



THINKING FORWARD

2012 EMC Sustainability Report

EMC²[®]

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EMC CORE VALUES

- CUSTOMERS FIRST
Focus on their needs; deliver on our promises.
- SENSE OF URGENCY
Seize opportunities quickly; get it done now.
- RESULTS-DRIVEN/ACCOUNTABILITY
Complete what you say you are going to do; no excuses.
- INTEGRITY
Treat others with respect and do the right thing always.
- INNOVATIVE PROBLEM SOLVING
Think creatively to provide the solution.
- EXPERTISE/QUALITY
Develop and deliver best-in-class products and services.
- UNDERSTANDING THE BUSINESS
Know how we provide real value to our customers.
- TEAMWORK
Collaborate smoothly with others; leverage our diversity.
- COMMUNICATION
Maintain open, honest interaction; build relationships on trust.
- ADAPTABILITY
Stay flexible; adapt as circumstances change.

MESSAGE FROM EMC CHAIRMAN & CEO JOE TUCCI



DEAR STAKEHOLDER,

At EMC, we are looking toward the future.

The IT industry is in the midst of a major transformation as dramatic as any the industry has experienced before. EMC is at the nexus of three of the most important drivers of this transformation: the adoption of cloud computing, the emergence of real time, predictive Big Data analytics, and the need to protect and secure information and IT networks to ensure trust. At the same time, the world around us is undergoing massive demographic, environmental, and cultural shifts that affect us as members of our industry, as members of our local communities, and as individuals.

As a company intent on creating lasting value for our customers, employees, investors, and communities, we work to shape aspects of our changing world that we can influence and we strive to adapt where we must. Incorporating principles of sustainability in our product designs, operations, and decision-making enhances our resilience and agility in the face of global social and environmental events. Sustainable business practices create financial value by generating savings from more efficient products and operations and revenues from new market opportunities. Our commitment to a healthy and sustainable future also helps us attract, retain, and engage our talent pool. Above all, being conscious of the impacts of our business on all of our stakeholders makes us a better partner, supplier, employer, and a better neighbor.

Our goal is for EMC to be a company that understands and considers the near- and long-term economic, environmental, and social implications of every choice we make. Through the efforts of an amazingly talented workforce of nearly 60,000 worldwide, and with the support of numerous stakeholders, we are making progress toward that goal. But we are not there yet. That is why I invite all of our internal and external stakeholders to explore this report to learn about our initiatives, accomplishments, and the work still ahead of us.

I am incredibly optimistic about our future and our ability to seize this opportunity. Thank you for supporting us on this journey.

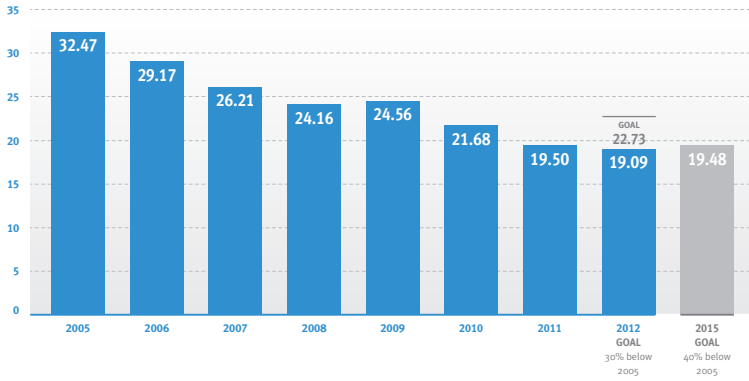
A handwritten signature in black ink, appearing to read "Joe Tucci". The signature is stylized with a large, sweeping loop at the bottom and a horizontal line extending to the right.

JOSEPH M. TUCCI

KEY PERFORMANCE INDICATORS DASHBOARD

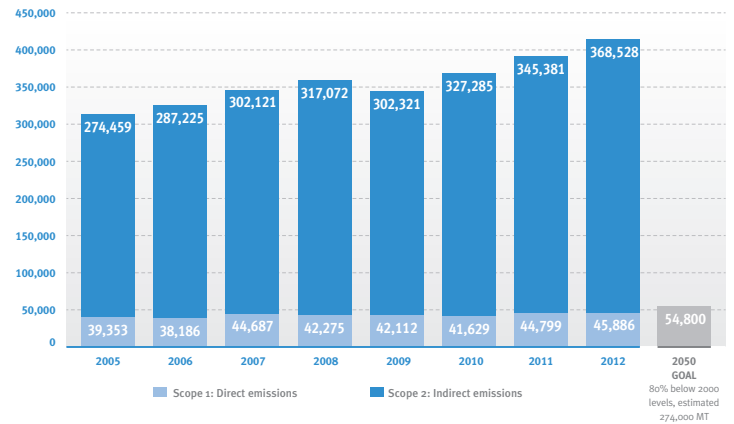
EMC GLOBAL GHG EMISSIONS INTENSITY PER \$1M REVENUE SCOPE 1 AND 2

ALL LEASED AND OWNED GLOBAL FACILITIES AND MOBILE ASSETS (INCLUDES VMWARE AND VCE)—METRIC TONS CO₂e



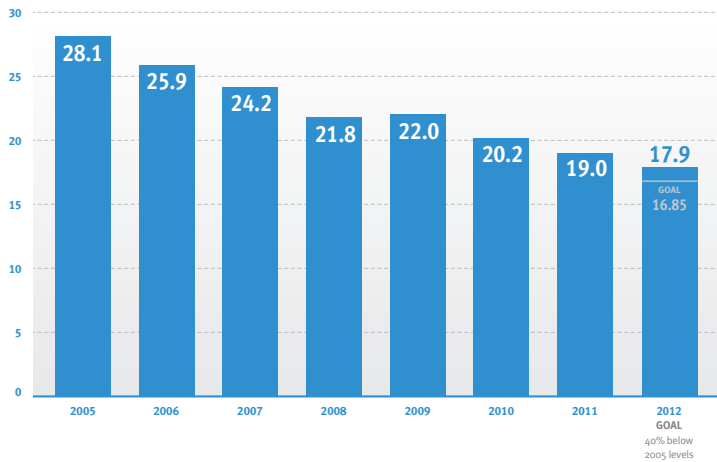
EMC GLOBAL ABSOLUTE GHG EMISSIONS SCOPE 1 AND 2

ALL LEASED AND OWNED GLOBAL FACILITIES AND MOBILE ASSETS (INCLUDES VMWARE AND VCE)—METRIC TONS CO₂e

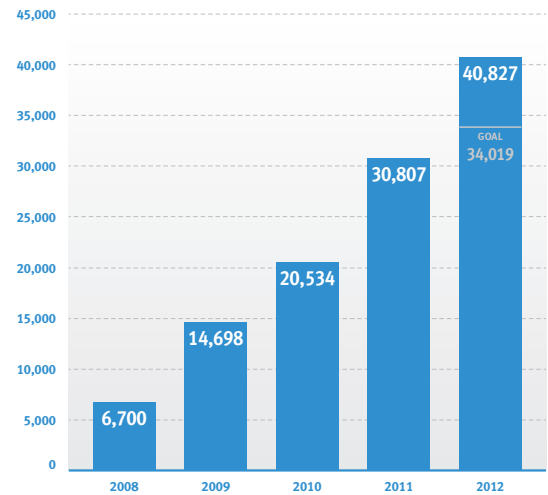


ENERGY CONSUMPTION PER EMPLOYEE

ALL LEASED AND OWNED GLOBAL FACILITIES (INCLUDES VMWARE AND VCE)—MWH/EMPLOYEE

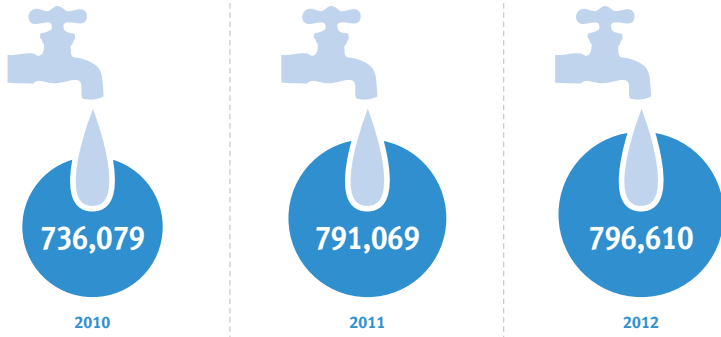


CUMULATIVE EWASTE DIVERTED FROM LANDFILLS GLOBAL—METRIC TONS

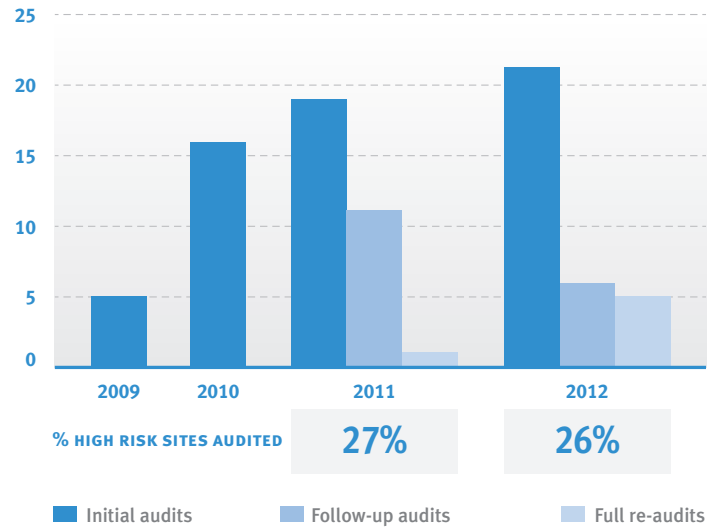


GLOBAL WATER WITHDRAWAL

ALL LEASED AND OWNED GLOBAL FACILITIES
(INCLUDES VMWARE AND VCE)—CUBIC METERS (M³)

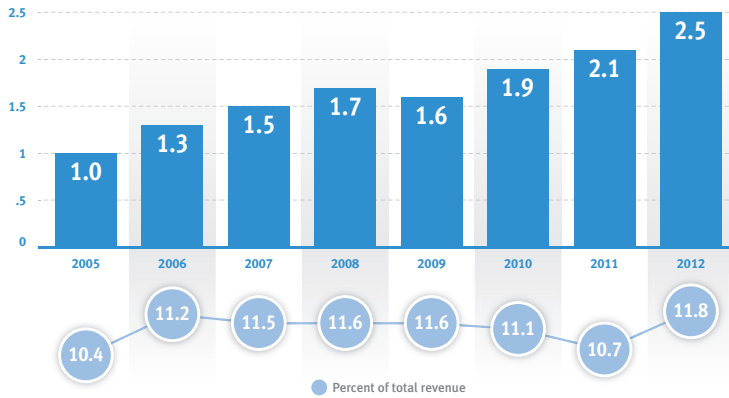


NUMBER OF SUPPLIER SER AUDITS, 2009-2012

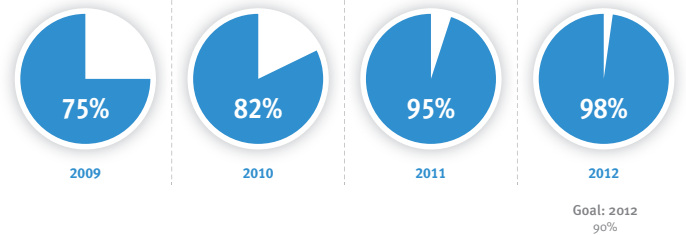


EMC INVESTMENT IN R&D

BILLION \$USD

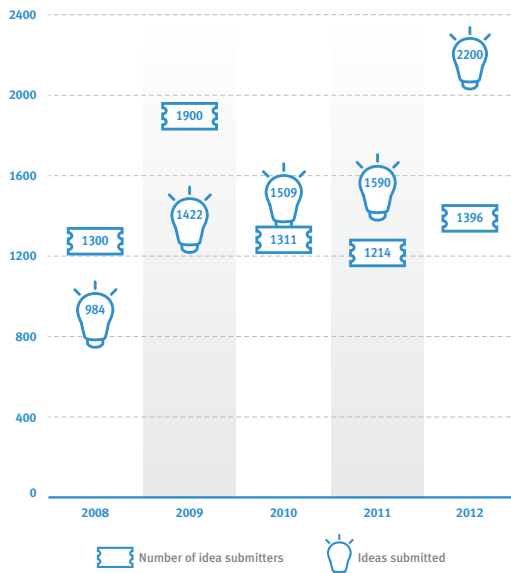


PERCENT BY SPEND OF SUPPLIERS REPORTING SCOPE 1 AND 2 GHG EMISSIONS DATA



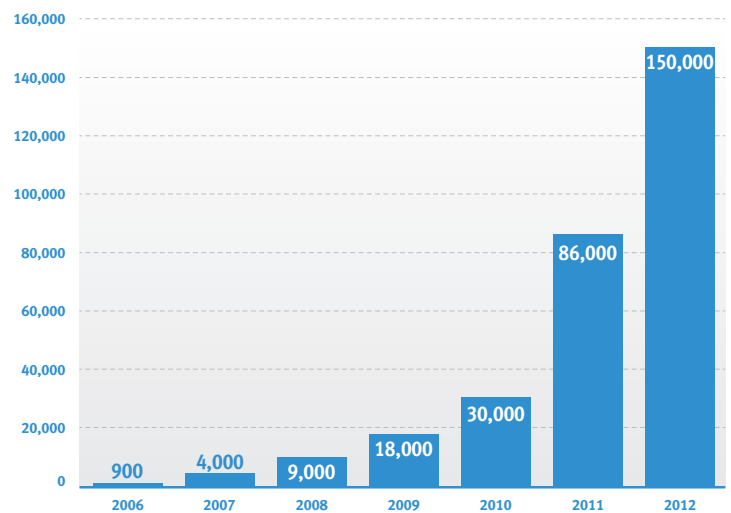
INNOVATION CONFERENCE PARTICIPATION

GLOBAL



NUMBER OF STUDENTS PARTICIPATING IN EMC'S ACADEMIC ALLIANCE PARTNERSHIP

GLOBAL, CUMULATIVE



SUSTAINABILITY AT EMC

At EMC, we are driven every day to do better and be better. This determination for continued improvement guides every decision we make. We continuously evaluate and identify areas to further improve how we operate our business.

We believe that investing in a sustainable future makes our company stronger and healthier, and creates long-term value for our shareholders and other stakeholders. Sustainable business practices create financial value by generating savings from more-efficient products and operations, and revenues from leveraging new market opportunities. Incorporating principles of sustainability into our product designs, operations, and decision making enhances our resilience and agility in the face of global social and environmental events. This commitment to sustainability also plays an increasingly important role in attracting, retaining, and energizing our talent pool.

EMC's sustainability efforts are founded on three pillars:

- Sustaining ecosystems (the environmental dimension), which addresses how we manage the environmental impacts and dependencies of our business and value chain
- Strengthening communities (the social dimension), which reflects the important role we play in strengthening and transforming our communities around the world
- Delivering value (the economic dimension), which encompasses our commitment to delivering value for customers, employees, shareholders, and other stakeholders

MATERIALITY FOR SUSTAINABILITY

Our sustainability strategy is centered on the issues identified in our [Sustainability Materiality Assessment](#) as most important to EMC, our industry, and our internal and external stakeholders. These topics are the focus of our sustainability priorities and include:

- Energy efficiency
- Business ethics
- Information privacy and security
- Innovation
- eWaste
- Climate change mitigation
- Human rights
- Hazardous substances
- Supply chain responsibility
- Positive impact of information technology (IT)

KEY SUSTAINABILITY ISSUES

CLIMATE

Atmospheric CO₂ is now 140% of pre-industrial levels

Source: World Meteorological Organization
Greenhouse Gas Bulletin, No. 8, 19
November 2012.



Weather-related events
create risks to the EMC
supply chain

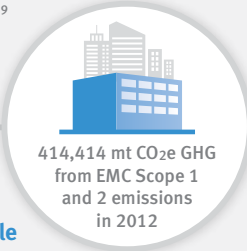
41%

EMC achieved the 2012 emissions/
revenue 30% reduction goal in 2010 and
the 2015 emissions/revenue 40%
reduction goal in 2012 (base year 2005)

ENERGY

Demand for
energy could double
or triple by 2050

Source: World Business Council for Sustainable Development,
Facts and Trends to 2050 Energy and Climate Change.



8:1

Ratio of energy consumed by EMC
products in use compared to EMC's
facilities operations annually



EMC offers a range of cloud
computing solutions for customers
that can improve energy efficiency

EWASTE

Approximately 82% of U.S. eWaste is disposed of in the trash

Source: Electronics Take Back Coalition, 2009 estimate based on 3.19 million tons of eWaste generated.

<1%

Less than 1% of EMC eWaste
worldwide goes to a landfill



EMC's goal is to work only
with e-Stewards or R2 certified
ITAD suppliers by 2014

HAZARDOUS SUBSTANCES

Many substances in electronics products have been
identified as potentially hazardous to human health



EMC understands the importance of
keeping hazardous substances out of
the environment and waste stream



EMC worked with suppliers to identify
and implement halogen-free substances
for use in printed circuit boards

INNOVATION

Without innovation, companies risk stagnation,
commoditization, and irrelevance in a world where
change continues to accelerate



Employees representing 28 countries
participated in the Innovation Showcase



2,200 ideas submitted across
28 categories in 2012

PRIVACY AND SECURITY

416: The median number of days to detect
advanced attackers

Source: Mandiant, M-Trends 2012: An Evolving Threat, March 2012.



Focusing on these areas
reduces risk to both EMC
and our customers



RSA's suite of products and solutions
delivers innovative security analytics and
unique capabilities to solve a wide range
of information-security challenges

BUSINESS ETHICS

Levels of public trust in the private sector are still
largely pessimistic

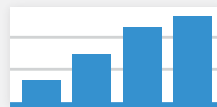
Source: BSR/GlobeScan State of Sustainable Business Poll 2012, 18 Oct 2012.

100%

All employees and contractors
are required to follow EMC Business
Conduct Guidelines

SUPPLY CHAIN RESPONSIBILITY

Companies' visibility into suppliers' social and
environmental performance and risk, and their ability
to drive positive change, are increasing every year



EMC continues to increase the
number of high-risk suppliers audited,
to help guide corrective actions



New incentives: Supplier SER award
created and given in 2012

LEARN MORE

[SUSTAINING ECOSYSTEMS:
ENERGY & CLIMATE CHANGE](#)

[SUSTAINING ECOSYSTEMS:
SUPPLY CHAIN SOCIAL &
ENVIRONMENTAL RESPONSIBILITY](#)

[CLIMATE CHANGE POLICY STATEMENT](#)

[2012 INVESTOR CDP RESPONSE](#)

[2012 CDP WATER DISCLOSURE REPORT](#)

SUSTAINING ECOSYSTEMS

EMC is committed to sustaining and restoring our planet's ecosystems and addressing the impacts our business has on the environment and human well-being throughout our value chain. Our forward-looking approach is reflected in the commitments and progress we've made in our priority areas, including energy and climate change, supply chain responsibility, and material use and waste. We also drive the transformative power of IT beyond the boundaries of our business by looking for innovative ways to engage our supply chain and help reduce the IT industry's global impacts.

ENERGY USE & CLIMATE CHANGE

EMC recognizes and embraces our role in mitigating our contributions to climate change. We participate in and critically assess the conversations regarding climate change, then adapt our operations as appropriate by optimizing our operations, delivering products and services that enable customers to better manage the growth of data, and engaging with our supply chain partners.

Our goals:

- Achieve at least 80 percent absolute reduction in greenhouse gas (GHG) emissions below 2005 levels by 2050 in accordance with the Intergovernmental Panel on Climate Change's (IPCC's) Fourth Assessment Report recommendations
- Obtain 50 percent of electrical needs from renewable sources by 2040
- Achieve a 40 percent reduction in GHG per revenue below 2005 levels by 2015

Since 2005, our energy intensity by revenue—the amount of global GHG we emit per \$1 million we earn—has declined more than 40 percent from 32.47 to 19.09 metric tons, exceeding our 2012 target of 30 percent and meeting our 2015 goal. We retired this goal in 2012 and plan to set a new one in 2013. Our efforts remain focused on the areas that account for our highest GHG emissions and present the greatest opportunity to drive improvement through our own actions and influence.

For instance, we implemented energy-efficiency initiatives at our owned and operated facilities ranging from more-efficient lighting systems to expanded energy monitoring systems that capture more data about the impact of mechanical systems on overall building performance. These efforts are clearly on display in EMC's energy-efficient, 100-percent cloud data center in Durham, North Carolina, which earned the Leadership in Energy and Environmental Design (LEED) Gold certification in 2012. Efficient technologies utilized at this site include:

- Free air cooling for more than half of the year
- Flywheel technology that eliminates the need for batteries in uninterruptable power systems
- Hot & cold aisle containment that increases temperature regulation control for high-density equipment

CONFLICT MINERALS

EMC is committed to the [responsible sourcing of minerals](#). Beyond the regulatory requirement to trace and report on the source of the tantalum, tin, tungsten, and gold (3TG) in our products, we support human rights at all levels of our supply chain, and believe that addressing the challenge of conflict minerals is a key component of ethical sourcing. We participate in the Electronic Industry Citizenship Coalition (EICC) Extractives workgroup to help advance the industry approach to this complex issue. In 2013, we will conduct a comprehensive supply chain conflict minerals survey to understand the risk and opportunities in our supply chain and to evolve our strategy to ensure responsible mineral sourcing.

MATERIAL & RESOURCE USE

EMC is committed to using less and reusing more, while protecting environmental and human health throughout the value chain. We constantly seek new ways to increase recovery of useful materials at the end of a product's useful life and responsibly handle materials that cannot be reused.

To protect people and the environment, EMC takes a proactive approach to minimizing the use of potentially hazardous substances in our products by researching and, where feasible, substituting alternative materials. We also take measures to prevent these substances from entering the natural ecosystem. Our take-back program accepts returns of all EMC®-branded products at the end of their useful life, and in 2012, we developed a five-year plan to manage our global eWaste in a responsible and uniform manner. This plan includes requiring our IT Asset Disposal (ITAD) suppliers to achieve e-Stewards or R2 certification by the end of 2013, to help ensure responsible recycling and disposal.

EMC's sustainable packaging program seeks to maximize environmental benefits across the product lifecycle. We collaborate with suppliers on inbound packaging and look for efficiencies in packaging used to transport products between EMC manufacturing facilities and to our customers. For instance, in 2012 we changed the packaging for shipping disk array enclosures (DAEs) from our manufacturing plant in Ireland to our Configure to Order partner in Brazil. Originally, we shipped six DAEs per pallet in virgin packaging. After re-assessing our packaging and processes, we are now shipping 24 DAEs per pallet in reused packaging. As a result, we are reducing associated CO₂e emissions by 55 percent (including from transport), waste by 71 percent, and costs by 47 percent.

SUPPLY CHAIN

Supply chain responsibility involves a complex system of intertwined social, environmental, and economic issues spread across a global system. Through EMC's Supply Chain Social & Environmental Responsibility (SER) program, we work with hundreds of suppliers in more than 20 countries to monitor, report, and engage for continuous improvement. Our strategy is focused on four core pillars:

- Monitoring through an industry-standard approach, including self-assessment questionnaires and third-party audits for high-risk suppliers and strategic first- and second-tier suppliers
- Conducting multi-pronged risk assessments to prioritize suppliers based on geography, commodity, and company-specific information
- Engaging with suppliers to improve and drive change through the supply chain
- Incentivizing SER by integrating social and environmental responsibility into our business processes

In 2012, we developed a new "spot check" program to provide more insight into conditions at supplier sites; created new incentives through the launch of a supplier award and increased business integration; improved supplier communication and education; and delivered new training on social and environmental responsibility for EMC's procurement team.

In 2013, our emphasis will be on improving supplier performance through best-practice sharing; strengthening sub-tier supplier SER management; requiring reporting and recommending use of the GRI standard; and increasing integration with core business processes. We will also continue to invest in collaboration—across internal business functions, with our suppliers, and with industry peers and others across industries—as it is critical to achieving our intended goals.

DELIVERING VALUE

EMC's culture is driven by our commitment to deliver value for customers, employees, shareholders, and other stakeholders in a way that not only meets their needs today, but also creates value and builds long-term opportunity through the cloud, Big Data, and trust. This determination advances our efforts to create and evolve customer solutions, cultivate a collaborative and inclusive workplace, and build open and honest relationships with all of our stakeholders.

In 2012, we delivered value within our company walls and beyond by harnessing the power of IT to spur social good; providing information security and privacy in an age of increasingly sophisticated cyber attacks; building strong corporate governance; cultivating a safe, healthy, and inclusive workplace; and encouraging innovation in every aspect of our business.

IT AND SOCIETY: ADVANCEMENTS FOR THE GREATER GOOD

IT has the potential to transform nearly every segment of the world's economy. EMC is developing cloud computing and Big Data technologies that help address today's unprecedented environmental and social challenges. We are leveraging these technologies to create a more sustainable world by uncovering new sources of knowledge, facilitating previously unforeseen methods of collaboration, and delivering technological efficiencies.

In 2012, EMC collaborated with industry and global crowdsourcing expert, [Against All Odds Productions](#), on the "[Human Face of Big Data](#)"—the world's most comprehensive initiative to date that demonstrates the societal impact Big Data has now and will have in the future. Through a book filled with hundreds of stories from around the globe, an interactive iPad app, and engagement activities, the project reveals how our planet is developing a "central nervous system" that data experts believe will be even more transformational than the Internet itself. By showcasing the power and impacts of Big Data, EMC aims to raise awareness of future possibilities and inspire the next generation of Big Data scientists.

INFORMATION SECURITY AND PRIVACY

Organizations around the world are facing an onslaught of cyber attacks of unprecedented scale and sophistication. As a leading security and Big Data solutions provider, EMC is leveraging the expertise of its RSA security division to develop entirely new defense strategies. We seek to preserve the trust of our stakeholders by employing these new strategies to secure our own IT systems and the sensitive information in our charge. We also design engineering and supply chain processes that protect customers and help them minimize risk by providing advanced products that are more resilient to these attacks.

We mitigate our internal risk through quarterly reviews of our information security strategy by our Governance Risk and Compliance Council. For customers, our Product Security Response Center proactively issues EMC security advisories (ESAs) to alert them about potential vulnerabilities and provide corrective measures before hackers are able to exploit the situation. In 2012, we issued more than 50 ESAs to our customers.

RESPONDING TO CYBER THREATS

In January 2013, we launched [RSA Security Analytics](#), an innovative security-monitoring platform designed to help organizations defend digital assets against advanced security challenges and sophisticated threats. RSA Security Analytics, recognized as the next generation in security technology, transforms security operations by leveraging the power of Big Data to better detect and investigate threats that can be overlooked by traditional tools. Learn more in our 2012 [Big Data Fuels Intelligence-Driven Security white paper](#).

EMC EMPLOYEE ENGAGEMENT SURVEY WITH THE GREAT PLACE TO WORK INSTITUTE

In 2012, EMC launched a new employee engagement survey with the Great Place to Work Institute to learn about our employees' perceptions of what makes EMC a great workplace and how we could make it even better. The survey was designed to gain insights on 63 company statements based on the Great Place to Work Trust Index, which assigns those statements to five different Trust Dimensions: respect, credibility, fairness, pride, and camaraderie. More than 31,000 EMC employees took part in the survey.

- **82%** of employees think that EMC is a great place to work
- **80%** agree that EMC demonstrates a commitment to environmental and social responsibility

Moving forward, we will continue to incorporate feedback to improve employee satisfaction at EMC and will participate in the Great Place to Work Survey in 2013 and beyond.

Implementing security processes for new, rapidly changing technologies is an ongoing focus for EMC. In 2012, we collaborated with several partners, including the National Cyber Security Alliance and the Security for Business Innovation Council, to address the evolving landscape of security technology.

CORPORATE GOVERNANCE & BUSINESS ETHICS

EMC builds trust and delivers value to our stakeholders through strong corporate governance, ethics, and public policy practices. These practices allow us to compete more effectively, sustain our success, and build long-term value for our shareholders.

The keystone of our corporate compliance program is our [Business Conduct Guidelines](#). The Guidelines apply to all employees and contractors, and provide guidance on key topics such as anti-bribery, insider trading, and privacy and information security.

Our [Human Rights and Global Labor Principles](#) are based on the United Nations Global Compact, International Labour Organization standards, United Nations Guiding Principles on Human Rights, and similar doctrines. In 2012, we revised the EMC Human Rights and Global Labor Principles to refer explicitly to the right of freedom of expression. EMC has also adopted the Electronic Industry Citizenship Coalition (EICC) [Supplier Code of Conduct](#) for our suppliers and for EMC to improve social and environmental responsibility throughout the global supply chain.

EMC is committed to responsible and transparent participation in the political process and we help shape public policy that impacts the company and our industry. We are actively engaged with organizations that encourage action on public policy in the key areas of education, competitiveness, cyber security, and energy. We disclose our corporate [Political Contributions Policy](#), EMC PAC contributions, lobbying expenditures, and major trade association memberships on emc.com. To learn more, visit [Public Policy](#).

EMPLOYEES & WORKPLACE

EMC employees are the foundation of our business and our most important resource. We cultivate a sense of urgency, a drive for excellence, and a hunger for continuous learning and improvement among employees. We are committed to a safe, healthy, and diverse workplace where employees thrive and know they are valued for their contributions to the company's future.

INNOVATION NETWORK

Innovation is at the core of everything EMC does—from how we run our operations to how we develop and deliver new products and services. We rely on innovation to survive and thrive, and believe the intersection of innovation and sustainability is where we can uncover solutions to our business, social, and environmental challenges. Thinking forward is vital to delivering innovative solutions today and anticipating the needs of tomorrow.

The EMC Innovation Network is our innovation engine, an internal team whose efforts aim to spark the creation and delivery of high-value ideas that accelerate innovation and drive progress. The Innovation Network, led by the Office of the Chief Technology Officer, hosts our annual Innovation Showcase and Innovation Conference, which unite our employees globally and help expand our knowledge of the issues and challenges facing us.

Our Innovation Showcase is a competition that invites EMC teams or individual employees to submit technical innovation and business process improvement ideas for solutions to company or customer challenges. It generates breakthrough ideas that will shape EMC, our customers, and the IT industry over the long term. In 2012, a record 2,200 proposals were submitted by employees representing 28 countries. Winning ideas were presented and awarded at EMC's sixth annual Innovation Conference.

**EMC ACADEMIC ALLIANCE:
2012 HIGHLIGHTS**

- **20** new countries represented,
62 countries total
- **290** universities and colleges
joined, more than **1,000** total
- **70,000+** students educated,
over **150,000** students
reached since 2006

“EMC partners with VEX Robotics to support the promotion of STEM subjects in schools. It is critical that we maintain a pipeline of engineering talent in the industry and it’s important to reach them early. What better way to capture the imagination of a teenager than with robots?”

MARTIN O’FLAHERTY
EMC PROGRAM MANAGER

STRENGTHENING COMMUNITIES

EMC helps create opportunities that will shape the future for our company, employees, customers, and neighbors. EMC is planning for and investing in the future by supporting initiatives that provide access to education, encouraging employees to volunteer their time and talent, and leveraging our Information Heritage program to help ensure cultural treasures remain available for future generations to experience.

ACADEMIC ALLIANCE

EMC plays an active role as a community partner by collaborating with colleges and universities around the globe to close the technology skills gap, which continues to grow with the increasing volume and complexity of data. Through our Academic Alliance program, our global education partners use EMC-developed courseware to prepare the next generation of IT professionals for careers in information infrastructure, cloud computing, and Big Data analytics. The program is one of the industry’s first initiatives created to address the cloud and data science skills gap, and helps ensure the industry has a strong pipeline of graduates to meet its future needs.

EDUCATION PARTNERSHIPS

EMC recognizes that our future—as a company and a society—hinges on the availability of an educated workforce. As an IT company, our future competitiveness depends on a pipeline of employees skilled in the fields of science, technology, engineering, and math (STEM). Today’s technology skills gap threatens innovation, and can have profound effects on our business, communities, and even the sustainability of our planet. We support programs that expand access to education and encourage students, particularly from underrepresented groups, to pursue science and math programs.

In 2012, we supported education programs in 35 countries—up from 29 in 2011—and introduced nine new programs. We hope to continue expanding the reach of these programs and partnerships in 2013.

For instance, in 2012, EMC expanded its sponsorship of the [Vex Robotics competition](#) to our Center of Excellence in Cork, Ireland. This competition, the country’s first of its kind, offers students an enticing way to learn about career opportunities in STEM. Together with the Cork Institute of Technology, EMC donated robot kits to 10 teams of students across eight low-income schools in Cork. Twenty-one EMC employees mentored the 125 students as they learned to build robots, while others volunteered as judges during the final competition at Ireland’s Discovery Science Festival. The event reached more than 5,000 students and adults, and winners qualified to participate in the Vex Robotics World Championships in California in April 2013.

PROMOTING LITERACY AND INCLUSIVE EDUCATION IN BRAZIL

EMC has supported the work of [AlfaSol](#), an organization in Brazil committed to improving literacy around the world. Since 2008, our financial contributions and employee volunteer time have helped provide programming for more than 1,000 adults in underserved areas of Rio de Janeiro. You can watch a [video](#) of our efforts on [emc.com](#).

DISASTER RELIEF

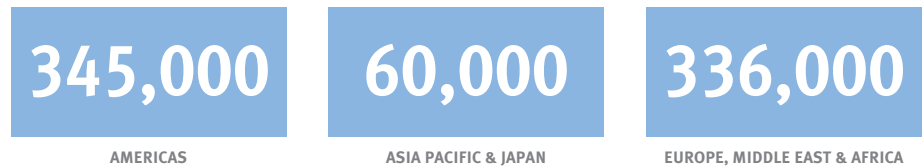
In 2012, EMC contributed \$100,000 to the American Red Cross and matched \$124,866 in employee donations for disaster relief activities. Benefit service organizations included the Australian Red Cross, Give 2 Asia, International Red Cross, New Zealand Red Cross, and Red Crescent Societies.

EMC ISILON HELPS FUEL THE LIBRARY OF THE FUTURE

In 2012, we partnered with the North Carolina State University (NCSSU) Libraries to support the development of Hunt Library, a pioneering facility and technology incubator that will house the largest collection of visualization technologies of any U.S. public university and more than two million digitized books. EMC provided Isilon® technology equipment, which will improve the development and performance of smart grid, gaming, and high-performance computing for research and collaborative services to faculty, staff, and students. With this support, the library will become a campus model for public and private partnerships on research and development into the cloud.

Around the world, our support and partnership helped Vex Robotics reach more than 100,000 youth in 2012. We hope to build on our success in Cork by expanding the program throughout Ireland in 2013.

APPROXIMATE NUMBER OF STUDENTS REACHED THROUGH EMC'S EDUCATION PARTNERSHIPS



COMMUNITY INVOLVEMENT

EMC and our employees play an active role in the communities in which we operate around the world. By supporting health, human services, arts programs, and disaster relief efforts, we are strengthening society and helping shape the future of our local communities.

Community partnerships are one of the focus areas of EMC's corporate giving and volunteer efforts. In 2012, we partnered with more than 40 organizations around the globe to increase access to education and supporting disaster relief and recovery efforts in the communities in which we live. We also encouraged employees to organize grassroots volunteer activities. From transforming a classroom into an IT lab in Ghana to teaching young students about the importance of education in Mexico and Brazil, EMC employees participated in many service projects throughout 2012.

EMC fosters a culture of giving back by recognizing employees who volunteer in their communities through our annual Community Service Awards (CSA). CSA winners are recognized internally, and a one-time financial grant is contributed to the organization in their honor. In 2012, 26 employees received Community Service Awards, and cash grants were donated to the respective organizations. To date, EMC has contributed more than 100 grants totaling \$180,000 to organizations on behalf of CSA winners.

INFORMATION HERITAGE

EMC contributes expertise to help ensure books, art, and artifacts stored in museums and libraries around the world are available for future generations to access and enjoy. Through our Information Heritage Initiative, we partner with cultural institutions to capture, store, and share digital images of their priceless collections. We also recognize the importance of local preservation projects and award cash grants to support community-based digital curation efforts through our [EMC Heritage Trust Project](#). Since 2007, we have provided more than \$20 million in products, services, and financial assistance for digital Information Heritage programs worldwide.

ADDITIONAL RESOURCES

2012 EMC ANNUAL REPORT



CORPORATE PROFILE

At EMC, we know that our financial performance is crucial to the long-term sustainability and success of our business. We believe a sustainable business is one that takes a holistic, forward-looking view of environmental, societal, economic, and governance practices—and one that creates value for all of our shareholders and stakeholders.

EMC is a global leader in enabling businesses and service providers to transform operations and deliver IT as a Service. EMC is focused on helping our customers lead in three of the most important areas of IT investment:

Cloud: Improving agility and reducing IT costs through the adoption of cloud computing and IT transformation initiatives

Big Data: Leveraging vast quantities of data to make smarter decisions and solve complex problems

Trusted IT: Protecting and securing information to ensure that IT is trusted

EMC's strong 2012 results were driven by our consistent strategy and execution, our solid operational and financial model, and our leading-edge products, solutions, and services in these three categories. This includes our ability to identify opportunities and effectively manage risks such as competition, regulation, disruptive technologies, social developments, and environmental changes that play a significant role in our economic performance.

STRONG LEADERSHIP RECORD

Our differentiated value stems from sustained and substantial investment in research and development which totaled \$15.3 billion from 2003 to 2012, with \$2.6 billion invested in 2012 alone. To strengthen our core business and expand to new areas, we have also invested \$14.1 billion in acquisitions over the same period, including the acquisition and integration of 62 growth-oriented technology companies since 2006. To learn more, see [EMC's 2012 Annual Report](#) online infographic.

EMC's success is delivered through our technical experts around the world; the industry's broadest portfolio of systems, software, and services; our ability to create integrated solutions; and a commitment to delivering the best **Total Customer Experience**. In 2012, we received The Temkin Group's Customer Experience Excellence Award for our TCE program and our Customer Service Support program, demonstrating our commitment to driving improvement through customer feedback. To learn more, visit [Customers](#).

