policies.

JM's Chairman, President & CEO; Chief Financial Officer; and General Counsel make up our board of directors, who regularly interact with their counterparts at Berkshire Hathaway. Two-thirds of the governing board are women and none are associated with any other protected class. The board directly oversees risk

management, finance and accounting, operations, human resources and sustainability.

JM's Sustainability Council oversees the company's sustainability practices, sets strategic direction for sustainability goals and monitors progress against performance targets. The Sustainability Council is chaired by the Vice President, R&D & Chief Sustainability Officer and consists of the heads of our three businesses, along with key managers from functional areas. As a global company, JM's executives, managers and employees regularly seek and receive feedback from stakeholders.

JM's Sustainability Report Committee meets throughout the year to improve the processes for transparency and reporting, including understanding progress towards JM goals and targets. This cross-functional team is responsible for overseeing all aspects of the reporting process, including the materiality assessment and using the GRI G4 guidelines in preparing the JM Sustainability Report. Quantitative data is collected from each business unit and functional area to evaluate performance and identify opportunities for improvement.

G4-19, G4-20, G4-21, G4-27

See last paragraph on this page for further details on materiality methodology.

Material Topics	Internal Stakeholders	External Stakeholders						
	Employees	Customers	BRK	Earth	Communities	Government & Regulators	Potential Employees	Suppliers
Ethics	●	●	●	●	●	●	●	●
Compliance	●		●	●	●	●		●
Customer Health & Safety	●	●	●		●	●	●	●
JM Brand/Reputation	●	●	●				●	
Economic Performance	●	●	●				●	●
Product Responsibility	●	●	●	●	●	●	●	●
Innovation & Technology	●	●	●				●	●
Environmental Stewardship (Energy, Emissions, Waste, Water, etc.)	●	●	●	●	●	●	●	●
EHS Wellness & Benefits	●		●		●	●	●	
Community	●	●	●	●	●		●	

● Topic of Material Concern to JM Employees ● Topic of Material Concern to Stakeholder Group

By assessing our economic, environmental and social impacts, JM is better positioned to develop priorities and understand how various business activities influence the decisions of our stakeholders. That's one reason why an in-depth materiality assessment is part of our sustainability reporting process. We identify the areas that are most relevant to key groups and factor them into our communication and goal-setting activities.

We strive to continually improve our materiality assessment methodology and participation. In 2017, our materiality assessment considered a range of topics derived from stakeholder input as well as source information. Sources of information included:

- Previous materiality exercises and findings;
- Insights from industry and Berkshire Hathaway company peers;
- Direct survey feedback from internal and external stakeholder groups;
- Sustainability reporting standards and guidance.

Quantitative and qualitative methodologies were used to rank and prioritize material topics. Finalizing the materiality assessment involved JM's cross-functional Sustainability Report Committee, Sustainability Council and Senior Leadership Team. Material topics relating to specific GRI aspects and corresponding performance indicators were reported to add perspective on sustainability impacts, corporate culture and our value system. Although the 2016/2017 materiality assessment did provide some new perspectives and considerations from the previous year, no significant changes were made to the report's scope as a result. **G4-23** JM is dedicated to consistent improvement, therefore any restatements or data adjustments were made to enhance accuracy and are disclosed as footnotes throughout the report. **G4-22**

JM STAKEHOLDERS **G4-24**

Employees and potential employees

Business-to-business and business-to-consumer customers

Berkshire Hathaway (BRK)

Earth, natural and social environments

Governments and regulators

Suppliers and distributors

JM STAKEHOLDER ENGAGEMENT METHODS **G4-25**

- Face-to-face communication, emails, telephone calls, mailings, newsletters
- Quarterly and annual meetings
- Conferences, events, industry trade associations
- California Transparency in Supply Chain Act of 2010 and JM's Code of Conduct
- Design, manufacturing and distribution
- Surveys, audits and inspections
- Employee and customer marketing communications materials

- JM Green Teams and the JM Sustainability Report
- Lifecycle assessments and regulatory inspections/compliance activities
- Training, education and development programs
- Corporate sponsorships, volunteer projects, open house events and community update meetings

WE ARE PEOPLE CHAMPIONS



WE ARE PEOPLE CHAMPIONS

Preparing JM for the future requires a dedicated and dynamic workforce with superior operating capabilities, decisive leadership and specialized skills. Competition for top talent is strong, especially in industries focused on product innovation and new technology. With this in mind, JM's goal is to attract, develop and retain the best possible employees. By providing a collaborative and inclusive work environment, complemented with recognition for outstanding performance, strong engagement and support for work-life balance, JM is able to maximize employee satisfaction and wellbeing.

DIVERSITY, INCLUSION AND EQUALITY

An inclusive culture powered by a diverse workforce improves our decision making, creativity and performance. By inviting individuals from all demographics to be part of our team, we better empower employees to deliver the **JM Experience**. Building an inclusive, high-performing culture requires employee development, training, mentoring and hiring the best talent for the job. We are always innovating and developing our employees through ongoing feedback channels as well as formal and informal mentoring networks. These practices have resulted in the promotion of more women to top business and manufacturing leadership roles.

As a mature business, JM's workforce is aging. Strong economic conditions have resulted in a job market that is especially tight in the trade and technical fields. As our more experienced employees retire, JM's recruiting and retention efforts will continue to evolve allowing the company to embrace further equality, varied backgrounds, different skill sets and the changing needs of a future-focused workforce.



ETHICS

JM is driven by our strong values and takes an uncompromising stance on ethics, non-discrimination and business conduct. Managing operations with honesty and integrity are hallmarks of JM's Code of Conduct. Every JM employee, including managers and other leaders, is responsible for following the ethical and legal requirements outlined in the Code and for reporting suspected violations of the Code.

Every salaried employee must be annually certified or re-certified on the JM Code of Conduct. All new hourly and salaried employees are required to certify JM's Policies and Code of Conduct as part of their on-boarding process. In dealing with potential suppliers, JM employees are required to adhere to the confidentiality commitments set forth in both JM's Code of Conduct and any applicable non-disclosure/confidentiality agreements. Employees are not permitted to disclose any JM non-public information to potential suppliers or other third parties unless there is a fully-executed nondisclosure agreement in place protecting such information.

In 2016 and 2017, JM globally deployed online training courses to salaried employees focused on corruption, conflicts of interest, anti-bribery, ethics and general compliance. JM also provides in-person training on a variety of compliance topics to groups of employees around the globe. One hundred percent of JM's three businesses and corporate functions are part of our internal auditing team's annual risk assessment, which includes interviews with senior management and covers internal controls and business risks. It also includes targeted questions to identify potential fraud and corruption. The results of the assessment are shared internally as well as with the management of Berkshire Hathaway.

JM's Legal department also conducts periodic compliance risk assessments. There were no confirmed incidents of or legal enforcement actions taken related to anti-competitive behavior. Furthermore, JM received no fines or non-monetary sanctions under laws and regulations related to accounting fraud, workplace discrimination or corruption.

HUMAN RIGHTS

JM supports the tenants and principles of the United Nations Global Compact regarding the protection of human rights, the environment, labor and corruption. Our human rights policy, noted under the California Transparency in Supply Chains Act of 2010, states that JM will not knowingly engage a supplier that directly, or indirectly through a third party, employs illegal child, forced or compulsory labor in any way. Once again in 2016-2017, there were no incidents reported or legal actions taken regarding child or forced labor.

JM demonstrates its support for human rights in our daily operations by:

- Providing safe and healthy working conditions for employees and contractors;
- Ensuring non-discrimination in personnel practices;
- Providing decent work and producing quality products that improve lives;
- Adhering to the highest standards of ethical behavior in our business conduct, activities and relationships;
- Conforming to environmental, health and safety standards, as well as applicable labor laws;
- Implementing positive management practices that provide a workplace where employees feel they can work with leadership to find mutual solutions;
- Recognizing third parties' rights to represent our employees, where applicable, and dealing with elected representatives in a respectful and business-like manner.

JM requests sourcing information from suppliers when purchasing raw materials containing 3TG metals. This helps JM disclose to stakeholders when and why we must use conflict minerals in our products. JM's Product Stewardship team also reviews all new products and significant changes to existing products to provide hazard communication, product labeling information and other guidance to customers.

In 2017, 62 percent of our global workforce was represented under collective bargaining agreements. Between 2016-2017, none of JM's operations or suppliers were identified as prohibiting, violating or putting at significant risk the right to exercise freedom of association and collective bargaining.

JOURNEY TO SAFETY

Behaving in a safe manner is an ongoing expectation at JM. We believe it's a philosophy that should be practiced both on the job and at home. We ask that employees not only look out for themselves, but also for each other.

