

## An Overview of Sustainability at 3M



#### A Message From Our CEO



"As we celebrate our accomplishments, we recognize the magnitude of the global challenges we are all looking to address." Since 1902, 3M has been improving lives. Social and environmental stewardship is central to who we are and is embedded throughout our vision:

- 3M Technology Advancing Every Company
- 3M Products Enhancing Every Home
- 3M Innovation Improving Every Life

With operations in more than 70 countries — and 55,000 products sold across nearly 200 countries — we are intricately woven into the global economy and deeply invested in humanity. No one is ever far from a 3M product, which empowers us to make a difference city by city, village by village and person by person.

Rapid communication advances are quickly merging our world into a global community with shared values. Together, we face uncertainties surrounding energy availability and climate change, water quality and availability, raw material scarcity, education, employment, and human health and safety.

It's clear that these global dynamics are challenging the sustainable growth of future generations, which is why 3M is using its greatest assets — ideas and innovation — to address these challenges.

With industries ranging from healthcare to electronics to automotive, we invent technologies that make daily life easier, safer and more fulfilling. Some of the recent ways in which we've applied our ideas and innovation for a more sustainable future include the following:

- In 2014, for our worldwide energy-conservation efforts, we earned the U.S. Environmental Protection Agency's ENERGY STAR® award. This was the 10th consecutive year 3M received the honor, an industry first. We were also, again, listed on the Dow Jones Sustainability Index – a credit we've had since its inception in 1999.
- We have developed and launched an increasing number of sustainability-focused products, including energy-efficient films for tablets, Post-it® Greener Notes, air-barrier building solutions, Envision® graphics films, 360 Encompass<sup>™</sup> health information system, and an energy-saving, award-winning LED technology.
- The continued success of our Pollution Prevention Pays program, which has prevented nearly 2 million tons of air, water and waste pollution, and the reduction of our global greenhouse gas emissions by 57 percent from 2002 to 2013 on an absolute basis (even as the company sales grew 30 percent over the same period of time).
- Ongoing support to protect and restore vital ecosystems around the world. By working with partners such as The Nature Conservancy, the 3M Foundation has provided more than \$21 million to preserve more than 1 million acres.
- More than \$61.6 million in global cash and in-kind product donations in 2013.
- In early 2014, we joined the United Nations Global Compact. While 3M has always acted in accordance
  with the core values represented by the Compact, we are proud to formalize our commitment to its
  10 principles in the areas of human rights, labor, environmental and anti-corruption and to grow our
  partnership with the organization.

As we celebrate our accomplishments, we recognize the magnitude of the global challenges we are all looking to address. This will not be easy, and it will require shifts in how we operate, how we make long-term decisions and how we collaborate. But we firmly believe that, by working with our customers and partners, and by empowering people to exercise their own creativity and passion, we can drive the transformational changes necessary for the success of both business and society.

3Mers are a committed team, 89,500 strong, poised to help create a more sustainable future. We intend to do this by designing products that support our customers' sustainability efforts, embedding sustainable practices across our supply chain, and, perhaps most importantly, joining together with a shared purpose.

I am proud to be a 3Mer committed to this effort and excited about the role 3M can play in helping everyone, everywhere, live a better life.

Inge G. Thulin Chairman, President and CEO

### **Sustainability Progress**

GOAL ACHIEVED: **80%** of supplier **80%** spend in top 10 high-risk countries reviewed for alignment with 3M Supplier policies and standards

Reduced GHG Emissions by 57% nearly 100 million metric tons in 11 years even as the company grew sales and production



Nearly \$125 million of cash and in-kind product donations in 2012 and 2013

**3M EHS** onboarding plans in **100%** place for **100%** of acquired operations In 2013, recycled 37% of total water used



Approximately **50** of TOTAL WASTE **50** generated annually is **recycled** or **reused** 

Nearly ½ of MANUFACTURING SITES GLOBALLY have developed local stakeholder engagement plans

# **Our Sustainability Strategy**

"Sustainability is a natural part of who we are. We've been operating with sustainability in mind since before it was popular. Environmental and social considerations — both in our own operations and across our supply chain — have been part of our company's value system from the beginning."