FINANCIAL PERFORMANCE

As of December 31, 2012, EMC ranked 139 in the Fortune 500 and reported revenues of \$21.7 billion, the largest revenue year in EMC's 33-year history. Net income increased 11 percent year over year to \$2.7 billion. Our GAAP diluted earnings per share (EPS) increased more than 12 percent year over year to \$1.23 per share. We achieved record full-year operating cash flow of \$6.3 billion, an increase of 10 percent from 2011.

GLOBAL PRESENCE

EMC works closely with a global network of technology, outsourcing, systems integration, service, and distribution partners. Our headquarters is located in Hopkinton, Massachusetts, and we are represented by approximately 400 sales and corporate offices and partners in 86 countries around the world. We operate R&D centers in Brazil, China, France, Ireland, India, Israel, the Netherlands, Russia, and the United States. Our systems are manufactured at EMC's and contract manufacturers' facilities in the United States, Brazil, China, Hungary, and Ireland. We employed more than 60,000 people worldwide at the end of 2012.

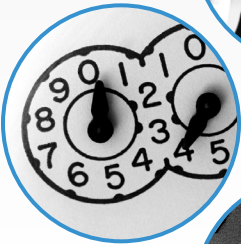
SUSTAINING ECOSYSTEMS

EMC is committed to sustaining and restoring our planet's ecosystems and addressing the impacts our business has on the environment and human well-being throughout our value chain. Our forward-looking approach is reflected in the commitments and progress we've made in our priority areas, including energy and climate change, supply chain responsibility, and material use and waste. We also drive the transformative power of IT beyond the boundaries of our business by looking for innovative ways to engage our supply chain and help reduce the IT industry's global impacts.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:



Environmental Strategy



Energy Use & Climate Change



Material & Resource Use



Supply Chain

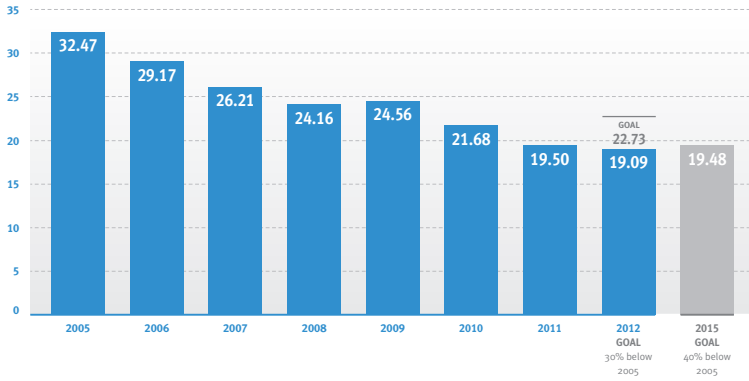


Collaboration

SUSTAINING ECOSYSTEMS DASHBOARD

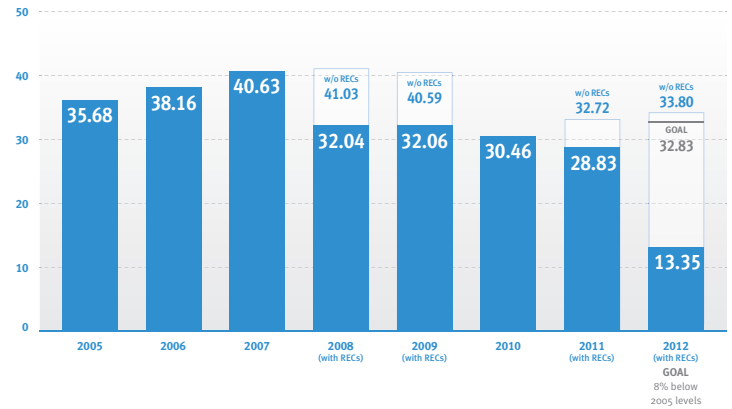
EMC GLOBAL GHG EMISSIONS INTENSITY PER \$1M REVENUE SCOPE 1 AND 2

ALL LEASED AND OWNED GLOBAL FACILITIES AND MOBILE ASSETS (INCLUDES VMWARE AND VCE)—METRIC TONS CO₂e



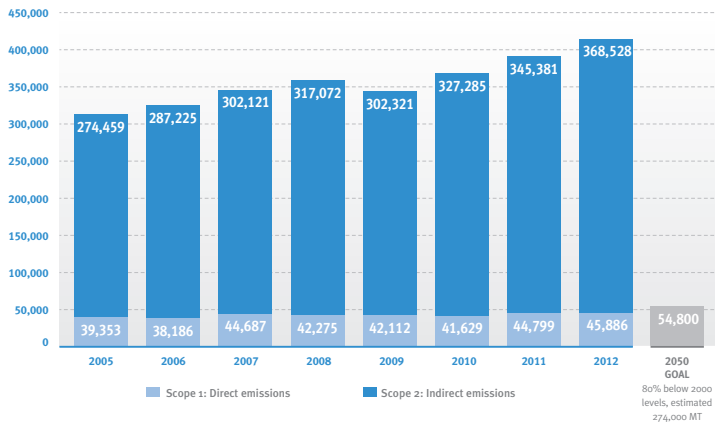
CLIMATE LEADERS GOAL: EMC U.S. GHG EMISSIONS SCOPE 1 AND 2

ALL U.S. OPERATIONALLY-CONTROLLED LEASED AND OWNED FACILITIES AND MOBILE ASSETS (EXCLUDES VMWARE)—METRIC TONS CO₂e



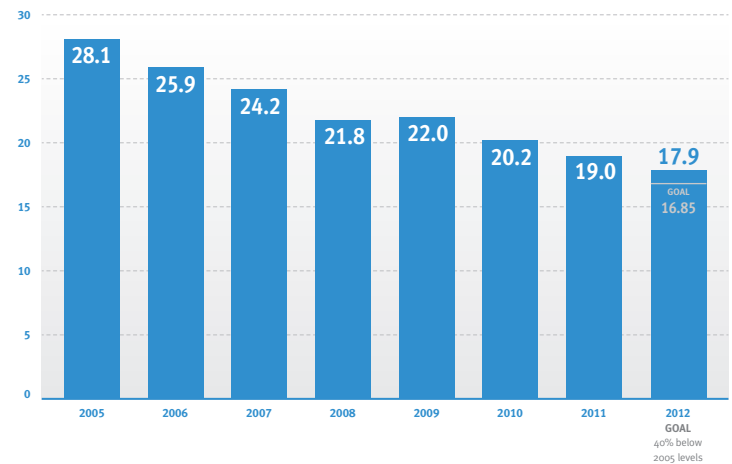
EMC GLOBAL ABSOLUTE GHG EMISSIONS SCOPE 1 AND 2

ALL LEASED AND OWNED GLOBAL FACILITIES AND MOBILE ASSETS (INCLUDES VMWARE AND VCE)—METRIC TONS CO₂e



ENERGY CONSUMPTION PER EMPLOYEE

ALL LEASED AND OWNED GLOBAL FACILITIES (INCLUDES VMWARE AND VCE)—MWH/EMPLOYEE



PERCENT OF GLOBAL FACILITIES ELECTRICITY CONSUMPTION FROM RENEWABLES



GOAL: 2040

SCOPE 3 GHG EMISSIONS
GLOBAL—METRIC TONS CO₂e



PURCHASED GOODS AND SERVICES,
DIRECT TIER 1 SUPPLIERS

110,955



BUSINESS TRAVEL

139,630



TRANSPORTATION AND LOGISTICS

167,362



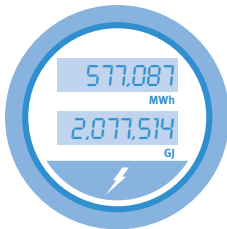
USE OF SOLD PRODUCTS

3,683,725

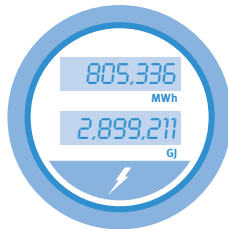
2012

EMC GLOBAL FACILITIES: ELECTRICITY CONSUMPTION

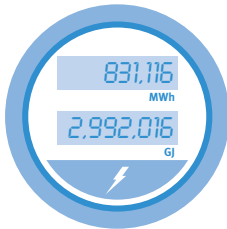
ALL LEASED AND OWNED GLOBAL FACILITIES
(INCLUDES VMWARE AND VCE)



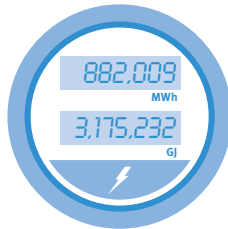
2005



2010



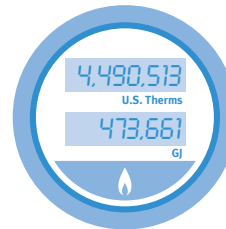
2011



2012

EMC GLOBAL FACILITIES: NATURAL GAS CONSUMPTION

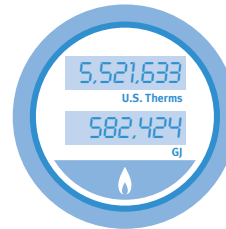
ALL LEASED AND OWNED GLOBAL FACILITIES
(INCLUDES VMWARE AND VCE)



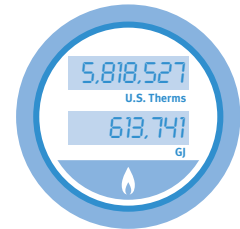
2005



2010

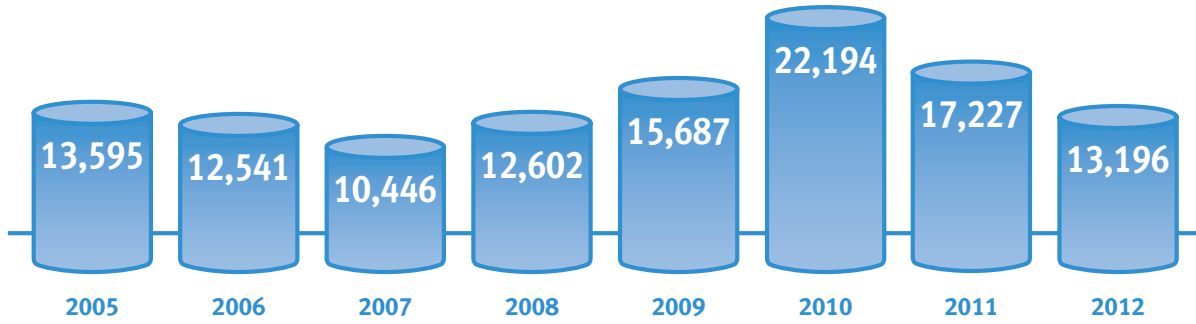


2011



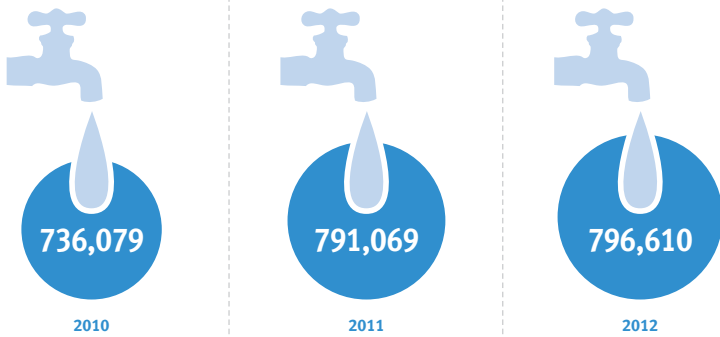
2012

EMC CORPORATE WATER REUSE
 MASSACHUSETTS FACILITIES—CUBIC METERS



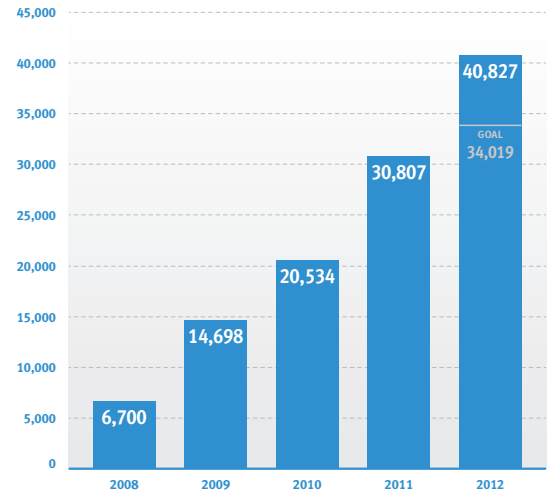
GLOBAL WATER WITHDRAWAL

ALL LEASED AND OWNED GLOBAL FACILITIES
 (INCLUDES VMWARE AND VCE)—CUBIC METERS (M³)



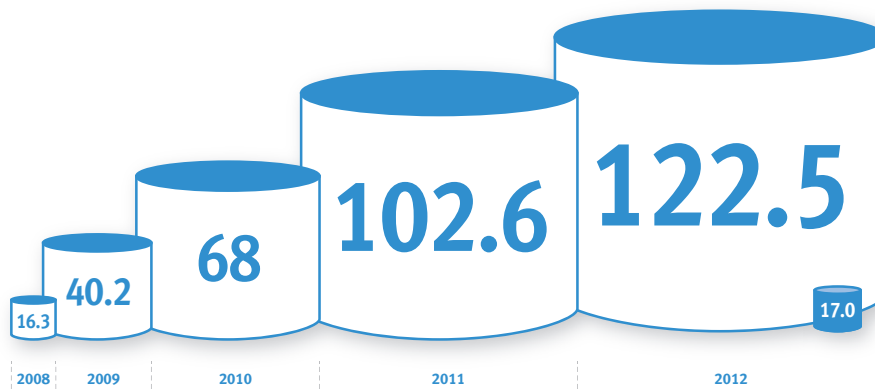
CUMULATIVE EWASTE DIVERTED FROM LANDFILLS

GLOBAL—METRIC TONS



COMPOST MADE FROM EMC CAFETERIA WASTE

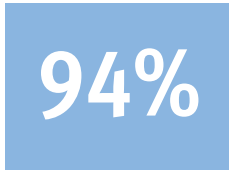
METRIC TONS



Massachusetts North Carolina

PERCENT OF OUR ITAD SUPPLIERS AUDITED BY A THIRD PARTY

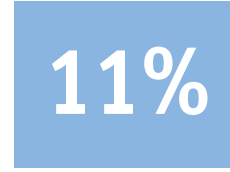
GLOBAL



2012 GOAL: 80%

ENVIRONMENTAL ASPECTS OF OUTBOUND PACKAGING

GLOBAL, EMC CORE

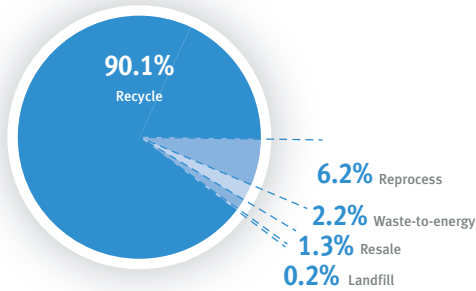


2012
RECYCLED CONTENT

DESTINATION OF RETURNED PRODUCTS BY WEIGHT

GLOBAL—METRIC TONS

10,041
metric tons

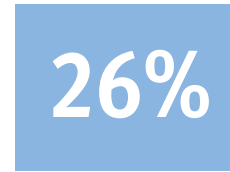


2012

Goal: Continue to send less than 1% of eWaste to landfills

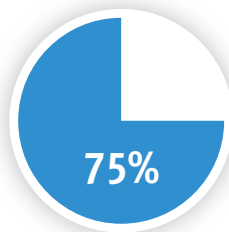
PERCENT OF HIGH-RISK SUPPLIER FACILITIES AUDITED ON SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

GLOBAL

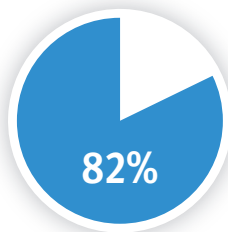


2012 GOAL: 20%

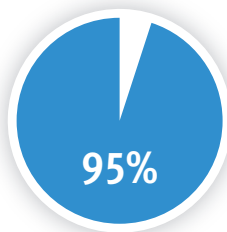
PERCENT BY SPEND OF SUPPLIERS REPORTING SCOPE 1 AND 2 GHG EMISSIONS DATA



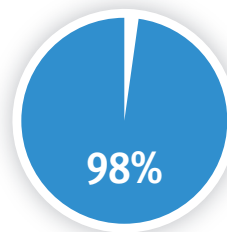
2009



2010



2011



2012

Goal: 2012
90%

ADDITIONAL INFORMATION

EMC'S GLOBAL ENVIRONMENTAL POLICY

WATCH THIS VIDEO to learn more about EMC's approach to sustainability.



ENVIRONMENTAL STRATEGY

EMC's environmental strategy guides our approach to managing the environmental impacts of our business. Our anticipation of future needs arms us with the perspective we need to provide thoughtful direction and a unified purpose for our efforts today and tomorrow.

Through EMC's Office of Sustainability and commitments from partners throughout the company, we focus our efforts on the areas of greatest potential impact. These include:

- Energy and climate change
- Material use and waste
- Collaboration and engagement with external groups

DEFINING ENVIRONMENTAL SUSTAINABILITY AT EMC

Environmental sustainability is defined by those we serve: our employees and their families, customers, suppliers, investors, and the greater global community. By conducting and transforming the company in a purposeful manner, we can serve these groups by:

- Conserving and enriching the environment in which we live and work
- Creating value in the adaptations that are required to thrive into the future
- Mitigating the risks from changes in the planet that we cannot influence

GOVERNANCE AND SUSTAINABILITY OVERSIGHT

The Corporate Governance and Nominating Committee (the "Governance Committee") of EMC's Board of Directors is responsible for overseeing our sustainability program. The Governance Committee meets with the chief sustainability officer throughout the year to provide board-level oversight. Our operating model can be seen in the graphic shown.

ENVIRONMENTAL MANAGEMENT SYSTEM

Our environmental management system covers waste reduction, conservation of energy and materials, and overall environmental impact—using the same policies and procedures at all company-operated facilities worldwide. This has allowed us to certify all our global manufacturing sites with ISO 14001 and limit noncompliance. We did not incur fines or nonmonetary sanctions for noncompliance with environmental laws and regulations in 2012.

ENVIRONMENTAL SUSTAINABILITY OPERATING MODEL



ADDITIONAL INFORMATION

CLIMATE CHANGE POLICY STATEMENT

ENERGY USE & CLIMATE CHANGE

Energy use is among EMC’s most material issues, and we recognize and embrace our role in mitigating our contributions to climate change. This holistic perspective drives our climate change and energy strategy, and related goals and initiatives. We participate in and evaluate the conversation around climate change, then adapt our operations as needed to address the issue by optimizing our operations, delivering products and services that enable customers to better manage the growth of data, and engaging with our supply chain partners.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:



Energy & Climate Change Strategy



Efficient Facilities



Efficient Data Centers



Efficient Products



Transportation & Logistics



Employee Travel & Commuting

ENERGY & CLIMATE CHANGE STRATEGY

EMC's primary GHG emissions arise from the electricity needed to run our business—including our supply chain—and power our products. Therefore, our energy and climate change strategy focuses on the following key areas:

I. Reducing emissions from our own operations by:

- Decreasing the demand for energy
- Maintaining a highly efficient infrastructure
- Designing and operating data centers for energy efficiency
- Identifying opportunities to adopt renewable energy sources that are economically and environmentally sound

II. Reducing emissions in our supply chain by:

- Engaging suppliers in measuring and reporting
- Collaborating with suppliers to reduce their emissions
- Working with the IT industry to develop standards for reporting supply chain emissions

III. Reducing energy demand in our customers' IT infrastructures by:

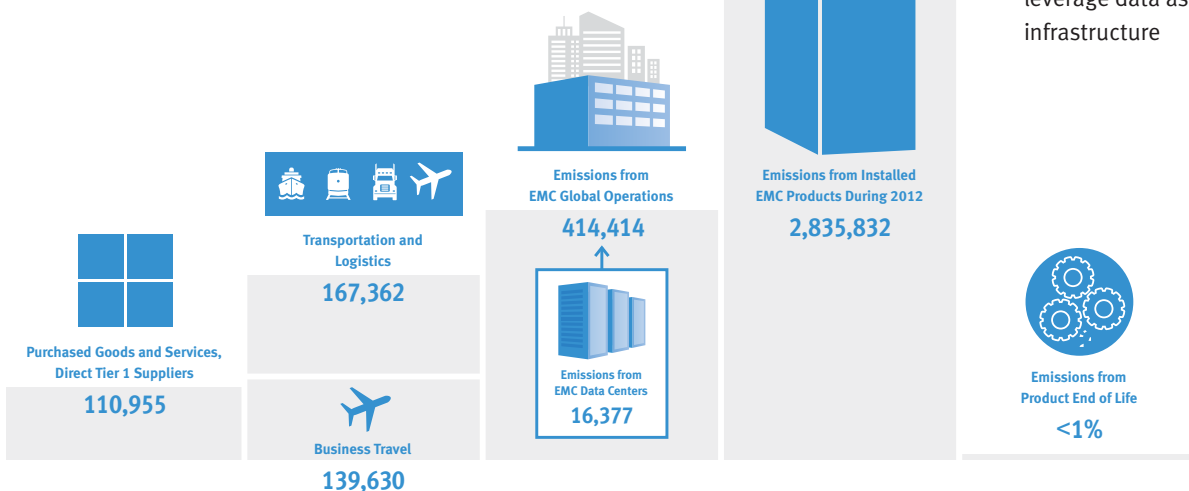
- Supplying energy-efficient products
- Developing innovative approaches to manage the exponential growth of data in their operations
- Delivering services to help customers implement the most energy-efficient solutions for their businesses

IV. Reducing global energy demand by:

- Supplying information solutions to optimize business functions, accelerate research, leverage data assets, and enhance public infrastructure

A SNAPSHOT OF EMC'S GLOBAL 2012 GREENHOUSE GAS EMISSIONS

METRIC TONS CO2E



GOAL SETTING

We began measuring our GHG emissions in 2005. Since then, our energy intensity by revenue—the amount of global GHG we emit per \$1 million we earn—has declined by over 40 percent, from 32.47 to 19.09 metric tons. Based on 2012 data, we achieved our 2015 goal of reducing emissions per revenue by 40 percent from 2005. We’ve also made progress toward our other key performance indicators, including U.S. GHG emissions and global absolute GHG emissions. We did not meet our 2012 goal of reducing energy consumption per employee by 40 percent from the base year of 2005; however, we made significant progress by achieving a 36 percent reduction. In 2012, we gained efficiencies through investments in projects to reduce energy use and through incentives offered by local utility companies, including National Grid and NSTAR in Massachusetts, and Duke Energy in North Carolina. To learn more, visit the Data Dashboard and [Efficient Facilities](#).

While we are pleased to have met our 2012 and 2015 emissions per revenue goals, we recognize there is more we can do to reduce emissions on a global scale. The following is a snapshot of our goal setting and revision process during the past seven years. As we think forward to 2013, we plan to further review our goals and targets to make sure they still closely align with our priorities and material issues.

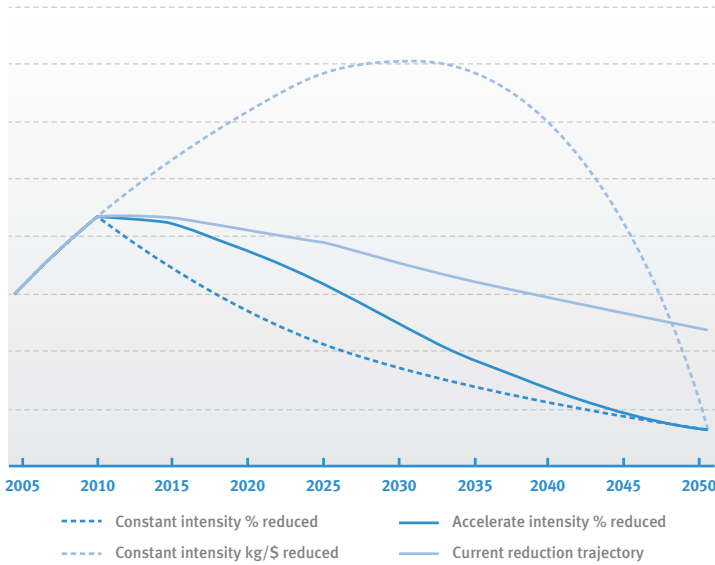
| 2006 | 2009 | 2010 | 2011 & 2012 |
|--|---|---|---|
| As one of the first 40 companies to join the U.S. Environmental Protection Agency (EPA) Climate Leaders Program, EMC set an initial goal to reduce our GHG emissions by 8 percent per 1,000 square feet at our operationally-controlled U.S. facilities by 2012. | We realized that our Climate Leaders Goal was suboptimal since it penalized consolidation of office space that actually contributed to absolute emissions reductions. Nonetheless, we expect to meet and retire this goal in 2012 with the aid of purchased Renewable Energy Credits. | EMC established new corporate GHG reduction targets: <ul style="list-style-type: none"> • 30 percent reduction in GHG intensity below 2005 levels by 2012 • 40 percent reduction in GHG intensity below 2005 levels by 2015 • 80 percent absolute reduction in GHG emissions below 2005 levels by 2050 Supporting these emissions targets, we also established the following goals: <ul style="list-style-type: none"> • Achieve a 40 percent reduction in energy consumption per employee by 2012 • Purchase 50 percent of all energy from non-fossil fuels sources by 2040 | EMC’s commitment includes a periodic review of targets by adjusting the model’s assumptions regarding actual business performance and developments in climate science. In 2011 we reviewed our targets and decided to retain them through 2012. |

DETERMINING OUR GOALS

To set our emissions targets, we began with the imperative to achieve an absolute reduction of at least 80 percent by 2050 in accordance with the Intergovernmental Panel on Climate Change’s (IPCC’s) Fourth Assessment Report recommendations. We then modeled various reduction trajectories to help us identify a solution that would be elastic enough to adjust to changes in our business while achieving a peak in absolute emissions by 2015, in accordance with recommendations from the 2007 Bali Climate Declaration.

Our model was based on the Corporate Finance Approach to Climate-stabilizing Targets (C-FACT) proposal presented by Autodesk in 2009. The model calculates the annual percentage reduction in intensity required to achieve an absolute goal. We selected this approach because intensity targets better accommodate growth through acquisitions (in which net emissions have not changed but accountability for them has shifted), and aligns business performance with emissions reductions performance rather than forcing tradeoffs between them. Setting an intensity trajectory also drives investment beyond one-time reductions to those that can be sustained into the future.

TRAJECTORY DIAGRAM



The C-FACT system, however, is “front-loaded” as it requires a declining absolute reduction in intensity each year. EMC developed a variant of the model that requires reductions to be more aggressive than the previous year. This makes better economic sense for the company as it leverages the learning curve for alternative fuels as they become more efficient and cost-effective. Please see the figure at the left for more information about the trajectories studied.

REPORTING AND ACCOUNTABILITY

We are committed to reporting our progress transparently and disclosing our GHG emissions annually to CDP. To learn more, see the link in the sidebar for our 2012 Investor CDP response.

Our Ireland Center of Excellence (COE) also continues to participate in the European Emissions Trading Schemes, which is managed by the Ireland Environmental Protection Agency (EPA). While we have been significantly below our emissions allowances the past several years, the next period from 2013 to 2020 will be particularly challenging as it is expected that our allowance will be cut by an additional 30 percent. The Ireland EPA will issue allowances in 2013.

ADDITIONAL INFORMATION

2012 RESPONSE TO CDP

RENEWABLE ENERGY

EMC's reduction targets cannot be achieved through operational energy efficiency alone. Our corporate goal is to obtain 50 percent of electrical needs from renewable sources by 2040. We have continued working toward this goal by seeking renewable energy sources that are economically and environmentally sound. In 2012, our efforts included:

- Continued investigation of a combined heat and power plant for a large U.S. site. Though we completed a feasibility study in 2011, we are still analyzing the cost-benefit analysis conducted in 2012 to determine the appropriate next steps to bring this project online.
- Continued evaluation of the use of fuel cell technology for one of our U.S. locations. Findings showed that this technology will be most feasible for locations in the western region, but we continue to analyze the information to determine potential timing for introducing the technology.
- Continued compilation of information from the meteorological tower we installed in 2011 to collect wind data at our headquarters in Hopkinton, Massachusetts. The 18 months of data has determined that wind conditions favor installation of one or more wind turbines. Thinking forward to 2013, we'll be further exploring how to bring this project online.
- Conducting additional research on solar energy options and evaluating the expected payback period and return on investment.

EMC purchased 175,000 MWh of Renewable Energy Certificates (RECs) in support of renewable energy generated in the U.S. during 2012. The RECs purchased supported renewable electricity delivered to the national power grid by alternative energy sources. The RECs are third-party verified by Green-e Energy to meet strict environmental and consumer protection standards. The 175,000 MWh represents over 30 percent of the grid electricity consumed at all U.S. EMC facilities including all divisions during 2012.

SCOPE 3 EMISSIONS

At EMC, we strive to increase the breadth and depth of our GHG reporting. In 2012, we reported on five of the 15 categories of Scope 3 emissions based on the WRI Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. These reported categories, listed as follows, represent the greatest opportunity to drive improvement through our own actions and influence.

Business Travel

We track global corporate business travel miles from commercial flight and rail via our corporate American Express accounts. Beginning in 2012, we also accounted for the emissions associated with global business travel car rentals in our Scope 3 accounting efforts. The methodology for calculating the emissions associated with business travel is aligned with the GHG Protocol Corporate Accounting and Reporting Standard.

We are undertaking specific actions to reduce GHG emissions associated with employee business travel by implementing changes in technology, business processes, and resource management. We continue to expand technology to perform changes to customer technical environments from remote support centers in lieu of sending an engineer to the customer's site resulting in reduced travel emissions. A substantial amount of work that previously required travel to a customer location is now being performed remotely. We have implemented other initiatives that will impact Scope 3 business travel emissions over time including increased use of high-definition video conferencing and job role/skill redesign to reduce the number of different individuals required to perform common services. To learn more, visit [Employee Travel & Commuting](#).

Employee Commuting

EMC maintains a comprehensive employee commuter services program focused on minimizing single-occupancy vehicles and unnecessary local employee travel. In 2012, we expanded these efforts by launching a work-from-home pilot program at the Cork COE and introducing a carpooling tool called iPOOL at the India COE. EMC was again named as one of the Best Workplaces for Commuters by the Center for Urban Transportation Research, a program formerly administered by the U.S. EPA. For the second year in a row, EMC received the Massachusetts Excellence in Commuter Options (ECO) award at the highest Pinnacle level. The ECO Awards celebrate Massachusetts employers and their efforts to reduce congestion and greenhouse gas emissions by encouraging employees to utilize green transportation options. To learn more about our employee commuting programs, visit [Employee Travel & Commuting](#).

Purchased Goods & Services

In 2012, we collected Scope 1 and 2 emissions data from direct Tier 1 suppliers comprising 98 percent of annual spend. Using economic allocation, we then approximated our share of these emissions. This involves determining the ratio of our spend to each company's revenue, and applying that ratio to their reported emissions. While approximate at best, this methodology follows the WRI GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and is currently the best available option given the level of data reported. Because this allocation approach requires access to supplier revenues, a small number of private companies were excluded from the analysis. To learn more, visit [Supply Chain Social and Environmental Responsibility](#).

Transportation & Logistics

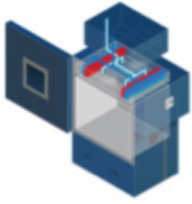
EMC's Global Logistics Operations generated approximately 167,362 metric tons CO₂e in 2012. This number is estimated using the GHG emissions reports from our logistics partners and covers inbound, outbound, interplant, and customer service transportation and logistics. In 2012, we collected emissions reports from carriers representing 75 percent of our logistics spend and extrapolated total emissions based on the reports we received. To learn more, visit [Transportation & Logistics](#).

Use of Sold Products

EMC estimates that the lifetime GHG emissions from use of EMC products shipped to customers during 2012 will be approximately 3,683,725 metric tons CO₂e. This value represents our customers' Scope 2 emissions from powering our equipment. It is based on an estimated product lifespan of five years, and includes overhead for power distribution and cooling with an average Power Usage Efficiency (PUE) of 1.8. EMC's configurations vary substantially from customer to customer as well as over time within a single customer. As such, it is not possible to sum the expected emissions from each and every system shipped in 2012. Rather, this estimate is based on the measured power consumption of disk drives, the inventory of disk drives shipped in 2012, an engineering estimate that 80 percent of system power is attributable to the disk subsystems, and an extremely conservative average system utilization of 90 percent. EMC used GHG Protocol methodology and a global average emissions factor of 569.3309 g CO₂e per kWh. The IEA 2010 World CO₂ emissions factor published in 2012 and IEA 1999-2002 CH₄ and N₂O emissions factors were applied. The global warming potentials, which were obtained from the IPCC SAR-100, are 1 for carbon dioxide, 21 for methane, and 310 for nitrous oxide. We believe the total is conservative (i.e., that the directly measured value, if feasible to obtain, would be lower) as our calculation takes into consideration neither the reduction over time in carbon-intensity of fuel used by our customers, nor improvements in data center power and cooling efficiency.

Environmental Lifecycle Analyses conducted prior to 2012 confirmed our expectations that more than 90 percent of lifecycle impacts are due to electricity consumed during the product use phase. Armed with this insight, in 2012 we continued efforts to design more efficient products and communicated more frequently with our end-use customers about using products more efficiently. This included drafting and distributing white papers on product energy attributes, both built-in (e.g., efficient power supplies, adaptive cooling, solid state drives, high-capacity hard disk drives) and operational (Fully Automated Storage Tiering, EMC Virtual Provisioning™, compression, and data deduplication), to help our customers realize more energy efficiencies during product use. To learn more, visit [Efficient Products](#).

HYBRID ESS PROJECT



An important step in EMC's product development process is Environmental Stress Screening (ESS), a process that subjects products to different

environments (e.g., temperatures and rates of change) by using liquid nitrogen (LN₂). LN₂ usage is difficult to measure and, though it is effective at dropping temperatures quickly, a heating system is then required to regulate the temperatures.

"It was like having one foot on the gas and one on the brake pedal at the same time," says Kevin Burke, test equipment manager at the Cork COE.

Creating and transporting LN₂ is also a very carbon-intensive, and expensive, process. New ESS chambers that use less LN₂ are also expensive and create logistics problems due to their larger size, so the engineering group developed a retrofit for the current chambers. By installing a small refrigeration unit, they were able to better regulate temperatures and minimize use of LN₂.

In 2012, this ESS Hybrid Project won the GPO (Global Product Operations) Innovation Award and the newly-established Nelson Award for Initiative in Sustainability. EMC plans to retrofit all 68 ESS chambers in Cork, Ireland, by the end of Q3 2013, and expand the model to the Franklin, Massachusetts, location as well.

Based on 2012 volumes, project highlights include:

- An 85 percent savings in LN₂
- Significant net reductions to Scope 3 emissions for LN₂ manufacturing
 - 26.19M (lbs) CO₂e
 - 182K (m₃) water
- Global savings of \$4.3 million per year
- Payback period of 20 months

EFFICIENT FACILITIES

Energy use is among EMC's most material issues, and we recognize and embrace our role in mitigating these impacts and our contributions to climate change. We address this issue in our owned and operated facilities by evaluating, optimizing, and adapting our operations—an important piece of our holistic approach to drive climate change and energy strategy.

EMC's three-pronged approach to managing energy use and associated GHG emissions comprises:

- An aggressive pursuit of energy efficiency
- Constant collaboration among our facilities, engineering, and information technology (IT) teams
- Exploring opportunities for the use of renewable energy

ENERGY EFFICIENCY & GHG REDUCTION

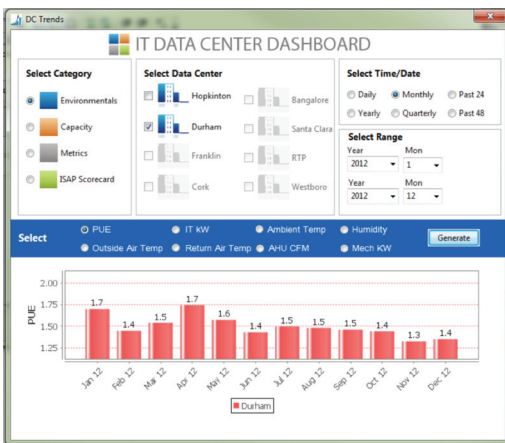
In 2012, we implemented energy-efficiency initiatives at our owned and operated facilities. These initiatives range from hot and cold aisle containment in our data centers to expanded energy monitoring systems that capture more data about the impact of mechanical systems on overall building performance. We also strengthened relationships with electricity utility companies in the U.S.—National Grid, Duke Energy, and NSTAR—that play an important role in building evaluation, rebate programs, and other opportunities to gain energy efficiencies.

This year we also reduced energy use through our Environmental Stress Screening (ESS) optimization project. The project, now in its fourth year, focuses on increasing the capacity and efficiency of ESS chambers. In 2012, the project focused on minimizing liquid nitrogen use to realize new efficiencies with implications for CO₂e emissions and water savings. It should be noted that while this project actually increases EMC's energy use (Scope 2 emissions increased 3.60M pounds CO₂e), it is resulting in a much greater reduction of emissions within the supply chain (Scope 3 emissions decreased 26.19M pounds CO₂e). The program will continue into 2013. To learn more, please review the Hybrid ESS case study.

Beyond our facilities, we realize the importance of accounting for suppliers' GHG emissions in order to understand our full environmental impact. We began collecting emissions data from direct Tier 1 suppliers in 2009 and have expanded our program every year. In 2012, our Social and Environmental Responsibility (SER) initiative engaged supply chain partners to gather greenhouse gas emissions data from suppliers representing 98 percent of our direct spend, up from 95 percent in 2011.

To learn more about supplier emissions and engagement, visit [Supply Chain Social and Environmental Responsibility](#) and [Energy & Climate Change Strategy](#).

DURHAM FACILITY DATA DASHBOARD



EFFICIENCIES VIA INTERNAL COLLABORATION

The facilities team works closely with engineering and IT to manage global energy consumption by monitoring power use and implementing energy efficiency initiatives. Our data centers are designed to automatically capture and report PUE, which is The Green Grid standard for measuring the energy efficiency of data center infrastructures. We use PUE across all facilities, including our Hopkinton, Massachusetts, and Cork, Ireland, locations, as well as our new facility in Durham, North Carolina. These systems allow data center managers to consistently monitor and measure the impact of changes they make.