To maintain our high standards, JM employees participate in extensive safety training. In fact, in 2017 alone, JM employees received approximately 67,000 hours of safety and environmental instruction.

SAFETY STRATEGY

Our ultimate objective is to minimize potential safety risks to protect people and assets and to better position JM for future growth. The following actions have been taken to enhance the safety of our employees and contractors:

- Conducting both internal and independent assessments of compliance, and continuously tracking the health and safety performance of each facility while complying with applicable laws and regulations.
- Providing leadership within our business segments to establish effective safety and occupational health standards and procedures.
 - Every JM facility has a health and safety leader.
 - Every JM facility continually monitors for occupational hazards and implements appropriate corrective actions.
 - JM regularly reviews the overarching safety policy, programs and procedures to ensure they are effective.
- Holding every employee responsible for implementing our health and safety policy and practices to protect themselves and others from potential workplace hazards.

2016 AND 2017 INITIATIVES INCLUDED:

- Implementing a safety culture improvement process including safety perception surveys, on-site assessments and workshops with joint management and employee teams to develop corrective actions to address any gaps. To date, 16 plants have initiated the safety culture process. JM will continue implementing the process at the remaining locations over the next few years.
- Leveraging JM's Environmental, Health and Safety Management System to provide a consistent framework for reducing risks. From 2016 to 2017, most locations began identifying and quantifying risks using standardized assessments as well as implementing processes for self-assessments. JM developed and implemented five standardized Life Critical Programs to address risks that could lead to serious injuries or fatalities.



- Introducing the JM Ergonomics Program to train front-line employees to identify and reduce hazards that commonly lead to ergonomic injuries such as strains, sprains, carpal tunnel syndrome and other musculoskeletal disorders.

SAFETY AWARDS AND RECOGNITION

The 2016 JM Annual Health & Safety Excellence Award was presented to the Trnava, Slovakia, plant. The plant had several accomplishments including:

- Developing leadership training for middle management where safety is strongly integrated using the *Crucial Conversations* framework.
- Implementing cross-functional management safety walks with a focus on communication and education.
- Launching regular meetings of plant managers with shop-floor personnel to discuss safety items.
- Introducing educational programs to increase awareness of the impact of poor ergonomic habits, both on and off the job.

The 2017 JM Annual Health & Safety Excellence Award was presented to the Tucson, Arizona, plant. The plant had several accomplishments including:

- Establishing Safety Mentors for all new hires.
- Mentoring and supporting other JM plants on safety best practices.
- Implementing a "Good Catch" system for employees to identify and correct hazards.
- Installing back-up cameras on all stand-up lifts as an added protective layer.
- Building a *Lock, Tag, Clear, Try* Training Center.
- Being recognized as a model for Voluntary Protection Programs (VPP) for other manufacturers in Arizona.
- Going 8 years and nearly 2 million hours since its last lost time injury; 1 recordable in 2016 and 72 percent below the national average for the industry.

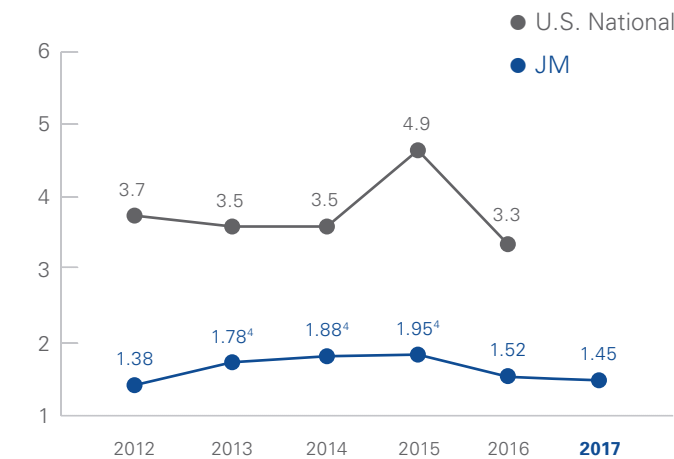
JM SAFETY METRICS — 2017¹

JM EE = JM Employee TP = Temporary Employee

Note: Outliers with higher than average incident rates are a result of the JM population in those regions working significantly fewer hours than the other population groups. Most of these outliers are seen within our temporary employment populations.

Country	Total OSHA Recordable Rate ¹	OSHA Recordable Injuries Rates				OSHA Occupational Illness Case Rates				OSHA Lost Day Injuries Case Rates				Fatality Case Rates			
		Male		Female		Male		Female		Male		Female		Male		Female	
		JM EE	TP	JM EE	TP	JM EE	TP	JM EE	TP	JM EE	TP	JM EE	TP	JM EE	TP	JM EE	TP
Canada	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	3.15	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Germany	1.29	1.42	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Slovakia	0.66	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U.S.	1.61	1.31	5.83	1.82	4.35	0.11	0.00	0.20	0.00	0.09	0.97	0.40	0.00	0.00	0.00	0.00	0.00
Total JM	1.45	1.26	4.56	1.41	2.51	0.08	0.00	0.16	0.00	0.08	0.65	0.31	0.00	0.00	0.00	0.00	0.00

JM TOTAL OSHA INCIDENT RATES¹ VS U.S. NATIONAL RATES³



Note: Data beginning in 2013 include the acquisition of a subsidiary with higher rates than JM's historical rates.

¹ Occupational Safety and Health Administration, a U.S. agency charged with the enforcement of safety and health legislation. Total Case Incident Rate (TCIR): Number of injuries and illnesses x 200,000/employee hours worked.

² Lost Time Rate: Number of incidents involving workdays beyond the day of injury or onset of illness that the employee was away from work because of an occupational injury or illness, per 200,000 work hours.

³ Bureau of Labor Statistics (BLS) Rate using NAICS Code 32799. 2017 data not available.

⁴ Years 2013–2015 include data from an acquired subsidiary with higher incident rates than JM's historical rates.

NOTABLE PLANT SAFETY MILESTONES INCLUDED:

- **Bremen, IN:** 20 years without a lost time injury; seven years without an OSHA recordable injury
- **Lewiston, ME:** 15 years without a lost time injury
- **Rockdale, IL:** 10 years without a lost time injury
- **Scottsboro, AL:** 10 years without a lost time injury
- **Oklahoma City, OK:** five years without a lost time injury
- **Innisfail, Alberta:** one year without a recordable injury in 2017
- **Belgrade, MT:** one year without a recordable injury in 2017
- **Penbryn, NJ:** one year without a recordable injury in 2017

2020 SAFETY GOAL: Continuously improve performance leading to our vision of zero injuries by:

- Reducing the three-year rolling average number of yearly injuries by 30 percent
- Reducing the three-year rolling Lost Time Injury Rate (LTIR) by 30 percent

PROGRESS: JM is making strides in its three-year rolling average LTIR (down 10 percent) and showing a modest reduction in the yearly number of total injuries.

Baseline in 2015	Five-Year Goal (30% reduction)	Current Rates
TCIR ¹ : 1.87	TCIR: 1.31	TCIR: 1.64
LTIR ² : 0.30	LTIR: 0.21	LTIR: 0.27

All rates are three-year rolling averages.

JM LOCATIONS WITH AT LEAST 1 MILLION HOURS WORKED WITHOUT A LOST TIME INCIDENT.¹

Location	Numbers
Trnava	2,661,015
Bremen	2,106,085
Defiance 2	1,959,392
Tucson	1,953,238
Winder	1,593,764
Innisfail	1,343,798
Willows	1,342,233
Berlin	1,265,027
McPherson	1,243,117
Defiance 8	1,174,390
Wertheim	1,168,727

EMPLOYEE HEALTH AND WELLBEING

We believe that the workplace has the power to improve the health and wellbeing of employees, leading to greater fulfillment on the job, at home and in communities. In 2017, 32 on-site biometric screening events took place at U.S. locations. JM promoted two corporate wellness challenges, various webinars and several lunch and learns. In addition, six JM locations had flu shot clinics. Over 13,000 services related to health, wellbeing and mental health were conducted by JM's Employee Assistance Program provider.

COMMUNITY

JM's efforts in the community are driven by our employees' passion to assist, respond and serve, focusing on the causes that matter most to our employees and customers. Our goal is to have a positive impact in the areas where we live and work. We have a strong history of employee volunteerism that has only gotten stronger over the past few years. In fact, since 2015, we've seen a **60 percent** increase in employee-driven volunteer projects.