- Jean Sweenev. Vice President, 3M Environment, Health and Safety and Sustainability Operations

"By partnering with our customers to better understand these challenges, and by empowering the passion and expertise of 89,500 3Mers, we see an opportunity to create technologies that drive real change and real impact toward making a better future. We are currently increasing the number of sustainable products we create, deepening our approach to operational excellence and expanding our partnerships, particularly with our customers, to bring our vision to life."

> - Gayle Schueller, Vice President, 3M Global Sustainability

At 3M, we look at sustainability in terms of shared global needs and the future of our business. As the population grows, particularly in emerging economies, challenges like energy availability and security, raw material scarcity, human health and safety, education, and employment must be addressed to ensure people across the globe can lead healthy, fulfilling lives.

With this in mind, social and environmental stewardship is core to the sustainability of our business and our vision for growth:

- 3M Technology Advancing Every Company
- 3M Products Enhancing Every Home
- 3M Innovation Improving Every Life

Starting with technology and culminating with the improvement of every life on the planet, we are committed to driving a growing business while supporting the personal growth of everyone on the planet.

Like many organizations, we operate with the intent to balance the three key pillars of sustainability. To that end, the principles by which we operate are as follows:

- Economic Success: Build lasting customer relationships by developing differentiated, practical and ingenious solutions to their sustainability challenges.
- Environmental Protection: Provide practical and effective solutions and products to address environmental challenges for ourselves and our customers.
- Social Responsibility: Engage key stakeholders in dialogue and take action to improve 3M's sustainability performance.

While we have been a leader in environmental stewardship for decades, we recently sharpened our focus and began a transformational shift in how we balance these three pillars toward overcoming the global challenges we all face.

Every day, 3M innovation aims to tackle the world's most pressing areas of concern:



Health & Safety

Education & Employment





Energy & Climate

The following pages outline these challenges and how we're addressing them for the sustainability of our planet, our business and our daily lives. To learn more about how we identified and prioritized these key challenges.



The world's population is growing larger, living longer — and consuming more. With this increased pressure on our finite natural resources and materials, we must move beyond low-cost, recyclable materials to renewable products.

As competition for nonrenewable materials increases, companies and people have been forced to become smarter and more efficient about resources when designing product lifecycles. For example: laptops, smartphones and tablets. To keep pace with today's technology, consumers are upgrading devices at a faster pace and creating a greater need for raw materials to manufacture those products. This puts a strain on the world's resources, and companies that address this issue not only help the planet, but they also gain a competitive advantage in the marketplace.

3M can't solve every raw material challenge, but we can create solutions and practices to address them — and to help our customers address them. We can develop renewable replacements for impacted resources, revolutionize recyclable materials and become more sustainable. We've worked on this challenge for decades — and we plan to continue innovating well into the future.

**It's time make electronic devices more recyclable.** 3M's Thermal Bonding Films and Plastics Bonding Adhesives extend the potential lifespan of mobile devices and make it easier to recycle them. Our electronics bonding solutions enable faster assembly times and simplify rework by helping manufacturers fix damaged parts and salvage key components.

**Cleaning supplies can make the whole world cleaner, not just the home.** Take tequila, for example, made using agave. Since only the juice is used, often the rest of the plant is left to decompose in fields. 3Mers from the U.S. and France, looking to manufacture 3M products with more sustainable materials, partnered to create scrubbing fibers made of 50 percent agave. These fibers are the scouring muscle of a plant-based-fiber sponge that uses 23 percent recycled material. It took a lot of work to adapt the material to manufacturing processes, but thanks to their passion and persistence, they were able to create the Scotch-Brite® Greener Clean Non-Scratch Scrub Sponge.