In 2012, we saw the PUE of the Ireland COE data centers/labs fall from 1.64 to 1.61, a direct result of the initiatives we put in place. This decline means we have moved even closer to the “very efficient” end of the PUE scale.

EFFICIENT FACILITIES AROUND THE GLOBE

Durham, North Carolina

In 2012, EMC’s new energy-efficient, 100-percent cloud data center in Durham, North Carolina, earned the Leadership in Energy and Environmental Design (LEED™) Gold certification.

Efficient technologies utilized at this site include:

- Free air cooling for more than half of the year
- Flywheel technology that eliminates the need for batteries in uninterruptable power systems
- Hot and cold aisle containment that increases temperature regulation control for high-density equipment

Hopkinton, Massachusetts

EMC’s 650,000 square foot corporate headquarters in Hopkinton earned the 2012 Corenet Global “Best in Sustainable Practices” Award. We were recognized for collaborating with the U.S. Green Building Council and Symmes Maini & McKee Associates to share industry best practices and create new performance metrics for how R&D organizations can develop and apply protocols to conserve energy and reduce waste.

Other improvements to the Hopkinton campus include more-efficient lighting systems, upgrades to water pumping and chillers via variable frequency drives, and new kitchen ventilation controls used for the onsite cafeteria. These upgrades will save more than 2.75 million kWh annually.

Franklin, Massachusetts

In 2012, a variety of upgrades and retrofit projects were completed at this facility, including installation of more-efficient lighting systems, new kitchen ventilation controls used for the onsite cafeteria, and updating cooling towers and pumping systems to varying frequencies. In total, these improvements will save more than 3.10 million kWh annually.

Cork, Ireland

In 2012, the Ireland COE continued to optimize the Free Fresh Air Cooling Project. The program, which takes advantage of low local average air temperature to help cool the facility, reduced total annual electricity consumption by 4.329 million kWh in 2012.

In addition, the Ireland COE was certified to ISO 50001, the international standard for energy management, and continued the roll out of a hot aisle containment project and orchestrated a variety of lighting improvement projects to achieve further efficiencies.

Bangalore, India

Our India COE has continued to drive energy efficiencies throughout the facility. The process started in 2008, when the lab began a weekend shutdown program initiative to reduce its carbon footprint by turning off unnecessary servers when not in use.

PURCHASING EFFICIENT EQUIPMENT

We purchase energy-efficient servers, printers, photocopiers, and personal computers for our operations worldwide. The purchases are guided by explicit efficiency requirements (including ENERGY STAR® certification) and help achieve efficiencies by replacing older equipment with more-efficient equipment and by creating energy reductions through consolidation and virtualization.

EFFICIENT DATA CENTERS

Each and every day, EMC IT strives to advance our vision and strategy for delivering secure cloud computing and Big Data while delivering IT services to our business units.

EMC leverages our leadership in information management and cloud computing to transform our own IT operations to deliver IT as a Service (ITaaS) to the business. We develop and apply our technology solutions and industry best practices for energy-efficient cloud data centers. In doing so, we are addressing the same challenges EMC customers face in their respective organizations—providing purposeful, innovative, and transformative solutions to manage digital information growth, while working within the constraints of energy and space, and growing business demand.

OUR IT TRANSFORMATION

EMC IT supports approximately 60,000 “internal” users working in approximately 400 sales and corporate offices in more than 86 countries—not to mention our large telecommuting population. EMC’s Global IT environment spans four data centers with 10,000 OS Images and 92 percent of all servers virtualized, and hosts more than 500 applications and 13 PB of information storage.

EMC IT began its multi-year journey to the cloud in 2004. What began as “doing more with less” became an opportunity to completely rethink the way IT is built, managed, and consumed. Virtualization, cloud computing, and ITaaS provide EMC with an opportunity to improve efficiency, gain agility, enable business innovation, and create competitive advantage for EMC.

Our initial goal was to reduce IT costs by consolidating and virtualizing the IT infrastructure, including servers, storage, networks, and desktops. This resulted in significantly higher utilization rates for storage and servers and dramatically improved efficiency and power consumption in our data centers. We then focused on improving quality of service and time-to-value for our business units and employees. EMC accomplished this by extending virtualization to existing business-owned, mission-critical applications, including enterprise resource planning (ERP), email, customer relationship management (CRM), and decision support/business intelligence.

Rather than building complex, custom solutions for every need throughout the company, EMC IT began automating, simplifying, and packaging competitive IT services for dynamic selection. The EMC IT service catalog offers transparent prices and service levels that give the business choices based on needs, usage, and budget. EMC IT’s cloud operating model enables the business to embrace our standardized technology and application platforms for a broader spectrum of choice, while allowing EMC IT to spend more time consulting proactively with our business professionals in support of their strategic objectives.

While our journey was fueled initially by economic reasons, it has also produced environmental benefits from both lower GHG emissions and reduced material consumption.

To learn more about our cloud journey, please visit [EMC IT Proven](#).

**WHITE PAPER:
EMC IT: LEADING THE
TRANSFORMATION**

LEVERAGING OUR TECHNOLOGY FOR EFFICIENCY

Virtualization and cloud computing are improving energy efficiency in our data centers. By leveraging our own products and technologies—virtualization, data deduplication, and Fully Automated Storage Tiering (EMC FAST™)—we are delivering significant energy and cost savings on our journey to the cloud.

Dynamic allocation of server and storage resources in a highly virtualized IT infrastructure allows us to strike the right balance between energy efficiency and business performance.

Our virtualization strategy includes:

- Tiered, shared, and virtualized server and storage—based on the VCE Vblock® converged infrastructure
- Virtual (thin) Provisioning of IT infrastructure
- Integrated management and automation for virtualized infrastructure

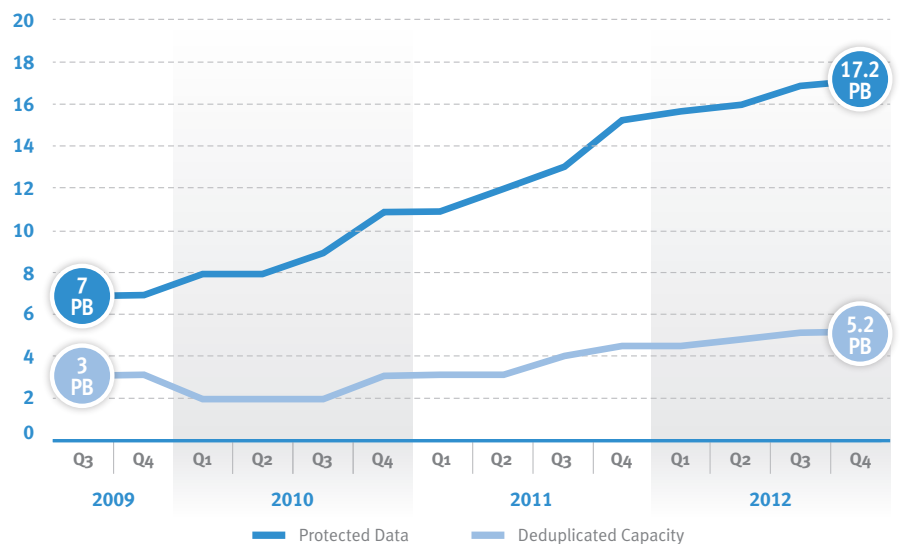
By the end of 2012, EMC IT had virtualized 92 percent of OS images using the VMware® vSphere® platform. On average, we are achieving virtual to physical consolidation ratios of 14:1. Capacity utilization rates across compute and storage have increased to about 75 percent. EMC FAST VP™ technology, which automatically moves data to the appropriate tier of storage, such as Flash drives for ultra-high performance or SATA drives for infrequently used information, is further optimizing our storage infrastructure for performance, energy-efficiency, and cost.

By deploying EMC Avamar® and Data Domain® data deduplication solutions, EMC IT has transformed backup and restore. We have eliminated backup for certain applications by providing online archiving, removing more than 1 PB of email, file system, and database data from the backup schedule. Data deduplication, using Data Domain for databases and Avamar for virtual machines (VMs) and file systems, has further reduced the amount of data to be backed up—and reduced backup times by 75 percent. Avamar is also used to centralize backups for 121 remote sites, increasing data availability and eliminating offsite backup costs.

Deduplication Backup Savings

From Q3 2009 through 2012, the total amount of data being protected rose from 7 PB to 17.2 PB, including temporary data copies required for migration to the Durham data center. However, because of the deduplication efficiency of Avamar and Data Domain, the backup capacity required to protect that data only increased from 3 PB to 5.2 PB.

**DEDUPLICATION BACKUP SAVINGS
PETABYTES**



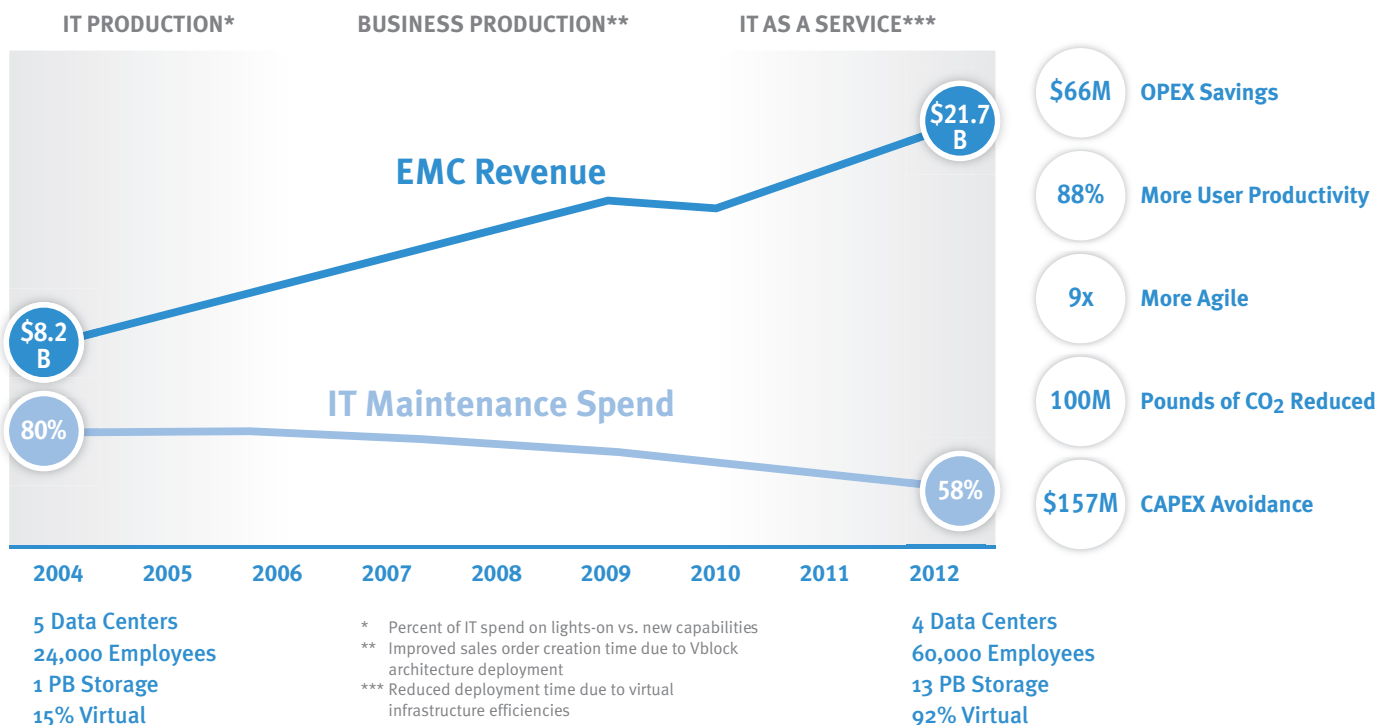
RESULTS TO-DATE OF EMC'S CLOUD TRANSFORMATION

| | 2004 | 2011 | 2012 |
|--|------------------------|--|---|
| EMC REVENUE | \$8.2 billion | \$20 billion | \$21.7 billion |
| NUMBER OF EMPLOYEES | 22,700 | 53,000 | 60,000 |
| AMOUNT OF INFORMATION | 1 PB | 12 PB | 13 PB |
| NUMBER OF DATA CENTERS | 5 | 5 | 4 |
| VIRTUALIZATION PERCENT | 0% | 85% | 92% |
| NUMBER OF SERVERS | 2,000 physical servers | 1,800 physical servers hosting 7,000 OS images | 1,500 physical servers hosting 10,000 OS images |
| PERCENT OF IT SPEND ON NEW CAPABILITIES VERSUS LIGHTS ON | 23% | 42% | 42% |
| TIME TO PROVISION INFRASTRUCTURE | 90 days | ~1 day | ~1 day or less |

Operationally, from 2004-2012, our IT transformation has saved the company millions of dollars while improving productivity and driving value and agility for the business. During this period, EMC IT realized capital savings of \$157 million and operational savings of \$66 million. In 2012, the Scope 1 and 2 GHG emissions from EMC data centers were approximately 16,377 metric tons CO₂e.

EMC IT TRANSFORMATION RESULTS

ESG IT AUDIT REPORT: EMC IT—LEADING THE TRANSFORMATION, MARCH 2013



MIGRATION TO VIRTUALIZATION AT THE DURHAM CLOUD DATA CENTER

The migration to the Durham Cloud Data Center required relocation of more than 350 applications and six petabytes of data used by 60,000 EMC users worldwide, making it EMC's largest migration to-date. Though the process started in 2011 when the center opened, the majority (70 percent) of the migration was completed in 2012.

Through the use of leading virtualization technologies and tools, the project successfully migrated information from the Westborough, Massachusetts, location to the new Durham facility—all without physically moving a single box.

Completed in December 2012, this migration allowed us to test our abilities as a leading IT company, and gave us another important case study to share throughout EMC and with customers and peer companies.

ADDITIONAL INFORMATION

EMC DURHAM CLOUD DATA CENTER—APPLICATION & DATA MIGRATION

EMC DURHAM CLOUD DATA CENTER—MIGRATION PLANNING AND PROGRAM MANAGEMENT

EMC DATA CENTER IN DURHAM, NORTH CAROLINA

Although EMC opened the doors to its new Durham cloud data center on September 15, 2011, most of the migration of activity to Durham occurred in 2012. Built with leading technology solutions from EMC, VMware, and the VCE Company, the 100 percent virtual Durham data center is the foundation for EMC IT's cloud vision and transformation to ITaaS. The new data center enables EMC IT to deliver the agility, flexibility, and scalability needed for current and future business needs. For example, all applications run on a single version of the VMware vSphere platform within an x86 enterprise hosting architecture. Additionally, this state-of-the-art facility provides a world-class showcase for customers and enables employees to tap into cloud capabilities through its global R&D labs. To learn more, please review the Migration to Virtualization at the Durham Cloud Data Center case study.

This Tier III data center meets a stringent annualized PUE objective of 1.3, and we learned in 2012 that we will be receiving Leadership in Energy and Environmental Design (LEED) Gold certification in 2013. Environmental innovations include a rooftop water-collection system that provides 40 percent of our water needs, free outside air cooling for 57 percent of the year, and flywheel technology that eliminates the need for batteries in uninterruptible power systems (UPS). Despite increased server and storage demand in the Durham data center, EMC IT managed to save 280 watts per server with virtualization and has reduced power consumption per terabyte of storage by 82 percent.

To learn more about the energy-efficient design and construction at Durham cloud data center, visit [Efficient Facilities](#).

DATA CENTER ENERGY EFFICIENCY TRANSFORMATION

| | | OLD PHYSICAL DATA CENTER | DURHAM CLOUD DATA CENTER | DELTA | PERCENT IMPROVED | ANALYSIS |
|---|-----------------|--------------------------|--------------------------|--------|------------------|---|
| PHYSICAL AND VIRTUAL SERVERS ON THE JOURNEY TO THE CLOUD | | | | | | |
| Servers | Servers | 2,120 | 3,550 | 1,430 | +67% | Server demand grew by 67% |
| | % Virtual | 32 | 100 | 68 | +213% | 100% virtual servers, up from only 32% virtual |
| | Watts/Server | 377 | 97 | -280 | -74% | 280 watts saved per server by leveraging virtualization |
| INFORMATION LIFECYCLE MANAGEMENT STORAGE BY TIER | | | | | | |
| Storage | Storage (TB) | 2,808 | 6,697 | 3,889 | +138% | During the project, storage demand grew by 138% |
| | Watts (TB) | 285 | 52 | -233 | -82% | The project was able to reduce power per TB by 82% |
| DATA CENTER INFRASTRUCTURE OPTIMIZATION | | | | | | |
| Power | IT Load (KW) | 1,200 | 802 | -398 | -33% | IT demand continued to grow, while power was decreased |
| | Total Load (KW) | 2,400 | 1,043 | -1,357 | -56% | Overall the project saved 1.4 Megawatts of power demand |
| | PUE | 2 | 1.3 | -0.7 | -35% | PUE improved by 35% |

2012 PROJECTS IMPLEMENTING DFE STRATEGIES

[PUE Efficiencies via Internal Collaboration](#)

[EMC's Supply Chain Social & Environmental Responsibility Program](#)

[Halogen-Free Alternatives for Printed Circuit Boards](#)

[Improving Our Logistics Every Day](#)

[Partnering with Our Logistics Carriers to Drive Change](#)

[2012 EMC Packaging Summit](#)

[EMC Apex Manufacturing Facility Push for Zero Waste to Landfill](#)

[Advancing Our Responsible eWaste Practices](#)

EFFICIENT PRODUCTS

EMC's global carbon footprint expands far beyond the technologies and resources needed to create our products—the biggest environmental impacts occur as a result of the energy consumed during product use.

We work continuously to generate savings for our customers and to help them reduce their environmental impact by improving the energy efficiency of our products. These improvements, which apply to both hardware and software products, include delivering industry-leading functionality to manage demand, driving increased efficiency, and tightly integrating our products within the data center.

To learn more about how data center efficiencies come to life at EMC, visit [Efficient Data Centers](#).

DESIGNING PRODUCTS WITH THE ENVIRONMENT IN MIND

We employ tools and processes to measure and improve the sustainability of our products, including a Design for Environment (DFE) process that allows us to leverage current product development to help inform future sustainability practices. This process starts with our designers and architects who gain insights into sustainable product design by using proxy indication systems that are embedded into their design tools. As the process continues, our engineers consult development checklists to ensure products adhere to our corporate standards and best practices. During the final stage, when products become ready for general release, we conduct lifecycle analyses on representative product configurations to inform future efforts.

Moving forward, we will continue to focus on the following areas:

- Increasing the energy efficiency of our products
- Developing products that foster significant improvements in PUE
- Implementing standards that help measure and define areas for energy-efficient operations of information technology (IT) equipment
- Working with suppliers to reduce impacts of manufacturing disk drives
- Investigating less carbon-intensive options for transport of products and components
- Working to minimize transportation of cabinets and other high-volume, heavy components
- Exploring lightweighting techniques
- Reducing material impacts by informing design decisions
- Developing environmentally friendly printed circuit board materials
- Improving packaging efficiency without compromising efficacy
- Maximizing recovery and recycling of products at end of use

To learn more about projects implementing these strategies, see the sidebar links.

ENERGY STAR® SPECIFICATIONS AND REVIEW

Part of EMC's forward-looking strategy to develop energy-efficient products is staying abreast of evolving industry guidelines and best practices. This foresight helps us prepare and plan ahead when new or revised policies take effect and, in some cases, provide input during public commenting periods where allowed.

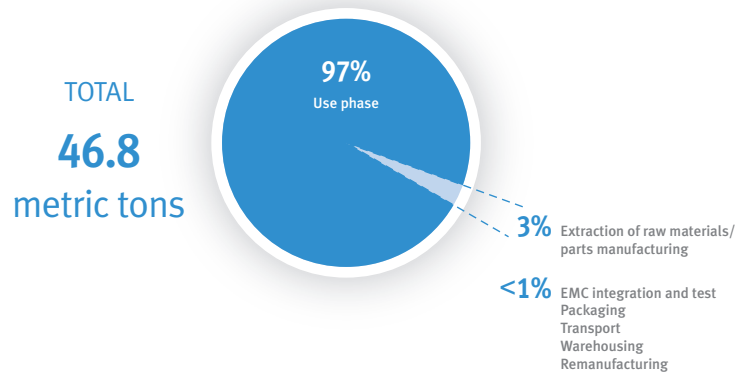
In 2012, EMC played a role in the next iteration of the U.S. Environmental Protection Agency's (EPA) ENERGY STAR® for Data Center Storage requirements and chaired the Green Grid's "ENERGY STAR® for Storage Task Force." In addition, EMC participated in a workshop with other IT companies, Information Technology Industry Council (ITIC), and the EPA to explore the future direction of the program and led one of the investigation tracks.

On an organizational level, EMC's Energy, Efficiency, and Effectiveness (E3) team—a voluntary group of employees from product groups across EMC that shares information and ideas about EMC's technology efficiency initiatives—reviewed proposed changes to ENERGY STAR requirements and provided a consolidated response with recommendations for the EPA to consider.

In 2012, we further evolved DfE through an annual review and update of the guidelines and increased employee communications regarding the importance of engraining DfE approaches into our daily work. We also hosted our first-ever Sustainability Summit, an annual half-day event that convened more than 40 employees from engineering, supply chain, manufacturing, and other groups to provide an overview of sustainability at EMC and the role of DfE in developing more sustainable products. The Summit featured presentations from EMC product developers and third-party recycling vendors, and offered hands-on exercises including a chassis disassembly that demonstrated the DfE process for attendees.

To learn more about DfE and innovation, visit [Product Material Content](#) and [Innovation Network](#).

GHG EMISSIONS PER STAGE OF A REPRESENTATIVE EMC MIDRANGE PRODUCT (LCA) 5-YEAR USE PHASE—METRIC TONS



EFFICIENT DRIVES

EMC offers a variety of disk drives to meet varying needs of capacity, performance, and cost—each with its own set of characteristics to consider when pursuing energy efficiency. For example, high-capacity SATA drives use less power but have slower performance. In contrast, lower capacity FC/SAS drives use more energy but have a higher performance. In addition, there are several efficiencies that can be achieved with using disk drives in tandem with other technologies.

We were the first in the industry to use Flash, or solid state, drives in enterprise storage systems. Enterprise Flash drives offer energy efficiency in high-performance computing, using up to 97.7 percent less energy per IOP (operations per second) than FC/SAS drives, and up to 38 percent less energy per terabyte of data stored. The energy savings come from their solid state nature—they do not spin like conventional disk drives—and from the potential to reduce the total number of drives required across an entire system to achieve stringent performance targets. EMC Fully Automated Storage Tiering (FAST) technology can leverage the more-efficient enterprise drives at the highest tier and the more-efficient ATA drives at the lowest tier to achieve both greater efficiency and greater performance across the spectrum of service levels.

EFFICIENT POWER & COOLING

Beyond drives, there are three other key initiatives for reducing power use in our storage platforms:

1. Using more efficient power supplies to reduce energy loss as power is delivered to the storage platform. The use of high-efficiency power supplies reduces total equipment power and minimizes the generation of waste heat. This can yield significant savings in the facility cooling and power distribution infrastructure. Power supplies in our current USD and ESD products have achieved a “Gold” rating against the 80 PLUS benchmark.
2. Embedding instrumentation and utilizing effective tools to monitor and report power use and ambient temperature.
3. Embracing adaptive cooling technology to save energy by dynamically adjusting fan speeds in the storage platform. Our adaptive cooling technology continuously samples the external environment and adjusts its operation to minimize power consumption while maintaining reliability.

To learn more about efficient power and cooling in EMC products, visit [EMC VNX® Series](#) on [emc.com](#).

TRANSPORTATION & LOGISTICS

At EMC, we believe that efficiency, cost savings, and environmental benefit can go hand in hand. EMC ships globally to more than 120 countries, always balancing speed of delivery and product protection with operational efficiency and environmental integrity. We consistently seek to reduce greenhouse gas (GHG) emissions by focusing on route consolidation, mode of transport, and logistics carrier engagement.

We collaborate internally and externally to pursue our objectives. Cross-functional employee teams help analyze the drivers of GHG emissions, prioritize impact areas, and drive projects to reduce our environmental footprint. Externally, we engage our logistics carriers to increase efficiency and adopt more sustainable practices.

IMPROVING OUR LOGISTICS OPERATIONS EVERY DAY

Route consolidation for greater efficiency

Freight consolidation can produce financial and environmental benefits. By shipping greater volumes of product in fewer, more efficiently packed shipments, we can reduce fuel consumption, costs, and GHG emissions. This approach has been applied across EMC's product value cycle, including inbound logistics from suppliers, outbound logistics to customers, and reverse logistics for product take back at end-of-life.

Mode selection for lower GHG emissions

In 2012, we expanded our efforts to use modes of transport with lower GHG emissions factors. For example, we shifted one North American shipping lane from truck to rail. This reduced associated GHG emissions by an estimated 50 percent and cut costs by 25 percent.

The transition to lower-emitting modes of transport—such as sea, rail, and intermodal routing—is a priority for our logistics sustainability program. However, extensive packaging and quality assurance testing is necessary before shifting to a different mode of transport. For instance, sea transport brings risks of damage from moisture, while rail transport has different vibration patterns than truck transport, which can damage product if not adequately packaged. We continue to evaluate these opportunities and implement those that make sense for the environment and our business strategy.

PARTNERING WITH OUR CARRIERS TO DRIVE CHANGE

Sustainability is embedded into the business relationship with our logistics carriers. We collaborate with carriers to optimize routes, leveraging their logistics networks and capabilities to improve EMC's costs, timeliness, and environmental impact. We also exchange sustainability strategies and industry best practices. In addition to this collaboration, we set standards and reporting requirements that support our sustainability objectives.



Carrier GHG emissions reporting

EMC's major carriers are required to report CO₂e emissions for the freight they carry for EMC. In 2012, we developed and piloted a standard template for carriers to report this emissions data. Our objective is to simplify the aggregation of data which can be complex when carriers use different reporting formats. In 2013, we will collect and analyze feedback about the benefits and challenges of the standard template before expanding its use to all carriers.

Reporting environmental initiatives and performance

Carriers are also asked to present their companies' sustainability programs and goals during quarterly business reviews. In 2012, EMC developed a new sustainability section within the logistics scorecard. This section, which we plan to pilot in early 2013, is used to rate carrier performance. We also began requiring our logistics partners to acknowledge the EMC Supplier Code of Conduct in accordance with the Supply Chain Social and Environmental Responsibility program. To learn more, visit [Supply Chain Responsibility](#).

SmartWay

In the United States, we require our carriers to join the SmartWay Transport Partnership, a program of the U.S. Environmental Protection Agency that works with carriers to increase efficiency and reduce GHG emissions. In 2012, EMC again achieved greater than 98 percent domestic freight volume moved using SmartWay-certified providers.

MEASURING OUR IMPACT

EMC's Global Logistics Operations generated approximately 167,362 MT CO₂e in 2012. This number is estimated using the GHG emissions reports from our logistics partners and covers inbound, outbound, interplant, and customer service transportation and logistics. In 2012, we collected emissions reports from carriers representing 75 percent of our logistics spend, and extrapolated total emissions based on the reports we received. We also set standards to quantify the environmental impact of logistics projects which helps measure progress and identify projects with the highest potential to reduce GHG emissions.

Our objective is to advance EMC's initiatives to promote a low-carbon future by continually integrating sustainability practices into strategy development and everyday operations, and by collaborating with logistics partners to achieve emissions reductions. We will continue to make incremental improvements, report our progress, and aspire to the big changes that will significantly lighten our environmental impact worldwide.

EMPLOYEE TRAVEL & COMMUTING

EMC encourages alternative travel, commuting, and communications methods including e-conferencing, virtual meetings, remote work assignment programs, and shuttle services. We encourage employees to reduce their environmental impact and achieve savings for our business at the same time. In addition, we continue to add efficiencies to our corporate fleet.

E-CONFERENCING

We provide a number of technology options for employees to collaborate more effectively and more often without having to travel. Our options for e-conferencing include TelePresence, video conferencing, web conferencing, and audio conferencing. We have 50 Cisco TelePresence facilities around the globe including the six facilities we added in 2012. In 2012, we installed several new HD Video Conferencing systems and saw increased usage of desktop video conferencing with over 4,000 users with Cisco TelePresence Video (Movi) accounts.

CORPORATE FLEET

We continually examine our fleet and potential replacement aircraft to improve fuel efficiency and reduce emissions. Since 2010, we have reduced our total emissions from our fleet aircraft from 2,198 metric tons to 1,848 metric tons, primarily due to reductions in flight hours. We have been participating in the EU-Aviation Emissions Trading Scheme (EU-ETS or AVETS) since its inception in 2010. The EU-ETS or AVETS went live in 2012 and we reported our 2012 CO₂e emissions in early 2013.

TELECOMMUTING/WORKWISE

More and more of our employees are working remotely and with other flexible work arrangements. Our WorkWise program, for example, empowers eligible employees in either a partial or full commitment to work remotely. The environmental benefits include reduced emissions from and time lost to commuting and facility consolidation, which allows more efficient use of space and energy.

In 2012, we expanded our efforts by launching a work from home pilot program at the Ireland COE. The e-work program offered 40 customer support employees the opportunity to work up to three days at home per workweek, depending on team needs. The pilot was a success and will be offered to more employees in 2013.

EMPLOYEE COMMUTING AND SHUTTLE PROGRAMS

Our facilities in the U.S. and in Cork, Ireland, offer carpool matching programs for employees. The Ireland COE also continues to expand the Cycle to Work program and launched an electric car competition in 2012. In addition, one of our facilities in Hopkinton, Massachusetts, was recognized as one of the Best Workplaces for Commuters by the U.S. EPA for the second year in a row.

Commuting programs and projects available at the Hopkinton location include:

- Bike racks and showers for employees who bike to work
- Incentives to encourage employees to use public transportation, including direct service to our locations from some local train stations and a commuter pretax savings plan
- Shuttle services between buildings at our central Massachusetts facilities to limit employees' use of their own vehicles; shuttle fleets include hybrid vehicles

Ireland's Cycle to Work Program

The Cycle to Work program was an initiative launched by the Irish Government in 2009 and was first offered to our Ireland COE in 2010. The program offers several benefits, including:

- **Personal health and fitness:** Employees can burn approximately 4,000 calories per week by cycling to/from work
- **Reduced environmental impact:** Cycling is a zero emission form of transportation
- **Financial savings:** Employees can save up to 52 percent off the retail cost of a bicycle through the program, which also covers bicycle accessories up to €1,000 per employee

In 2012, an additional 97 Ireland COE employees purchased bikes through the Cycle to Work program.

iPOOL

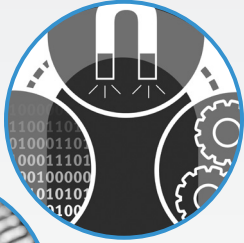
In 2012, the India COE launched iPOOL, a web-based carpooling tool that helps employees connect with fellow car poolers within the company. To encourage participation, EMC allocated car pool parking spaces that are closer to the building than most spaces. The India COE's other program, which offers bus service for approximately 20 percent of the workforce, further reduces dependence on individual vehicles.

MATERIAL & RESOURCE USE

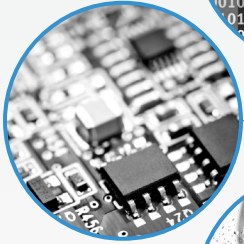
EMC is committed to using less and reusing more, while protecting environmental and human health from risks throughout the value chain. We constantly look for new ways to increase recovery of useful materials at the end of a product's useful life and responsibly handle materials that cannot be reused.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:

Product End-of-Life



Product Material Content



Water Use & Management



Recycling & Waste



Packaging



Biodiversity



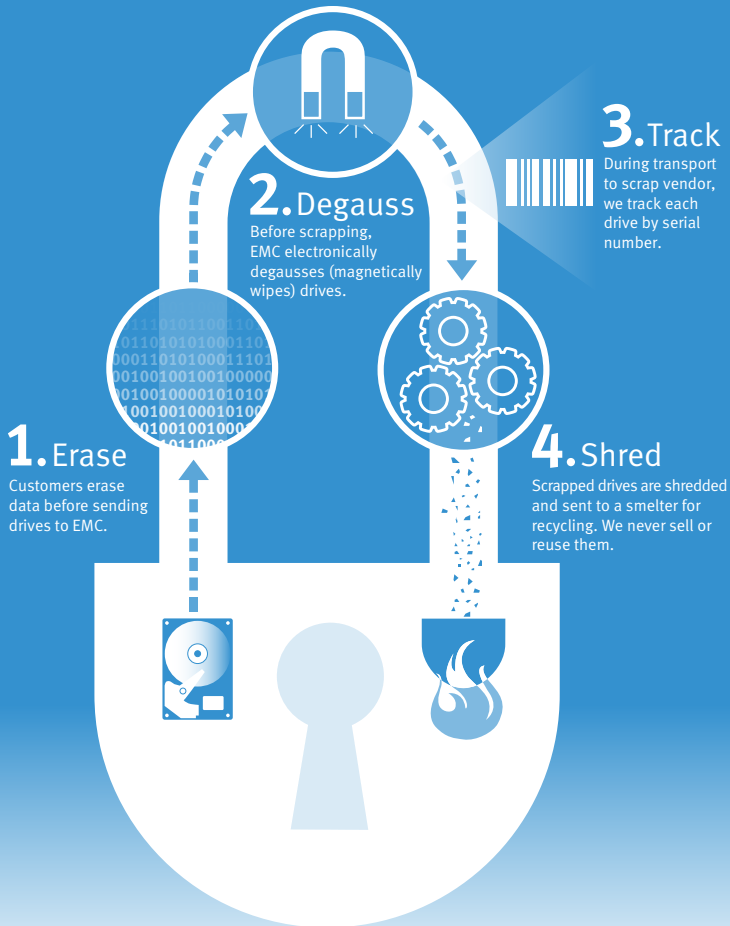
BLOOMBERG'S "TOP 10 SUSTAINABLE BUSINESS STORIES OF 2012" FEATURES EMC'S CROWDSOURCING SOLUTIONS

PRODUCT END-OF-LIFE

EMC aims to meet the highest standards of environmental stewardship, maximize the economic value of returned products, and effectively manage risks associated with product end-of-life processes. Our global eWaste program looks to improve management of eWaste worldwide, both within EMC and externally, through partnerships and innovation. We offer product take-back to all of our customers to help ensure products are recycled or disposed of responsibly and in compliance with the law.

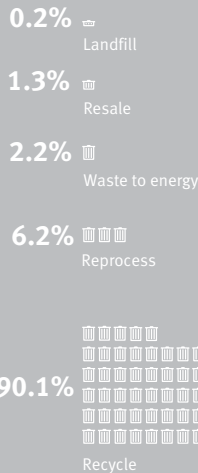
EMC eWASTE MANAGEMENT PROTECTING DATA AT EVERY TURN

At every stage of the eWaste lifecycle, EMC puts data protection first. We go beyond standard practices to ensure the highest levels of information security for our customers.



EMC eWASTE DISPOSAL AT A GLANCE: WHERE DOES IT GO?

Less than 1% of all of EMC eWaste, including drives, goes to a landfill



COLLABORATING TO SET INDUSTRY STANDARDS AND CREATE INNOVATIVE SOLUTIONS

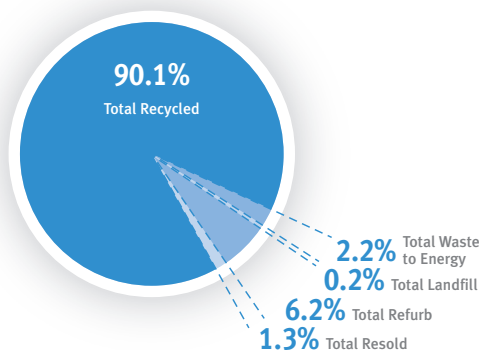
Establishing Industry-Wide eWaste Metrics

Rigorous standards and metrics are essential for building and assessing effective global eWaste programs. EMC is actively engaged with The Green Grid to develop and promote consistent, industry-wide eWaste metrics that measure and account for responsible recycling and disposal.

Crowdsourcing Solutions

In 2012, EMC partnered with the Environmental Defense Fund and InnoCentive to crowdsource ideas for tracking eWaste through the recycling and disposal process. The goal was to identify solutions to help verify responsible eWaste management. EMC hosted an international virtual meeting with EMC engineers and the three crowdsourced contest winners to discuss their ideas. As a result, EMC is currently working to pilot potential eWaste tracking solutions and plans to share key learnings with the industry in 2013.

2012 EWASTE DISPOSITION



Thinking Broadly about Social and Environmental Impacts

eWaste processing can be an economic opportunity for people in developing countries, but can also pose risks to their health and the environment if not properly managed. In 2012, we explored this issue by launching a partnership with researchers at the Massachusetts Institute of Technology, EMC employees in Bangalore, India, a local Information Technology Asset Disposal (ITAD) supplier in India, and an Indian NGO. The goal of the partnership is to identify alternative economic models that will advance responsible eWaste collection and processing—while preserving local collectors' participation. In 2013, EMC plans to strengthen this partnership and pilot a program to achieve its goals. The program will initially provide education and eWaste collection opportunities to local schools in Bangalore. We hope to expand this program over time to include other opportunities for promoting responsible eWaste management. This initiative will focus mainly on consumer electronics in India, as enterprise equipment sold by EMC is less pervasive in the secondhand market.

ADVANCING OUR RESPONSIBLE EWASTE PRACTICES: A LIFECYCLE PERSPECTIVE

Design for Disassembly

A truly effective take-back and eWaste program starts with product design. The easier a product is to disassemble, the easier it is to reclaim, recycle, and dispose of in a responsible manner. This reduces waste and recaptures the value of recyclable and reusable materials. Our standard design specifications include easy component recovery and continual improvement of disassembly procedures.