GENERAL COMMUNITY SUPPORT

JM improves quality of life in our communities by supporting those in need during times of hardship and crisis. Examples include:

- Supporting United Way with corporate and local financial contributions;
- Providing food and water to disadvantaged and underprivileged individuals and families;
- Cleaning up waterways and yards and providing minor home repairs for elderly, handicapped and low-income individuals.

HEALTH & WELLBEING

As an established employer, JM's corporate citizenship contributes to overall community health and wellbeing. Examples include:

- Supporting victims of Hurricane Harvey and Hurricane Irma through the American Red Cross Relief Fund;
- Participating in events that support those with Multiple Sclerosis, Alzheimer's disease, cancer, arthritis and more.

EDUCATION

Public education plays an important role in preparing children for future opportunities. JM employees support students in a variety of ways:

- Tutoring grade school students in reading;
- Donating school supplies and other necessities;
- Advising high school students on career opportunities;
- Providing scholarships to help further educations.



OUR **PASSION** IS IN GOING

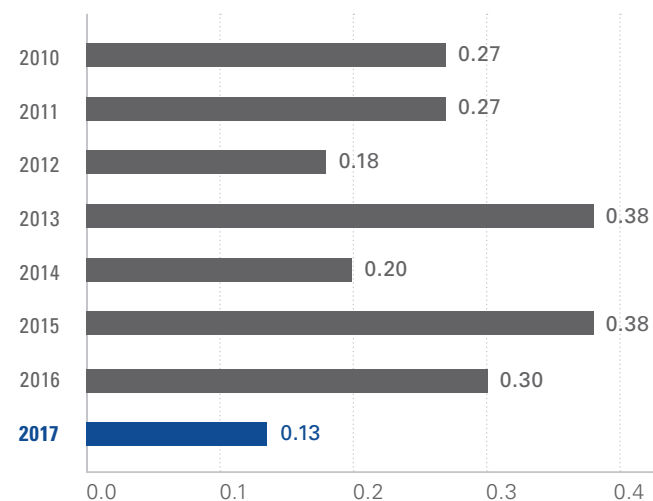
THE EXTRA MILE

At JM, we are committed to innovation in everything we do. Even though many of our businesses are in mature industries, the speed of change continues to tick at an ever more rapid rate. Developments in robotics, machine learning, digital fabrication, the Industrial Internet and data analytics are routinely inspiring us to increase our pace.

-57%

From 2016 to 2017, JM's lost time incident rate¹ decreased by **57 percent**.

LOST TIME INCIDENT RATE¹



Note: Data beginning in 2013 include the acquisition of a subsidiary with higher rates than JM's historical rates.

¹ Lost Time Rate: Number of incidents involving workdays beyond the day of injury or onset of illness that the employee was away from work because of an occupational injury or illness, per 200,000 work hours.

PATHWAY TO PRODUCT SUSTAINABILITY

JM has a long tradition of manufacturing durable and environmentally-responsible materials used to construct our cities, homes, communities and transportation systems. Customers and stakeholders desire to live and work in environments that are safe, efficient and comfortable. Specifiers, builders and occupants want peace of mind knowing that they have a trustworthy partner to help them achieve their goals. By delivering products that use recycled content, improve energy efficiency, promote indoor air quality and contribute to sustainable design, JM continues to strengthen the path to a more sustainable future.

SAFETY DATA SHEETS (SDSs)

WHAT ARE SAFETY DATA SHEETS?

SDSs contain information related to identified hazards and chemical composition, as well as instructions for safe handling and storage. SDSs also provide guidance on issues including first aid, firefighting, accidental release and disposal. All SDSs are prepared in accordance with OSHA's **Globally Harmonized System of Classification and Labeling of Chemicals**. In addition to SDSs, JM develops and maintains Safe Use Instructions (SUIs) for its products that don't require an SDS by law. SUIs contain health and safety information for development of appropriate product handling procedures to protect the users of our products.

WHY ARE SAFETY DATA SHEETS IMPORTANT TO JM?

SDSs are designed to ensure proper use while communicating potential hazards to workers in occupational settings. They help JM promote product stewardship, occupational health and safety and sustainability.

ADDITIONAL RESOURCES

To further promote the safe use of JM products, SDSs are available on our website: jm.com/en/building-materials/industrial-insulation/technical-resource-library

LIFECYCLE ASSESSMENT (LCA)

WHAT IS LIFECYCLE ASSESSMENT?

Lifecycle Assessments (LCAs) are used to evaluate the potential environmental impacts of a product, material, process or activity across its full lifecycle from the sourcing of the raw materials to production, distribution, use and end-of-life.

WHY IS LCA IMPORTANT TO JM?

JM uses an LCA as a tool to gain a clear understanding of the environmental impacts of products over their lifespan as well as to further promote sustainability throughout the product portfolio. LCAs can be valuable in reducing or removing hazardous or toxic materials in favor of more sustainable alternatives. JM's business divisions identify the need for LCAs and environmental product declarations based upon direct requests from customers or through participation with industry associations.

ADDITIONAL RESOURCES

JM has participated in the following industry-level LCA initiatives:

- Glass Fiber Europe for continuous filament glass fiber products
- European Alliance for SMC/BMC for lightweight composites
- American Composites Manufacturing Association for lightweight composites
- European Union Composites Industry Association ECO Impact Calculator

HEALTH PRODUCT DECLARATIONS (HPDs)

WHAT ARE HEALTH PRODUCT DECLARATIONS?

Health Product Declarations (HPDs) disclose all ingredients used in building products and potential health effects of a product throughout its lifecycle.

WHY ARE HPDs IMPORTANT TO JM?

HPDs ensure that stakeholders have the information they need when specifying building materials. HPDs contribute to being awarded LEED v4 credit and support JM's commitment to customer health and safety. JM contributed toward the launch of the HPD Open Standard and HPD Collaborative as a Pilot Manufacturer in 2012. HPDs for JM insulation batts, rolls and mineral wool products are in the process of finalization.

ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs)

WHAT ARE ENVIRONMENTAL PRODUCT DECLARATIONS?

Environmental Product Declarations (EPDs) are reports that communicate the energy consumption and energy savings of a product throughout its lifecycle, from the raw material acquisition to the disposal of the product once it's been removed from the application. All JM EPDs are prepared in accordance with ISO 14025 and are independently certified by UL Environment.

WHY ARE EPDs IMPORTANT TO JM?

EPDs are a transparency tool enabling customers and stakeholders to comprehensively understand the sustainable attributes and implications of JM products. EPDs provide designers and specifiers with technical information they can use to determine the net environmental impact of the materials specified in their building designs. As JM moves toward creating greener buildings, EPDs are crucial in determining the most energy efficient and environmentally preferable products to specify. They are also a necessary component for many energy efficiency certifications, like LEED v4 credits. JM assists select customers with understanding the environmental implications of their products by providing lifecycle impact assessment information on specific materials.

ADDITIONAL RESOURCES

JM has participated in the following industry environmental product declarations:

- Single Ply Roofing Industry for single ply roofing membranes
- Asphalt Roofing Manufacturers for bituminous roofing
- Polyisocyanurate Insulation Manufacturers Association for polyiso insulation and sheathing
- North American Insulation Manufacturers Association for mineral wool insulation products

JM product category EPDs are available for:

- Duct Wrap Insulation — Microlite® EQ FSK duct wrap made with our Formaldehyde-free™ bio-based binder that is manufactured from rapidly renewable plant-based materials.
- Mechanical Insulation Boards — 1000 Series Spin-Glas®; 800 Series Spin-Glas®; Precipitator Spin-Glas®; Micro-Flex®; and Permacote® Linacoustic® R-300.
- OEM Insulation Board — Whispertone® Wallboard; Equipment Spin-Glas® board; and SG Series Spin-Glas® insulation.
- Pipe Insulation — Micro-Lok®; Micro-Lok® HP; Micro-Lok® HP Ultra; and Micro-Lok® HP plain.
- Duct Liner Products — Linacoustic® RC and Permacote® Linacoustic® RC-HP.
- HVAC Equipment Insulation — Micromat® and Micromat® RX.

THE JM PRODUCT LANDSCAPE

A LANDSCAPE OF INNOVATIVE, SUSTAINABLE PRODUCTS

JM products may not always be seen, but their value is certainly felt every day across the globe. Whether in the buildings where we live and work, or transportation moving people and products around, JM innovation is empowering a more sustainable way of life. To demonstrate usage cases and the sustainable benefits of our products, JM has created an interactive experience called the *JM Product Landscape* available at jm.com/productlandscape. By clicking on various locations within the landscape, you can access specific product applications and learn more about JM innovation and sustainability in action.