Photo courtesy of Gary and Phyllis Thompson

"Sustainability is about using materials to their fullest. Sometimes that means unlocking their hidden potentials."

> *— Myhanh Truong, 3M Product Development*



People consume it, farm with it and manufacture products with it. Reducing water consumption and improving water quality are important elements of environmental stewardship.

Water is our world's most valuable natural resource. Despite its prevalence, freshwater makes up only 2.5 percent of our total global water supply<sup>1</sup>. A majority of freshwater is used for irrigation purposes, but nearly 30 percent of it is used for domestic consumption and industrial functions<sup>2</sup>. Aging infrastructure and increased demand places a premium on clean, accessible water for 3M and our customers.

"The connections between water and energy, human health, manufacturing, food supply ... make it vitally important that we innovate with this global challenge in mind. And that we do so in partnership with our customers, suppliers and communities."

> – David Schaefer, Vice President and General Manager, 3M Purification

Our customers are finding it difficult to source or deliver clean, accessible water. We can help them solve this problem by developing technology that increases water efficiencies and improves quality.

**Rehabilitate and protect water infrastructure.** To use water resources with greater efficiency and safety, our customers need solutions to protect water quality and reduce losses from water main deterioration, breaks and leaks. 3M<sup>™</sup> Scotchkote<sup>™</sup> water pipe coatings and linings help rehabilitate aging potable water infrastructure while protecting new infrastructure.

Water challenges are very local. In China, water challenges vary greatly across the country. So, 3M's China Purification Residential Water Product Development team worked to understand the multiple local water source challenges and developed a residential



product portfolio that supports human health and safety, as well as 3M business growth. That's a winwin. The team used 3M's unique carbon/membrane technology to create products that would remove the broad spectrum of local contaminants. The "whole house" portfolio now offers point of use water filters, water softeners, a shower filter and water heaters (specifically created for local preference to drink hot water).

<sup>1</sup>"Water Use Rising Faster than World Population" Reuters (Oct, 2011) <sup>2</sup> World Resources Institute, (http://www.wri.org/our-work/topics/water)



Access to a dependable energy supply directly affects all businesses and communities. Energy usage and climate concerns require systematic change, and we're here to drive that forward.

From air emissions to fossil fuels, 3M takes a proactive and collaborative approach to addressing energy demand and climate change — in our operations and for our customers. The issues around effective use of energy resources and climate change are complex and interconnected. At 3M, we are focused on understanding those connections and seeking solutions that promote energy conservation, clean energy infrastructure, and reductions in atmospheric greenhouse gases. We already have many products and technologies that reduce the impact of energy use, promote energy efficiency, and reduce greenhouse gases. Our goal is to continue developing and implementing global concepts for the greatest long-term impact.



Global health and safety issues are prevalent, and concerns are growing to ensure safe and healthy workplaces around the world. Creative innovation, technology, education and collaboration are all critical if we are to tackle the human health and workplace safety concerns of today, for the sake of tomorrow.

Governments, corporations and consumers are driving global demand for safety, protection, healthcare and food safety solutions. Food poisoning and water-borne illnesses lead to the deaths of 3 million people across the globe each year. At the same time, approximately one of every 20 hospitalized patients in low- and middle-income countries will contract an infection while under medical care.

"3M is known for its commitment to innovation, and that commitment doesn't just apply to products. We're innovative in HOW we invent — seeking out ways to improve our processes, including greater energy efficiency and resource savings. Moreover, we share our best practices in an effort to pay it forward."

- Steve Schultz, 3M Corporate Energy Manager

**Smaller footprint, greater power.** In collaboration with Intel and SGI, 3M developed a revolutionary two-phase immersion cooling technology which is now being used as a proof-of-concept in a fully functional supercomputer. This technology using 3M<sup>™</sup> Novec<sup>™</sup> Engineered Fluids can reduce cooling energy costs by 95 percent and reduces water consumption by eliminating municipal water usage for evaporative cooling. Heat can also be harvested from the system and reused for heating and other process technologies, such as desalination of sea water.