In 2012, EMC hosted a Design for the Environment event in which representatives from our ITAD suppliers met with EMC engineers to identify opportunities to design for more efficient recycling and recovery. Together, the team brainstormed ways to simplify disassembly (e.g., replacing screws with clips), segregate possible hazardous materials, and identify new ways to find and remove valuable materials for enhanced economic returns.

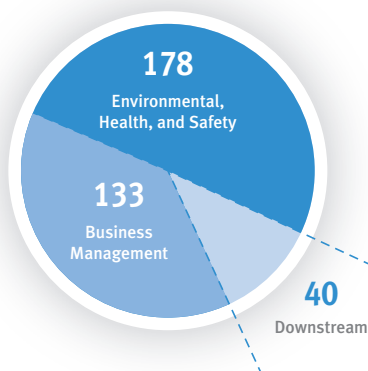
Responsible Handling of Customer Returns

We accept returns of all EMC-branded products at the end of their useful life. Where appropriate, we recondition products for donation or internal deployment. All remaining products are disassembled. Where possible, some subassemblies are remanufactured and tested to new product standards, so the products may be used again. Products that cannot be remanufactured are sent to our ITAD suppliers, who responsibly reclaim, recycle, or resell the remaining material—sending less than one percent to landfills. To protect customer information, disk drives are degaussed (magnetically erased) and/or physically shredded prior to recycling.

In 2012, we took back an estimated 10,041 metric tons of eWaste. Our cumulative returns from 2008-2012 stands at approximately 90 million pounds (40,823 metric tons)—surpassing our five-year cumulative collection goal of 75 million pounds.

EMC has chosen not to set additional eWaste collection targets based on weight, although annual weights will still be reported. As storage technologies improve, our products are getting smaller and lighter, even though our customers are storing ever-greater amounts of data. Furthermore, taking back a greater weight of product does not necessarily indicate improved environmental performance. EMC would rather our products have a longer lifespan and be adaptable to changing customer needs. These forces may actually drive down the annual weight of product taken back, yet reduce the environmental impact of manufacturing new products. We plan to measure performance and set goals around how responsibly EMC and our ITAD suppliers manage the eWaste we do receive.

SUMMARY OF 2012 ITAD SUPPLIER AUDIT FINDINGS



351
findings

ITAD Supplier Certifications and Auditing

Partnering with responsible and transparent ITAD suppliers is crucial to proper eWaste management. In 2012, we set requirements for suppliers to achieve e-Stewards or R2 certification by the end of 2013. By the end of 2012, approximately 73 percent of eWaste collected by EMC was disposed of at an R2 or e-Stewards certified facility, including 100 percent in the United States. Moving forward, our goal is to send 100 percent of eWaste collected to an R2 or e-Stewards certified facility by 2014. This goal also aligns with The Green Grid's new Electronics Disposal Efficiency (EDE) metric, which EMC helped establish.

EMC surpassed our goal of auditing 80 percent of our ITAD suppliers' sites by auditing 94 percent of them via a third party in 2012. Audits include verification and/or confirmation of:

- **Downstream Disposition**
 - Mass balance accounting
 - Shipping documentation
- **Business Management**
 - Training
 - Process documentation
 - Contingency planning
 - External certifications, such as R2 or e-Stewards
 - Working conditions
 - Data and hardware security
- **Environmental, Health, and Safety (EHS)**

Audit results from 14 ITAD supplier facilities included 40 downstream findings, 133 business management findings, and 178 EHS findings. Examples of findings included lack of proper downstream documentation, incomplete site closure and contingency plans, and low levels of employee health and safety training. EMC was concerned about the severity and large number of findings, and worked closely with our ITAD suppliers to address them.

Each ITAD supplier was required to create a Corrective Action Plan, which was monitored closely by EMC. All findings, with few exceptions, were also required to be closed (with documentation) within three months of discovery. In fact, many ITAD suppliers were able to close minor findings immediately and the majority of them worked diligently to address findings. EMC plans to continue annual auditing and has incorporated audit findings as a key performance indicator for all ITAD suppliers.

In 2013, our goal is to audit all ITAD suppliers and ensure that 100 percent of them are either R2 or e-Stewards certified. In addition, all ITAD suppliers will have to acknowledge the [EMC Supplier Code of Conduct](#) in 2013.

Global Alignment for Greater Efficiency

In 2012, we developed a five-year strategic plan to manage eWaste across the globe in a responsible and uniform manner. As part of that plan, ITAD suppliers are now managed along with other EMC direct material suppliers and held to the same standards for performance and quality. EMC has placed an emphasis on working with ITAD suppliers that can partner with us in multiple locations and across several aspects of our business. To learn more about supplier standards for performance and quality, visit [Supply Chain](#).

EMC has established additional eWaste handling capabilities in-region to reduce GHG emissions from transportation of goods, reduce logistics costs of transporting used electronics, and prepare for compliance with evolving international regulations. Additional locations include the western United States, China, Thailand, and Western Europe.

In 2013, EMC will expand our eWaste processing capabilities even further in Asia and South America. All of these new sites will be required to obtain R2 or e-Stewards certification by the end of the year.

PRODUCT MATERIAL CONTENT

Information technology (IT) devices contain substances that are essential to the functionality and safe use of the product, but some of them can adversely impact ecological and human health when not properly managed. To protect people and the environment, EMC takes a proactive approach to minimizing the use of these substances in our products by researching and identifying alternative materials. We also take measures to prevent these substances from entering the natural ecosystem. To learn more, visit [Product End-of-Life](#).

DESIGN FOR ENVIRONMENT

The EMC Design for Environment (DfE) program incorporates environmental considerations throughout product design. EMC engineers take what we have learned about the environmental impact of existing product designs and use that knowledge to implement best practices for ongoing design. To learn more, visit [Efficient Products](#).

IDENTIFYING ALTERNATIVES

To eliminate environmentally sensitive materials in our products, viable alternatives must be found. When we believe that a material may be of concern, we take a precautionary approach by exploring alternatives that are safer for ecological and human health. We prioritize the substances to assess, and then collaborate across the industry and academia to identify and qualify alternatives that meet the same or higher standards of reliability, cost-effectiveness, performance, and availability as the materials we currently use. We implement substitutes in new designs where feasible.

Halogen-Free

Flame retardants in IT products are essential for product functionality and human safety. Halogens are an ingredient in flame retardants commonly used in laminates for printed circuit boards (PCBs), but there are concerns about halogens' impact on the environment and human health. EMC has been working for several years to identify halogen-free substitutes that meet the rigorous technical requirements for our products.

In 2011, EMC successfully shifted the majority of its new PCBs to a halogen-free material. However, that halogen-free substitute could not be used in our high-performance PCBs, which have more stringent requirements. Because a suitable halogen-free substitute did not exist on the market, EMC decided to develop a solution.

In the spring of 2012, EMC invited chemists and engineers from a PCB manufacturer and a laminate supplier to work with EMC on this challenge. EMC set the vision to identify, test, and implement a new flame retardant that is halogen-free, meets the technical requirements of our high-performance PCBs, and is affordable to implement. EMC's own experts in PCB design, signal integrity, and electrical and mechanical engineering participated in the project.

By the end of 2012, this collaborative group identified a halogen-free material that meets EMC's requirements and will be implemented on our high-performance PCBs in 2013.

Originally, EMC was the only customer for these halogen-free substitutes. Today, our suppliers report that there is significant interest from other companies. By driving this effort with our suppliers to identify these substitutes, EMC is not only helping our own business, but also the rest of the industry and the planet's ecosystem.

EMC'S MOVE TO HALOGEN-FREE

2011

Implemented halogen-free material for majority of new PCBs

2012

Worked with suppliers to develop new halogen-free material for high-performance PCBs

2013

Implementing new halogen-free material for high-performance PCBs

Researching halogen-free material for ultra-high-performance PCBs

Phthalates

EMC participates in the U.S. Environmental Protection Agency (EPA) [Partnership on Alternatives to Certain Phthalates](#), a project of their Design for Environment Program. This project has identified eight phthalates of high concern and a list of potential alternatives. We are currently working with our suppliers to evaluate these and other alternatives for use in our products. We are also members of the [Green Chemistry and Commerce Council \(GC3\)](#), which is conducting tests of alternative materials to determine human toxicity. In 2013, we intend to identify substitutes for those eight phthalates identified by the EPA, with the intent to implement changes in 2014.

FULL MATERIAL DISCLOSURE

EMC's Full Material Disclosure (FMD) database catalogs the substances used in EMC products. This database enables us to quickly and easily identify the presence of substances—when there are new regulations regarding their use—and to respond more rapidly to those requirements. It also helps with identifying where “[conflict minerals](#)” (tin, tantalum, tungsten, and gold) are used in our products so that we can trace their source. To gather this information, we ask suppliers to identify materials used in every part of EMC products by CAS number (a unique identifier for chemical substances).

Compiling this database is complex due to the vast number of parts in our hardware products, the constant evolution of our product portfolio, and the maturity level of each supplier's ability to report FMD. We continue to gather this information from our suppliers, adding data for our new products and backfilling data from our older product releases.

MEETING COMPLIANCE AND CUSTOMER REQUIREMENTS

As interest in reducing the environmental impact of IT products has grown, regulations on product material content worldwide have followed. There has also been an increase in requests for information from our customers about specific substances in our products. The initiatives mentioned above are critical to our efforts to stay ahead of government regulations and customer desires, but the proliferation of regulations and the lack of global harmonization can be a challenge. EMC has a governance body that oversees environmental product compliance and regularly anticipates and communicates requirements to our engineering organization and supply chain. In 2013, we plan to further educate our suppliers to help them understand and prepare for the quickly changing regulatory landscape.

WATER USE & MANAGEMENT

Although EMC has a relatively small water footprint throughout our operations, we take a conscientious approach to conserving this important global resource today and for future generations. We are guided by our focus on minimizing water consumption and managing wastewater in our owned and operated facilities to help protect local water quality. Our owned global manufacturing facilities produce no industrial wastewater.

WATER CONSERVATION

EMC's approach includes the use of various water efficiency and conservation features in our facilities worldwide, such as low-flow plumbing fixtures, rainwater capture systems, and free air cooling. We also consider water conservation and efficiency elements when designing and constructing new facilities.

At our headquarters in Hopkinton, Massachusetts, wastewater is reclaimed at an onsite treatment plant which filters wastewater through three treatment and disinfection processes, resulting in treated "gray" water. In 2012, we reused more than 13,196 cubic meters of gray water for cooling, sanitation, and irrigation. Unused gray water is returned to the ground through infiltration systems to replenish local watersheds.

STORMWATER MANAGEMENT

At our Massachusetts campus facilities, which account for more than 30 percent of our corporate physical footprint, we have implemented a stringent Stormwater Management System to help protect and maintain the integrity of the surrounding resources. At these facilities, we have also implemented an Integrated Pest Management program to minimize and eliminate the use of chemical herbicides, insecticides, and pesticides where possible. Through diligent management efforts, we ensure a high quality of storm water runoff from our facilities. This minimizes the impact of our operations on natural resources, including groundwater and surface water, and helps ensure that these resources are protected in the future.

WATER FOOTPRINTING

Since 2007, we have tracked water consumption data for all of our owned facilities and most of the larger facilities that we lease. We use the World Business Council on Sustainable Development's Global Water Tool to analyze our operations and calculate our water footprint in water-stressed areas.

Our total 2012 global water withdrawal was 796,610 cubic meters. Seventy-nine percent of the water withdrawal data were compiled from reliable water bills and water meter readings. The remaining annual corporate water consumption was estimated using a water intensity factor calculated by benchmarking consumption at metered EMC facilities.

ADDITIONAL INFORMATION

CDP WATER DISCLOSURE REPORT RESPONSE

ENERGY—WATER NEXUS

We recognize that water, energy, and carbon emissions are interconnected. Water is required to generate and transmit the energy we consume, and energy is used to supply the water we use. Our suppliers also use water in their operations to produce the material components in our products. Thoughtful water conservation and efficiency practices help save energy and reduce the carbon emissions generated from these activities.

We also understand that there can be trade-offs between water and carbon emissions. Water and energy are needed to power and cool our own data centers as well as those of our customers, and our wastewater treatment plant consumes energy while reducing our water footprint.

We take a holistic view of energy and water use and the resulting carbon emissions, and thus focus on driving efficiencies in our products and operations. For example, applying free air cooling technology has allowed us to reduce the amount of energy and water consumed in our data centers and labs.

Looking forward, we have started to conduct a deeper analysis to further understand the links and trade-offs between water and carbon emissions. We plan to use the findings to develop strategies to help minimize our overall impact on the environment.

EMC'S APEX MANUFACTURING FACILITY PUSHES FOR ZERO WASTE TO LANDFILL

EMC encourages our facilities to recycle more and reduce the amount of waste sent to landfills. Each year, we work with vendors to find solutions for recycling a different material such as wooden pallets, shrink wrap, or bottles and cans. In 2012, we explored improving our existing polypropylene foam recycling program at the Apex facility by developing a new approach that compresses the foam onsite, thereby requiring fewer truckloads to deliver the material for recycling. This new approach serves as an example of how EMC continues to evolve our processes to reduce the impact of materials we use. We plan to launch this solution in 2013 and achieve zero waste-to-landfill at the Apex facility by 2016.

POWER FLO OPTION FOR COMPACTORS

In 2012, EMC's waste and recycling vendor, E.L. Harvey, converted standard hydraulic fluid to an eco-friendlier Power Flo fluid for all self-contained compactors at several Massachusetts locations. The new Power Flo option requires less frequent pick up by our vendor, E.L. Harvey, and utilizes new hydraulic fluids that have a reduced environmental impact. They are readily biodegradable and require less servicing than previously-used hydraulic fluids.

RECYCLING & WASTE

EMC encourages recycling and material reuse in our owned and operated facilities. In addition to meeting regulatory requirements for waste reduction and recycling in the countries where we operate, the EMC global recycling strategy aims to take advantage of all reasonable opportunities to minimize our waste disposal needs through waste reduction techniques, material reuse, and recycling efforts, including composting.

RECYCLING & COMPOSTING

We use the following approach to capture recyclable materials in our facilities around the world:

- In our Massachusetts, New Hampshire, North Carolina, California, and Cork locations, recyclables are removed from the waste stream by waste management contractors or municipal providers.
- In our manufacturing operations, waste materials are segregated and recycled by our waste management vendors into reusable commodities, which reduces the overall cost of recycling to the business.

We are continuously looking for opportunities to improve our recycling and composting efforts at our global facilities. In Massachusetts, North Carolina, and California, we've focused efforts on our cafeteria and have already replaced many traditional service items with compostable alternatives. In 2013, we will work with our supplier Sodexo to research and identify additional compostable products for use in our facilities.

Other highlights from 2012 include:

- Our Massachusetts locations alone composted more than 138 metric tons of waste.
- Our North Carolina locations composted more than 17 metric tons.
- Our Cork, Ireland, location reused 441 metric tons, recycled 998 metric tons, and composted 21.5 metric tons.
- Our Bangalore, India, location recycled 97.7 metric tons.

Realizing that recycling is managed and controlled in our company-owned facilities, we continue to explore recycling opportunities and efficiencies in leased facilities.

EWASTE

We strive to re-use office electronics, extend their useful life, and reduce waste at all of our company-owned and operated facilities. When office electronics reach the end of their useful life, they are returned to manufacturers who accept them for take-back, or sent to disposal vendors for responsible reuse or recycling.

The India COE continues to be authorized by the Karnataka State Pollution Control Board to store, handle, and dispose of its own eWaste. In 2012, we disposed of 1.6 metric tons of eWaste. The COE is working with local recycling partners to further improve the eWaste program in 2013.

To learn more about EMC's vision for eWaste, visit [Product End-of-Life](#).

HAZARDOUS WASTE

We are committed to reducing and eliminating the use of hazardous materials in our operations wherever possible. We do not use any Ozone-Depleting Chemicals (ODCs) in the manufacturing of our products, and our manufacturing operations generate only small quantities of hazardous waste (as defined by the U.S. and Ireland Environmental Protection Agencies). In addition:

- The Apex, North Carolina, manufacturing facility is a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste and a Small Quantity Handler (SQH) of universal waste. As a CESQG, the Apex facility generates less than 0.1 metric ton of hazardous waste in any calendar month.
- The Franklin, Massachusetts, manufacturing facility is registered as a Small Quantity Generator (SQG) of hazardous waste and waste oil, and is considered an SQH of universal waste. As an SQG, the Franklin facility generates less than 1 metric ton of hazardous waste in any calendar month.
- As SQHs, the Apex and Franklin facilities accumulate less than 5 metric tons of universal waste onsite at any time.

In 2012, there were no significant spills on any EMC property.

VIDEO: SVP MIKE KEROUAC OPENS THE 2012 EMC PACKAGING SUMMIT

PACKAGING

EMC’s sustainable packaging program seeks to maximize environmental benefits across the product lifecycle. We look at inbound packaging from our suppliers, packaging used to transport products between EMC manufacturing facilities, and outbound packaging to our customers. We collaborate to identify opportunities, generate ideas, and implement projects that reduce environmental impact and cost. Our strategy focuses on two key areas: design and use.

DESIGN

Packaging design impacts material consumption, GHG emissions from transport, waste, and recycling streams. Because of the high volumes of material we ship, seemingly small adjustments in the size, weight, and material makeup of packaging can have significant impacts. Of course, our highest priority must always be protecting our products, and we note that the environmental and financial impact of replacing damaged products would outweigh the benefits from environmentally improved packaging.

Using Less Material

We call the practice of balancing product protection with smaller, lighter packaging “right-sizing.” We continually seek to design packaging that maximizes performance using the minimal amount of material. “Right-sized” packaging can reduce material consumption and GHG emissions from transportation. For example, in 2012 we changed the packaging for shipping disk array enclosures (DAEs) from our manufacturing plant in Ireland, to our configure-to-order partner in Brazil. Originally, we shipped six DAEs per pallet in virgin packaging. After re-assessing our packaging and processes, we are shipping 24 DAEs per pallet in reused packaging. As a result, we are reducing associated CO₂e emissions by 55 percent (including from transport), waste by 71 percent, and costs by 47 percent.

Using the Right Materials

EMC also actively seeks to incorporate recycled and renewable material in our own packaging designs.

| PACKAGING MATERIAL OBJECTIVE | EXAMPLE |
|------------------------------|---|
| RECYCLED MATERIAL | A clamshell pack for shipping disk drives, one of our highest volume packages, is made of 50 percent recycled content. |
| RECYCLABLE MATERIAL | In Massachusetts, our waste management provider picks up our corrugated cardboard and sells it back to our packaging supplier. That material is then put through a milling procedure and reprocessed into new liner board. That liner board is then used in new packaging, including packaging for EMC. |
| RENEWABLE MATERIAL | In 2012, we fully implemented bamboo cushioning for 2.5-inch form factor drives, replacing polyethylene foam. Bamboo fiber material is not only renewable—it is also compostable to ASTM, BPI, and EN 13432 standards. |

Eleven percent (by weight) of our packaging in 2012 was recycled content material. In addition, EMC packaging is free of polyvinyl chlorides (PVCs), and we have eliminated the use of polyurethane in all new package designs since 2009.

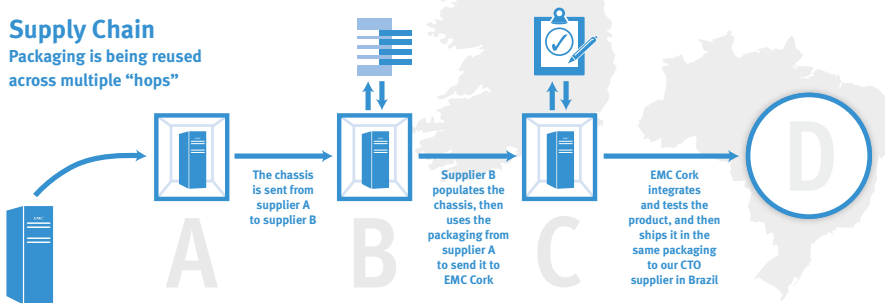
In 2012, we identified a material that can reduce energy consumption in product transport and the recycling process. We engaged a team of students from the Net Impact chapter at the International Business School of Brandeis University, who compared foam we currently use to two other types of foam. The team compared each material's technical properties, size, and weight when used in a package, availability of recycling services, and energy consumption in the recycling process. Their final recommendation was to shift to foam that will support smaller and lighter package designs, is as easily recycled as the foam we currently use, and consumes less energy in the recycling process. In 2013, we will evaluate this foam for use in select packaging designs.

EMC WORKS WITH SUPPLIERS AND CUSTOMERS TO RECLAIM AND REUSE PACKAGING ACROSS THE VALUE CYCLE

BUY

Supply Chain

Packaging is being reused across multiple "hops"



Supplier Requirements

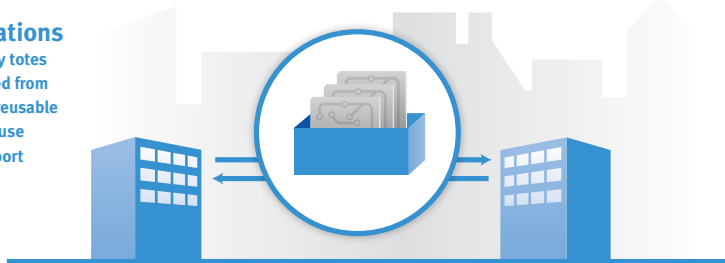
In 2012, EMC released an updated packaging specification for suppliers with expanded sustainability requirements. This specification applies to inbound and outbound packaging, and requires our suppliers to:

- Use a minimal amount of material required to comply with all other requirements (right-size)
- Reuse packaging through tiers of the supply chain when possible
- Select packaging materials according to EMC's Material Preference List, which identifies materials that are preferred, permissible, urged to avoid, or prohibited

MAKE

Internal Operations

Circuit card assembly totes have been redesigned from single use boxes to reusable totes to maximize reuse for inter-plant transport



In 2012, we held a Sustainable Packaging Summit, convening suppliers with EMC engineers and supply chain management. The objective was to promote innovative packaging that is environmentally responsible and financially sensible and increase collaboration across EMC's value chain. In addition to sharing best practices, we are exploring several ideas suggested at the summit. They include investigating new materials for shipping pallets, implementing more reusable packaging across the supply chain, and developing benchmarks for space utilization in packaging for select high-volume parts.

DELIVER

Customers

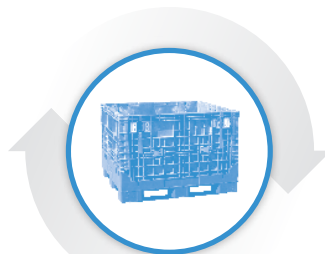
North American manufacturing locations and CTO suppliers in Brazil use the returnable cab pack to send storage cabinets to customers



RETURN

eWaste

Returnable and reusable bulk bins are used to ship eWaste to our IT Asset Disposal suppliers



BIODIVERSITY

At EMC, we know that our operations and facilities can impact biodiversity. As part of our commitment to the environment, we take a forward-thinking approach by engaging with third-party organizations and undertaking activities that enhance and protect biodiversity.

Our Massachusetts corporate headquarters does not sit in any “Areas of Critical Environmental Concern” (ACEC) as designated by the Massachusetts Department of Conservation and Recreation. Our North Carolina facilities also do not sit adjacent to any areas designated as “Protected Lands” or “Biodiversity Protected Lands” by the State of North Carolina. Beyond the effects of our office buildings, our operations do not have any significant direct impacts on biodiversity.

NORTH CAROLINA ENVIRONMENTAL STEWARDSHIP INITIATIVE

Our Apex manufacturing facility is recognized by the North Carolina Department of Environment and Natural Resources as a North Carolina Environmental Stewardship Initiative (ESI) Environmental Steward. Through this initiative, we work with ESI on reducing our environmental impacts beyond regulatory requirements, including a commitment to environmental protection by finding effective ways to act as stewards of our natural resources.

WILDLIFE AND INDUSTRY TOGETHER CERTIFICATION

Our Apex manufacturing facility is recognized as a Wildlife And Industry Together (WAIT) site by the North Carolina Wildlife Federation. The WAIT designation is a workplace stewardship program which manages portions of a commercial property for wildlife and provides environmental education opportunities for employees and the local community. Implemented with assistance from management and employees, including the North Carolina Veterans Employee Circle, we assist the North Carolina Wildlife Federation with statewide conservation efforts, habitat protection, and the connection of people to nature.

SUPPLY CHAIN

We are committed to establishing and maintaining a world-class supply network in a competitive landscape. By working closely with our suppliers and industry partners, we aim to build a supply chain that respects workers and the environment in which they work, and seeks to create opportunities that benefit the entire supply chain.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:

Supply Chain Social & Environmental Responsibility

Supply Chain Business Continuity



SUPPLY CHAIN SOCIAL & ENVIRONMENTAL RESPONSIBILITY

Supply chain responsibility involves a complex system of intertwined social, environmental, and economic issues spread across a global system. Through the EMC Supply Chain Social & Environmental Responsibility (SER) program, we work with hundreds of suppliers in more than 20 countries to monitor, report, and engage for continuous improvement.

Our strategy is focused on four core pillars:

- Monitoring through an industry-standard approach
- Conducting multi-pronged risk assessments to prioritize suppliers
- Engaging with suppliers to improve and to drive change through the supply chain
- Creating incentives for improvement by integrating social and environmental responsibility into our business processes

By shaping and following industry standards and protocols, we are able to leverage the work being done across the industry. We additionally invest in the areas we think will have the greatest strategic impact. In 2012, we developed a new “spot check” program to enhance our monitoring; created new incentives through the launch of a supplier award, and increased business integration; improved supplier communication and education; and delivered new training on social and environmental responsibility for EMC’s procurement team. In 2013, our emphasis will be on improving supplier performance through best practice sharing; strengthening sub-tier supplier SER management; requiring reporting, and recommending use of the GRI standard by suppliers comprising 80 percent of our spend; and increasing integration with core business processes. We will also continue to invest in collaboration—across internal business functions, with our suppliers, and with industry peers and others across industries—as it is critical to achieving our intended goals.

MONITORING AND REPORTING

In monitoring and collecting reporting from our suppliers, EMC follows the frameworks and questionnaires from the Electronic Industry Citizenship Coalition (EICC). We do this to ensure consistency with the industry, to ease the burden on our suppliers, and to support a standardized approach. In addition, we employ an internally developed risk-assessment tool and spot checks to complement these industry frameworks.

Risk Assessments

There are varying degrees of risk within our supply base. Our risk assessment evaluates all supplier sites that make product materials for EMC, including Tier 1 suppliers and those Tier 2 suppliers with whom we work directly. This process results in a risk ranking for each supplier site using the following inputs:

SETTING STANDARDS

CODE OF CONDUCT

We expect suppliers to conduct their business according to the standards set out in our Supplier Code of Conduct. As of 2012, our code is exactly the same as the Electronic Industry Citizenship Coalition (EICC) Code of Conduct which sets standards for labor, ethics, environment, health & safety, and management systems. Language around key areas of concern such as human trafficking, conflict minerals, and sub-tier supplier management was strengthened in the most recent revision process. All direct materials suppliers are required to acknowledge the code, and compliance with the code is part of our standard contract language for all EMC vendors.

Geography. Based on location, supplier sites are evaluated on human rights, ethics, and environmental risks. Scores are weighted according to indicators of governance and accountability for that geographic region.

- **Human rights and ethics risks** includes metrics such as corruption, human development, and human trafficking
- **Environmental risks** includes metrics such as water stress, environmental health, and climate risk

Commodity. Some types of suppliers present a higher risk due to their position in the supply chain or processes involved in manufacturing their products. Printed circuit board manufacturing, for example, poses higher EHS risks than plastic injection molding. Component suppliers that make strategic parts for EMC may present greater risk too, since they are critical suppliers and further upstream in the value chain where there are often less-developed systems for social and environmental responsibility.

Company-specific information. We also review information about each individual supplier, including first-hand insights from our supply chain management team; risks highlighted through media or in NGO reports; results from Self-Assessment Questionnaires (see the following); and past audit reports and corrective action plans.

Self-Assessment Questionnaire

Direct materials suppliers comprising 80 percent of EMC's spend, as well as additional strategic first and second tier suppliers, are required to complete Self-Assessment Questionnaires. EMC uses the EICC's Self-Assessment Questionnaire to conduct supplier risk analysis while also supporting standardization and reducing survey fatigue. The questionnaire covers the presence of policies and procedures needed to support compliance with the EICC Code of Conduct, as well as asking about risk factors and associated controls.

In 2012, the EICC launched EICC-ON, an online platform for completing and sharing information confidentially among EICC members and suppliers. EMC quickly introduced our suppliers to the platform and completed a full refresh of our SAQ data. According to the EICC's scoring algorithm, all of the facility SAQs submitted by EMC's suppliers have been categorized as low or medium risk.

Audits

Third-party audits help us validate information provided in SAQs and monitor supplier performance more closely. Our primary focus for audits is sites identified as high-risk through our risk assessment process, and we met our 2012 goal of auditing 20 percent of high-risk sites. We also audit sites of key strategic suppliers—even if they pose lower risk—due to their important role in EMC's business.

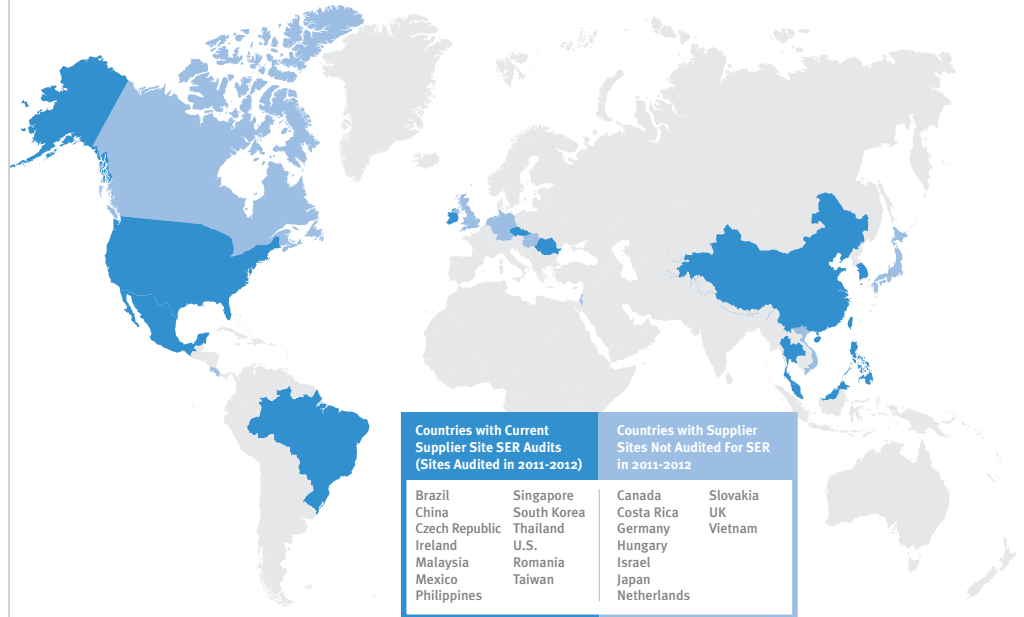
EMC uses the EICC audit protocol and, with rare exceptions, conducts those audits through the EICC Validated Audit Program (VAP). This program was instituted in 2010 as a common tool and approach to encourage sharing audit results and to help reduce the volume of audits conducted. VAP audits are conducted by certified third-party vendors and are valid for two years. In the rare cases where we do not use a VAP audit, we still follow EICC standard audit protocol and use certified third-party auditors.

SPOT CHECKS

Spot checks provide more insight into conditions at supplier sites without substantially adding to audit fatigue. In 2012, we formalized an SER “Spot Check” program. Beginning in 2013, in-region EMC supply chain management staff will perform checks of supplier sites to identify any red flags and facilitate corrective actions as necessary. The objectives are to identify and remedy smaller issues before they become large ones; enable quick, proactive action when risks are identified; and monitor more regularly and outside of the formal full audit process. We will launch a small-scale pilot program before expanding to include more sites.

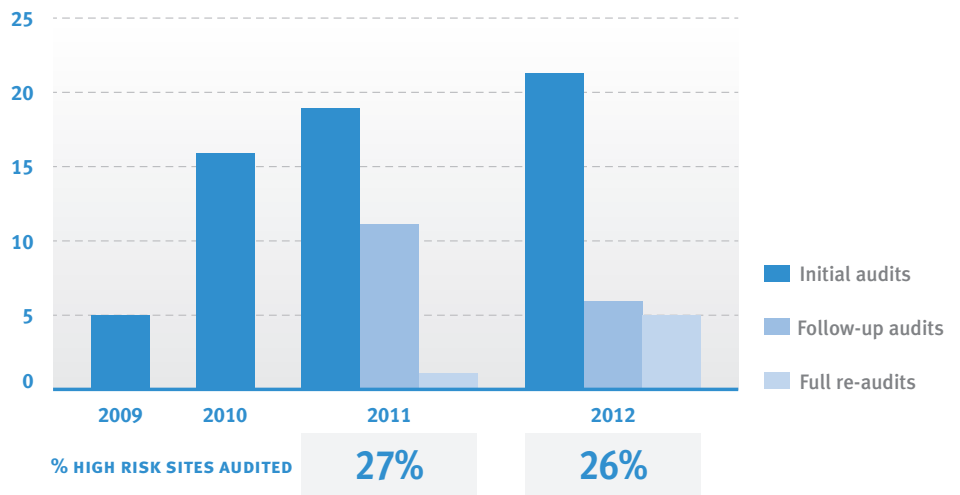
In addition to expanding our monitoring capability, we hope this program will encourage collaborative, proactive solutions in the future.

In 2011 and 2012, we audited sites in most of the countries in which our suppliers manufacture EMC product:



These audits represent two forms of assessment: a full audit, asking all of the questions on the protocol; and a follow-up audit, which assesses the findings from a previous audit. We typically use follow-up audits when there is concern regarding closure of a supplier’s Corrective Action Plan. Suppliers who facilitate their own EICC audits (using third-party auditors) also sometimes choose to employ follow-up audits as a way to validate completion of their corrective actions. A site that has been audited and receives another full audit after two years is counted as having undergone a full re-audit. These are becoming increasingly common as more sites are audited using the VAP.

NUMBER OF SUPPLIER SER AUDITS, 2009-2012¹



¹ Note that the pre-2012 numbers have been revised to reflect VAP audits submitted from suppliers in response to 2012 queries that actually took place in previous year(s). This should become less of an issue in future years, as we accumulate more years of active monitoring of the list of VAP audits.

- **67%** average reduction in findings between first and second audits

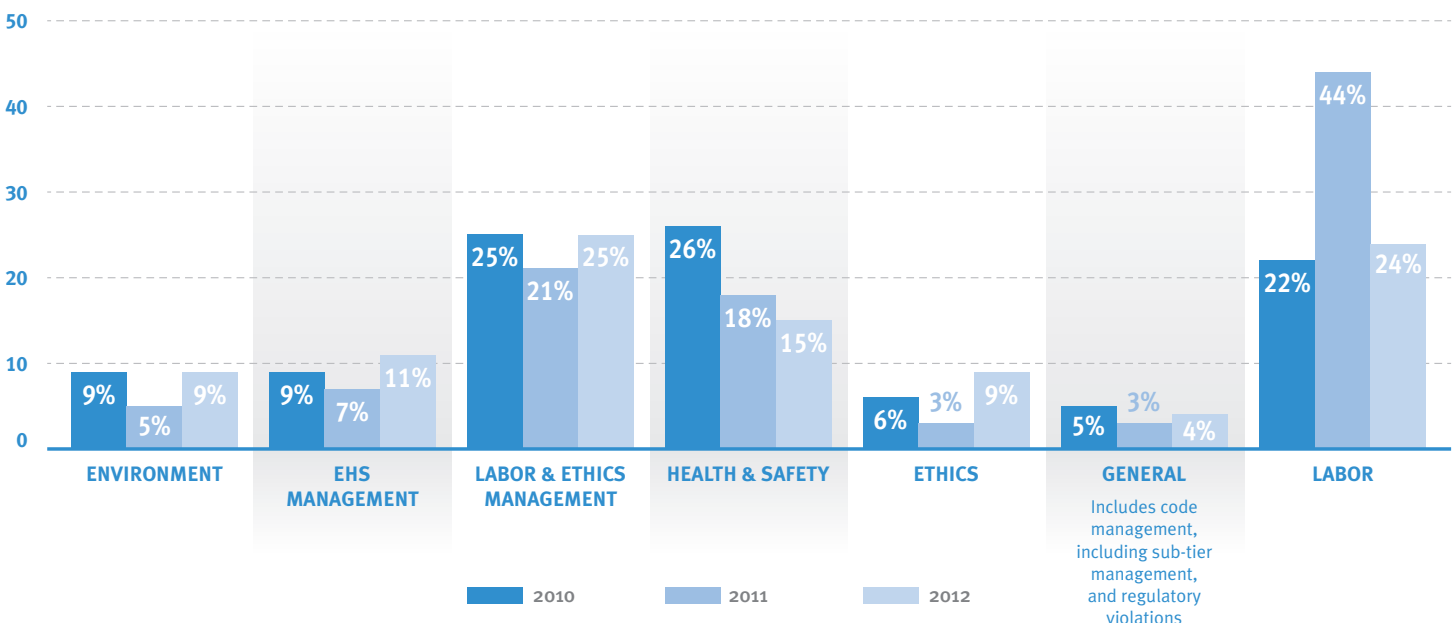
Findings and Corrective Action

Audits may reveal findings in one or more of four categories: priority, major, minor, and risk of nonconformance. Any findings must be addressed through a Corrective Action Plan (CAP). EMC works directly with each supplier to understand underlying causes, follow through on CAPs, and review and ultimately accept evidence demonstrating completion of all corrective actions. In sites that have been audited twice, we can see the impact of the CAP. On average, the number of findings identified during the second audit decreases 67 percent compared to the first audit.

While recognizing that audits have limitations as a means to create change, we are encouraged to see some suppliers systematically investing in broad-scale change in response to audit findings. For example, one supplier responded to findings regarding management systems by instituting new policies and procedures that dramatically improved performance across its global operations, even at sites that had not been audited. In another instance, isolated audit results in multiple sites identified gaps in a supplier’s labor and ethics management systems. Rather than addressing the issue solely at the audited sites, the supplier brought it to the attention of the corporate team to improve internal awareness throughout the company and help prevent related issues in the future.