JM Product Landscape

JM.com



INNOVATION AND TRAINING FOR THE FUTURE

Exploring and adopting new technologies is key to promoting innovation and ensuring sustainability. Research and development of next-generation materials, new technologies and digital transformation will require an evolving set of human skills and technological acumen. For example, enterprise resource planning tools have been an enabler for running JM's business processes including accounting, sales, production, human resources and finance in an integrated environment. These software tools have helped JM deliver more efficient, effective products and services. Coined by Kevin Ashton of Proctor & Gamble in 1999, the Industrial Internet of Things will require the development of new technological infrastructures to link our enterprise resource planning with JM's factory operations and suppliers. At every stage, JM will continue to link its people with the best technology possible to increase productivity and enhance employee satisfaction.

A strong job market, shifting customer demands and technological advances are driving the need for continuous and specialized learning and development programs for our employees to do their jobs and help JM grow. With this in mind, JM is sponsoring an innovative, multi-year *Manager as Coach* learning series for all managers of the company. The training began with our senior leadership and continues throughout JM's operating footprint. Research shows that managers who are active and effective coaches can have a profound impact on employee engagement, productivity, retention and organizational results.

JM continues its apprenticeship program in Germany. Each year, approximately 15 apprentices join the JM program and gain hands-on experiences in areas such as business administration, logistics, mechanical craftsmanship and electrical work. After three years, apprentices may be offered employment at one of JM's facilities throughout the world.

In addition, JM made its North American internship program a top priority in 2017. Those leading the initiative set out to enhance the quality of JM's intern candidates and provide the **JM Experience** to interns and managers. A post-program survey indicated that all of the interns felt their onboarding process was effective, with 80 percent indicating it was very or extremely effective. About 90 percent said they got very good to excellent support and direction from their managers. And almost all of those surveyed said they would be very interested in working for JM, either as an intern the following summer or after they graduated. The internship program supports JM's practice of hiring locally.¹

¹ "Local" refers to individuals either born in or who have the legal right to reside indefinitely in the same country in which JM conducts operations. This practice applies to employees at all levels, including our senior management, as 100 percent of our CEO's direct reports were hired locally.

NEW PRODUCTS

At JM, innovation and sustainability work together to enhance our R&D processes. We see innovation and sustainability as catalysts that drive the development of solutions that add value to global markets. We consider finite resources, macro-trends, energy requirements and lifecycle implications in the development of new and better products for customers and consumers. Within the transportation sector alone, light-weighting requires alternative materials to replace metals. JM fulfills these needs by improving weight-to-strength ratio in vehicles and start/stop batteries in hybrid automobiles. JM products are always evolving, serving the needs of a rapidly changing world.



MultiStar® 566 for composite panels and weaving.

MultiStar® 587 for weaving.

StarRov® 090 for composite profiles.

StarRov® 895 for nylon tapes and organosheets.

ThermoFlow® 641 chopped strands for polypropylene compounding.



ENGINEERED PRODUCTS

Dura-Glass® 7571 for reinforcement of commercial and residential roofing systems.

Evalith® FH 120/2 for luxury vinyl tiles.

MultiStar® 264 roving for sheet molding compounds.

INSULATION SYSTEMS

Compression Pack® pipe-in-pipe aerogel insulation system for the subsea market.

Thermo-1200™ water-resistant calcium silicate insulation.

ROOFING SYSTEMS

GlasKap® CR G highly reflective granulated cap sheet to help meet cool roofing requirements.



JM's insulation systems help control energy consumption, promote occupant comfort and support end-user safety by improving thermal and acoustical control. Our complete line of commercial, residential, OEM and industrial solutions has the versatility to meet the broad range of insulation requirements in the diverse markets we serve.

As buildings account for approximately 40 percent of energy consumption and one-third of greenhouse gas emissions, insulation is a key component to controlling energy consumption in both residential and commercial construction on a day-to-day basis. Our HVAC, Mechanical and Building insulations are designed to accomplish this by insulating many applications both inside and outside the building envelope.

For OEMs, JM takes an application-specific approach when designing and engineering our insulation products. Whether the focus is on land, sea or aerospace, we consistently deliver the quality solutions our customers require.

Likewise, our industrial products are key to ensuring both process control and worker safety in high-temperature applications. They are engineered to withstand the demands of industrial settings, covering needs ranging from space constraints to corrosion under insulation to hydrophobic moisture control.

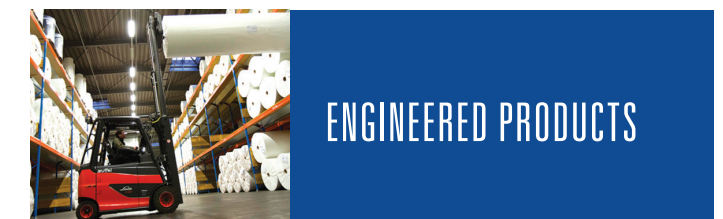


JM's Roofing Systems business has the industry's most complete offering of commercial roofing components including membranes, cover boards, rigid insulation and accessories. Our products are single-source supplied, providing enhanced responsibility and dependability.

JM recently began the expansion of a second TPO (thermoplastic polyolefin) production line at the company's Scottsboro, Alabama, manufacturing facility. The new TPO production line brings JM's total investment in commercial roofing over the past ten years to over \$200 million. Together with putting money back into

the American economy and bringing more than 175 jobs to the manufacturing sector, JM's continued investments allow growth in the industry and extend our areas of roofing expertise and available products.

In mid-2016, JM opened a new 136,000-square foot distribution center in Grand Prairie, Texas. The distribution center houses JM PVC and TPO membranes; polyisocyanurate insulation and cover board products; and roofing accessories and fasteners. The center enhances our ability to control service, ensure quality and reduce lead time. In fact, since it has opened, JM has reduced lead time on its products from as long as five days to as little as next-day.



JM's Engineered Products business produces a wide range of fibers and technical nonwovens for building and construction, filtration, energy storage and composites at 13 production sites in the United States, Germany, Slovakia and China.

For the dynamic field of Glass Reinforced Plastics (GRP) laminates in Europe, JM introduced Evalith® FF 0,25/ 1, a glass mat that has been successfully used to enhance the performance of stiff and lightweight components for recreational vehicles. Light weight and long-term durability are important product characteristics for OEM suppliers who need cost-effective solutions for next-generation automotive components.

Recently in the U.S., JM introduced several uncoated glass mat facers for gypsum wall boards. These new uncoated facers have greater mechanical performance and better handleability at significantly lower cost than mineral coated facers. These new products utilize the upgraded glass mat capabilities at JM's Waterville, Ohio, facility.

JM expanded its glass fiber operations in Waterville, Ohio, and Etowah, Tennessee, by successfully re-starting furnaces with increased capacity to serve customers in the composites and engineered thermoplastic field and to support market growth in the United States.

WE PERFORM AT A SUPERIOR LEVEL

WE PERFORM AT A SUPERIOR LEVEL

JM took advantage of favorable market conditions in 2016-2017. In addition to strong global growth, the industries we serve experienced high capacity utilization and input cost inflation. Increases in housing starts, remodeling, commercial construction and reroofing benefited our businesses, as did industrial production and material substitution. But our focus on product design and differentiation, innovation, sales growth and exceptional customer service is where we really add value. These practices, along with a commitment to operational excellence and responsible investing, will help drive even better performance in 2018.



OPERATIONAL EXCELLENCE

From driving greater productivity in our plants to delivering more efficiency in our capital projects, JM is committed to operational excellence. At our manufacturing locations, we rely on leading best practices to increase machine availability, yields and value. We are always looking for better ways to turn inputs into quality products; this forward-thinking approach is critical to our long-term success.

JM's Manufacturing Council takes a strategic view of our entire manufacturing value chain by developing solutions to common challenges. They oversee the Operational Excellence (OpEx) team, which delivers training and best practices to our plants and administrative offices worldwide. Using LEAN tools and Kaizen-based methods, the OpEx team contributes to a mindset of continuous improvement that helps result in better outcomes.

For example, the Pipe Insulation department in Defiance, Ohio, used LEAN manufacturing tools to dramatically improve first-pass yields while increasing the life of furnaces by more than 50 percent. Production output and pipe throughput pounds are running at record levels, and product quality is consistently strong.

Other examples of operational excellence include:

- Roofing Systems and Information Technology teams developed and launched a mobile app for commercial roofing field reps that automates many of the manual steps of the roof inspection process, making it more timely and efficient.
- Employees at our Spartanburg plant in South Carolina adopted an execution model that increased first-pass yields by 7 percent from a production line that manufactures polyester nonwoven mat for roofing, filtration and geotextiles.
- A Roofing Systems team completed a debottlenecking capital project that increased TPO membrane output by 20-30 percent, allowing JM to better serve the fastest-growing segment of the low-slope roofing market.