**Unyielding commitment, an industry first.** In 2014, the U.S. Environmental Protection Agency (EPA) recognized 3M for a decade of global energy management achievements with the EPA ENERGY STAR Sustained Excellence Award for the 10th year in a row. 3M is the only industrial company in the world to attain this privilege. Award-winning efforts included 252 energy

"The health of our employees, our customers and our communities has always been a priority at 3M. I'm proud of the role we play in making people healthier across the globe."

Greg Anderson, Technical Director,
 3M Critical and Chronic Care Solutions

For decades, 3M has had entire business divisions focused on creating products and services for human health, protection, security and safety. At the same time, the company has embraced this commitment in its own operations.

**Making hospital patients a bit more comfortable.** Research shows that core body temperature drops rapidly following the induction of general anesthesia, which puts patients at an increased risk for unintended hypothermia, leading to higher mortality rates, longer hospital stays and an increased rate of wound infection. 3M (TM) Bair Paws (TM) Warming Units



management projects resulting in savings of \$8.79 million and reductions of 61,700 metric tons (MT) of CO2, the formation of Centers of Excellence to integrate all aspects of sustainability into business strategies across the

company, initiatives to bring energysaving innovations to diverse markets, and engagement with global communities in energy and sustainability dialogues.



are revolutionary forced-air warming systems that help to prevent and treat hypothermia while enhancing patient comfort.

**Protecting our most important asset, 3Mers.** Our innovations are only possible with the minds, talent and commitment of our 89,500 employees worldwide. So, we put a lot of thought and effort into keeping them safe and healthy. Our robust Safety and Health Policy applies to all 3M operations worldwide. It holds anyone working at or visiting a 3M location to strict safety and

health requirements. Based on our core business values, the policy stems from our integrated vision for safe and healthy people, products and planet.





#### **Education & Employment**

Global unemployment rates are expected to remain steady through 2017, particularly among youth. Today's job market has

fewer opportunities, with most available jobs too specialized for young people and recent graduates. We're training the workforce of tomorrow, while empowering the workforce of today.

Young people around the world are suffering from high unemployment rates as the number of science, technology, engineering and math (STEM) graduates is insufficient to meet today's technical job market demands. As a technology company, 3M recognizes the importance of well-trained STEM graduates — we need young minds to step into specialized roles and help our company solve future challenges. At the same time, the workforce of today must feel supported to follow its own insights in pursuit of problem-solving, thus making education and employment both a social and a business challenge.

"Management that is destructively critical when mistakes are made kills initiative. And it's essential that we have many people with initiative if we are to continue to grow."

> William L. McKnight, Former President (1929–1949) and Chairman of the Board (1949–1966), 3M

**Energizing the classroom with 3M innovation.** 3M is a leader in partnering with local schools on science, technology, engineering and mathematics (STEM) related programs. 3Mgives, the company's strategic philanthropic and global community engagement organization, supports programs like FIRST Robotics and Destination Imagination. These programs engage students with challenge-based projects, addressing global challenges



such as natural disasters or rainforest protection. 3M also provides grants to teachers to create and implement programs that bring science to life and that connect learning to the world beyond the classroom, student scholarships for higher education in STEM-related fields, and investments in technical training programs such as mechatronics.

**A "15% culture" for 65 years.** A core belief at 3M is that creativity needs freedom. That's why, since about 1948, we've encouraged our employees to take our resources, to build up a unique team and to follow their own insights in pursuit of problem-solving — and to spend 15 percent of their working time to do it. If there's a secret ingredient to 3M's more than 100 years of innovation, it's this: Give talented people the time and resources to prove the worth of their ideas, and in the long run, you'll come out well ahead. Even if those talented people are mistaken, you've learned something.



For more information, visit 3M.com/sustainability or check out #3Msustainability.