Findings revealed through our audits are aligned with those seen throughout the industry. While there are some data anomalies due to a large number of findings from individual audits, the findings appear fairly consistent overall. We are actively developing new strategies for 2013 to help address common challenges, including greater integration of SER into our business decision making and targeted training initiatives.

YEAR-TO-YEAR COMPARISON—EMC SUPPLIER AUDIT RESULTS BY PERCENTAGE OF FINDINGS



Detailed results of 2012 audit findings (shown in this chart) indicate specific areas that are of greater concern. Common nonconformances at the systems level (major) include working hours, emergency preparedness, and sub-tier management (a sub-category of the “Code of Conduct”). Common categories of minor findings include hazardous substances, fair business, and child labor avoidance.

SER DETAILED SUPPLIER AUDIT FINDINGS 2012

| EICC CODE | PERCENT OF NONCONFORMANCE | | |
|--|---------------------------|-------|--|
| | MAJOR | MINOR | |
| GENERAL | 3% | | |
| Code Of Conduct | 82% | 18% | |
| Compliance With Laws | 0% | 0% | |
| LABOR | 24% | | |
| Freely Chosen Employment | 5% | 6% | |
| Child Labor Avoidance | 2% | 20% | |
| Working Hours | 18% | 15% | |
| Wages & Benefits | 6% | 6% | |
| Humane Treatment | 0% | 7% | |
| Non-Discrimination | 1% | 2% | |
| Freedom of Association | 2% | 11% | |
| ETHICS | 11% | | |
| Business Integrity | 20% | 5% | |
| No Improper Advantage | 4% | 9% | |
| Disclosure of Information | 0% | 0% | |
| Intellectual Property | 4% | 2% | |
| Fair Business, Advertising, & Competition | 11% | 16% | |
| Protection of Identity | 18% | 2% | |
| Others | 5% | 5% | |
| ENVIRONMENTAL | 10% | | |
| Environmental Permits & Reporting | 8% | 6% | |
| Pollution Prevention & Resource Reduction | 4% | 6% | |
| Hazardous Substances | 17% | 40% | |
| Wastewater & Solid Waste | 4% | 4% | |
| Air Emissions | 10% | 0% | |
| Product Content Restriction | 0% | 2% | |
| HEALTH AND SAFETY | 16% | | |
| Occupational Safety | 7% | 9% | |
| Emergency Preparedness | 26% | 15% | |
| Occupational Injury & Illness | 5% | 5% | |
| Industrial Hygiene | 5% | 7% | |
| Physically Demanding Work | 1% | 6% | |
| Machine Safeguarding | 0% | 4% | |
| Food, Sanitation, & Housing | 5% | 6% | |
| MANAGEMENT SYSTEM | 6% | | |
| LABOR & ETHICS MANAGEMENT SYSTEM | 20% | | |
| ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT SYSTEM | 10% | | |

In addition, there is significant industry concern about common challenges including student workers in China, the use of labor agents in Southeast Asia, migrant and temporary labor in general, and workplace safety. We understand the risks these issues pose to our supply chain, and our audits have indicated some gaps in management systems around these issues. We have put CAPs in place to address those gaps and are actively working to identify areas in which to invest more deeply. To better identify the most appropriate priorities, we are conducting more detailed analyses of audit data, the correlation of the data to business metrics, and the challenges facing our suppliers.

Environmental Risk Management

Environmental issues are closely interconnected with social and economic impacts and are monitored and addressed as part of our self assessment, audit, and corrective action process. The environmental areas addressed include:

- Environmental permits and reporting
- Pollution prevention and resource consumption
- Hazardous substances
- Wastewater and solid waste
- Air emissions
- Product material content
- Environmental management systems

In 2011, we began cross-referencing our Chinese supplier list against the database of pollution violations maintained by the Institute of Public & Environmental Affairs (IPE) in China. At that time, we noted three sites that had previous violations in 2009 and 2010 and contacted them to learn more about the situation. Each site was able to show documentation demonstrating that they had addressed the issue through corrective actions, including implementation of measures to help prevent future violations. They are also making efforts to be removed from the IPE list. As of 2012, the IPE database showed no new violations from supplier sites that provide product to EMC. We will continue to monitor the list and, through our leadership in the EICC's Environmental Sustainability Workgroup, are involved in efforts to review and strengthen the industry's transparency and engagement in this area. To learn more, visit [Product Material Content](#).

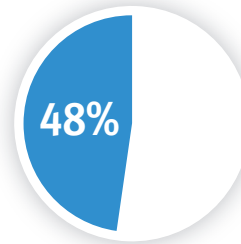
Environmental Reporting

In addition to monitoring, which focuses on risk management, EMC requires suppliers to submit annual environmental reporting through the EICC's Carbon & Water Reporting Initiative. The intention of this initiative is to provide incentives for internal monitoring of data and to promote a commitment to continuous improvement. The data we collect provides valuable information on supplier performance and helps guide prioritization of resources, training, and collaboration.

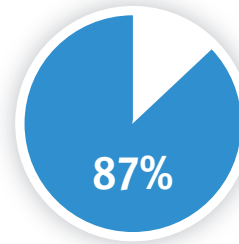
Suppliers' carbon emissions, goals, and initiatives are an input into our supplier scorecards. In 2013, we plan to add water and waste metrics to these scorecards using data from suppliers' environmental reporting, SAQs, and audits. The EICC is also working to expand the Carbon & Water Reporting Initiative in 2013 to include waste data and will rebrand the initiative to reflect this broader scope.

In 2012, we requested carbon reporting from direct Tier 1 and strategic Tier 2 suppliers. 82 percent of these suppliers responded, including 98 percent of our direct materials suppliers by spend, up from 95 percent in 2011. Nearly two-thirds of those suppliers also reported their water use and management. Water reporting tends to lag carbon reporting

due to immaturity of supplier tracking and reporting mechanisms, as well as differences among suppliers in the use of water in their operations. Scope 1 and 2 carbon emissions reported by suppliers are incorporated into our Scope 3 emissions and financially allocated according to the World Resources Institute's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. To learn more, visit [Energy & Climate Change Strategy](#).



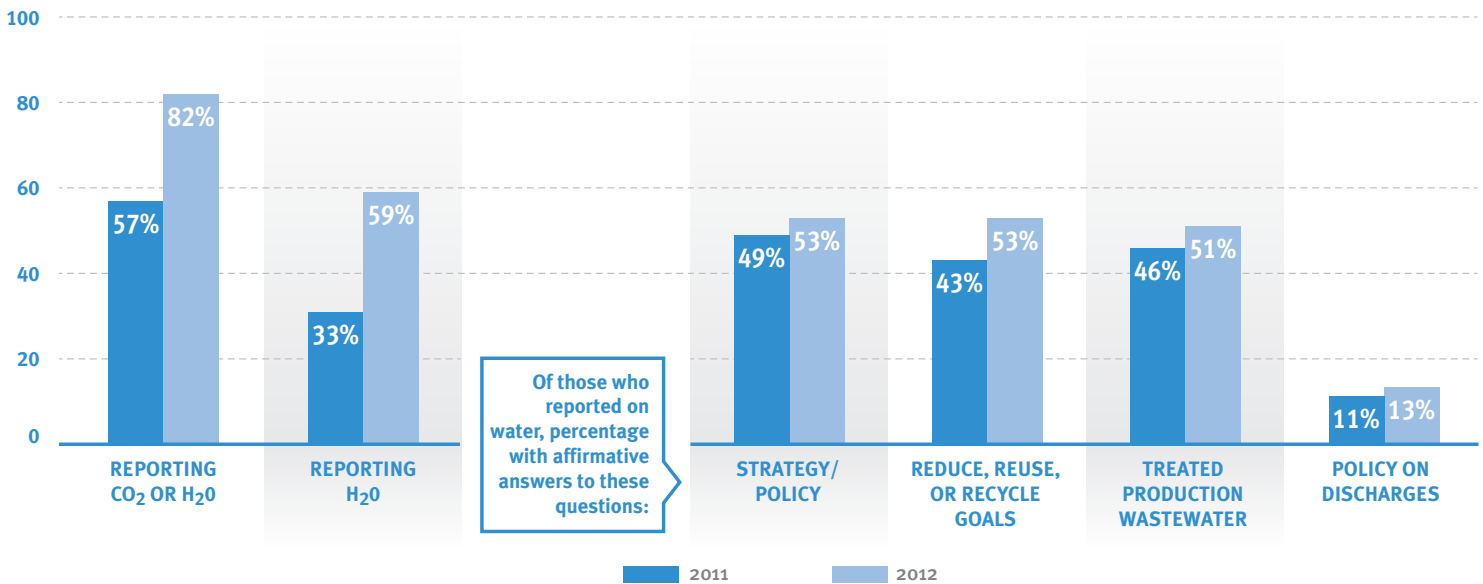
48%
of suppliers
(who reported) have
a GHG emissions
reduction goal



87%
of suppliers
(who reported) have
initiatives to reduce
energy use

In addition to our work with our own suppliers, we are leading efforts via the EICC to advance environmental management in the industry more broadly. In 2013, the Environmental Sustainability Workgroup is piloting a new Supplier Carbon Performance initiative. The Workgroup will also continue to grow its collaborative efforts with the IPE in China to address issues of water and air pollution.

2011 AND 2012 SUPPLIER ENVIRONMENTAL REPORTING



ADDITIONAL INFORMATION

EMC POLICY ON CONFLICT MINERALS

Conflict Minerals

EMC is committed to the [responsible sourcing of minerals](#). Beyond the regulatory requirement to trace and report on the source of the tantalum, tin, tungsten, and gold (3TG) in our products, we support human rights at all levels of our supply chain and believe addressing the challenge of conflict minerals is a key component of ethical sourcing. To learn more, visit [Human Rights](#).

The addition of Responsible Minerals Sourcing to the EICC Code of Conduct in 2012 set the industry-wide expectation for suppliers to establish policies and exercise due diligence on the source and chain of custody of the 3TG in their products. To help advance the industry approach, we participated in teams developing the EICC-GeSI Due Diligence Template and supplier training. A standard format to report information on 3TG reduces the complexity and reporting burden for suppliers and will improve the quality of information that is reported to us. Complete and accurate information from our suppliers not only enables us to complete our required reporting; it also helps us better understand the risks and opportunities in our supply chain and to develop a strategy to ensure responsible mineral sourcing.

In 2012, we conducted a second pilot survey of suppliers to prepare for a more comprehensive survey in 2013. That survey showed that there is still a wide range of conflict minerals maturity in our supply chain, with a few suppliers working to identify smelters in their supply chains and other suppliers not yet having started that process. In 2013, we will offer training to help suppliers better understand the broader issue of conflict minerals and the specific reporting requirements.

Public Reporting

In 2012, we began encouraging suppliers not yet reporting publicly on their sustainability activities and performance to begin doing so using the Global Reporting Initiative (GRI) framework. To support this, we included guidance on how to embark on GRI reporting in our quarterly newsletter. In 2013, we will formalize a requirement for our top suppliers to begin such reporting if they have not done so already. Performance to this requirement will be integrated into our Supplier Scorecard in 2014.

ENGAGING TO IMPROVE

EMC actively engages with suppliers, internal business units, and stakeholders to facilitate improved social and environmental responsibility and to holistically address common challenges.

Suppliers

Communication is a key element of collaboration. In 2012, we implemented or expanded several initiatives designed to help suppliers better understand and track expectations; share and learn from best practices; and access tools and resources. We introduced the quarterly newsletter SER Link, which provides announcements, deadlines, training opportunities, case studies, and resource suggestions. We also continued one-on-one assistance and site visits with suppliers and continued including SER performance in supplier Quarterly Business Reviews (QBRs). These interactions enable mutual problem solving, facilitate senior-level engagement, improve understanding of issues, and identify needs and solutions. This approach will guide our increased focus in 2013 on sub-tier supplier management as we work with direct suppliers to monitor and drive responsibility further upstream.

To recognize good work already being done by our suppliers and to encourage continuous improvement, we introduced in 2012 the Blue Sky Supplier Sustainability Award, which will be given annually. The award promotes excellence in supplier sustainability reporting, engagement, and social and environmental responsibility. Two suppliers received the award in 2012 in recognition of exemplary progress in environmental and social responsibility within their own operations and in partnership with EMC.

ADDITIONAL INFORMATION

ELECTRONIC INDUSTRY CITIZENSHIP COALITION

EMC POLICY STATEMENT ON SLAVERY AND HUMAN TRAFFICKING

We also provide suppliers with formal training to support their development of social and environmental management systems. In 2012, we offered training developed and delivered through the EICC. Two multi-day courses were offered in 2012 focusing on two key issue areas: Health & Safety and Worker-Management Communications. Multiple EMC suppliers attended these sessions, which were offered in both English and Chinese at various sites throughout Asia. We also offered suppliers in-depth online training on the Code of Conduct.

In 2013, we plan to complete a training needs assessment of our supply base. Given the range of SER training needs in our supply chain, we hope to better understand where the needs are, where existing courses are already reaching our suppliers, where gaps exist, and how we can fill those gaps. Based on feedback from suppliers and stakeholders, our initial focus will be on sharing best practices and guidance, as well as leveraging new EICC initiatives such as the improvement of energy use performance among suppliers.

Internal Capacity Building

We recognize the valuable incentives created by integrating SER into business decisions and, in 2012, invested much of our training resources with this focus. EMC staff in China, Thailand, and Ireland—bringing commercial and technical perspectives of supplier management—were trained to improve their understanding of SER auditing, take a systems approach to identifying social and environmental responsibility issues, and work through root-cause analysis of issues that often arise in electronics manufacturing. The training was designed to provide additional context for supplier management staff as SER becomes increasingly integrated into our overall supplier performance management and business decision-making. Staff in the United States will attend the same training in 2013.

Multi-stakeholder Initiatives

In 2012, we expanded relationships within our industry and with other sectors to help drive SER improvement throughout supply chains. Our efforts focused on continued engagement with the EICC, taking on leadership of the Environmental Sustainability Workgroup and the Impact Assessment Subgroup of the Learning & Capabilities Building Workgroup. We also actively participate in a number of other workgroups, including Extractives (Conflict Minerals), Tools, and other groups within Learning & Capabilities Building. In the summer of 2012, we hosted the EICC's highly successful summer meeting, contributing to logistics planning and content development as the forum expanded stakeholder engagement activities and broadened the scope of issues discussed. To learn more, visit [Governance & Integrity](#).

In addition, we joined the [Stanford Initiative for the Study of Supply Chain Responsibility \(SISSCR\)](#), which seeks to explore the relationship between business performance and supply chain social and environmental responsibility. The first two phases of research were completed in 2012, with the third phase—focused on quantifying correlations between SER and business performance—continuing into 2013.

To gain additional outside perspective, we hosted a stakeholder forum focused on supply chain issues. Participants from the NGO, academic, and investor communities joined together to discuss the key risks and challenges facing our industry and our company. The discussion validated our approach while also reinforcing that there is more work to do. In 2013, we plan to focus our efforts on creating incentives for supplier performance; improving visibility throughout the supply chain; disclosing more information about our initiatives and results; and advancing the industry. To learn more, visit [Stakeholder Engagement](#).

SUPPLY CHAIN BUSINESS CONTINUITY

Supply chain resiliency in the face of unexpected disruptions is essential to meeting customer expectations for quality and availability. The EMC Supply Chain Business Continuity Planning (BCP) program sets strategies to prepare for potential disruptions from events such as natural disasters, civil unrest, and financial instability. This planning makes our supply chain more resilient in the face of large-scale events that could create delivery, quality, or production issues.

EMC's operations were not impacted by natural disasters or social disruptions in 2012. A network of strategic information sharing was a key factor in avoiding serious supply chain interruptions. With each severe typhoon or hurricane, EMC monitored the path of the storm and warned suppliers of potential risk, expanding the communication channels to enable rapid decision-making and avoid disruption. Suppliers communicated diligently about events they encountered, such as the International Longshoremen's Association strike and the earthquake off the coast of Indonesia. These early responses built stronger contingency plans and drove BCP deeper into the normal operations of all functions.

OUR APPROACH TO SUPPLY CHAIN BCP

Our BCP program assesses suppliers' vulnerabilities to disruptions and establishes plans to mitigate risk. We work closely with suppliers to understand their programs and help them improve. To this end, we:

- Request supplier self-assessments of their business continuity plans
- Conduct onsite audits of strategic suppliers
- Work with suppliers to make improvements if weaknesses are discovered
- Engage in simulations of business disruptions to test suppliers' ability to activate emergency response plans and crisis management
- Continually measure against key indicators through onsite visits

We also have our own tested playbook for crisis response and management when an event occurs.

STANDARDS

EMC expects all of our suppliers to incorporate business continuity practices into their operations. We use the international standard of ISO 22399 as a benchmark against which we measure their BCP programs.

We also include BCP indicators in our supplier performance scorecard which guides purchasing decisions. In addition to the ISO 22399 indicators, we analyze suppliers' short- and long-term financial health to assess the potential risk of financial instability. These BCP scores are incorporated in suppliers' quarterly business reviews.

SELF-ASSESSMENTS

Self-assessments provide insight into suppliers' BCP practices and program maturity levels. In 2012, 80 percent (by spend) of Tier 1 and managed Tier 2 suppliers completed BCP self-assessments. Most of these suppliers reported progress in securing resources, skills, and knowledge to integrate BCP into their daily operations.

AUDITS AND EXERCISES

On a quarterly basis, select strategic suppliers are chosen for audits. Auditing suppliers' BCP programs gives us a deeper understanding than what is visible in a self-assessment. The process of reviewing compliance guidelines clarifies suppliers' BCP objectives, planning, emergency response, mitigation, and recovery plans. Any audit findings are addressed through corrective action plans.

We also conduct activities to enhance suppliers' awareness of BCP and to encourage continuous improvement. In 2012, we hosted a joint simulation exercise with a supplier in which we staged a mock emergency scenario to test the supplier's and EMC's BCP plans. This training exercise gave us new insights and identified some potential gaps. We took the lessons learned and implemented an action plan to make our BCP plans more resilient.

NATURAL DISASTER RISK ASSESSMENT

Another key accomplishment in 2012 was the completion of a Natural Disaster Risk Assessment which assesses which countries are most at risk from various natural disasters. The study looked at earthquakes, extreme weather, flooding, volcano clouds, and other disasters, to better understand risk factors and how EMC might be able to improve its early warning systems. The next objective is to develop a robust warning system that gives us enough time to activate our contingency plans and protect deliveries and supply lines.

COLLABORATING FOR A BROADER PERSPECTIVE

In 2012, the BCP program contributed to projects that linked to the long-term growth of EMC's supply chain. For example, BCP partnered with EMC's Social and Environmental Responsibility (SER) program and a project team from Yale University to conduct a study on the impact of rare earth elements on electronic components. The study's findings informed procurement planning for critical components of EMC's products and advanced the integration of BCP into supply strategies.

OUR OBJECTIVES FOR 2013

In a complex world where the interdependency among suppliers is increasing, the BCP program must be ever more vigilant in monitoring the supply chain. In 2013, we intend to gain even more insight into potential disruptions and refine our mitigation planning. This will require continuous coordination among multiple departments and across the globe. Interactions with suppliers will intensify as we engage in discussions over crisis management and faster emergency response. In addition, members of the BCP and Supply Chain Social and Environmental Responsibility programs will continue to collaborate on supplier risk assessment and education—bringing a holistic approach to both preventing and managing risk.

COLLABORATION

We engage and collaborate within EMC and with industry peers to better understand and address the landscape of environmental issues impacting our industry and society. The IT industry shares deep interconnections throughout the value chain, and our collaborative approach helps us identify emerging trends and issues that will determine where we will focus our efforts in the future.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:

External Collaboration

Employee Engagement



EXTERNAL COLLABORATION

In addition to leveraging the contributions of tens of thousands of company employees, we also reach out to external stakeholders as a guide to sustainable innovation at the company. This includes a long list of community leaders, civil society organizations, non-profit organizations, industry experts, customers, shareholders, and suppliers.

In 2012, we collaborated with many different partners, industry groups, and universities including Ceres, CDP, the U.S. and Ireland Environmental Protection Agencies, the U.S. EPA SmartWay Transport Partnership, the Environmental Defense Fund, the Product Stewardship Institute, the Center for Advanced Life Cycle Engineering, the Irish Government, Stanford, MIT, and Yale. To learn more, visit [Stakeholder Engagement](#).

Consortium memberships are another important means for engaging with the greater IT community. Our employees—ranging from engineers to sustainability professionals—actively participate with industry groups to transform the future landscape. Our memberships include The Green Grid, the Storage Networking Industry Association (SNIA), the Electronic Industry Citizenship Coalition (EICC), the Digital Energy and Sustainability Solutions Campaign (DESSC), the ICT's for Sustainable Energy Partnership (ISEP), the Information Technology Industry Council (ITIC), and the Distributed Management Task Force (DMTF). For a full list of organizations and memberships, visit [Corporate Profile](#).

THE NELSON AWARD

The following five teams received the inaugural Nelson award in 2012:

REUSING DAE INBOUND BULK PACK IN THE BRAZIL SUPPLY CHAIN: REDUCING COSTS AND CO₂ FOOTPRINT

Dewang Bhavsar, Victor Brett, Keith Brooks, Eoin Buckley, Pat Foley, Paul Higgins, Damien Long, Brian Marshall, Dermot McDonald, Susan Nelson, Donal O'Connell, Barry O'Driscoll, Adam Page, Mark Sheehan, Cathy Westerhold, and Laura Nelson

WORLD-WIDE, CROSS-FUNCTIONAL MANUFACTURING CAPACITY & RESOURCE MANAGEMENT

Robert Bacon, Ryan Barry, Eric Benevides, Ryan Dwyer, Robert Finnigan, Steve Galvin, Julian Gamache, William Leroux, Tom Lucey, Jeffrey Mingels, Kurt Morin, Fergal Moynihan, Amy Mullins, Mike Pritoni, Andrea Rekrut, Jason Rose, Dave Salois, and Wayne Sevigny

IMPROVE LOGISTICS INVOLVED IN EMC VNXE® SUPPLY CHAIN

Frank Altieri, Ryan Barry, Tim Brassil, Ryan Dwyer, Steve Galvin, Tom Lucey, Richard Lukas, Fergal Moynihan, Jason Rose, and John Walsh

CS LOGISTICS DEFECTIVE RETURN KIT

Rory O'Connor, Fergal McLauchlan, and Pat Oldham

HYBRID ENVIRONMENTAL STRESS SCREENING (ESS)

Kevin Burke, Mark Burns, Phillip Nolan, and Don O'Sullivan

EMPLOYEE ENGAGEMENT

The success of our company, including our never-ending pursuit to be more environmentally responsible, rests on the shoulders of the 60,000 people who work at our company. We engage employees throughout the year in several ways, the most noteworthy of which are our Innovation Conference's Sustainability Award, the Green Business Leadership team, and our quarterly employee sustainability awareness surveys.

- EMC's annual Innovation Conference encourages and recognizes the power of employee innovation to shape the future. Since launching the program in 2009, we have identified—and implemented—employee ideas focused on data center energy consumption, monitoring enterprise information technology's (IT's) carbon footprint, and sustainable packaging practices. In 2012, a record 2,200 proposals were submitted to the Innovation Showcase by employees representing 28 countries. We selected 31 entries as award winners and recognized three “best-in-show” entries. To learn more about this award, visit [Innovation Showcase](#).
- In 2012, we introduced the Nelson Award for Initiative in Sustainability. Named in honor of Laura Nelson, EMC principal packaging engineer and member of the team that won the 2010 Environmental Stewardship Award, the Nelson Award recognizes not only innovative thinking, but also the commitment to follow-through in bringing the teams' ideas to life at EMC. The kinds of initiative the winners have shown included enlisting subject matter experts inside EMC and out, analyzing the feasibility and potential impact of an idea, building the business case, piloting it, and finally seeing it through implementation. In 2012, five teams were recipients of the first annual Nelson Award for Initiative in Sustainability.
- Aided by commitments from partners throughout the company, EMC's Office of Sustainability is applying a unified environmental strategy across our business and day-to-day operations. The cross-functional Green Business Leadership team, with 20 participating business units and functions, collaborates to share ideas and practices, aligns programs, and drives sustainability throughout our operations.
- EMC conducts a quarterly Environmental Sustainability Awareness Survey to better understand employee awareness. The survey is given to 500 randomly-selected employees from our global workforce and gives us insight into issues that are most important to employees as well as their understanding of our sustainability programs. Survey questions have asked about:
 - Awareness of what EMC is doing to protect the environment
 - Awareness of how EMC is helping our customers reduce their environmental impact
 - Whether employees feel good about EMC as an environmental steward
 - Whether employees look for ways to reduce EMC's environmental impact when doing their jobs

In addition to the initiatives mentioned, we also engage employees throughout the year by hosting Earth Day events, leveraging social media to share tools and ideas, and using online tools for comparing impact and taking quizzes.

DELIVERING VALUE

EMC's culture is underpinned by 10 core values that demonstrate our commitment to delivering value for customers, employees, shareholders, and other stakeholders. These core values guide our work to leverage innovation to meet customer needs, cultivate a collaborative and inclusive workplace, and build open and honest relationships with all of our stakeholders.

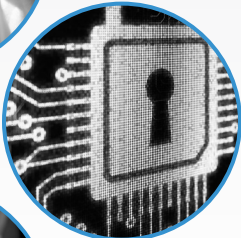
THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:



Customers



IT & Society



Information Security & Privacy



Governance & Integrity



Stakeholder Engagement



Employees & Workplace



Innovation Network



Global Inclusion

DELIVERING VALUE DASHBOARD

INTERNS AND HIRING OUT OF SCHOOL

2012

27%

NORTH AMERICAN COLLEGE HIRES WERE FORMER INTERNS AND COOPS

33%

NORTH AMERICAN CHANGE IN COLLEGE HIRES

23%

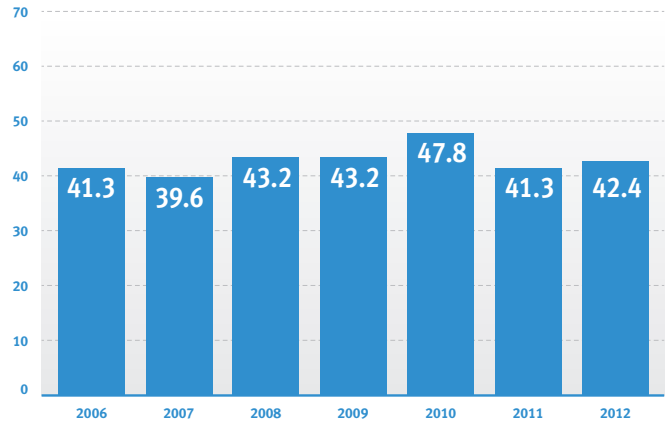
GLOBAL CHANGE IN COLLEGE HIRES

-7%

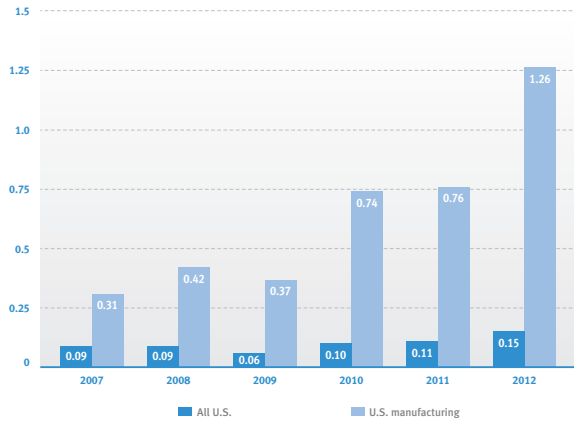
GLOBAL CHANGE IN INTERN PROGRAM HIRING

AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE

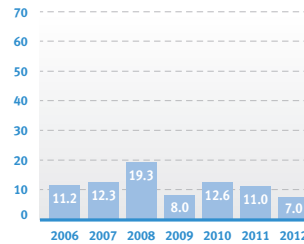
GLOBAL



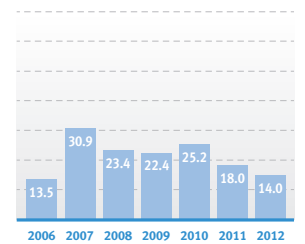
LOST TIME INCIDENT RATE (LTIR)



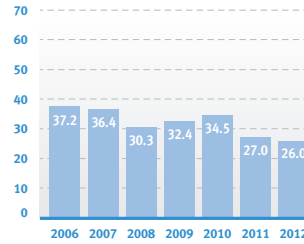
VICE PRESIDENT AND ABOVE



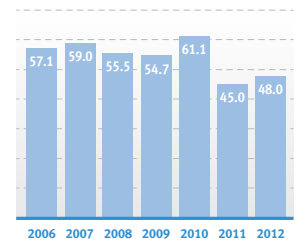
DIRECTOR



MANAGER

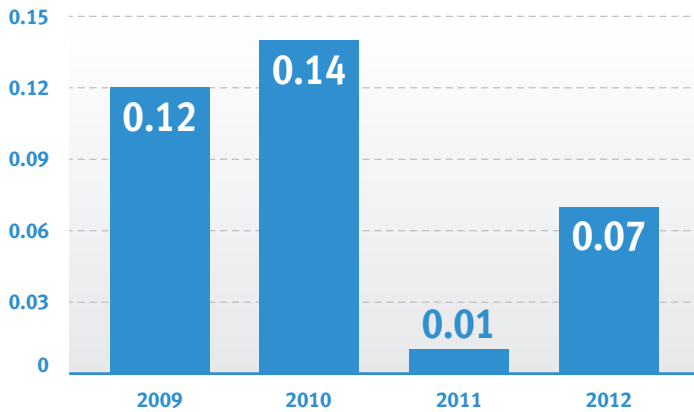


INDIVIDUAL CONTRIBUTOR



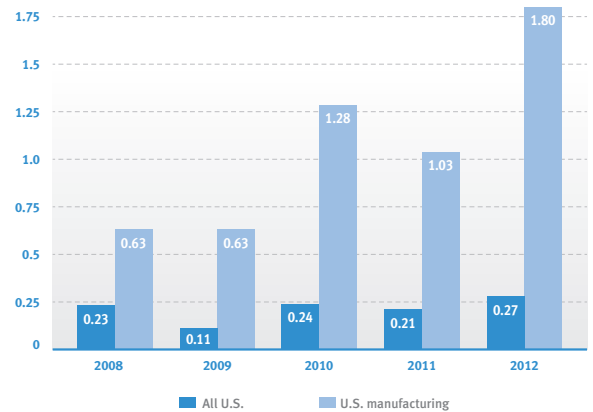
H.S.A. REPORTABLE SAFETY INCIDENT RATE

IRELAND MANUFACTURING

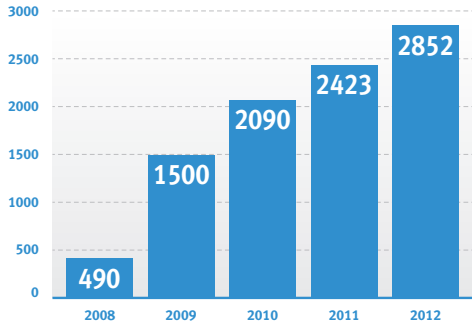


U.S. OSHA RECORDABLE INCIDENT RATE (ORIR)

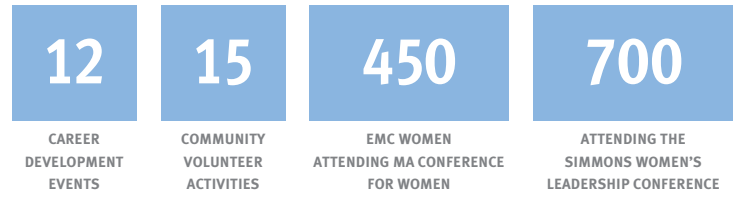
U.S.



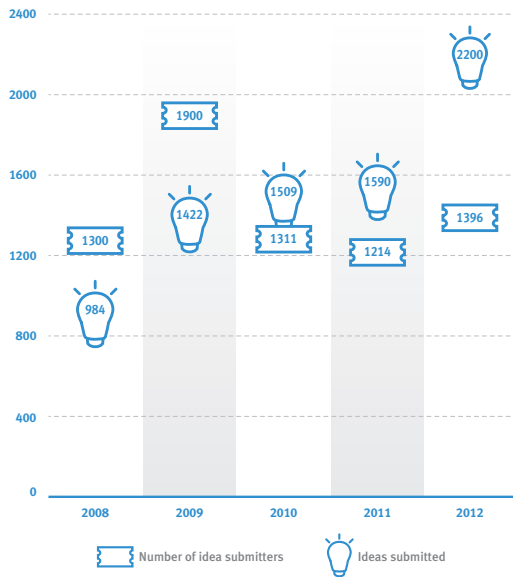
TOTAL NUMBER OF IDENTIFIED HIGH-POTENTIAL EMPLOYEES GLOBAL



PARTICIPATION IN EMC'S WOMEN'S LEADERSHIP FORUM 2012, GLOBAL



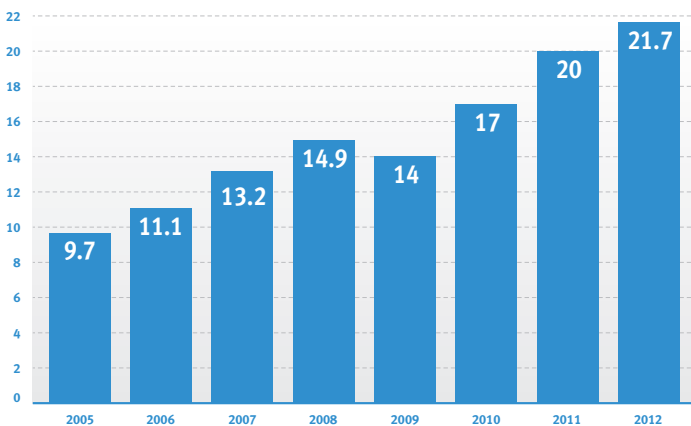
INNOVATION CONFERENCE PARTICIPATION GLOBAL



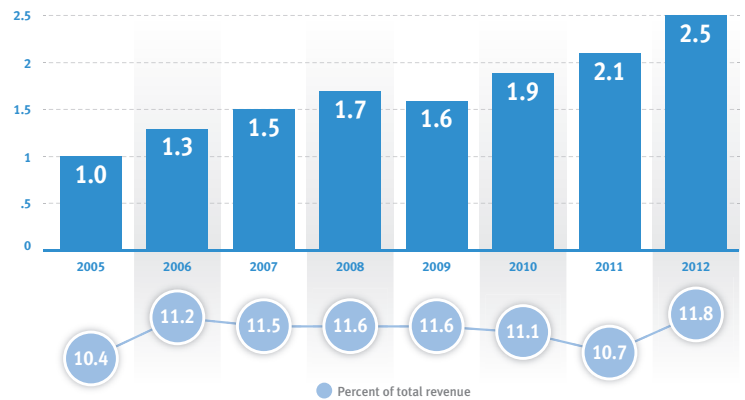
COUNTRIES PARTICIPATING IN THE INNOVATION SHOWCASE 2012



EMC REVENUE GLOBAL—\$USB



EMC INVESTMENT IN R&D BILLION \$USD



DELIVERING VALUE

CUSTOMER STORIES

REDUCING ENERGY: THE JOURNEY TO THE CLOUD

Blank Rome LLP, one of the largest law firms in the U.S., wanted to transform its global IT infrastructure to enable more efficient growth, improved agility, and increased performance. EMC helped streamline storage, virtualization, and cloud technologies by moving the company to a virtual environment via a private cloud. The project helped Blank Rome reduce energy costs by 30 percent, increase storage capacity by 40 percent, and save millions of dollars in hardware and maintenance expenditures. To learn more, view the [Blank Rome Customer Profile](#) on emc.com.

Blue Cross Blue Shield, a major healthcare insurance company, engaged EMC to consolidate, virtualize, and modernize its IT infrastructure at its corporate headquarters. Our efforts to help Blue Cross Blue Shield on its journey to the cloud resulted in a 35 percent increase in performance and around \$250,000 in annual savings in power and cooling costs. To learn more, watch the [Blue Cross Blue Shield video](#).

CUSTOMERS

Understanding and anticipating customer needs has been the keystone of EMC's success. We deliver products that meet customer needs, and we're constantly anticipating new solutions that can help them advance their own sustainability journeys and transform their operations. Driving our efforts is the EMC Total Customer Experience (TCE) program, which enables business growth through continual improvement in customer and partner experience via a customer-focused and data-driven strategy.

TOTAL CUSTOMER EXPERIENCE

Our TCE model is a demonstration of EMC's company-wide commitment to exceed customer expectations for quality, service, innovation, and sustainability. Through TCE, customers, partners, and EMC field personnel can provide feedback on their experience and EMC can measure the quality of every customer interaction. We also use Big Data analytics to gain deeper insight into customer feedback, identify trends, develop improvement plans based on those trends, and drive continuous improvement and process excellence throughout the enterprise.

One component of TCE is EMC's extensive Voice of the Customer survey which evaluates our relationship with customers through each step of the customer's journey. We use the survey to determine priority areas, establish initiatives, and identify metrics and goals that are important to our customers—driving actionable recommendations and improvement initiatives. EMC explicitly asks customers about sustainability priorities to ensure their concerns are incorporated into our products, services, and business processes. The 2012 survey findings reaffirmed EMC's ongoing improvement as indicated by an increase in customer loyalty ratings. Customers noted innovation as a strength for EMC, and our partners and resellers recognized our products to be a differentiator in the market.

The TCE team leverages its Lean Six Sigma and Audit group to identify critical improvements across the business—streamlining processes and saving money for the company and our customers. At the end of 2012, EMC had conducted more than 2,000 Lean Six Sigma projects, which provided return on investment benefits (measured by cost efficiencies, revenue generation, and customer experience improvements) exceeding \$800 million.

EMC received The Temkin Group's 2012 Customer Experience Excellence Award for our TCE program and our Customer Service Support program, demonstrating our commitment to driving improvement through customer feedback. The Temkin Group is a prestigious industry expert and one of the founders of the Customer Experience Professionals Association.