Our commitment to excellence means more than just sharing best practices. We understand the importance of long-term planning and investing in our future. Over the past few years, significant improvements have been made to our glass mat lines in Waterville, Ohio. Uptime, yield and output have increased, contributing to positive operational results and greater customer satisfaction. As another example, technical enhancements have been completed to a glass fiber nonwoven line at our Wertheim, Germany facility. These enhancements are helping us to successfully meet the increasing demands of customers in the area.



JM Technical Center
Littleton, CO

GREEN TEAM CONTRIBUTES TO SUSTAINABILITY WITH TECHNICAL CENTER RENOVATION

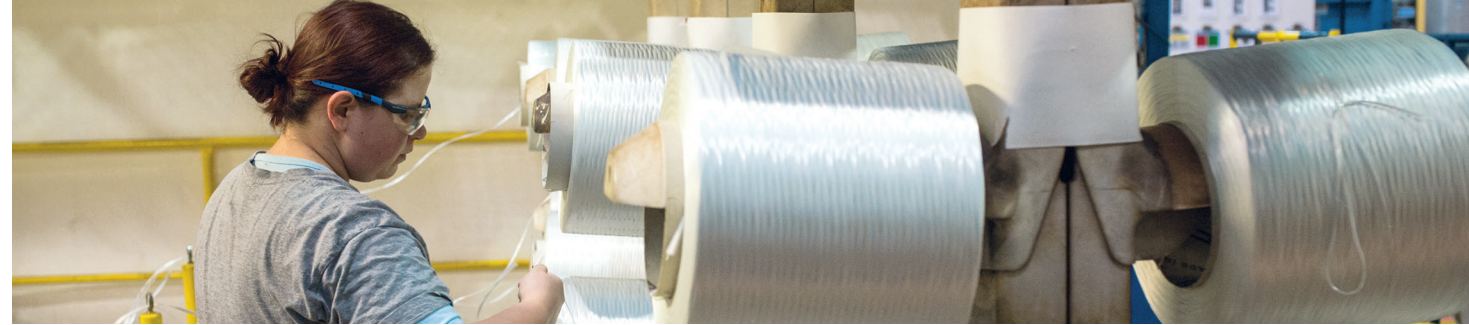
JM's Green Team in Littleton, Colorado, actively supports the multi-year renovation of our Technical Center, which is designed to advance facilities and capabilities for the next 30 years or more. The renovation, which may take as long as five years, will also help to build customer relationships, improve employee recruitment, enhance the protection of our employees and strengthen our innovative culture.

The first phase began during the second half of 2016 with work on the building exterior and window replacement. Phase two includes renovations to the office space in the Customer Service, Transportation and Engineering areas along with a new thermal lab and fitness center. Phase three — which accounts for the biggest capital investment — includes laboratory and administrative area renovations and updates to the cafeteria. As part of this overall project, sustainable improvements will be made to common areas, conference rooms, office furniture, lighting, technology and HVAC.

These renovations are part of JM's goal to be the *Employer and Supplier of Choice*. As we plan, we consider options to improve the sustainability of our facility and implement them if they make good economic sense. We also want to improve work processes and space utilization to maximize collaboration and offer an enhanced customer experience. There's no doubt that a thriving, innovative and state-of-the-art technical center will help attract and retain the best and brightest talent. Ultimately this project is designed to demonstrate our core values and help us perform at a superior level.

JM PLANT MAKES A BIG IMPACT BY OPTIMIZING OPERATIONS

JM's McPherson, Kansas, plant was awarded the Pollution Prevention award from the Kansas Department of Public Health and Environment. By optimizing the plant's High Energy Air Filtration (HEAF) system to minimize failures, the team generated savings equating to 49 tons of raw waste materials and \$120,000 annually.



EMPLOYEE PERFORMANCE

2020 EMPLOYEE DEVELOPMENT GOAL: Provide greater emphasis on employee development by delivering a 5 percent increase in average employee training hours over a 2015 baseline. Ensure that salaried employees who have been employed at JM for at least six months have documented development plans in place.

PROGRESS: JM continues to emphasize employee training at all levels and locations. Our new performance management philosophy supports these efforts companywide with a focus on accountability, ongoing conversations and effective feedback. In addition, JM remains committed to ensuring that all salaried employees have documented development plans in place.

As JM strives to be the *Employer of Choice*, we continually look for ways to enhance employee engagement. One way we do this is by ensuring our people processes effectively serve their purpose. In the past, our performance management program emphasized process rigor and accountability with scheduled performance reviews. However, we began to find that day-to-day interactions with forward-focused development discussions were much more successful. With this in mind, JM rolled out an updated program with comprehensive training modules that underscore the benefits of frequent employee-manager dialogue.

Our Frontline Leadership Program is a good example of an initiative that helps employees perform at their best. Now implemented within our plants in North America and Slovakia, the program offers training modules designed to expand the skill sets of facility managers and supervisors. Initiatives like these not only prepare employees for increasing levels of responsibility, they help improve morale by reinforcing best practices and fostering increased communication.

GLOBAL MARKETS, LOCAL PRESENCE

The growing need to address pollution, infection control and overall air quality is expanding the market for air media. JM's air media is a voluminous, non bio-persistent glass microfiber filter media used in HVAC applications at airports, hospitals, shopping centers, hotels and more. To meet increasing demand and maintain its position as the leading supplier of air media, JM launched a new production line at its Wertheim, Germany, plant in 2016. We also produce air media at JM's Defiance, Ohio, plant.



Flame-retardant properties are increasingly in demand for the building and construction markets, and in the transportation industry for ships, buses and trains. Many of these industries require products with non-combustibility and/or low smoke development in the event of fire. JM recently entered the compact laminate and high-pressure laminate/continuous-pressure laminate (HPL/CPL) market with two different glass fiber nonwoven product families produced at our Wertheim facility. These nonwovens also offer flame-retardant and low-smoke properties for plywood and MDF boards.



PRODUCT STEWARDSHIP

JM is committed to incorporating ethical and responsible product stewardship criteria into our business strategies. As we design and manufacture new building materials and engineered products, our focus is on how well the materials will perform over their lifecycle, protecting human health and the environment.

JM takes a precautionary approach to help ensure that we comply with environmental laws and regulations while considering the environmental challenges of both today and the future. This approach also informs the way our products are made, influencing the selection and removal of chemical inputs to better meet the needs of the marketplace while maintaining cost and end-use effectiveness.

JM Engineered Products introduced a new sustainable white Formaldehyde-free™ binder for nonwovens containing bio-based raw materials. The color is a key feature for applications like ceiling tile front facers, a quality difficult for competitors to replicate.

The Eco Impact Calculator calculates the environmental impact of a composite product from cradle to gate and can be used throughout Europe by all composite manufacturers to generate an Eco Report, without in depth know-how of lifecycle assessment processes. The Brussels-based Association of the European Composites Industry (EUCIA) developed the tool with the help of Ernst & Young Climate Change and Sustainability Services. JM is a member of EUCIA.

As part of our commitment to product stewardship, JM discloses comprehensive information about the safe use and disposal of products. This includes communicating potential hazards to employees, customers and other parties. JM has implemented the OSHA Hazard Communication Standard (HCS), which aligns with the provisions of the Globally Harmonized System (GHS) of Classification and Labeling Chemicals. The primary benefit of the HCS is increased quality and consistency of information provided to workers, employers and chemical users by adopting a standardized approach to hazard classification, labels and safety data sheets.

Under the HCS, when a hazard is present, pictograms are used to quickly convey hazard types. Actionable and standardized information on storage and handling requirements allows for more consistent employee training, as well as a safer working environment. JM has even exceeded HCS requirements by providing Safe Use Instructions for those products that do not require an SDS.

PRODUCT IMPACT INFORMATION

Types of Information Available		YES	NO
Content, particularly with regard to substances that might produce an environmental or social impact		•	
Safe use of the product or service		•	
Disposal of the product or service		•	
The sourcing of components within the product or service			•
Other	Approximately 30 JM products are GREENGUARD and GREENGUARD GOLD Certified and may display this mark on product packaging.		

CUSTOMER HEALTH AND SAFETY

JM's scientists and engineers continually strive to design products that use resources efficiently while improving the health, wellbeing and productivity of building and vehicle occupants. In addition, our procurement departments continually seek to supply less harmful materials in a variety of products. This includes recycled glass cullet, renewable carbohydrate-derived binders, low sulfur fuels and soy bean-based de-dusting oils.