INCREASING PERFORMANCE IN THE DEMANDING DIGITAL WORLD

Rodale Inc., one of the world's leading healthy lifestyle companies, doubles its storage needs every 18 months due to increasing demand for faster access to digital content such as videos, images, and other data. EMC solutions helped Rodale achieve greater scalability, performance, and more efficient backup. The project decreased backup data by 70 percent and recovered 15 percent of its data center space—resulting in significant reductions in energy needs for power and cooling. To learn more, visit the [Rodale Customer Profile](#) on emc.com.

To learn more about other successful customer projects, visit Customer Profiles located in the [EMC Resource Library](#) on emc.com.

To drive the importance of customer service at EMC, an annual TCE Excellence Award is presented to individuals or teams that best demonstrate our commitment to the Total Customer Experience. In 2013, candidates will be nominated by EMC executives for the TCE Excellence Award in the following three categories:

- **Corporate Team Award:** Awarded to the internal TCE-enabled organization that goes above and beyond to develop a customer relationship or strategic partnership
- **Customer-Facing Team Award:** Awarded to the field team that goes above and beyond to proactively drive Total Customer Experience with an existing or new account
- **Individual Award:** Awarded to the EMC employee who demonstrates individual excellence in exceeding customer expectations

The TCE program also leverages EMC's annual Innovation Conference to recognize innovative approaches to maintain customer loyalty while enhancing our customer service capabilities and engagement model. In 2012, the TCE Innovation Award was awarded to a team that focused on log analysis and improving data collection and response time, enabling EMC to optimize our customer feedback. To learn more, visit [Innovation Network](#).

CUSTOMER FEEDBACK

EMC places high importance on measuring customer satisfaction (CSAT), maintaining industry-leading levels, and using feedback to continually drive improvements. This includes setting quarterly CSAT targets both across “the field” and remote organizations, as well as posting the surveys on our internal dashboard site for EMC's Customer Support Services (CSS) to reference.

In 2012, CSS learned that “handoffs” transitions of cases from customer support teams to technical teams were not being executed well. To address this feedback, we introduced initiatives to minimize instances of handoffs and launched “Skills-Based Routing,” which helps CSS employees route cases to the most qualified technical support engineer. Early results of these efforts show faster time to resolution with a 10-point improvement in CSAT scores since Q1 2011.

Through our use of advanced text analytics to understand customer concerns, CSS realized that some customers were not fully satisfied with EMC support communication during their service requests—primarily due to language barriers. We worked with offshore customer support teams to improve communication effectiveness through the use of language coaches and recorded phone sessions for training and learning opportunities. We also made a strategic decision to open a new customer support center in Draper, Utah, in which we placed multi-lingual support professionals. These initiatives have helped increase CSAT scores by more than six points and we are seeing fewer negative comments regarding local language support.

ADDITIONAL RESOURCES

[EMC WORLDWIDE EXECUTIVE BRIEFING PROGRAM:](#) [CUSTOMER BROCHURE](#)

EMC RECOGNIZED FOR COMMITMENT TO CUSTOMER EXCELLENCE

In 2012, EMC was named the winner of the 2012 Technology Services Industry Association (TSIA) STAR Award for Innovation in Enabling Customer Success and Innovation in Product Supportability. These awards recognized EMC's customer-centric governance model for anticipating a shift in the IT landscape due to emerging customer requirements. EMC also earned its fourth TSIA Hall of Fame Achievement Award, in recognition of 21 STAR Award wins to-date.

EMC ELECT: SPANNING THE GAP BETWEEN BRAND LOYALTY AND BRAND ADVOCACY

In late 2012, we launched EMC Elect, a community-driven, peer-nominated recognition program that acknowledges distinguished contributions to the EMC community by employees, customers, and partners during the past year. We received more than 200 applications, and selected 75 "Elect" members who demonstrated holistic social engagement in 2012. EMC now looks to these individuals to show leadership and commitment, and set the cadence of the community as we weave them further into our corporate DNA.

EMC COMMUNITY NETWORK

The EMC Community Network (ECN) on emc.com launched in 2008 and continues to evolve. The site is a social network that links stakeholders—our employees, customers, and partners—who have common interests in collaborating and innovating on everything from EMC products to industry practices. Members can find and share ideas through blogs, social networking tools, and RSS feeds—providing a direct connection to our leaders, experts, and products teams. Membership increased 20 percent in 2012 and, in response to member requests, we are adding new features such as social collaboration and personalized search tools.

EXECUTIVE BRIEFING PROGRAM

EMC founded the worldwide Executive Briefing Program in 1994 and has since hosted more than 40,000 individual customer briefings across the globe. The briefings are designed to bring EMC customers together with executives and experts in order to encourage multi-way discussions about industry-leading technology and strategy. The meetings are catered to specific customer needs and the local market, but we have noticed a growing interest in the topic of sustainability and EMC's efforts in this area.

We have briefing centers located in Hopkinton, Massachusetts; Santa Clara, California; Bedford, Massachusetts; Washington, D.C.; Cork, Ireland; Bangalore, India; Singapore; Tokyo, Japan; and Beijing, China. We plan to launch a center in Rio de Janeiro, Brazil, in early 2014. To learn more, visit [EMC Worldwide Executive Briefing Program](#) on emc.com.

CASE STUDY: HOW BIG DATA IMPROVES EFFICIENCY IN HEALTHCARE

Big Data helped Jeffrey Brenner, founder of the [Camden Coalition of Healthcare Providers](#), understand how funds are being spent on healthcare and to find ways to improve the efficiency of the healthcare system. By analyzing patterns in records from 600,000 hospital visits, Brenner and his team discovered that one percent of patients accounted for 30 percent of hospital bills, due to repeat visits. To help improve the health and financial outcomes of these patients, the coalition educated hospital caseworkers and trained them to coach patients on the importance of medication adherence.

CASE STUDY: GOVERNMENT CLOUD MEETS BIG DATA TO ENABLE TRANSFORMATION WITH CLOUD4GOV

In 2012, EMC's COE in Cork partnered with Cisco, VMware, VCE, and the Irish Government of Ireland to create Cloud4Gov, a public-private partnership aimed at bringing cloud computing solutions to the public sector while driving the country's economic growth. Cloud4Gov is building two cloud innovation centers—one hosted by EMC and another by government networks—to enable small-to-medium sized IT companies to develop and test new applications and services for government. By providing affordable access to small IT companies, Cloud4Gov promotes entrepreneurship and stimulates economic growth, while also providing the government enhanced access to cloud-based solutions.

IT & SOCIETY: ADVANCEMENTS FOR THE GREATER GOOD

Information technology (IT) has the potential to transform nearly every segment of the world's economy. By providing opportunities to people around the world and creating solutions to tackle challenges in ways never before imagined, IT contributes to the greater good by catalyzing advancements across sectors and industries.

At EMC, we are developing cloud computing and Big Data technologies that help address today's unprecedented environmental and social challenges. From contributing to more effective healthcare systems to helping customers reduce resource use and manage climate change impacts, we are leveraging these technologies to create a more sustainable world by uncovering new sources of knowledge, facilitating previously unforeseen methods of collaboration, and delivering technological efficiencies. To learn more, visit [Health & Wealth](#), [Material & Resource Use](#), and [Energy Use & Climate Change](#).

We believe that harnessing the power of IT will shape the future of business, shift paradigms, and transform our world for the better.

JOURNEY TO THE CLOUD

Cloud computing is changing the way information is built, stored, and consumed. Data centers now are transformed into dynamic, virtualized infrastructures that deliver IT in a more agile and cost-efficient way, while maintaining reliability and security.

In a traditional data center, applications are provisioned to the maximum resource capacity they could potentially require—not to the resources they actually require at the time. The agile nature of the cloud reduces the need for such “over-provisioning.” Cloud computing enables more efficient use of IT assets by consolidating hardware resources and reducing energy consumption. The cloud also creates a more resilient platform for delivering IT, which helps ensure business continuity in the face of physical, weather, or social disruption.

Cloud infrastructure continues to evolve, but represents a fundamental shift that, over time, will be as impactful as the adoption of personal computers was a generation ago.

BIG DATA

The rapid increase of digital information has spawned the Big Data revolution, uncovering opportunities to analyze massive volumes of information and glean insights that drive business and societal change.

Big Data consolidates information from disparate sources to create innovative solutions to some of business and society's most pressing challenges. Our Big Data solutions enable organizations to realize value from all data sources and gain efficiencies, agility, and business breakthroughs. Today, organizations leverage Big Data to discover new medicines, isolate and prevent diseases, identify business trends, improve disaster response, unite children from around the world, and alter how we work and play.

“Our goal is to help people better understand, visualize, and navigate the wild and uncharted territory of Big Data, a topic that is going to completely transform the world our children will inherit. It’s already enabling our kids to live healthier and happier lives; providing our seniors with independence while keeping them safe; helping us conserve our precious resources like water and energy; and allowing us to peer into our own individual genetic makeup. All this and we’ve barely scratched the surface of what’s possible.”

RICK SMOLAN

PRESIDENT AND CEO, AGAINST ALL ODDS PRODUCTIONS, AND PRODUCER OF THE HUMAN FACE OF DATA PROJECT

The rise of Big Data has led to the emergence of a new role—the data scientist. Data scientists analyze and interpret data to extract meaningful insights, then explore their potential to change business and society in unprecedented ways. EMC recognizes and celebrates this role in the Big Data era through our Data Scientist Summit, which provides opportunities for collaboration and knowledge sharing among this new type of scientist.

Data Science Summit

In 2012, EMC hosted its second annual Data Scientist Summit, convening thought leaders from academia, social enterprises, industry start-ups, and the public sector to explore and define their paths forward in a new, data-driven world. The Summit offers future data scientists a forum to exchange ideas, explore new perspectives, challenge current data theories, and learn about tools, education, and resources needed to succeed.

Human Face of Big Data

Big Data is enabling humanity to measure, understand, and address many of the world’s biggest challenges in previously unimaginable ways. In 2012, EMC collaborated with industry and global crowdsourcing expert, [Against All Odds Productions](#), on the **“Human Face of Big Data”**—the world’s most comprehensive initiative to date that demonstrates the societal impact of Big Data now, and in the future. Through a book filled with hundreds of stories from around the globe, an interactive iPad app, and engagement activities, the project reveals how our planet is developing a “central nervous system” that data experts believe will be even more transformational than the Internet. By showcasing the power and impacts of Big Data, EMC aims to raise awareness of future possibilities and inspire the next generation of Big Data scientists. To learn more about one of the projects featured in the initiative, see the “How Big Data Improves Efficiency in Healthcare” case study.

As part of the initiative, we partnered with [TedYouth](#) to develop “Data Detectives,” a global, [web-based program](#) that teaches students in grades 6-12 about Big Data and the role it will play in their lives and the world in the future. To learn more about EMC’s other education initiatives, visit [Education Partnerships](#).

INFORMATION SECURITY & PRIVACY

The world's dependence on information technology (IT) has brought with it increasing concern about the infrastructure security and information privacy. Cyber attacks designed to steal and disrupt critical infrastructure are becoming increasingly sophisticated, demanding a coordinated response from governments, industry leaders, and customers.

As a leading security and Big Data solutions provider, we seek to preserve the trust of our stakeholders by employing new strategies to secure our own IT systems and the sensitive information in our charge. We also design engineering and supply chain processes that protect customers and help them minimize risk by providing advanced products that are more resilient to attacks. By leveraging the expertise of our RSA security division, we are developing entirely new defense strategies that are transforming cyber security risk management for our customers and enhancing trust in the cloud.

SECURING OUR OWN IT SYSTEMS

As a leading technology provider, EMC is a potential target for cyber attacks and has an imperative to protect our own IT systems, as well as sensitive information about our customers and our products. Through the EMC Global Security Organization (GSO), we take a proactive approach to protecting our systems and sensitive information using advanced technology and risk-based programs.

Protecting Personal Information

We have established and trained our workforce on internal policies that require employees and contractors to protect the privacy and security of confidential, personal, and corporate information. From a privacy standpoint, confidential, personal information may not be used or disclosed except as necessary for legitimate business purposes such as for human resources and employment functions or as otherwise permitted or required by applicable law. From a data security standpoint, we use reasonable administrative, technical, and physical measures to safeguard confidential, personal, and corporate information. In 2012, a laptop containing personal information of a Greenplum customer was stolen from the home of a Greenplum employee. The theft was reported to local police who investigated the crime. We participated in the investigation and assisted the customer in its response. Although the laptop was not encrypted, we have no reason to believe that any personal information has been misused as a result of the incident. We have put additional encryption safeguards in place to ensure compliance with our laptop encryption policy.

EMC complies with the U.S.-E.U. Safe Harbor Framework and the U.S.-Swiss Safe Harbor Framework as set forth by the U.S. Department of Commerce regarding the collection, use, and retention of personal information from the European Union and Switzerland. In addition, EMC has been awarded TRUSTe's Privacy Seal. The seal signifies that the emc.com privacy statement and EMC's practices have been reviewed by TRUSTe for compliance with TRUSTe's program requirements, including transparency, accountability, and choice regarding the collection and use of personal information.

Responding To Cyber Security Risks

Like any large company, EMC experiences and successfully defends multiple cyber attacks on its IT infrastructure every day. We remain committed to our relentless pursuit of building trust in the digital world and have dedicated ourselves to maintaining the confidence of our customers and partners. Through aggressive enhancements to our products and services, we are strengthening EMC's internal security to better protect our business and customers from cyber threats. In 2012, there was no meaningful impact on EMC's networks or IT systems from security breaches.

Critical Incident Response Center

Our Critical Incident Response Center (CIRC) consolidates all information regarding incidents against EMC and provides it to our Critical Incident Response teams located in Bedford, Massachusetts, and Bangalore, India. This centralized management is designed to provide more efficient and effective resolution. Learn more about how we manage internal security [here](#).

IT Proven Program

Through the IT Proven Program, EMC's GSO implements our security solutions across IT operations throughout the enterprise. By tackling the same problems our customers face, we can test our own products and provide realistic feedback on their performance.

The GSO also develops prototypes of new security solutions for EMC. For example, the GSO developed a Secure Management Infrastructure, using VMware, Cisco, and RSA technology to create a security management portal to manage our data centers.

Employee Training And Credentialing

EMC employees and contractors must complete regular security training related to protecting confidential and personal information. EMC sales force members and field engineers who work on customer sites must undergo supplemental annual training. In addition, our credentialing program makes a consistent, global practice of conducting employee background checks. This background screening is another effort to help reduce the potential risk to corporate and customer information posed by possible internal threats.

To prevent internal data spills—unintentional data transfers—we established the EMC Firstline program for employees. EMC Firstline is a comprehensive and continuously evolving user awareness and education program that trains our employees on how to handle sensitive data through a wide-ranging selection of videos, poster campaigns, emails, and application programming.

ISO 27001 Certifications

EMC's security program is based on the ISO 27001 standard for security management systems. We also seek ISO 27001 certification for select business units as the business need arises. Nine business units in four countries are ISO 27001 certified, including all of our RSA data centers servicing the RSA Identity Protection and Verification products.

BUILDING AND DELIVERING SECURE PRODUCTS

As a provider of information infrastructure products, it is critical for EMC to establish processes that make our products and services more resilient against cyber attacks. Our Product Security Office leverages advanced security engineering and supply chain practices to minimize the risk of vulnerabilities in our products. We also actively participate in SAFECode, an industry-led organization working to increase trust in IT.

Customer Security Management Office

EMC's Customer Security Management Office (CSMO) serves as an internal resource to help our sales teams and business units effectively respond to customers' security-related inquiries. The CSMO works directly with internal departments as a customer advocate to enhance our operations to meet or exceed customer expectations.

Product Security Office

Another component of EMC's security strategy is to securely source, implement, deliver, and service our products. EMC manages risk across the full supply chain including credentialing, supplier management, secure product development lifecycle, the protection of intellectual property, and our support and service delivery capabilities.

We take secure product development very seriously at EMC. Our approach includes identifying a set of functional and nonfunctional security requirements integrated into a product security standard. We apply this standard through requirements, design, development, documentation, testing, readiness, and vulnerability response, minimizing the risk of vulnerabilities in our products. To learn more about EMC's approach to product security, visit emc.com/security.

Our security development lifecycle overlays security on standard development processes to achieve a high degree of compliance with the EMC product security policy. The EMC security development lifecycle follows a rigorous approach to secure product development that involves executive-level risk management before our products are shipped.

EMC Product Security Response Center also proactively alerts customers when security issues with our products arise. Through our Product Security Response Center, we issue EMC security advisories (ESAs) to notify customers about potential vulnerabilities and provide corrective measures before hackers are able to exploit the situation. In 2012, we issued more than 50 ESAs to our customers.

Compliance And Risk Management Team

RSA's Compliance and Risk Management (CRM) team helps ensure compliance in RSA Software as a Service (SaaS) environment with external regulations including PCI, HIPAA, ISO 27001, and SSAE-16. This group also performs third-party reviews of downstream suppliers of RSA to ensure end-to-end compliance.

PROTECTING CUSTOMERS FROM CYBER ATTACKS

The unprecedented number of targeted, increasingly sophisticated attacks on companies in recent years has created an industry shift toward a blended approach of security response technology and preventive actions. In January 2013, we launched [RSA Security Analytics](#), an innovative security monitoring platform designed to help organizations defend digital assets against these advanced security challenges and threats.

RSA Security Analytics, recognized as the next generation in security technology, transforms security operations by leveraging the power of Big Data to better detect and investigate threats that can be overlooked by traditional tools. Additionally, the platform reduces time and cost associated with threat detection, investigation, and response through quick capture and analysis and automated compliance reporting. To learn more about our approach, read our [Big Data Fuels Intelligence-Driven Security](#) white paper.

CASE STUDY: RSA ARCHER EGRC— TRUSTING IN THE CLOUD TO MEASURE COMPLIANCE WITH REGULATORY CONTROLS IN A CLOUD-BASED ENVIRONMENT

EMC enhances trust in digital systems through our continuously evolving RSA Archer® eGRC platform, the market-leading solution for managing enterprise governance, risk, and compliance (GRC). Designed to draw data from a variety of systems, the RSA Archer eGRC platform integrates information about security alerts and threats, gathers metrics about the effectiveness of security controls and processes, and analyzes the security and business environment to create actionable, realtime intelligence to help customers manage GRC.

BIG DATA FUELS INTELLIGENCE- DRIVEN SECURITY WHITE PAPER

RSA SECURITY ANALYTICS RESOURCES ON EMC.COM

TRUST IN THE CLOUD RESOURCES ON EMC.COM

Ensuring Trust In Digital Systems

Cloud computing and virtualization are powerful tools to manage and use digital information. These tools foster innovative approaches to resource conservation and efficiencies through principles of multi-tenancy, resource sharing, and rapid resource elasticity.

However, these approaches also create new complexities for organizations, including the fundamental challenge of getting the right information to the right people over an infrastructure they can trust. Cloud computing and virtualization have irrevocably changed the nature of control and visibility: infrastructure becomes virtual, not physical, and people access infrastructure from devices that are outside of IT's direct control.

Information moves with incredible speed across enterprises, mobile networks, and the cloud, which can make it difficult to know where sensitive information resides. With an IT infrastructure that is shared via the cloud, organizations must learn new ways to identify and monitor potential risks, threats, and compliance performance.

The formula for building trust in today's highly connected, mobile, and cloud-dependent infrastructures is to achieve control over and visibility into the management of infrastructure, identities, and information. The technologies required to achieve this level of control and visibility already exist for both internal (private) clouds and hybrid cloud environments, which span enterprise-based and hosted applications and information.

ADVANCING SECURITY IN A CHANGING WORLD

An ongoing challenge for EMC and its divisions is implementing security processes for new, rapidly changing technologies. As our company evolves, we are becoming a hyper-extended enterprise, sharing information with more people and using more technology tools across more geographies than ever before.

Our stringent information security strategy and practices are preparing us for this challenge. We also recognize that we don't have all the solutions, and we are working with partners to address the evolving landscape of security technology. Some of our 2012 efforts include:

- **National Cyber Security Alliance (NCSA):** Through funding and board-level participation, EMC actively supports [NCSA](#), a nonprofit organization dedicated to promoting Internet safety and security at home, work, and school. To celebrate [National Cyber Security Awareness Month](#) in October 2012, we collaborated with NCSA for the sixth year in a row to raise awareness of cyber security by hosting educational events at schools in 21 states in the U.S. and 17 countries around the world. During the month, EMC employee volunteers taught thousands of school-age children about safe and responsible Internet use, and reinforced ongoing cyber security training programs within EMC with live events and testing, including an internal spear-phishing campaign.
- **RSA/Radio Disney Partnership:** RSA partners with [Radio Disney](#) to support cyber security awareness and digital responsibility at middle schools in Massachusetts, Rhode Island, and Connecticut. In 2012, we extended our partnership with Radio Disney to encourage interest in data science among students. To learn more, visit [Education Partnerships](#).

- **SAFECode:** In 2007, EMC collaborated with Adobe, Microsoft, and other industry partners to launch **SAFECode**, a global organization focused on improving trust in IT products and services. The mission of SAFECode is to identify and promote best practices for developing and delivering more secure and reliable software, hardware, and services. EMC regularly contributes new things we learn from our work with SAFECode. For instance, in 2012, we worked with industry partners to publish an in-depth **report** on how to secure software using agile development, an approach that allows for adaptive planning and rapid, flexible response abilities.
- **Open Group:** EMC is a member of **Open Group**, a nonprofit organization working to develop open, secure, vendor-neutral IT standards and certifications. Through the Open Group Trusted Technology Forum (OTTF), EMC is helping the organization to develop solutions for a more trusted global supply chain.
- **Computer Security Research Alliance (CSRA):** In 2012, EMC became a founding member of **CSRA**, a nonprofit research consortium aimed at tackling information security challenges. The consortium will work closely with industry members, universities, and government agencies to develop breakthrough technologies to improve cyber security.
- **Cloud Security Alliance (CSA):** RSA, EMC's security division, is a member of CSA, a nonprofit industry coalition that promotes best practices in security assurance within cloud computing and provides education on the uses of cloud computing to help secure all other forms of computing. As co-chair of CSA's SME council, we led a number of important cloud security initiatives in 2012. One initiative included helping CSA engage with international Standards Developing Organizations (SDOs) such as ISO. We also played a key role as a member of CSA's International Standards Council (ISC), which is leading the review of new standards proposals.
- **Internet Engineering Task Force (IETF):** EMC supports the development of Internet standards through our work with **IETF**, an open, international community of IT professionals and researchers concerned with the evolution of Internet architecture and seamless operation.
- **Security for Business Innovation Council (SBIC):** In 2012, EMC formed **SBIC**, a group of leading security executives from Global 1000 enterprises. SBIC publishes recommendations to help advance information security worldwide. In 2012, we sponsored a report highlighting 2013 trends to demonstrate the critical importance of improving cloud security.

GOVERNANCE & INTEGRITY

At EMC, governance and integrity involve many actions, such as understanding our customers, setting clear goals and priorities, having an informed and engaged Board of Directors, developing new leaders, and building a culture that supports employees. Through our strong governance practices, we aim to be transparent and accountable to our stakeholders.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:

Corporate Governance

Ethics

Public Policy



EMC RECOGNIZED FOR INNOVATIVE DISCLOSURE OF SUSTAINABILITY PRACTICES

EMC is proud to have been recognized by Corporate Secretary Magazine in 2012 for our approach to disclosing the company's sustainability practices and performance. EMC was a finalist in the Corporate Governance Awards category for Most Innovative CSR Disclosure Policy. Corporate Secretary is a leading publication for governance, risk, compliance, and ethics professionals.

CORPORATE GOVERNANCE

GOVERNANCE GUIDELINES

Our [Corporate Governance Guidelines](#) provide a framework for effective governance at EMC. The guidelines address many areas, including selection criteria for Board members, lead director responsibilities, selection and evaluation of the CEO, management succession planning, and assessment of Board performance.

GOVERNANCE STRUCTURE

EMC recognizes that corporate governance is only as strong as the board of directors behind it. We are fortunate to have a highly experienced, well-informed, and fully engaged Board.

We currently have **11 Board members**, nine of whom are independent as defined in our Categorical Standards of Independence and the listing standards of the New York Stock Exchange. We require each Board member to stand for election annually, and have adopted a majority vote standard for the election of directors. In August 2012, after a broad and extensive search, the Board of Directors elected Jami Miscik to the Board.

The EMC Board of Directors has established five standing committees:

- Audit Committee
- Corporate Governance and Nominating Committee (the "Governance Committee")
- Finance Committee
- Leadership and Compensation Committee
- Mergers and Acquisitions Committee

The Audit, Governance, and Leadership and Compensation Committees consist entirely of independent directors.

BOARD LEADERSHIP

Our bylaws and Corporate Governance Guidelines permit the roles of chairman and CEO to be filled by the same or different individuals. The Board believes that EMC and its shareholders are best served at this time by having Joe Tucci serve as our chairman and CEO, and David N. Strohm, an independent director, serve as our lead director. The Board believes a lead director is an integral part of our Board structure and facilitates the effective performance of the Board in its role of providing governance and oversight. The active involvement of the independent directors, combined with the qualifications and significant responsibilities of our Lead Director, promote strong, independent oversight of EMC's management and affairs.

In September 2012, the company announced that, at the Board's request, Mr. Tucci would remain with EMC through at least February 2015, and that he expects to transfer the CEO role prior to such date while remaining chairman at both EMC and VMware.

CONTACT THE BOARD

SUSTAINABILITY OVERSIGHT

The Governance Committee, as specified by [its charter](#), is responsible for overseeing our sustainability efforts. The Governance Committee meets regularly with the chief sustainability officer throughout the year. To learn more, visit [Environmental Strategy](#).

CONTACTING THE BOARD

To enable open communications, we provide various means for shareholders and other interested parties to contact the non-management directors, the Audit Committee, and the Leadership and Compensation Committee. The Board strives to provide clear, candid, and timely responses to any substantive communication it receives. To build constructive, informed relationships with shareholders and encourage transparency and accountability, directors may also be available for dialogue with shareholders from time to time, as appropriate. During 2012, members of the Board and EMC management met and engaged with stakeholders on a variety of topics. To learn more, visit [Stakeholder Engagement](#).

ETHICS

Ethical conduct builds relationships of trust among employees, customers, partners, shareholders, communities, and other stakeholders. EMC's corporate compliance program educates employees about our ethical standards and monitors compliance with those standards. The Audit Committee of the Board of Directors oversees the corporate compliance program.

BUSINESS CONDUCT GUIDELINES

The cornerstone of the corporate compliance program is our [Business Conduct Guidelines](#). The Guidelines apply to all EMC employees and contractors worldwide and are organized around five principles:

- Act honestly and ethically
- Treat others with dignity and respect
- Conduct business fairly and responsibly
- Safeguard EMC's assets and information
- Ensure the integrity of EMC's business records

The Guidelines are reviewed at least annually and are translated into Chinese, French, German, Hebrew, Italian, Japanese, Korean, Polish, Portuguese, Russian, and Spanish for our global employees. The Guidelines are distributed to all employees and contractors on an annual basis, and are also always available on EMC's corporate website and intranet. All new employees are required to acknowledge and agree to abide by the Guidelines when they join EMC.

The Guidelines provide guidance on and link to EMC's policies on key topics, including anti-bribery, insider trading, equal employment, workplace violence prevention, anti-harassment, privacy and information security, confidentiality, antitrust and competition, environmental sustainability, trade compliance, and financial reporting. The Guidelines also provide information about the several methods that are available to report concerns, which are kept confidential to the maximum extent possible and may be made anonymously where local law allows. The Guidelines specify that EMC will not retaliate against anyone who makes a report in good faith.

All new employees are also required to complete a comprehensive online training module on the Guidelines and EMC's policies on key topics. In addition, we provide ongoing compliance training to various employee groups throughout the world on important topics. This training is delivered in-person, via webcast, and online. In 2012, for example, live and webcast programs were held for employees in China, India, South Africa, Russia, United Kingdom, United States, Brazil, Mexico, Colombia, and Argentina, among other countries.

EMC actively encourages its employees and other parties to report concerns either directly to the company or through EMC's hotline, which is maintained by a third-party provider. The different ways through which reports can be made are included in the Guidelines, corporate compliance training materials, and elsewhere. Specifically, questions and guidance regarding a potential violation of law, regulation, the Guidelines, or other EMC policies can be reported in any of the following ways:

- Contact the Office of the General Counsel by telephone (508-435-1000, extension 77267), facsimile (508-497-8079), or email (General_Counsel@emc.com).
- Contact the Audit Committee of the EMC Board of Directors by email (AuditCommitteeChairman@emc.com) or by mail (Alertline, PMB 3767, 13950 Ballantyne Corporate Place, Charlotte, NC 28277).
- If you are located within the United States, contact the EMC hotline, which is monitored by an independent third-party provider, by telephone (877-764-0557), or via a secure web report to <https://emccorporation.alertline.com>.
- A list of country-specific dialing and web-reporting information can be found on EMC's intranet.

In 2012, EMC significantly expanded the capabilities of its third-party maintained hotline to allow people to report concerns in their local languages.

HUMAN RIGHTS

EMC supports and respects the protection of internationally proclaimed human rights for all, including our employees, workers within our supply chain, and people impacted by the use of our products.

In furtherance of its commitment to human rights, EMC is a member of the Electronic Industry Citizenship Coalition (EICC), a collaboration of the world's leading information and communications technology companies dedicated to improving social and environmental responsibility in the global supply chain through collaboration and common tools and standards. We have adopted the EICC's Supplier Code of Conduct which sets standards for labor, ethics, environment, health & safety, and management systems. All direct materials suppliers are required to acknowledge the Code, and compliance with the Code is part of our standard contract language for all EMC vendors. To learn more about how we monitor suppliers' compliance to the Code, assess risk, engage with suppliers to drive positive change, and create incentives for improvement, visit [Supply Chain Social and Environmental Responsibility](#).

EMC's commitment to human rights is also reflected in its [Human Rights and Global Labor Principles](#). EMC's Principles, which are based on the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights, International Labour Organization standards, and other respected standards, reflect the company's commitment to core human rights issues, such as freely chosen employment, child labor avoidance, working hours, wages and benefits, humane treatment, non-discrimination, and freedom of association. In 2012, we revised the Principles to reflect our commitment to freedom of expression and state clearly that we will not tolerate misuse of our products. We also incorporated the United Nations Guiding Principles on Business and Human Rights into EMC's Principles and as guidance for our actions internally, upstream (throughout the supply chain), and downstream (with respect to product-in-use). EMC has been participating in discussions with NGOs, the European Commission, and our peers to clarify how best to apply these Principles to the information technology industry.

There is a process in place for clear and accurate communication of our policies, practices, and performance expectations to workers, suppliers, and customers. We encourage worker feedback and regularly review results of audits and assessments.

EMC expects the partners with whom we do business to act ethically, which includes following all anti-bribery and export control laws, as well as EMC's Principles. EMC achieves this through various methods, including strict contractual requirements, a robust trade compliance program, and requiring periodic certifications of compliance with those laws.

PUBLIC POLICY

EMC is committed to responsible and transparent participation in the political process. We participate in the political process to help shape public policy that impacts the company and our industry. Our involvement aims to ensure that the interests of customers, shareholders, employees, and other stakeholders are fairly represented at all levels of government.

OVERSIGHT

The Corporate Governance and Nominating Committee of our Board of Directors regularly reviews our corporate political activity and the activity of the EMC Political Action Committee (the “EMC PAC”), including review of our semi-annual disclosure statements, key public policy priorities, and the appropriateness of EMC’s political contributions policies and procedures.

Since 2007, we have had a publicly available [Political Contributions Policy](#) which outlines procedures for contributions made with corporate funds. The Political Contributions Policy also describes oversight of the EMC PAC, a nonpartisan committee registered with the Federal Election Commission.

Any proposed corporate political contribution by EMC, whether monetary or “in-kind,” must be submitted in advance to EMC’s Office of Corporate Government Affairs and the chief compliance officer for pre-approval.

Any contribution by the EMC PAC must be reviewed and approved by the EMC PAC Board. Our due diligence process includes, among other things, consideration of whether the proposed recipient of a contribution represents a state or district where a major EMC facility is located, supports employee interests in his or her district, serves on a Congressional committee with jurisdiction over issues of importance to EMC’s business, or has been supportive of the IT industry on key issues. Contributions may be made to members of all political parties and are made without regard to the political preferences of EMC executives.

PUBLIC POLICY PRIORITIES

Our desire to assist in the development of sound public policy guides how we prioritize our government affairs activities. Our priorities align with our business interests and are reviewed with our Board of Directors. The following are examples of our public policy priorities and the rationale behind our support.

- **Informing Federal Cloud Computing Policies.** Cloud computing and data center consolidation are critical elements of federal IT policy. Federal stakeholders are pushing agencies to adopt these policies to increase productivity and achieve cost savings. We work with trade associations and industry partners to educate policy makers on these topics, including enhancing their understanding of cloud computing deployment, service models, and information security and privacy issues. We continue to participate in forums on cloud computing issues, including TechAmerica Foundation’s Commission on the Leadership Opportunity in the U.S. Deployment of the cloud. EMC has also been invited to various other sessions to discuss our own journey to the cloud and expertise and knowledge of industry best practices regarding data center consolidation. To learn more, visit [IT & Society](#).

- **Leveraging Big Data to Advance Key Public Sector Missions.** The era of Big Data has spurred organizations to find new ways to scale and manage their storage environments and to develop and leverage advanced data analytics capabilities. We support policies that harness Big Data to enhance intelligence and defense programs and advance health sciences by meeting massive storage requirements through cost-effective and scalable solutions. Recently, we participated in TechAmerica Foundation's Big Data Commission which focused on educating and training the federal workforce around analytics and data science to provide the government with a comprehensive roadmap to using Big Data to better serve the American people. To learn more about Big Data, visit [IT & Society](#).
- **Comprehensive Immigration Reform.** Through our activity with trade associations and industry partners, such as the Technology CEO Council, EMC supports bipartisan comprehensive immigration reform that includes critical high-skills provisions.
- **Prompting Effective Sustainability/Energy Efficiency Approaches.** Through Congressional testimony and other outreach, we communicate frequently with federal stakeholders about our sustainability strategy and green IT policies in the public sector. EMC recently supported the introduction of legislation that would save the federal government energy and money, and reduce greenhouse gas emissions, by requiring the use of energy efficient and energy reduction technologies, particularly in federal data centers. To learn more about EMC's efficiency approach, visit [Energy & Climate Change Strategy](#).
- **Promoting Policies to Address Advanced Cyber Threats.** Organizations face cyber threats every day—including increased attempts to steal sensitive data such as intellectual property—and cyber security has become a major national and economic security priority. Congress is actively considering cyber security legislation and EMC, along with RSA, our security division, has weighed in with policy recommendations that will address the security concerns of our customers. To learn more, visit [Information Security & Privacy](#).
- **Advancing Effective Education Policy and Math and Science.** As a technology company, our primary interest and expertise lies in advancing Science, Technology, Engineering, and Math (STEM) education to build a highly diverse, trained, and innovative workforce for the future. We also work to improve education systems around the world.

EMC Chairman and CEO Joe Tucci has been a leader in education reform in the U.S. for more than a decade. At the request of Massachusetts Governor Deval Patrick, Mr. Tucci served as co-chair of the Massachusetts Readiness Project, a collaboration of business, education, and community leaders that worked to create a long range strategic plan for K-12 education and beyond in Massachusetts. In Washington, D.C., Mr. Tucci also served as the Chairman of The Business Roundtable's Education Task Force for more than four years. In addition, EMC has advocated for an increase in the number of charter schools, and we are a member of Governor Patrick's STEM Advisor Council which was launched in 2010. To learn more about our support for STEM education programs, visit [Education Partnerships](#).

- **Campaign to Fix the Debt.** EMC has joined the Campaign to Fix the Debt, a non-partisan coalition of business and policy leaders that is urging Congress and the Administration to reach a compromise on a comprehensive plan to address our country's fiscal problems.

ADDITIONAL INFORMATION

POLICY STATEMENTS

[POLITICAL CONTRIBUTIONS POLICY](#)

DISCLOSURE STATEMENTS

[POLITICAL CONTRIBUTIONS](#)

[DISCLOSURE STATEMENT:](#)

[SIX MONTHS ENDED](#)

[DECEMBER 31, 2012](#)

[POLITICAL CONTRIBUTIONS](#)

[DISCLOSURE STATEMENT:](#)

[SIX MONTHS ENDED JUNE 30, 2012](#)

[U.S. SENATE LOBBYING DISCLOSURE](#)

[ACT REPORTS](#)

[FEDERAL ELECTION COMMISSION](#)

[MASSACHUSETTS LOBBYIST REPORTS](#)

POLITICAL CONTRIBUTIONS

EMC is committed to responsible participation in the political process in compliance with applicable federal, state, and local laws and reporting requirements.

In the interest of transparency for our shareholders and other stakeholders, we provide information about our corporate and EMC PAC contributions, lobbying expenditures, and major trade association memberships on our website.

The amount of our contributions is relatively small, but nonetheless we believe it is in the best interests of EMC and our shareholders to keep lines of communication open with our elected officials and help shape public policy consistent with our business priorities. Political contributions represent just a fraction of EMC's involvement in our communities and our activities as a responsible corporate citizen. To learn more, visit [Community Involvement](#).

CORPORATE CONTRIBUTIONS

We make information about our corporate political contributions publicly available on a semi-annual basis. A listing of our 2012 corporate political contributions is available [here](#).

EMC PAC

As with many corporations, EMC has established a political action committee—a nonpartisan committee registered with the Federal Election Commission. The purpose of the EMC PAC is to promote good citizenship and further business interests that are of concern to shareholders and employees of EMC. The EMC PAC provides eligible employees an opportunity to participate in the elective process at the federal level of government and to support the election of qualified, informed, and constructive candidates for office. The EMC PAC is funded entirely by voluntary employee contributions; no corporate funds are used to fund the EMC PAC.

While we do not expect recipients of contributions to agree at all times with our positions on all issues, we seek to support individuals who will promote the interests of EMC.

A list of the EMC PAC's contributions is available [here](#).

**ARCHIVED DISCLOSURES
POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED
DECEMBER 31, 2011**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED JUNE 30, 2011**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED
DECEMBER 31, 2010**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED JUNE 30, 2010**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED
DECEMBER 31, 2009**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED JUNE 30, 2009**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED
DECEMBER 31, 2008**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED JUNE 30, 2008**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED
DECEMBER 31, 2007**

**POLITICAL CONTRIBUTIONS
DISCLOSURE STATEMENT:
SIX MONTHS ENDED JUNE 30, 2007**

LOBBYING

We work closely with many different stakeholders in an effort to promote well-considered public policy for the benefit of our customers, employees, shareholders, and company. This pragmatic approach to the development of sound policy is effectuated through engagement with policymakers at all levels.

A list of EMC's federal lobbying expenditures and disclosures is available [here](#), and information on state-level lobbying activities in Massachusetts, where our headquarters is located, is available [here](#).

TRADE ASSOCIATION MEMBERSHIPS

EMC participates in various trade associations and organizations that engage in activities such as education, lobbying, advertising, and knowledge sharing. We take a collaborative approach in working with the trade associations to advance the best interests of EMC and our stakeholders. Among other things, we consider whether the trade association has been effective in advancing EMC's priorities when considering whether to join an organization or renew our membership.

We publicly disclose our major U.S. trade associations, the amount of our annual membership dues, and information we received from these organizations regarding lobbying expenses and political expenditures using membership dues. Details regarding our trade association memberships and dues paid are updated annually and available [here](#).

STAKEHOLDER ENGAGEMENT

EMC actively engages with stakeholders to build trust and foster dialogue, leveraging their expertise and perspective to strengthen our business. This engagement provides insight into emerging issues that are important to our stakeholders and to our business, as well as ideas for solutions to address those issues within our company walls and beyond.

In 2012, EMC organized two targeted forums focused on supply chain responsibility and facility carbon and energy. Approximately 10 external stakeholders—subject-matter experts from academia, industry, and the NGO and investor communities—participated in each meeting. Participants also included subject matter experts from EMC's internal community. The objective of these sessions was to identify trends and potential solutions or areas of investigation for critical issues. The forums were facilitated by Ceres, a network of investors, companies, and public interest groups working to accelerate the adoption of sustainability practices.

Key topics covered during the supply chain responsibility session included:

- Incentivizing suppliers to improve social and environmental responsibility performance
- Strengthening disclosure around EMC's and our suppliers' supply chain responsibility efforts and results
- Gaining knowledge of SER performance deeper in the supply chain sub-tiers
- Collaborating with the EICC to advance industry standards

Key topics covered during the facility carbon and energy session included:

- Increasing engagement with facility energy providers to influence a stronger renewable and low carbon mix
- Developing medium-term goals to demonstrate progress toward longer-term goals
- Investigating and developing stronger processes to measure emissions for leased and shared spaces and impacts from the activities of remote workers

In addition to these targeted sessions, EMC held several one-on-one meetings with stakeholders to review our previous year's sustainability report and solicit feedback on how we could improve the reporting process for the 2012 report. That feedback resulted in several changes to this year's report, including the addition of an overview section to describe our overarching perspective on sustainability, organization of the report content around those issues that are most material, and alignment of the visual elements and infographics with our highest priority issues.

Below are some additional examples of how we engaged with stakeholders in 2012 and responded to issues raised.

| STAKEHOLDER GROUP | HOW WE ENGAGE | EXAMPLES OF HOW WE RESPOND TO ISSUES RAISED |
|-------------------|---|---|
| EMPLOYEES | <p>Employee engagement survey in collaboration with Great Place to Work Institute</p> <p>Annual Innovation Conference</p> <p>Recognition@EMC</p> <p>Ongoing learning and development programs</p> <p>Green teams and COE sustainability teams</p> <p>Social media (EMCIONE)</p> <p>Online sustainability software</p> | <p>EMC continued engagement with employees at our Centers of Excellence to review sustainability initiatives and broaden EMC’s visibility into global sustainability issues.</p> <p>In 2012, EMC launched a new employee engagement survey with the Great Place to Work Institute. The survey sought insights on 63 different statements based around the Great Place to Work Trust Index. The Trust Index maps statements to five different Trust Dimensions: Respect, Credibility, Fairness, Pride, and Camaraderie.</p> <ul style="list-style-type: none"> • Feedback showed us that employees want to better understand how their day-to-day efforts contribute to the company’s overall success. In 2012, we launched Sharing for Success, a component of our employee review program, which ties employee bonuses to their performance on “One EMC” and rewards employees for all they do to drive our success as a company. • Moving forward, three “Great Place to Work” teams are focused on key areas to ensure that EMC continues to be a great place to work. These working groups are evaluating the company’s benefits package, the role our facilities play in contributing to a good working environment, and our community involvement initiatives. In addition, we are forming “Great Place to Work” teams around the world to identify and implement initiatives at the regional, local, and business unit level. <p>To learn more, visit Employee Engagement and Employees & Workplace.</p> |
| CUSTOMERS | <p>Quarterly “Voice of the Customer” survey</p> <p>Customer council focus group</p> <p>One-on-one meetings</p> <p>CDP supplier reports</p> <p>Extensive RFP questions and supplier questionnaires</p> <p>Executive Briefing Center</p> <p>Engagement at EMC World</p> | <p>Through our customer feedback processes, we heard from customers that the process of transitioning a case from EMC Customer Support Services (CSS) to technical teams could be smoother. CSS implemented systems to minimize instances of handoffs, where possible, and trained representatives on how to route cases to the most qualified technical support engineer. As a result, we are seeing faster issue resolution time and improved satisfaction scores.</p> <p>We also learned that there are communications barriers between customers and CSS support personnel, primarily due to language differences. To improve the customer experience, we began offering new communication training and other learning opportunities, and opened a new customer support center staffed by multi-lingual support professionals.</p> <p>To learn more, visit Customers.</p> |
| SUPPLIERS | <p>Supplier and SAQ audits</p> <p>Annual Supplier Day</p> <p>Supplier scorecard</p> <p>Quarterly business reviews</p> <p>SER Link newsletter</p> <p>Training</p> <p>One-on-one assistance</p> <p>Site visits</p> | <p>At our annual Supplier Day, we awarded our first annual EMC Blue Sky Supplier Sustainability Award, designed to acknowledge a supplier partner who demonstrates efforts in sustainability reporting and improving social and environmental responsibility. Through the award, we aim to promote sustainability in our supply chain.</p> <p>We introduced the quarterly SER Link newsletter which helps suppliers better understand and track expectations, learn from best practices, and access tools and resources.</p> <p>In addition, we offered training developed and delivered through the EICC that focused on two key issue areas: Health & Safety and Worker-Management Communications. We also offered suppliers in-depth online training on the Code of Conduct.</p> <p>To learn more, visit Supply Chain Social and Environmental Responsibility.</p> |

| STAKEHOLDER GROUP | HOW WE ENGAGE | EXAMPLES OF HOW WE RESPOND TO ISSUES RAISED |
|-------------------------------|---|--|
| SHAREHOLDERS | <p>Regular outreach with institutional investors and other shareholders</p> <p>Annual shareholder meeting</p> <p>Bloomberg Sustainability Survey</p> <p>Inclusion of Sustainability overview in Annual Report on Form 10-K, Letter to Shareholders and earnings presentations</p> <p>CDP reports (water and carbon)</p> | <p>We received a shareholder proposal requesting that EMC require significant suppliers publish annual sustainability reports. We engaged with the proponent and discussed EMC's current practices and plans for next steps. Following our engagement, the proponent agreed to withdraw the proposal.</p> <p>We continue to participate in the Investor CDP and the CDP Water Disclosure Program.</p> <p>We regularly respond to analyst ratings surveys and participate in investor conferences (e.g., UBS Forum).</p> <p>To learn more, visit Energy Use & Climate Change and Water Use & Management.</p> |
| NGOS | <p>Targeted sessions</p> <p>One-on-one stakeholder sessions</p> | <p>We partnered with Ceres to hold two targeted sessions on Supply Chain Responsibility and Facility Carbon and Energy.</p> <p>We held several one-on-one sessions with stakeholders to gain feedback on our reporting methodology.</p> |
| INDUSTRY GROUPS | <p>Memberships</p> <p>Board participation</p> <p>Committee participation</p> <p>Public policy advocacy</p> | <p>We continued participating in the EICC-GeSI Extractives workgroup to develop programs for the responsible sourcing of minerals, including the Conflict-Free Smelter program and mineral traceability schemes.</p> <p>We continued our board membership in The Green Grid to establish industry-wide standards for energy efficiency metrics.</p> <p>To learn more, visit Collaboration & Engagement.</p> |
| PROSPECTIVE EMPLOYEES | <p>Engaging with universities</p> <p>Internships</p> <p>Career days</p> | <p>Through our Academic Alliance program, our global education partners use EMC-developed courseware to prepare the next generation of IT professionals for careers in information infrastructure, cloud computing, and Big Data analytics.</p> <p>To learn more, visit Academic Alliance.</p> |
| LOCAL SCHOOLS AND COMMUNITIES | <p>Town meetings</p> <p>Volunteerism with community organizations</p> | <p>EMC is committed to being a good corporate citizen in our local communities. Two examples below highlight how we've given back in two communities:</p> <ul style="list-style-type: none"> • EMC's COE in India launched "Joy of Giving Week," an employee-driven initiative to promote the company's commitment to our communities, diversity and inclusion, and the environment. Activities throughout the week included a school supply drive and donated funds to provide 1,500 school kits for local low-income children. • To celebrate National Cyber Security Awareness Month in October, RSA employees in Massachusetts volunteered in local schools to teach children safe and responsible use of the Internet. <p>To learn more, visit Strengthening Communities.</p> |

EMPLOYEES & WORKPLACE

EMC believes we must offer a workplace where innovation thrives. Our efforts focus on instilling a sense of urgency, a drive for excellence, and a hunger for continuous learning among employees. We cultivate a safe and healthy workplace and are transforming our approach to delivering industry-leading talent programs around the world.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:



Recruiting & University Relations



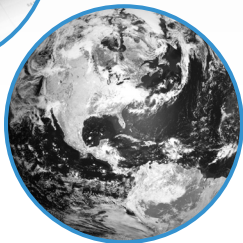
Employee Development



Workplace Health & Safety



Health & Wealth Benefits



Global Expansion

CASE STUDY: RSA OPENS NEW ANTI-FRAUD COMMAND CENTER WITH PURDUE UNIVERSITY

In 2012, RSA partnered with Purdue University to launch a new Anti-Fraud Command Center (AFCC), strengthening our global operations for fighting cybercrime. AFCC is a 24x7 services operation based at the Purdue Industrial Park and staffed by trained analysts who work to detect, track, block, and shut down online fraudsters. EMC also recruits interns from Purdue University to staff the center and cultivate the next generation of security professionals.

“As one of our Foundational IT Partners, EMC is doing more than providing equipment for our enterprise. EMC’s presence on campus benefits both faculty and students, and gives students the real-world experience they need to be successful in their careers. EMC is a leader in its educational vision and in working with Purdue to help students prepare for the jobs they’ll have after they graduate.”

DR. GERRY MCCARTNEY

VICE PRESIDENT, CIO, AND PURDUE’S
OLGA OESTERLE ENGLAND PROFESSOR
OF INFORMATION TECHNOLOGY

RECRUITING & UNIVERSITY RELATIONS

EMC is always on the lookout for the biggest thinkers and most innovative minds in our communities and on campuses around the world. We collaborate with academic institutions to identify prospective employees, as they are sources of talent and innovation, and are often partners in advanced research. EMC University Relations is our centralized resource for identifying, building, and managing strategic partnerships between universities and our global business groups.

COLLABORATING TO SUPPORT THE BUSINESS STRATEGY

University Relations works closely with the Academic Alliance, Innovation Network, Office of the Chief Technology Officer, Centers of Excellence, Office of Global Workforce Inclusion, Office of Sustainability, and Community Involvement. This internal collaboration informs the selection of EMC’s key schools, where we have developed recruiting, research, and faculty relationships.

In 2011, we evolved our summer intern program by introducing a process to extend full-time employment to interns graduating the year following an internship with EMC. Participation in EMC’s summer intern program increased by 17.5 percent in 2012.

In 2012, we focused efforts on strengthening relationships with our partner schools. For example, RSA, our security division, joined the [Center for Education and Research in Information Assurance and Security \(CERIAS\)](#) program at Purdue University, one of the world’s leading centers for research and education in information security. Our sponsorship funds undergraduate and graduate research on data security across all departments at the school.

COMMITTED TO RECRUITING MILITARY VETERANS

At EMC, we strive to foster a culture where everyone is valued for their unique talents, perspectives, and potential. With this approach in mind, we want to bring veterans' unique skillsets and wide breadth of IT experience to our company—especially as a high percentage of military professionals are expected to leave service during the next five years.

In 2011, EMC, JP Morgan Chase, and nine other companies founded the [100,000 Jobs Mission](#), a recruiting initiative that aims to hire 100,000 transitioning service members and military veterans by 2020. The coalition, which now includes 76 companies, has hired over 51,000 veterans to date.

To further our commitment to recruiting military professionals, EMC also launched an [online portal](#) where candidates can learn about EMC, submit their resumes, and connect with our Global Talent Acquisition team.

“EMC is extremely proud of the bravery and dedication shown by our nation’s soldiers. We’re committed to support them as they serve our country and when they’re ready to reenter the private sector workforce.”

TOM MURRAY

VICE PRESIDENT, GLOBAL TALENT
ACQUISITION AT EMC

RECRUITING FOR DIVERSITY

EMC strives to attract talented people who reflect the diversity of our global communities. In 2012, we continued to partner with five Historically Black Colleges and Universities (HBCUs) to offer students programming and mentoring opportunities and to build relationships with faculty, students, and administration by partnering with student organizations and Industrial Advisory Boards. We hired 13 interns from the HBCUs into our summer internship program.

In 2012, we piloted a new Europe, Middle East and Africa (EMEA) college-hire program in the United Kingdom, which we plan to roll out to other European countries in the spring of 2013. In the U.S., we began exploring opportunities at three schools with larger Latino populations and, in 2013, we plan to collaborate and develop strategic partnerships with these schools.

Our goal is to nurture strong relationships with students so they consider EMC as a potential employer upon graduation. To learn more about diversity at EMC, visit our [Global Inclusion Report](#).

EMC EMPLOYEE ENGAGEMENT SURVEY WITH THE GREAT PLACE TO WORK INSTITUTE

In 2012, EMC launched a new employee engagement survey with the Great Place to Work Institute to learn about our employees' perceptions of what makes EMC a great workplace and how we can make it even better. The survey was designed to gain insights into 63 company statements based on the Great Place to Work Trust Index which assigns those statements to five different Trust Dimensions: Respect, Credibility, Fairness, Pride, and Camaraderie. More than 31,000 EMC employees took part in the survey.

The results demonstrated that EMC continues to transform in our journey to be a great place to work with 82 percent of respondents agreeing to the following statement: "Taking everything into account, I would say this is a great place to work." For the first time in an EMC employee engagement survey, we included a statement on sustainability: "EMC demonstrates a commitment to environmental and social responsibility." Eighty percent of respondents agreed with this statement.

Moving forward, we will continue to incorporate feedback to improve employee satisfaction at EMC and will participate in the Great Place to Work Survey 2013 and beyond.

EMPLOYEE DEVELOPMENT

EMC offers an array of programs to guide employees on their journeys at EMC and beyond. We believe individuals should play an active role in their own career development to achieve their professional goals. We empower employees to develop their careers, and task managers with helping people to hone skills and seek development opportunities.

PERFORMANCE MANAGEMENT

EMC employees receive a performance review at least annually to discuss strengths, skills, and opportunities for growth. Employees and managers work together to develop and execute Individual Development Plans (IDPs). The IDP serves as an employee's professional transformation plan and outlines development goals that align with individual career aspirations and the needs of the business. More than 70 percent of EMC's employees have IDPs in place.

LEARNING AND DEVELOPMENT PROGRAMS

New employees are introduced to EMC through the award-winning EMC Proven Professional™ program, where they receive an overview of the information technology (IT) industry and learn about EMC's values, best practices, and methodologies.

We offer rotational development programs for recent graduates to provide job-specific skills, mentoring, peer networking opportunities, and a holistic understanding of EMC's business. Our rotational leadership development programs include:

- Business Operations Leadership Development Program
- Finance Training Program
- Global Services Leadership Development Program
- Human Resources Leadership Development Program
- Information Technology Leadership Development Program
- Leadership Engineering Accelerated Program
- Marketing Development Program

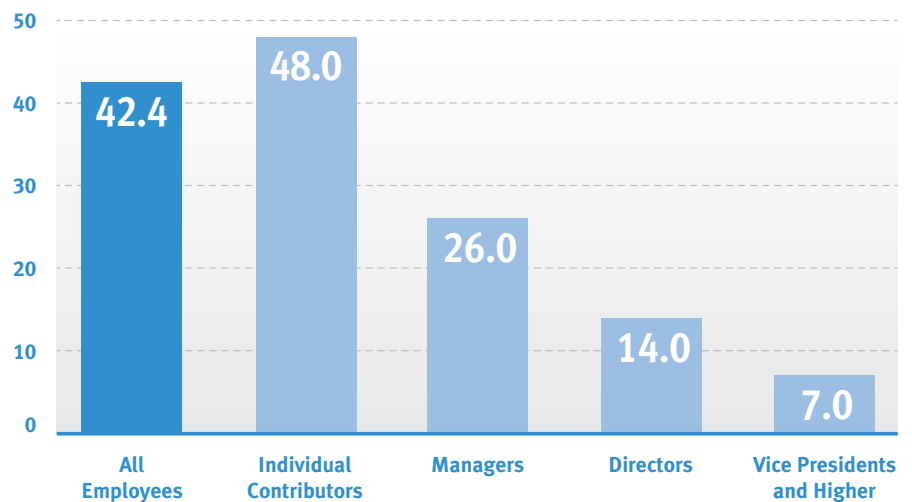
Learning and development programs are designed to attract, retain, and develop highly talented people and enhance their abilities to execute corporate strategy. Regular training opportunities are offered through Education Services and EMC University (EMCU). Our Education Services team is responsible for all technical and functional training, as well as sales and customer training. EMCU offers enterprise training on topics such as management and leadership development, business writing, and conflict management.

EMC offers a tailored learning path for employees at each level within the organization. EMCU designs and delivers this curriculum, which consists of a development roadmap for each career level, including robust and targeted portfolios of courses that are custom-developed for managers and directors in the areas of strategy, business, and leadership. Beyond this roadmap, there are multiple elective courses and programs to choose from for specific skills development.

We also offer eligible employees reimbursement for qualified education expenses, including undergraduate or graduate degree programs, external work-related programs, or formal certifications.

Our employees enthusiastically believe in our training and development programs as measured by our company-wide “Great Place to Work” survey. In the 2012 survey, 77 percent of our global employees agreed with the following statement: “I am offered training or development to further myself professionally.”

2012 PARTICIPATION FIGURES FOR TRAINING PROGRAMS AVERAGE HOURS PER EMPLOYEE



TALENT REVIEW PROCESS

Our talent is the engine that fosters innovation for EMC’s continued growth. We annually conduct an Organization and Talent Review (OTR) to plan our leadership and talent agenda for the future. During OTR, our leaders identify their high-potential employees, critical talent, and successors. This process yields a plan to actively engage and retain these employees through movement across business units and geographies, promotions, and targeted development opportunities to prepare them for their next roles at EMC. To learn more, see the Organization and Talent Review discussion in [EMC’s 2013 Proxy Statement](#).

PROCEDURAL CHANGES CASE STUDY: PREVENTING ACCIDENTS

Understanding how an accident occurred is critical to avoid repeating that same accident in the future. In 2012, we strengthened our health and safety program by promoting the internal reporting and evaluation of “near misses”—situations where injuries or damage could have occurred, but did not. Investigating and analyzing near misses allows us to proactively identify, control, and prevent health and safety hazards. We are using this information to develop corrective and preventative actions to further improve our approach to workplace health and safety.

2012 LOST TIME AND INJURY RATES

LOST TIME INCIDENT RATE (LTIR)

All U.S.:

0.15

U.S. Manufacturing:

1.26

U.S. OSHA RECORDABLE INCIDENT RATE (ORIR)

All U.S.:

0.27

U.S. Manufacturing:

1.80

WORKPLACE HEALTH & SAFETY

EMC works to ensure that our worldwide facilities provide safe and healthy environments for employees, visitors, and anyone who might be affected by our operations. Professionals manage our occupational health and safety programs, and we engage employees to continuously monitor and improve our performance.

HEALTH & SAFETY MANAGEMENT AND TRAINING

EMC has developed comprehensive health and safety procedures that are continuously updated to comply with Occupational Health and Safety Administration (OSHA) regulations. Job safety analyses and risk assessments support and drive our policies and procedures. We conduct audits and inspections to ensure the effectiveness of these policies and procedures.

Our manufacturing facilities, located in the U.S. and Ireland, are certified to OHSAS 18001, the global standard for excellence. As an IT company, our health and safety risks are primarily in manufacturing facilities. As of 2012, our OHSAS 18001 facilities certification statuses are as follows:

- Manufacturing facility in Cork, Ireland, certified since 2005
- Manufacturing facility in Franklin, Massachusetts, certified since 2009
- Shipping and warehouse facility in Franklin, Massachusetts, certified since 2011
- Manufacturing facility in Apex, North Carolina, certified since 2010

Employees take health and safety training relevant to their work through online and instructor-led courses. In 2012, we offered 16 computer-based training modules and bolstered our employee training program on hazardous chemicals, following changes in OSHA regulations. Employee-led safety action teams also meet regularly to review safety issues, perform audits, and organize training programs.

HEALTH AND SAFETY VIOLATIONS

EMC was not cited for any health and safety violations in 2012.

PANDEMIC PREPAREDNESS

EMC recognizes that communicable diseases may pose a potential threat to the health of our employees, our business operations, and our global customers. Comprising representatives from business units across the company, our Global Pandemic Preparedness Team has created a detailed plan to help employees and customers around the world deal with pandemics at every phase.

In the event of a declared pandemic, we will take direction from health expert partners—including the World Health Organization (WHO), the Center for Disease Control and Prevention (CDC), and EMC’s travel safety, security, and intelligence vendors—to minimize disruptions to our operations, customer operations, and the supply chain. To learn more about how we plan for unexpected disruptions in our supply chain, visit [Supply Chain Business Continuity](#).

No pandemics were declared in 2012.

EMC AND SODEXO RECOGNIZED FOR "BUILD A BETTER YOU" NUTRITION INITIATIVE

In 2012, the New England Employee Benefits Council recognized EMC, and its partner Sodexo, for the Build a Better You (BABU) program, which helps employees lead healthier lifestyles by influencing dietary choices at the moment of decision. BABU offers "Stop Light" color-coded utensils—red, use sparingly; yellow, use with caution; green, use freely—at employee cafes and easy-to-read signage featuring caloric information about food options provided in EMC cafeterias. Efforts to raise awareness about more nutritious options has resulted in a decrease in purchases of less nutritious, high-caloric foods, like bacon bits and pepperoni, and an increase in healthier options, such as vegetables.

HEALTH & WEALTH BENEFITS

At EMC, we use the power of innovative IT to help employees manage their health and wealth. Our tools and resources enable employees and their family members to understand individual status, get targeted information, improve health, and grow wealth.

We offer a comprehensive benefits package for our employees around the world. In the U.S., we provide the following:

- Tiered medical plans
- Dental, vision, and prescription insurance
- Adoption assistance
- Autism benefits
- Maternal health, smoking cessation, disease management, and life coaching programs
- Retirement planning through a 401(k) plan
- Access to an employee stock purchase plan

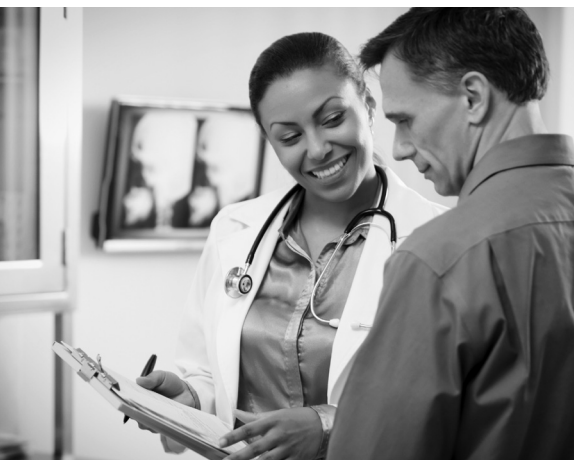
EMC is committed to protecting and securing our employees' information and to helping them protect their own personal data. In 2012, we built on that commitment by making available two benefit offerings that incorporate RSA® security technology: identity theft protection via InfoAmor and increased security of EMC HealthLink Personal Health Records. To learn more about EMC's role as an IT and security provider, visit [Information Security & Privacy](#).

Employees scheduled to work at least 20 hours per week are eligible for the benefits package. More information about benefits for EMC's U.S. employees can be found at www.peoplelinkbenefits.com. Information about benefits offered to employees in other countries where we conduct business can be found on the appropriate EMC local website.

HEALTHLINK

EMC believes that patients should be in control of their own health information and have access to it anytime, anywhere. Creating an all-in-one secure, meaningful, actionable, and technologically-based Personal Health Record (PHR) is a safety imperative, and we have demonstrated our commitment to improving access to PHRs for more than a decade. In 2012, we introduced the mobile PHR that allows users to access lab results right from their mobile devices. We also increased PHR security with the addition of RSA Adaptive Authentication.

HealthLink, EMC's health management portal is powered by WebMD and secured by RSA. It enables employees and their family members to manage healthcare information 24x7 anywhere in the world. It has been accessed by 80 percent of EMC's U.S. employees and 65 percent of spouses/domestic partners. Users enter health information into a confidential, secure portal and receive targeted communications about resources to help individual health needs. Users may also choose to share information in the PHR with healthcare providers.



HOW BIG DATA IMPROVES HEALTH OUTCOMES

As the prevalence of Big Data evolves, healthcare IT will continue to benefit from analytics. EMC predicts healthcare data will increase threefold between 2013 and 2016, bringing with it the ability to better detect disease and aid medical research. Under the Affordable Care Act, Big Data analytics will help doctors better predict outcomes for patients and help researchers evaluate the potential effectiveness of treatments.

The PHR helps employees and adult family members review complete clinical data with their healthcare providers, avoid duplicative tests and procedures, and manage drug interactions and side effects. This health management approach has improved outcomes and contained costs for employees and for EMC. Since implementing the wellness program in 2004, our average per capita cost increase is lower than the national average. In 2012, EMC's per capita increase was 4.7 percent as compared to the projected national average of 5.2 percent.

INFLUENCING THE HEALTHCARE IT MARKETPLACE

EMC was the first employer to sponsor an electronic PHR, launched in 2004. Since then, we have been playing an increasingly influential role in accelerating the movement to harness the full potential of digital technology to improve health. In fact, our innovation and expertise in healthcare technology and in employee benefits are being sought out by Fortune 500 companies, business leaders, and the Commonwealth of Massachusetts.

We helped advance healthcare IT in 2012 through the introduction of several new employee programs. Together with our digital health management partner [Healthrageous](#), we introduced a remote system for monitoring hypertension that allows patients to take their blood pressure virtually and then upload their readings to Healthrageous and HealthLink. We also introduced an Obesity Coaching program, which offers EMC employees the ability to weigh themselves, upload their weight to HealthLink, and participate in coaching calls with WebMD Health Coaches who have access to their readings. In addition, we offered NowClinic, a telehealth program that provides EMC employees and their families with online access to physicians and nurses. We also launched My PowerSource, a virtual benefits platform that offers benefit fairs, online chats, open enrollment, and other employee engagement tools.

We feel it is our responsibility to share our experiences with other employers and health organizations. Through our Choice & Responsibility Advisory Services, we provide employees with a road map for creating a culture of wellness, demonstrating our commitment to help improve the healthcare system.

WEALTHLINK

WealthLink is EMC's wealth accumulation and protection program. It provides employees with the opportunity to learn how to develop their own wealth management plans to meet their individual and family needs and goals while optimizing the benefits provided by EMC. Through WealthLink, employees have access to onsite seminars, webinars, financial planning sessions, the employee stock purchase plan, 401(k) plan, and other programs.

EMC CENTERS OF EXCELLENCE: 2012 SNAPSHOTS

India COE co-hosted a roundtable discussion in Bangalore for a visiting Congressional delegation from the U.S. House of Representatives. An EMC executive participated in the event, which was organized by the India Chamber of Commerce.

Russia COE hosted the Academic Alliance Forum Russia 2012, which brought together more than 60 university and business representatives from Russia, the Commonwealth of Independent States countries, Finland, and the U.S. for a five-day event.

Egypt COE continued its partnership with INJAZ, an NGO that seeks to inspire and prepare young students to become productive members of society and succeed in the global economy. EMC employees volunteer weekly as mentors to middle school and university students through the partnership.

China COE staff sponsored a Job Shadow Day in Shanghai to give students an insider view of the workplace at EMC. Additionally, China COE hosted a Junior Achievement volunteer day and invited 45 graduate students from North China Electric Power University to participate.

Israel COE volunteered at the Spivak Sports Center for the Disabled on behalf of the Israel Boccia Association. Boccia is a sport similar to bowling for individuals who are confined to a wheelchair due to severe disability.

Ireland COE employees participated in the 2012 VEX Robotics competition at the Discovery Science Festival at Cork's City Hall. VEX Robotics promotes interest in science, technology, engineering, and math and engages more than 50,000 students annually around the world. EMC is the primary sponsor.

GLOBAL EXPANSION

EMC serves customers in more than 100 countries. We believe it is important for us to be in close proximity to customers in growing markets. As new pools of talent blossom around the world, we are on a journey to find the best minds.

CENTERS OF EXCELLENCE

EMC Centers of Excellence (COEs) are the foundation of our strategy for cultivating talent and expanding our presence in key markets around the globe. We operate COEs in seven countries: China, Egypt, India, Ireland, Israel, Russia, and the U.S. In addition to supporting in-country market growth, our COE model drives operational, financial, and project efficiency by leveraging local talent and sharing best practices. COEs coordinate initiatives with local university programs, government representatives, and community partners for maximum impact. In addition, each of our COE locations plays an important role in contributing to EMC's vision for sustainability. In 2012, the Egypt, India, Ireland, Israel, and Russia COEs each published internal reports describing their sustainability achievements and initiatives.

Each COE leverages specific expertise and skills in their countries to advance our global business strategy. In conjunction with EMC business units, the COEs are responsible for the development of many products across EMC's broad software and hardware offerings, and for providing global services support to EMC customers. Executives in the U.S. oversee, direct, and manage all development work performed at the COEs. Additionally, the COEs provide back office processing activities for internal operations.

The COEs have been designed to provide EMC business units with world-class talent, infrastructure, and management to deliver to the needs of EMC's customers. EMC business units are, in essence, internal customers of the COEs. Each COE is managed locally, and a cross-functional board consisting of EMC's senior executives oversees strategy and investment decisions. One unique advantage of our COE model is that employees from different business units have more opportunities for collaborative innovation. For example, in 2012, the Israel COE hosted EMC's worldwide [Innovation Showcase](#), which featured a high percentage of submissions from our COEs. The first place entry was developed by a team from the China COE.

Our COEs work closely with University Relations, the Academic Alliance, Corporate Training, and the Innovation Network on local recruiting strategies. Although many technology companies are seeking to hire top talent in our COE locations, we have kept attrition rates below the market average by focused efforts on employee retention including benefits, work environment, career development, and compensation.

MANAGING CHANGE

The world of information technology (IT) is evolving rapidly, requiring EMC to be adaptive and flexible as companies, technologies, and markets change. Though industry consolidation, acquisitions, and restructuring have become common in the 21st century, we work hard to make transitions as smooth as possible for employees in order to retain top talent and preserve relationships.

Retaining top talent is one of the primary goals following any merger or acquisition. Early in the process, we create an assimilation plan to balance integration into EMC while maintaining important aspects of the acquired company's culture.

In the course of conducting normal business operations, EMC is occasionally required to reduce headcount in certain areas of the business, reallocate investments, de-emphasize less productive initiatives, and focus new investments in areas of opportunity. Any of these actions can result in valued employees leaving our business involuntarily. EMC takes these actions only after thoughtful consideration and with an empathetic understanding of the impact our actions can have on the lives and careers of our team members. We also work to exhaust all options before making the difficult decision to reduce the size of our workforce.

When we are required to take the difficult action of severing employment, we work to redeploy to other growth areas of the business whenever possible. When we do have to make reductions, we offer global job search assistance provided by a third-party organization and paid for by EMC in addition to providing separation pay and benefits. In either case, our mission is to ensure that each individual is treated with dignity, compassion, fairness, and respect.

PUTTING WINNING IDEAS INTO PRACTICE

Thanks to a winning idea from the 2012 Innovation Showcase, Big Data tools will help EMC design even more energy efficient products in the future. The new idea, which we plan to further explore in 2013, uses EMC technology to evaluate the “actual” or “real world” energy performance of EMC products at customer sites.

More importantly, this idea has the potential to provide our customers with customized, specific recommendations on how to help reduce their environmental footprints based on comparative analysis of how others in the industry are using similar technology.

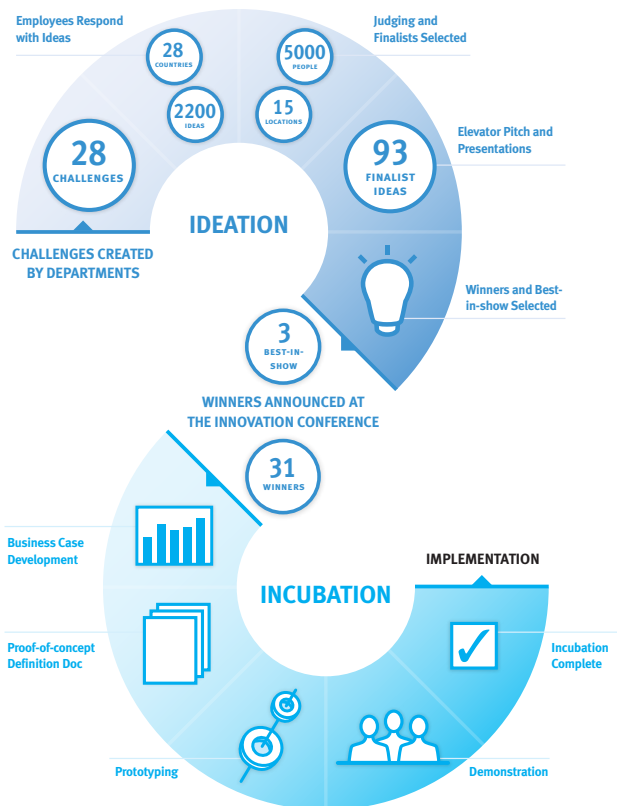
INNOVATION NETWORK

Innovation is at the core of everything EMC does—from how we run our operations to how we develop and deliver new products and services. We rely on innovation to survive and grow, and believe the intersection of innovation and sustainability is where we can uncover solutions to our business, social, and environmental challenges. Thinking forward is vital in our approach to deliver innovative solutions today and anticipate the needs of tomorrow.

The EMC Innovation Network is our innovation engine, an internal team whose efforts aim to spark the creation and delivery of high-value ideas that accelerate innovation and drive progress. The Innovation Network, led by the CTO office, runs ongoing programs and annual events that help expand our understanding of the issues and challenges facing our company, customers, partners, and industry—as well as the world around us. With this understanding, we identify opportunities to create the future of our company and shape the world we live in.

INNOVATION AT EMC

The EMC Office of the CTO Innovation Showcase is the company's premier internal idea and innovation competition, culminating in the selection of winning ideas which are incubated and turned into products/services/process improvements.



INNOVATION SHOWCASE & CONFERENCE

Our Innovation Showcase is a competition that invites EMC teams and individual employees to submit ideas for solutions to company or customer challenges. The showcase generates breakthrough ideas for technical innovations and business process improvements that will shape EMC, our customers, and the information technology industry over the long term.

Employees use EMCIONE, our internal social media site, to collaborate and develop ideas. The EMC community reviews submissions and provides feedback to their authors. Expert judges then select ideas to be incubated for development. Winning ideas are announced at the annual Innovation Conference.

CASE STUDY: INNOVATION ANALYTICS

As we continue to drive innovation at EMC, we're constantly looking for ways to improve the Innovation Showcase. In 2011 and 2012, we analyzed statistics from entries and winners to look for trends and insights to increase participation and better utilize innovation experts.

The Innovation Conference is our annual celebration of innovation and innovators. Through the conference, we bring together employees from around the world, provide a forum for knowledge sharing, and recognize and reward employees for innovation leadership.

2012 marked the sixth year of EMC's Innovation Conference. Employees from 28 countries submitted a record 2,200 proposals to the Innovation Showcase. Thirty-one entries were selected as "winners" for each of the sponsored awards, and three "best-in-show" winning entries were recognized at the conference hosted at the Israel COE. More than a dozen EMC locations around the world hosted regional conferences simultaneously, connecting to the "main stage" event at the Israel COE via live webcast.