As a company, we commit to never knowingly making or selling any product that cannot be manufactured and used safely when appropriate work and installation practices are followed. During new raw material reviews with R&D, JM's Product Stewardship function provides guidance on the selection of new materials based on the relative health and safety impacts of the different materials under consideration.

WE PROTECT TODAY TO ENSURE TOMORROW

At JM, we believe that environmental respect is a fundamental business priority. We are committed to operating our business in compliance with all environmental regulations. In addition, we are mindful about preventing pollution and we care about protecting natural resources. We seek to minimize the impact of our operations, delivering many products that reduce energy consumption and make the world a better place.



ENVIRONMENTAL COMPLIANCE AND RECOGNITION

JM maintains a strong commitment to environmental compliance and performance. Continuous improvement in our environmental management programs is an integral part of our business strategy. Every day, JM employees seek ways to reduce and eliminate waste and be responsible stewards of natural resources.

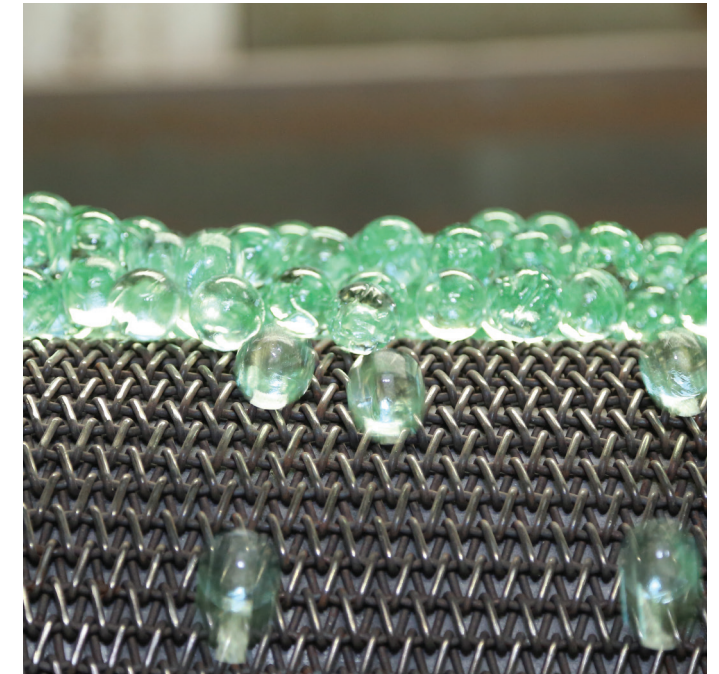
In 2016, the JM Annual Environmental Excellence Award was presented to the Etowah, Tennessee, plant for reducing its air permit deviation rate (APDR)¹. Between 2012 and 2016, they reduced APDR by 98 percent. Corrective actions included improving abatement equipment reliability, data integrity, monitoring systems and training.

In 2017, the JM Annual Environmental Excellence Award went to the Innisfail, Alberta, plant in Canada for its environmental achievements. JM's Innisfail plant has been in operation since 1977. The facility has expanded over the years to meet market demands and improve environmental performance. Operational enhancements have included steps to increase recycled content and recycled water, and actions to reduce waste and manufacturing emissions. The plant has the highest recycled content in its fiberglass products of any JM manufacturing facility, and one of the lowest rates of scrap sent to the landfill. Recently Innisfail installed a new manufacturing dust collection and recycling system to accommodate growth, while further reducing emissions and equipment failures.

From 2016 to 2017, JM did not have any significant monetary penalties for noncompliance with environmental regulations.² In aggregate, the sum of all penalties paid during both years were well below JM's defined significance levels. JM did have 17 notices of violation between 2016 and 2017.³

In 2016, our Waterville, Ohio, plant experienced a process water release into a tributary of the Maumee River which was reported to authorities, investigated and corrected. The quantity of water could not be determined.

In 2017, one spill at our Richmond, Indiana, plant triggered regulatory reporting. Less than one gallon of hydraulic oil from a failed hydraulic line on an off-road vehicle leaked onto an internal roadway. The spill was immediately cleaned; however, a small amount of oil may have reached a drain connecting to a sanitary sewer line. Because of the potential discharge to the sanitary sewer, the publicly owned treatment works was notified of the small spill and the mitigation measures. No further action was required.



A PRO-ACTIVE APPROACH ON SILICA

JM is taking proactive measures to prepare for a 2018 OSHA industrial mandate on respirable crystalline silica. The mandate covers employer responsibilities to limit worker exposure through monitoring and training, and by implementing controls where necessary.

Crystalline silica is found mainly as quartz in sand, which is the most abundant mineral found in the earth's crust. The most common uses of silica at JM is in manufacturing glass. JM also uses silica sand at some roofing plants.

JM has 15 U.S. plants that use silica sand or silica-containing raw materials. Since employee exposure determines compliance requirements, JM conducted exposure assessments at the impacted facilities. Based on the results, controls and work practices were modified and some sites required additional employee training.

¹ APDR is the relationship between the summation of monthly minutes in deviation of a limit or requirement and the number of compliance opportunity minutes included in the air permit. The deviations result from equipment malfunctions and human error.

² JM defines significant monetary penalties at \$75,000, which is a value rounded down from twice the daily maximum penalty under many environmental programs in the U.S.

³ JM tracks notices of violation (NOVs), which we strictly define as a written document from an agency with authority alleging that an environmental law, regulation or requirement was violated, and in which they require JM to take some action, such as pay a penalty, implement some corrective action or respond with actions to prevent recurrence. A single document can have more than one NOV if more than one violation is alleged.

ENERGY EFFICIENCY

2020 ENERGY GOAL: Implement projects that result in a 5 percent improvement in energy efficiency by 2020, over a 2014 baseline.

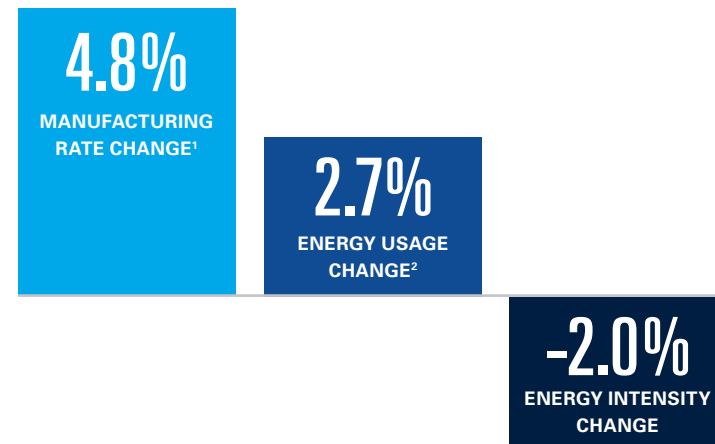
PROGRESS: JM remains committed to promoting energy efficiency in its operations. In 2017, strong demand increased JM's rate of manufacturing by 4.8 percent. However, energy usage increased by only 2.7 percent, and energy intensity decreased by 2 percent. This signals strong progress.

Adherence to the ISO 50001 framework for development of energy management systems (EnMS) has helped JM's German glass and spunbond operations exceed five-year energy efficiency targets of 5 percent improvement in specific energy consumption. Glass nonwovens plants in Wertheim, Steinach and Karlstein, Germany, achieved 10 percent improvement and spunbond operations in Bobingen and Berlin, Germany, achieved 11 percent improvement. A rigorous process of analysis and controls helped to focus on using less energy and going after the losses, like leaks in compressed air systems and control of pumps and compressors. The new target for the next five years is again, an improvement of 5 percent.

JM's Willows plant in California initiated a major lighting upgrade in 2016 designed to improve work conditions and energy efficiency. A new LED system replaced the inefficient lighting technology that was installed nearly ten years prior. The quality and level of light in the factory has improved with the higher lumen output per square foot and a more even distribution of light than the previous system. The annual energy savings is expected to be 6,221 MMBtu, resulting in an annual cost savings of approximately \$143,000. The new lighting system is expected to last over 20 years.

In 2017, our Penbryn, New Jersey, plant and our Edison, New Jersey, plant received an Environmental Stewardship Certificate from the New Jersey Department of Environmental Protection for achieving quantifiable reductions in energy usage from efficiency improvements. Both the Penbryn and Edison plants completed major projects in 2014 installing efficient lighting systems with motion sensors. The project resulted in reduced monthly energy usage at the Penbryn facility by an average of 39 percent.

2017 PRODUCTIVITY VERSUS ENERGY OVERVIEW



¹ Manufacturing Rate Change: the annual change in total manufacturing production volume.

² Energy Usage Change: the annual change in total direct and indirect energy consumption.

³ Energy and emissions data collected by multiple internal sources. All data is approximate and based on available data at the time of publication.

⁴ GHG and direct and indirect energy (electric) calculations based on EPA's Emissions & Generation Resource Integrated Database (eGRID) default emission factors. eGRID uses primary fuel mixtures by region. Emission calculations also based on The Climate Registry's 2013 Default Emission Factors, Table 14.2 and the U.S. Department of Energy Information Administration Form EIA-1605 (2007) Foreign Electricity Emission Factors, 1999-2002.

⁵ One gigajoule is equal to approximately 278 kilowatt hours of electricity or 26 cubic meters of natural gas.



DIRECT VERSUS INDIRECT ENERGY



TOTAL DIRECT AND INDIRECT ENERGY CONSUMPTION^{3,4}

In gigajoules⁵

Direct	2015	2016	2017
Coke	191,213	145,063	147,035
LPG	859	893	189
Natural Gas	10,498,407	10,940,111	11,280,582
Total Direct	10,690,479	11,086,067	11,427,806
Indirect	2015	2016	2017
Electricity	5,950,137	6,075,223	6,188,004
Total Indirect	5,950,137	6,075,223	6,188,004
TOTAL	16,640,615	17,161,290	17,615,810

ISO 14001 CERTIFICATION

2020 EMS GOAL: Implement Environmental Management Systems (EMS) in all North American and European plants.

PROGRESS: By the end of 2017, all 36 of JM's North American plants and all 6 of JM's European plants had an EMS conforming to ISO 14001. This brought the total number of plants conforming to the standards to 42, thus achieving JM's environmental management system goal.



In 2015, JM established a goal of implementing ISO 14001 requirements for EMS in all North American and European plants by 2020. ISO 14001 requirements enable JM to enhance its environmental performance by using a holistic approach that emphasizes continuous improvement.

In adopting ISO 14001, JM considers a variety of topics including air pollution, water and sewage issues, waste management, climate change mitigation and efficient use of resources. ISO 14001 standards also contribute to environmental performance



that complies with regulations and considers outcomes of JM product and service offerings from a lifecycle perspective. ISO 14001 certification compliments other ISO certifications such as ISO 50001 for energy management systems and ISO 9001 for quality management systems.

Since 2015, the ISO 14001 standard has been steadily implemented across our manufacturing plants in North America and Europe. A total of 42 JM plants have adopted the ISO 14001 standard. Eight of these plants will be officially certified in May 2018.



JM Engineered Products Plant
Bobingen, Germany

EMISSIONS

At JM, we manufacture products that improve lives and benefit society. We invest in our manufacturing processes in order to deliver value to our customers and foster growth within the business. However, our processes are inherently energy intensive, using high-temperature equipment that results in the emission of combustion by-products. We use a variety of prevention and control techniques to minimize potential impacts from these waste gases and particulates. A five-year strategic permit review process helps us meet production demands while proactively managing JM's air emissions and remaining in compliance with our operating permits.

In 2016 and 2017, JM experienced high demand for its products resulting in an increase in overall manufacturing activity. Due to the additional production, most figures related to air emissions and greenhouse gases increased. However, despite our manufacturing productivity increasing by nearly 5 percent, JM saw a reduction in greenhouse gas intensity by a rate of 2.5 percent. Additionally, various air pollutants changed due to JM's production mix or new testing requirements. JM has been consistent in updating and maintaining emissions performance calculations as new data has become available in an effort to ensure accuracy and promote performance improvements.

NON-GHG REGULATED AIR EMISSIONS BY POLLUTANT CATEGORY^{1,2,3,4,5}

Air Emissions in Kg

Air Emissions	2014	2015	2016
Carbon Monoxide	3,177,000	4,177,000	4,500,000
Particulate Matter	1,565,000	1,692,000	1,722,000
Volatile Organic Compounds	583,000	734,000	805,000
Nitrogen Oxides	775,000	804,000	831,000
Sulfur Dioxide	268,000	321,000	362,000
Total Criteria Pollutant Emissions:	6,368,000	7,728,000	8,220,000
Total Hazardous Air Pollutants (HAP) Emissions:	171,000	181,000	181,000

¹ 2016 Air Emissions and HAP data is the latest available. 2017 data will be reported in the 2018/2019 JM Sustainability Report.

² Data provided in earlier reports may differ from 2016/2017 report due to the implementation of more accurate measurement methodology.

³ Air emissions include emissions reported to regulatory agencies and monitored as required by permit.

⁴ 2014 emissions revised from prior report due to updated estimates.

⁵ VOC data reported only for North American facilities.

TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS⁶

Tonnes (metric) CO₂

Source	2015	2016	2017
Direct	613,000	636,000	659,000
Indirect	1,119,000	1,067,000	1,081,000
Total	1,732,000	1,703,000	1,740,000

⁶ GHG, direct and indirect energy (electric) calculations based on EPA's Emissions & Generation Resource Integrated Database (eGRID2014v2) default emission factors. eGRID uses primary fuel mixtures by region. Emission calculations also based on The Climate Registry's reporting protocol and the U.S. Department of Energy Information Administration Form EIA-1605 (2007) Foreign Electricity Emission Factors, 1999-2002. Research did not discover more current EFs for Germany, Slovakia, and China in CO₂e.

WATER

2020 WATER GOAL: Complete local water vulnerability assessment of all plants.

PROGRESS: JM has conducted an extensive survey to understand water supply sources. Survey results will contribute to the assessment of water vulnerability at all plants.

Water stewardship is consistent with our core value of protecting employees, customers and the environment. Water plays an essential role in our manufacturing operations across the globe.

At JM, we use water for processing and to cool equipment operating at high temperatures. Typically up to 95 percent of this non-potable water evaporates in our processes, which in many cases is unavoidable. Much of the rest of the water is recirculated to optimize usage and minimize discharge into wastewater treatment systems.

In 2017, we surveyed our plants to determine their sources of water supply. Based on preliminary results, we estimated that over 90 percent of JM's water supply comes from municipal water systems, with the remainder being supplied from underground wells. Generally, JM does not directly rely on surface water for its operations. JM is fortunate to have most of its operations located in water-rich regions of North America and Western Europe. JM has not experienced any adverse impacts from water shortages, but we continue to assess the business risks related to water.

WASTE AND RECYCLING

2020 WASTE GOAL: Reduce solid waste intensity 10 percent by 2020.

PROGRESS: The waste intensity metric is based on pounds of solid waste shipped to the landfill per ton of finished product shipped. Overall, JM's waste intensity was level for 2016 and 2017 with improvements across our North American glass and roofing products operations, being offset by the performance of our European glass operations and our North American non-glass insulation products. Our primary challenges were asset performance and the availability of landfill. Cost-effective ways to mitigate waste generation and recycle or reuse our waste continue to be investigated.

Responding to the demand for lightweight, high-strength spunbond nonwovens, JM has made significant investments in new state-of-the-art polyethylene terephthalate (PET) spunbond lines in Berlin and Bobingen, Germany.

Johns Manville GmbH's spunbond operations in Germany have taken positive steps along with governments and partners to achieve zero waste to landfills. Plant employees have successfully



Buffalo Creek Cleanup

JM Team

JM employees and family members were participants in the 20th Annual Buffalo Creek Cleanup in Cleburne, Texas. The JM team filled 21 31-gallon bags with trash. JM team leader Ricardo Santos stressed the role each of us can play in stormwater pollution prevention by picking up trash at home, school and work.

developed effective workflow separation and sorting capabilities for PET material waste. Both plants have established recycling and upcycling commercial partners that reuse these materials for beneficial purposes.

In addition, the Berlin and Bobingen plants have developed internal recycling initiatives for feeding reusable materials back into the manufacturing process. Our teams are also working with customers to reduce packaging and transportation requirements to minimize waste throughout the supply chain. Finally, the Bobingen operation has installed a new recycling line to process flakes produced from post-consumer PET bottles, increasing its use of recycled PET raw material significantly.

JM's plants in the U.S. recover, recycle and reprocess both pre-consumer and post-consumer materials to eliminate waste from the landfill, reduce the need to purchase associated raw materials and return resources back into the product lifecycle. For example, our Etowah, Tennessee, plant has recycled and reused about 18,700 tons of glass cullet, 105 tons of metal and 14 tons of cardboard over the past three years. Other efforts include:

- Harvesting and reusing scrap fiberglass and synthetic rubber materials from manufacturing processes at our Edison, New Jersey; Milan, Ohio; Winder, Georgia; and Cleburne, Texas plants.
- Recycling wood pallets, cardboard, paper, PVC and scrap metal at our Edison, New Jersey; Tuscon, Arizona; and Defiance, Ohio plants.
- Recycling waste plastic wrap, paper and foil facers and cardboard cores at our Jacksonville, Florida, plant.

JM sources and uses a significant amount of recycled glass, newsprint and PET, thereby reducing landfill input and energy use. JM cross-functional teams continue to improve processes to generate less waste and re-use materials.

AWARDS

“Best Conversion to AD Supplier HVAC” Award, Affiliated Distributors (AD)

Colorado Environmental Leadership Program, Gold Leader

Global Gypsum Innovation of the Year - Johns Manville DuraCore M300

Insulate America, Inc. Supplier of the Year

Kansas Department of Public Health and Environment Pollution Prevention Award, McPherson, Kansas plant.

Occupational Safety & Health Administration Voluntary Protection Program STAR status — 11 JM U.S. manufacturing facilities

Partner of Choice, David Weekley Homes

Strategic Supplier Awards, Distribution International Plants

Theodore H. Brodie Distinguished Safety Award, National Insulation Association

2017 N.B. Handy Supplier of the Year Award

APPROVALS

Dade County, Florida Product Approvals

Florida Building Code

FM Global (Factory Mutual)

International Code Council Evaluation Service (ICC-ES) approval for JM’s entire line of foam sheathings products

UL (Underwriters Laboratories)

CERTIFICATIONS

Customs-Trade Partnership Against Terrorism (C-TPAT)

ECOLOGO Certification

EPA ENERGY STAR® Partner

ENERGY STAR® Certification for JM’s APTM Foil-Faced Sheathing

EPA SmartWay® Certification for JM’s carrier fleet in Hazle Township, Pennsylvania

GREENGUARD Certifications for numerous fiberglass insulation products

GREENGUARD Gold Certification for JM’s entire line of Formaldehyde-free™ fiberglass building insulation

GREENGUARD AND GREENGUARD GOLD JM Corbond III and JM Corbond MCS SPF

GREENGUARD JM Corbond ocx SPF

CA-1350 VOC Emissions School, Office and Family Residence

ISO 14001 Environmental Management System — 42 plants total

ISO 50001 Energy Management System — five manufacturing facilities across Germany

SCS Certified Indoor Air Quality — Indoor Advantage Gold + Formaldehyde-free™

SCS Certified — Recycled content for fiberglass insulation products

SCS Certified — U.S. Environmental Protection Agency Region 9 and Alameda County, State of California Specifications for Environmentally Preferable Insulation

UL certification for DuraCore® 300 chopped strands used to reinforce wallboards in the building industry

ALLIANCES AND PARTNERSHIPS

Advanced Energy Economy

The Alliance to Save Energy

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

The American Composites Manufacturers Association (ACMA)

Asphalt Roofing Manufacturers Association (ARMA)

Association of the Nonwovens Fabrics Industry (INDA)

ASTM International

California Efficiency and Demand Management Council (CEDMC)

Center for Environmental Innovation in Roofing (CEIR)

Center for the Polyurethanes Industry, American Chemistry Council (CPI)

Conservation Colorado

Cool Roof Rating Council (CRRC)

Construction Specifications Institute (CSI)

European Alliance for Thermoplastic Composites (EATC)

Electricity Consumers Resource Council (ELCON)

EPDM Roofing Association (ERA)

European Pultrusion Association (EPTA)

European Disposables and Nonwovens Association (EDANA)

Federation of Reinforced Plastics (AVK) in Germany

Foam Sheathing Committee

Glass Alliance Europe, the European Alliance of Glass Industries

Glass Manufacturing Industry Council (GMIC)

GlassFibreEurope, the European Glass Fiber Producers Association

Heating, Air-conditioning & Refrigeration Distributors International

Housing Innovation Alliance

Industrial Energy Consumers of America (IECA)

National Insulation Association (NIA)

National Women in Roofing (NWIR)

North American Insulation Manufacturers Association (NAIMA)

Polyisocyanurate Insulation Manufacturers Association (PIMA)

Reliable Energy Codes Alliance

SMC/BMC Alliance in Europe

Single Ply Roofing Industry (SPRI)

Sheet Metal and Air Conditioning Contractors’ National Association (SMACNA)

Southwest Energy Efficiency Project (SWEEP)

Spiral Duct Manufacturers Association (SPIDA)

TECH-FAB Europe

U.S. Department of Energy, Building America Program

U.S. Environmental Protection Agency (EPA) ENERGY STAR Partner

U.S. Environmental Protection Agency (EPA) SmartWay Transport Partner

U.S. Green Building Council (USGBC) Gold Member



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The 2016/2017 JM Sustainability Report marks JM's sixth report detailing enterprise-wide sustainability initiatives and economic, environmental and social impacts. **G4-17**

At JM, we see publishing a sustainability report as a progress marker and a comprehensive resource where stakeholders can learn more about key priorities, global operations and corporate culture.

Following the publication of the 2015 JM Sustainability Report in Spring 2016, the decision was made to transition from an annual reporting schedule to a biennial schedule. However, each year JM continues to monitor sustainability progress and continually engages its stakeholders as part of corporate and sustainability initiatives. JM identifies high-priority internal and external stakeholders utilizing a variety of mechanisms. Detailed information on JM's approach to stakeholder engagement and materiality from ongoing stakeholder dialogue is available on pages 12 and 13 of this report. JM's sustainability reports are available on our website at www.jm.com/en/sustainability/.

To ensure that insights from all areas of the business are represented in the report, a cross-functional team of employees contribute to the reporting process. Team responsibilities include identifying and prioritizing stakeholders; understanding material content for inclusion in the report; and providing economic, environmental and social data aligning to Global Reporting Initiative (GRI) guidelines and performance indicators. **G4-18**

The content of this publication reflects information and metrics gathered during the reporting period of Jan. 1, 2016 through Dec. 31, 2017. Where possible, we have included additional company and product information to provide context regarding our business approach and long-standing sustainability efforts. Where JM oversees wholly owned operations and joint ventures, data from these organizations are included in this report. **G4-17**

JM created this report in accordance with GRI sustainability reporting guidelines in an effort to provide an appropriate level of transparency. GRI is a widely recognized reporting standard for organizations focused on measuring and managing the economic, environmental, social and governance implications of their business. JM does not currently seek external assurance services for the report and there is no formal internal policy in place requiring such assurance. External assurance options are evaluated and discussed as part of the reporting process.

JM's 2016/2017 Sustainability Report was developed 'in accordance' with the GRI G4 Guidelines Core option. It has undergone review by GRI's Materiality Disclosures Service to confirm the correctness of the locations of the G4 Guidelines Materiality Disclosures. For a full list of GRI General Standard Disclosures, Materiality Disclosures and Specific Standard Disclosures reported in 2016 and 2017, please refer to the GRI Index found on pages 36 and 37. Visit www.globalreporting.org for more information.

JM's 2016/2017 Sustainability Report communicates our corporate commitment to sustainability. It provides a two-year snapshot of JM's performance and approach to conducting business in a responsible way that respects our stakeholders, the environment and our communities.

2018 marks an important milestone at JM: our 160th year in business. JM has come a long way from a small, New York City basement to a global leader shaping the way we live and work in an ever-changing built environment. JM has maintained its place as an industry leader because of the dedication of our people and our steadfast commitment to operating our business responsibly. As with all companies, JM's continued success will depend upon our ability to improve, adapt and uphold trustworthy relationships, keenly focused on delivering the **JM Experience**. We understand that even greater effort and time must be dedicated to driving performance, fueling growth and preparing for the opportunities that will arise. A crucial component enabling JM to achieve our objectives is empowering our people and applauding their sense of purpose. The bonds and collaboration between employees and managers cultivate an even stronger culture, transfer of knowledge and inspired view of what we can achieve together.

OUR PEOPLE ARE SUPPORTED BY OUR VALUES. THESE IDEALS INSPIRE THE WAY WE LIVE AND WORK.



We are PEOPLE champions

Our employees and customers are at the core of everything we do. We strive to see the world through their eyes.



Our PASSION is in going the extra mile

We pursue fresh ideas and embrace new approaches to elevate how we work and deliver value.



We PERFORM at a superior level

We are committed to delivering profitable growth and a sustainable competitive advantage.



We PROTECT today to ensure tomorrow

Protecting our customers, employees, families and the world around us is our responsibility.

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