A GLOBAL CELEBRATION OF EMC'S CREATIVITY—2012



2012 INNOVATION SHOWCASE GLOBAL PARTICIPATION

The following charts provide an overview of global participation for the 2012 Showcase, including how many employees collaborated on entries. New tools like Innovation Central aim to increase collaboration for 2013 entries.

| COUNTRY | TOTAL PARTICIPANTS | TOTAL ENTRIES | PERCENTAGE OF COLLABORATIVE ENTRIES | ENTRIES SELECTED AS FINALISTS OR WINNERS | PERCENTAGE OF COLLABORATIVE ENTRIES SELECTED AS FINALISTS OR WINNERS |
|----------------------|--------------------|---------------|-------------------------------------|--|--|
| CHINA | 317 | 495 | 28 | 12 | 67 |
| IRELAND | 354 | 448 | 55 | 17 | 82 |
| INDIA | 300 | 418 | 29 | 14 | 71 |
| UNITED STATES | 416 | 406 | 42 | 37 | 78 |
| EGYPT | 134 | 325 | 14 | 4 | 75 |
| ISRAEL | 51 | 68 | 44 | 6 | 50 |
| RUSSIA | 19 | 58 | 16 | 2 | 0 |
| GERMANY | 17 | 27 | 19 | 0 | 0 |
| UNITED KINGDOM | 15 | 15 | 47 | 1 | 100 |
| FRANCE | 10 | 14 | 50 | 1 | 100 |
| UNITED ARAB EMIRATES | 9 | 13 | 62 | 1 | 100 |
| AUSTRALIA | 11 | 13 | 15 | 0 | 0 |
| NEW ZEALAND | 1 | 7 | 71 | 3 | 67 |
| NETHERLANDS | 4 | 6 | 0 | 1 | 0 |
| ITALY | 6 | 6 | 17 | 0 | 0 |
| CANADA | 4 | 4 | 25 | 0 | 0 |
| SAUDI ARABIA | 3 | 4 | 50 | 0 | 0 |
| PHILIPPINES | 1 | 4 | 25 | 1 | 100 |
| AUSTRIA | 2 | 3 | 0 | 0 | 0 |
| JAPAN | 2 | 3 | 0 | 0 | 0 |
| SINGAPORE | 5 | 3 | 33 | 1 | 100 |



| COUNTRY | TOTAL PARTICIPANTS | TOTAL ENTRIES | PERCENTAGE OF COLLABORATIVE ENTRIES | ENTRIES SELECTED AS FINALISTS OR WINNERS | PERCENTAGE OF COLLABORATIVE ENTRIES SELECTED AS FINALISTS OR WINNERS |
|-------------|--------------------|---------------|-------------------------------------|--|--|
| BRAZIL | 3 | 2 | 50 | 0 | 0 |
| ARGENTINA | 1 | 2 | 0 | 0 | 0 |
| SWITZERLAND | 1 | 1 | 0 | 0 | 0 |
| TURKEY | 1 | 1 | 0 | 0 | 0 |
| SWEDEN | 2 | 1 | 100 | 0 | 0 |
| NORWAY | 1 | 1 | 100 | 0 | 0 |
| FINLAND | 1 | 1 | 100 | 0 | 0 |
| ROMANIA | 1 | 1 | 100 | 0 | 0 |
| ESTONIA | 1 | 1 | 0 | 0 | 0 |

THE TOP 10 INNOVATORS FROM THE 2012 EMC INNOVATION SHOWCASE

Some finalists were playing a large collaborative role in several other entries. We've since reached out to these employees and are looking for ways to leverage their expertise within the Innovation Showcase and the EMC global network as a whole.

| RANK | ENTRIES SELECTED AS FINALISTS OR WINNERS | TOTAL ENTRIES | TOTAL COLLABORATIVE ENTRIES | COUNTRIES INVOLVED IN COLLABORATIVE ENTRIES |
|------|--|---------------|-----------------------------|---|
| 1 | 4 | 29 | 29 | 3 |
| 2 | 4 | 19 | 19 | 3 |
| 3 | 3 | 28 | 26 | 3 |
| 4 | 3 | 25 | 25 | 4 |
| 5 | 3 | 24 | 17 | 5 |
| 6 | 3 | 24 | 24 | 4 |
| 7 | 3 | 10 | 8 | 2 |
| 8 | 3 | 7 | 5 | 2 |
| 9 | 2 | 62 | 62 | 2 |
| 10 | 2 | 49 | 49 | 1 |

In addition to overall “best-in-show” winners, ideas are selected for awards from specific organizations and functions including each of our Centers of Excellence. Sponsored challenges include:

- Backup and Recovery Systems Supportability Challenge
- China COE Challenge
- Community Involvement Challenge
- CTO Office Challenge
- Egypt COE Education and Technology Award
- Environmental Stewardship Challenge
- Enterprise Storage Division Challenge
- EMC Solutions Group Challenge
- EMC Fellow and Distinguished Engineers Greenfield Challenge
- Global Product Operations Challenge
- Global Services Challenge (comprises three additional challenges)
 - Education Services Challenge
 - eServices Challenge
 - Total Customer Experience Program Challenge
- EMC Greenplum/Office of the CTO Challenge
- Human Resources Challenge

- Information Intelligence Group Technology Challenge
- India COE x-BU Challenge
- Infrastructure Management Group Challenge
- Ireland COE Challenge
- Israel COE Challenge
- IT Challenge
- Marketing Challenge
- Midrange (Isilon Storage Division/Unified Storage Division) Challenges—two awards granted
- RSA Challenge
- Russia COE Challenge
- Sales Challenge
- EMC VPLEX/RecoverPoint Challenge

Looking forward to 2013, we plan to launch Innovation Central, a new tool to manage showcase submissions. Though the number of entries has grown each year, judges were beginning to see similar or related ideas being presented from different groups. Innovation Central will address this issue with new features that will help submitters refine ideas, spark new ones, and collaborate with other employees before officially entering the competition. This includes the ability to search articles, presentations, and previous entries, as well as find information included within the Global Innovation Network Analytics (GINA) platform—which launched in 2012—to connect with EMC employees who work on similar projects. To learn more about GINA, see the section on the next page.

EMC FELLOW & DISTINGUISHED ENGINEER PROGRAM

Our Corporate EMC Fellow & Distinguished Engineer (FDE) Program honors those individual contributors who have demonstrated outstanding achievement and technical leadership across the company. After the Innovation Showcase and Conference, FDEs provide support as teams and individuals incubate and advance winning ideas across EMC and its subsidiaries. FDEs also serve as mentors for our employees and contribute to the company's overall strategy development.

The following individuals were honored at an induction gala and welcomed into the 2012 class of EMC Fellows and Distinguished Engineers:

EMC Fellows

- **Stephen Todd**
Vice President of Strategy and Innovation (Hopkinton, MA)

EMC Distinguished Engineers

- **Dan Aharoni**
Director of Engineering, Enterprise Storage Division (Hopkinton, MA)
- **Ken Chilton**
Distinguished Engineer, Enterprise Storage Division (Hopkinton, MA)
- **Larry Friedman**
Distinguished Engineer, RSA, The Security Division of EMC (Bedford, MA)

- **Bala Ganeshan**
CTO, EMC Solutions Group (Santa Clara, CA)
- **Bradford Glade**
CTO, Data Mobility Business Unit (Hopkinton, MA)
- **Earle MacHardy**
Distinguished Engineer, Unified Storage Division (Research Triangle Park, NC)
- **Steve McClure**
Director, Software Engineering, Enterprise Storage Division (Hopkinton, MA)
- **Michael Mohen**
Chief Architect, Information Intelligence Group (McLean, VA)
- **Scott Ogata**
Distinguished Engineer, Backup Recovery Systems Division (Irvine, CA)
- **Karl Owen**
Distinguished Engineer, Unified Storage Division (Research Triangle Park, NC)
- **David Richards**
Senior Director of Engineering, Isilon Storage Division (Seattle, WA)
- **Chris Stacey**
Distinguished Engineer, Isilon & Unified Storage Division (Christchurch, New Zealand)
- **Kenwood Tsai**
Distinguished Engineer, Information Intelligence Group (Pleasanton, CA)

GLOBAL INNOVATION NETWORK ANALYTICS

In 2012, we advanced the Global Innovation Network Analytics (GINA) initiative across the company.

Leveraging an EMC Greenplum®-based repository, GINA enables employees to submit meeting agendas or minutes to a central database and then automatically maps the distribution of EMC's global activities, showing the specific lines of connection across the company through recruiting, innovation activities, research and development, publications, patents, and more. Through GINA, users can learn more about specific areas and access links to additional information about each activity.

GINA provides a single pane-of-glass view of major collaboration and knowledge transfer across the globe, enabling the Innovation Network to achieve its mission to “expand knowledge locally, transfer it globally, and leverage it strategically.”

While there is more work to be done, it has already proved to be a powerful tool in providing a visual representation of knowledge transfer across the company's global employee base. Moving forward, GINA also will play a more active role in the Innovation Showcase by helping submitters find related information—including previous entries and employees working on similar technologies.

GLOBAL INCLUSION

At EMC, we view diversity and inclusion as a business imperative. We seek to cultivate an inclusive culture which is reflective of the diverse perspectives, backgrounds, and cultures of the world in which we live and do business.

To learn more about our approach to diversity and inclusion and the programs and initiatives that are helping to drive our culture of inclusion, read our [iBook Report](#) or the [2012 Inclusion Annual Report](#).



STRENGTHENING COMMUNITIES

EMC plays an important role in our local communities around the globe. We help create opportunities that will shape the world in which our company, employees, customers, and neighbors will thrive. EMC is planning for and investing in the future by supporting initiatives that provide access to education, encouraging employees to volunteer their time and talent, and leveraging our Information Heritage program to help ensure cultural treasures remain available for future generations to experience.

THE FOLLOWING TOPICS ARE COVERED IN THIS SECTION:



Academic Alliance



Education Partnerships



Community Involvement



Information Heritage



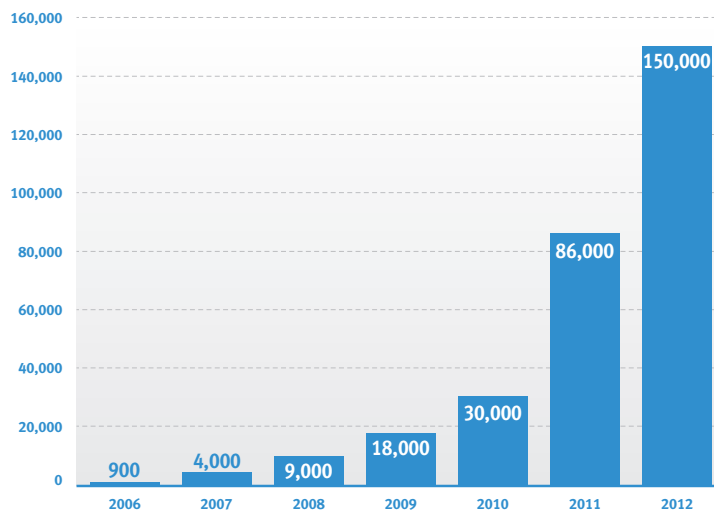
Funding Guidelines

STRENGTHENING COMMUNITIES DASHBOARD

COUNTRIES WITH EMC EDUCATION AND COMMUNITY PARTNERSHIPS



NUMBER OF STUDENTS PARTICIPATING IN EMC'S ACADEMIC ALLIANCE PARTNERSHIP GLOBAL, CUMULATIVE



DONATIONS MADE IN RESPONSE TO DISASTER RELIEF (INCLUDING MATCHING) 2012, GLOBAL—\$U.S.

\$234,866

COMMUNITY SERVICE AWARDS GLOBAL—\$U.S.

\$60,000

2010

19
awards

\$60,000

2011

41
awards

\$60,000

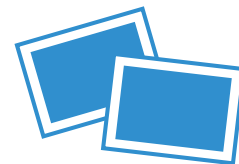
2012

23
awards

JFK LIBRARY PRESERVATION THROUGH THE EMC HERITAGE TRUST PROGRAM



PAGES
523,314



PHOTOGRAPHS
21,750



VIDEOS
121



SOUND RECORDINGS
1,436

**PARTNERSHIP WITH RAJIV
GANDHI TECHNICAL UNIVERSITY
IN INDIA EDUCATES 25,000
STUDENTS ANNUALLY**

In February 2012, Rajiv Gandhi Technical University (RGU) joined the EMC Academic Alliance. Through the partnership, Academic Alliance provides RGU with curriculum, including the newly launched Cloud Infrastructure and Services course, to more than 200 engineering colleges and 25,000 students each year.

**ACADEMIC ALLIANCE PROVIDES
HIRING PIPELINE**

In 2012, EMC hosted the Grand Opening of our state-of-the-art Customer Support Center in Draper, Utah. Representatives from six area universities attended the event, including Academic Alliance members Stevens-Henager College and Salt Lake Community College. These member institutions provide a strong pipeline of candidates for the center and help support EMC's goal of creating 500 jobs in Utah by 2015, further demonstrating our commitment to addressing the technology skills gap.

ACADEMIC ALLIANCE

According to a 2012 study by IDC¹, the world is doubling the amount of information created every two years, with the total volume expected to reach 40 zettabytes (10²¹ bytes) by 2020. To develop the workforce of tomorrow, we need to think ahead and anticipate what skills will be needed in the future. EMC plays an active role as a community partner by collaborating with colleges and universities around the globe to close the technology skills gap, which continues to grow with the increasing volume and complexity of data.

Through our Academic Alliance program, our global education partners use EMC-developed courseware to prepare the next generation of IT professionals for careers in information infrastructure, cloud computing, and Big Data analytics. EMC's Academic Alliance, one of the industry's first initiatives created to address the cloud and data science skills gap, helps to ensure the industry has a strong pipeline of graduates to meet its future needs.

In 2012, 290 new universities and colleges joined the EMC Academic Alliance and the program hit an important milestone of more than 1,000 participating institutions. Today, 62 countries are represented in the Academic Alliance, 20 of which were added in 2012. More than 70,000 students received education on information storage and management in 2012, and the program has reached over 150,000 students since its launch in 2006.

CURRICULUM & TOOLS

Membership in the Academic Alliance provides free access to "open" curriculum-based education, covering topics such as information storage and management (ISM), virtualization, cloud computing, and Big Data analytics.

The Academic Alliance provides faculty with free training and resources to teach information infrastructure technologies. EMC subject-matter experts work with professors to validate curricula and ensure technical relevance and integration into academic programs. At EMC World 2012, EMC released an updated version of the [Information Storage and Management](#) textbook, which serves as the information storage industry's only definitive reference resource.

Registered students have access to an online portal that includes free eLearning, case studies, videos, podcasts, and white papers. We also encourage students to connect with their global peers and industry experts through Facebook and Twitter and the EMC Proven Professional online community.

The Academic Alliance program continued to expand engagement with the global higher-education community through events and seminars, including hosting the fourth annual Academic Alliance Conference in 2012. Held in Bangalore, India, the two-day event focused on cloud, Big Data, and IT transformation and attracted more than 500 students and faculty members.

¹ IDC 2012 The Digital Universe in 2020: Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East

ADDITIONAL INFORMATION

PRESS RELEASE

MORE THAN 1,000 COLLEGES AND UNIVERSITIES TO DATE HAVE JOINED WITH EMC TO CLOSE TECHNOLOGY SKILLS GAP

[LEARN MORE ON ACADEMIC ALLIANCE'S FACEBOOK PAGE](#)

FACULTY ENGAGEMENT

EMC's Academic Alliance team engages with faculty to continually update and enhance the program. The team encourages feedback through our faculty portal, regular email communications, and interactions with Academic Alliance program managers.

In 2012, the Academic Alliance partnered with the [Network Development Group \(NDG\)](#), which brings IT labs online to provide students with hands-on virtual lab support for our ISM course. NDG, which has been partnering with academic institutions for more than 10 years, provides a cost-effective solution for faculty members to offer valuable lab experiences for students, which we learned through our engagement efforts, was important to faculty.

EMC LOCALIZATION INTERNSHIP PROGRAM

In 2009, EMC launched the Localization Internship Program (ELI), a joint program of the Academic Alliance and EMC's Globalization organization. The localization team translates and tailors materials about EMC products and services so they can be easily used in languages other than English. Through the ELI program, students can apply what they have learned in the Academic Alliance and explore the possibilities of a career in translation and localization.

Students from universities around the world connect with each other via the ELI online community, fostering international and intercultural communication. In 2011, ELI launched partnerships with universities in China, Italy, and Japan, and in 2012, launched partnerships with universities in Russia. To date, more than 100 students have participated in the program. Moving forward, EMC plans to expand its investment in ELI, launching partnerships in new countries and maintaining our connection with academic institutions.

EDUCATION PARTNERSHIPS

EMC recognizes that our future—as a company and a society—hinges on the availability of an educated workforce. As an IT company, our future competitiveness depends on a pipeline of employees skilled in the fields of science, technology, engineering, and math (STEM). Today’s technology skills gap threatens innovation, and can have profound effects on our business, communities, and even the sustainability of our planet. We support programs that expand access to education and encourage students, particularly from underrepresented groups, to pursue science and math programs.

In 2012, we supported education programs in 36 countries—up from 29 in 2011—and introduced nine new programs. We hope to continue expanding the reach of these programs and partnerships in 2013.

Read the following to learn about the impact of some of our education partnerships in 2012.

AMERICAS

Partnering with Radio Disney to Bring Data Science to the Classroom

In 2012, we launched a unique partnership with [Radio Disney](#) to bring STEM education to middle school classrooms in Massachusetts. The partnership resulted from a challenge posed to the EMC Innovation Network for new ways to bring data science curriculum into classrooms. Leveraging our longstanding partnership with [Citizen Schools](#), we hosted educational events at three schools in the Boston area. The events centered on an interactive learning laboratory that included a mock game show and other activities to cultivate students’ interest in STEM topics. In 2012, we reached 300 students through the Radio Disney partnership. In 2013, we plan to expand the program to schools in North Carolina and California.

Partnering with Citizen Schools

Since 2009, EMC has partnered with [Citizen Schools](#) to support education, apprenticeships, and networking events for lower-income middle school students. We support Citizen Schools programs in Massachusetts, North Carolina, and California through financial donations and employee volunteer time. To date, employees have volunteered to teach 18 apprenticeships, and in 2012, we reached 2,488 students in California, Massachusetts, and North Carolina through Citizen Schools’ programs.

Supporting STEM Education in Peru

In 2012, we partnered with [Coprodeli](#), an organization that supports economic development and education initiatives in marginalized communities in Peru. Local schools have science labs, but lack the necessary equipment and materials to effectively teach science lessons. EMC donated numerous chemistry and biology lab materials such as beakers and anatomy models for Coprodeli to provide to local schools. In 2013, we plan to expand this partnership by creating opportunities for employees to volunteer in the schools.

ASIA PACIFIC & JAPAN

Adopting Schools in India

Since 2011, EMC's Center of Excellence (COE) in India has partnered with **Youth for Seva (YFS)**, a nonprofit organization focused on youth development, to identify and provide academic support to government schools in Bangalore. Government schools provide subsidized education to underserved populations, but limited funding often results in a lack of qualified teachers and inadequate infrastructure.

In 2012, we adopted the Sarakari Padavi Poorva College in Hoodi, Bangalore, building on our partnership with the Sarkari Samyukta Praudha Shaale school in Garudacharpalya, Bangalore in 2011. There, we provided equipment for the computer lab, hosted training, and made essential infrastructure improvements such as building girls' restrooms—since facilities had been boys-only. Employees also visit the school to mentor students and assist teachers with lessons in the classroom.

Initial results of the partnership have been successful with an average of 60 percent of students receiving passing marks in 2012, up from 37 percent in 2011. To date, EMC has reached more than 450 students through the program.

Engaging Girls in Technology

In 2012, EMC China launched the Girls in Technology Program, hosted at the Beijing University of Posts and Telecommunications. The program provides an introduction to careers in technology and aims to increase engagement of female university students studying science and engineering in the technology sector—a direction that, as of last year, more than 80 percent had not considered.

We launched the program by hosting the Professionals Career Talk led by university career counselors and EMC executives. More than 300 students participated in-person or online and received a career development manual created by EMC, which provides tools, resources, and insights to prepare female students for careers in STEM areas. More than 95 percent of attendees report that they benefited from the forum and left with a greater understanding of career opportunities in the technology sector. EMC plans to continue and expand the Girls in Technology Program to China COE in 2013.

“EMC partners with VEX Robotics to support the promotion of STEM subjects in schools. It is critical that we maintain a pipeline of engineering talent in the industry and it’s important to reach them early. What better way to capture the imagination of a teenager than with robots?”

MARTIN O’FLAHERTY
EMC PROGRAM MANAGER

EUROPE, MIDDLE EAST & AFRICA

Inspiring Future Leaders with VEX Robotics

In 2012, EMC’s COE in Cork, Ireland, sponsored the country’s first **VEX Robotics Competition**, which offers students an enticing way to learn about career opportunities in STEM. Together with the Cork Institute of Technology, EMC donated robot kits to 10 teams of students across eight low-income schools in Cork. Twenty-one EMC employees mentored the 125 students as they learned to build robots, while others volunteered as judges during the final competition at Ireland’s Discovery Science Festival. The event reached more than 5,000 students and adults, and winners qualified to participate in the VEX Robotics World Championships in California in April 2013.

Around the world, our support and partnership helped VEX Robotics reach more than 100,000 youth in 2012. We hope to build on our success in Cork by expanding the program throughout Ireland in 2013.

Advancing STEM Education While Giving a Second Life to EMC Equipment

In 2012, EMC’s COE in Cork, Ireland, expanded our partnership with **Camara**, an organization working to advance digital literacy and help close the digital divide. Through the program, EMC donates old computers to Camara, which refurbishes and sends them to education centers in Africa, the Caribbean, and Ireland. Once the computers reach the end of their useful life, EMC takes them back to be disassembled and recycled.

In 2012, we provided funding to advance Camara’s work in Zambia. These funds supported the development of four eLearning centers, each equipped with 25 computers, to bring digital literacy opportunities to 28 teachers and 2,100 children. EMC offices in Austria, the Netherlands, and the United Kingdom provided nearly 200 computers to eLearning centers in Ethiopia, Jamaica, Kenya, Tanzania, and Zambia. We hope to expand to new locations in the future.

In Egypt, EMC donated equipment and provided pro bono consulting to create a computer lab for the Alashenek Ya Balady (Association for Sustainable Development).

Closing the Digital Divide in Rural Kenya

EMC continues to advance computer literacy around the world through our support of the **ZOO Memorial Foundation**, which provides Information Communications Technology (ICT) training to children and adults in rural Kenya. In 2012, EMC supported efforts to convert an ICT center into a mobile model, which will expand access of the Foundation’s services to people in remote regions of the country who do not have access to the brick-and-mortar training centers. EMC’s contributions helped bring ICT training to 2,350 community members.

APPROXIMATE NUMBER OF STUDENTS REACHED THROUGH EMC’S EDUCATION PARTNERSHIPS



EMC INDIA COE HOSTS “JOY OF GIVING WEEK”

In 2012, EMC’s COE in India launched “Joy of Giving Week,” an employee-driven initiative to promote the company’s commitment to our communities, diversity and inclusion, and the environment. Activities throughout the week included a school supply drive and donation of funds to provide 1,500 school kits for local low-income children. We also invited community organizations that support underserved populations to exhibit products by women and disabled people. The exhibition helped elevate awareness about diversity and inclusion in our community-supported partner organizations. During a two-day volunteer event held at our COE, employees took part in beautification projects, including the planting of more than 200 tree saplings.

EMC MARKETING RAISES FUNDS TO SUPPORT CLEAN WATER PROJECTS

Through the 2012 EMC Marketing Gives Back campaign, EMC employees raised funds to support [charity: water](#), a nonprofit organization that provides clean, safe drinking water to people in developing countries. The money raised helped fund the construction of five wells that supply water for more than 1,000 people in Ethiopia. During the campaign, the team raised awareness about the global need for safe drinking water through activities such as a “water walk,” which simulated the experience of walking three miles with a 40-pound can of water. To learn more about the impact of EMC’s donation, click [here](#).

PROMOTING LITERACY AND INCLUSIVE EDUCATION IN BRAZIL

EMC has supported the work of [AlfaSol](#), an organization in Brazil committed to improving literacy around the world. Since 2008, our financial contributions and employee volunteer time have helped provide programming for more than 1,000 adults in underserved areas of Rio de Janeiro. Watch a video of our efforts [here](#).

COMMUNITY INVOLVEMENT

EMC and our employees play an active role in the communities in which we operate around the world. By supporting health, human services, arts programs, and disaster relief efforts, we are strengthening society and helping shape the future of our local communities.

COMMUNITY PARTNERSHIPS

EMC’s corporate giving and volunteer efforts are focused on supporting programs that provide access to education. We also recognize our responsibility to invest in the communities in which we live and work. Please see below for a list of the partner organizations we proudly support through in-kind and financial contributions.

We also encourage employees to organize grassroots volunteer activities. From transforming a classroom into an IT lab in Ghana to teaching young students about the importance of education in Mexico and Brazil, EMC employees participated in many service projects throughout 2012. Our dedicated Community Involvement team provides guidance and resources to support these efforts, including promoting activities internally, matching volunteers and initiatives based on skills, and recognizing employees through the Community Service Awards.

SOME OF EMC’S MAJOR COMMUNITY PARTNERS AROUND THE WORLD

| | |
|--|--|
| Aiutare i Bambini Onlus | Kinder-Krebshilfe Elterninitiative |
| AlfaSol | KJ Choi Foundation |
| American Red Cross | Lazos |
| Big Brothers Big Sisters | Leonhard Euler International Charitable Foundation for Mathematics |
| Boston Symphony Orchestra | Massachusetts State Science Fair |
| Camara | Michael Carter Lisnow Respite Center |
| Camp Harbor View | Museum of Science |
| Coprodela Peru | New England Aquarium |
| Citizen Schools | North Carolina Council of Teachers of Mathematics |
| Diversa | North Carolina State University |
| Finca Vigia Foundation | Pan American Development Foundation |
| Friends of NC State Museum of Natural Sciences | Pisgah Astronomical Research Institute |
| Fundacion Leer | Resource Area for Teaching |
| Fundacion Sindrome de Down | Rising Star School |
| Girls for a Change | Robotics Education & Competition Foundation |
| Give 2 Asia | Science Buddies |
| Habitat For Humanity | Tabitha: Cambodia |
| Hope Foundation | Tech Museum of San Jose |
| Hope Thailand | The Massachusetts Green High-Performance Computing Center |
| Hope Worldwide (Philippines, Indonesia, Singapore, Malaysia) | TOCEV (Foundation for Educating Children) |
| Inclúyeme A.C. | United Way Australia |
| Industry Initiatives for Science and Math Education | United Way New Zealand |
| Inner-City Scholarship Fund | ZOO Memorial Foundation |

COMMUNITY SERVICE AWARD WINNER, ANTHONY SANSONE

In 1998, University of Wisconsin alumnus and EMC employee Anthony Sansone launched the Daily Cardinal Alumni Association to provide opportunities for alumni of the school's newspaper, The Badger-Herald, to mentor current journalism students. The organization provides one-on-one mentoring opportunities for current students, as well as an alumni network for them to leverage as they pursue careers after graduation. Through a fundraising campaign, the Daily Cardinal Alumni Association uses donations to invite notable speakers to campus and to create scholarships for journalism students to attend writing conferences and other learning and development opportunities.

EMC AUSTRIA MENTORS CANCER PATIENTS, CREATES JOB OPPORTUNITIES

EMC Austria established a mentor program in 2009 to support young cancer survivors as they transition into the working world. Mentees are selected through a partnership with St. Anna Children's Hospital, then paired with an EMC employee who provides support and friendship during their transition. Patients also use EMC gaming and educational software to stay on track in their studies while they undergo treatment.

In 2011, we learned about a former patient, Petar Tansaic, who was looking for an opportunity in the IT sector to fulfill requirements for his university degree. Petar was diagnosed with cancer at age 10 and, during treatment, encountered his first computer. Petar had found his calling in computer science, to which he devoted himself during recovery and beyond. After hearing Petar's story, EMC invited Petar to participate in our intern program in Austria. In 2012, upon receiving his degree, Petar joined EMC as an associate customer engineer.

Through this program, we have helped other cancer survivors like Petar find career opportunities at EMC and our industry peers.

COMMUNITY SERVICE AWARDS

We foster a culture of giving back by recognizing employees who volunteer in their communities. Established in 2009, EMC's annual Community Service Awards (CSA) recognize employees for their contribution to communities outside of causes we support at the corporate level. CSA winners are recognized internally, and a one-time financial grant is contributed to the organization in their honor.

In 2012, 26 employees received Community Service Awards, and cash grants were donated to the respective organizations. To date, EMC has contributed more than 100 grants totaling \$180,000 to organizations on behalf of CSA winners. Please see the following list of 2012 CSA recipients and organizations.

DISASTER RELIEF

In the wake of natural disasters and emergencies, EMC assists communities with support for relief and recovery efforts. We respond by donating corporate funds, as well as matching employee donations to benefit service organizations, including the American Red Cross, Australian Red Cross, Give 2 Asia, International Red Cross, New Zealand Red Cross, and Red Crescent Societies.

In 2012, EMC contributed \$100,000 to the American Red Cross, \$10,000 to Italy, and matched \$124,866 in employee donations. Contributions totaling \$234,866 supported disaster relief activities in response to earthquakes in Italy and Hurricane Sandy in the U.S. In Italy, local employees and EMC corporate donated to an education fund created by our partner organization, Aiutare I Bambini, to help rebuild schools in San Possidonio with infrastructure components that can withstand the impacts of future earthquakes.

TOP 2012 COMMUNITY SERVICE AWARD WINNERS

Daily Cardinal Alumni Association
Anthony Sansone

Aleppo Shriner's Transportation Fund/
Shriners Hospital for Children
Peter Simmons

Lions Club Hellerup/Jørgen Løkke
Ole Wulff

The Upton Men's Club
Dennis Kloepping & Alan Nasuti

The Gleaning Field Foundation
Carla van Blake

Music for All Seasons, Inc.
Norman Dee

ADDITIONAL INFORMATION

[EMC FACEBOOK PAGE](#)

[WATCH A VIDEO ABOUT OUR
HERITAGE TRUST PROJECT](#)

INFORMATION HERITAGE

Cultural heritage is captured in books, art, and artifacts stored in museums and libraries around the world. EMC contributes our expertise to help ensure these cultural treasures are available for future generations to access and enjoy. Through our Information Heritage program, EMC provides products, services, and financial assistance for digital information heritage programs worldwide.

Digitizing efforts not only prevent these pieces from disappearing, but often increase access for students, academics, and others who are interested in exploring these items. Since 2007, we have provided more than \$35 million in products, services, and financial assistance for digital information heritage programs worldwide.

EMC INFORMATION HERITAGE INITIATIVE

EMC's Information Heritage Initiative partners with cultural institutions to capture, store, and share digital images of their priceless collections. We offer financial assistance, hardware and software products, and technical expertise to help preserve the world's heritage and increase digital accessibility for research and education.

EMC Isilon Helps Fuel the Library of the Future

In 2012, we partnered with the North Carolina State University (NCSU) Libraries to support the development of Hunt Library, a pioneering facility and technology incubator that will house the largest collection of visualization technologies of any U.S. public university and collaboration spaces supporting over 100 active teams at any given time.

EMC provided Isilon technology equipment, which will improve the development and performance of smart grid, gaming, and high-performance computing for research and collaborative services to faculty, staff, and students. With this support, the library will become a campus model for public and private partnerships on research and development into the cloud. At the same time, we are facilitating the development of a digital archive for content of NCSU and its partner libraries—University of North Carolina at Chapel Hill, Duke University, and North Carolina Central University—which together comprise one of the largest research library systems in the country.

HELPING GEORGIE GO DIGITAL

In a rural North Okanagan community in British Columbia, Canada, a lone employee—Georgie Hay—operates a small museum more than a century old, rich with tape-recorded interviews and photos depicting the town’s mining, logging, milling, and farming heritage. When EMC received the Lumby Museum’s “Help Georgie Go Digital” submission in 2012, the photos and interviews were deteriorating and the Museum lacked the resources required to preserve them. Heritage Trust Project judges and EMC Facebook fans were moved by Georgie’s story and awarded a \$10,000 grant to provide IT training, digitize photos and interviews, and develop a website for the Museum to provide easier access to the documents for the larger public.

EMC HERITAGE TRUST PROJECT

We recognize the importance of local preservation projects, and through the EMC Heritage Trust Project, we support community-based digital curation efforts around the world. The Project awards cash grants of \$5,000, \$10,000, and \$15,000 to local cultural institutions, archives, or private collections. New grants are awarded every spring and fall through an open application process.

Beginning in 2012, we showcased the Project on [EMC’s Facebook page](#), where applicants now submit their proposals directly. An internal group of judges review the proposed projects and then post the seven finalists for the public to vote for the top winners. The 2012 grantees were:

- **Caffe Lena History Project**
Saratoga Springs, New York, USA
- **Centro de Documentación de las Artes Escénicas**
Santiago, Chile
- **CyArk**
Oakland, California, USA
- **Help Georgie Go Digital**
British Columbia, Canada
- **Springfield Public Library**
Newark, New Jersey, USA
- **The Reach Museum**
British Columbia, Canada

FUNDING GUIDELINES

We are proud to support the work of our nonprofit partners who are advancing important causes in communities around the world. Through these partnerships, EMC contributes funds, in-kind products and services, and employee volunteer time.

FUNDING CRITERIA

To be eligible for funding, organizations must meet the following criteria:

- Must be a nonprofit and tax-exempt organization according to section 501(c)(3) of the Internal Revenue Code, a publicly funded academic institution, or a municipality
- Must support an EMC site community
- Overhead expenses must not exceed 25 percent of total operating budget

INELIGIBLE FOR FUNDING

The following are not eligible for funding:

- Organizations without 501(c)(3) status with the exception of publicly funded academic institutions and municipalities
- Individuals; religious, veteran, or fraternal organizations; political causes or candidates
- Organizations that promote or practice discrimination
- Direct mail solicitations
- Courtesy advertising
- Endowments
- Tickets for contests
- Reduction of debt

SUBMITTING A PROPOSAL FOR FUNDING

EMC considers proposals bi-monthly, and the review process takes approximately eight weeks. There is no set financial range for the grant awards. All proposals should be emailed to CommunityInvolvement@emc.com and must include the following information:

- Application form (download and complete [this form](#))
- A listing of all current funding sources and amounts, and other revenue
- Names of board of directors and affiliations

Incomplete proposals will not be considered. EMC will respond to you in writing. If your proposal is selected for funding, EMC will require the following additional attachments:

- Copy of IRS 501(c)(3) determination letter
- Audited financial statement for most recent fiscal year
- Annual report, if available

FINAL REPORT

All EMC grant recipients must submit a report outlining the expenditures of the funds within 12 months of receiving the award. New requests will not be considered until the evaluation for the last grant is submitted.

GRI INDEX

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
|------------------------|--|--|-------------------------------|
| STRATEGY AND ANALYSIS | | | |
| 1.1 | Statement from the most senior decision maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy | A Message from Our CEO | F |
| 1.2 | Description of key impacts, risks, and opportunities | A Message from Our CEO About this Report | F |
| ORGANIZATIONAL PROFILE | | | |
| 2.1 | Name of the organization | Corporate Profile | F |
| 2.2 | Primary brands, products, and/or services | Corporate Profile 2012 10-K | F |
| 2.3 | Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures | Corporate Profile 2012 10-K | F |
| 2.4 | Location of organization's headquarters | Corporate Profile | F |
| 2.5 | Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report | Corporate Profile | F |
| 2.6 | Nature of ownership and legal form | 2012 10-K | F |
| 2.7 | Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries) | Corporate Profile | F |
| 2.8 | Scale of the reporting organization | Corporate Profile 2012 10-K | F |
| 2.9 | Significant changes during the reporting period regarding size, structure, or ownership | Corporate Profile 2012 10-K | F |
| 2.10 | Awards received in the reporting period | Awards & Recognition | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
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| REPORT PARAMETERS | | | |
| 3.1 | Reporting period (e.g., fiscal/calendar year) for information provided | About this Report | F |
| 3.2 | Date of most recent previous report (if any) | About this Report | F |
| 3.3 | Reporting cycle (annual, biennial, etc.) | About this Report | F |
| 3.4 | Contact point for questions regarding the report or its contents | About this Report | F |
| 3.5 | Process for defining report content | About this Report | F |
| 3.6 | Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers) | About this Report | F |
| 3.7 | State any specific limitations on the scope or boundary of the report | About this Report | F |
| 3.8 | Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations | About this Report | F |
| 3.9 | Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report | About this Report 2012 CDP Report | F |
| 3.10 | Explanation of the effect of any restatements of information provided in earlier reports, and the reasons for such restatement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods) | About this Report | F |
| 3.11 | Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report | About this Report | F |
| 3.12 | Table identifying the location of the standard disclosures in the report | GRI Index | F |
| 3.13 | Policy and current practice with regard to seeking external assurance for the report; if not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided; also explain the relationship between the reporting organization and the assurance provider(s) | About this Report | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
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| GOVERNANCE, COMMITMENTS, AND ENGAGEMENT | | | |
| 4.1 | Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight | Corporate Governance | F |
| 4.2 | Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement) | Corporate Governance | F |
| 4.3 | For organizations that have a unitary board structure, state the number and gender of members of the highest governance body who are independent and/or non-executive members | Corporate Governance | F |
| 4.4 | Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body; identify topics related to economic, environmental, and social performance raised through these mechanisms during the reporting period | Corporate Governance 2013 Proxy Statement Stakeholder Engagement | F |
| 4.5 | Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance) | Corporate Governance Guidelines | F |
| 4.6 | Processes in place for the highest governance body to ensure conflicts of interest are avoided | Corporate Governance Guidelines Business Conduct Guidelines | F |
| 4.7 | Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity | Corporate Governance Guidelines 2013 Proxy Statement | F |
| 4.8 | Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation | Ethics Business Conduct Guidelines | F |
| 4.9 | Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles | Corporate Governance Environmental Strategy 2013 Proxy Statement | F |
| 4.10 | Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance | Corporate Governance Corporate Governance Guidelines | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
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| GOVERNANCE, COMMITMENTS, AND ENGAGEMENT (CONTINUED) | | | |
| 4.11 | Explanation of whether and how the precautionary approach or principle is addressed by the organization | Product Material Content | F |
| 4.12 | Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses | Ethics Business Conduct Guidelines | F |
| 4.13 | Memberships in associations (such as industry associations) and/or national/international advocacy organizations | Public Policy Corporate Political Contributions Disclosure Statement | F |
| 4.14 | List of stakeholder groups engaged by the organization | Stakeholder Engagement | F |
| 4.15 | Basis for identification and selection of stakeholders with whom to engage | Stakeholder Engagement | F |
| 4.16 | Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group | Stakeholder Engagement 2013 Proxy Statement | F |
| 4.17 | Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting | Stakeholder Engagement | F |
| ECONOMIC PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach regarding its economic impacts on society | Community Involvement Corporate Profile 2012 10-K IT & Society | F |
| EC1 | Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments | Community Involvement 2012 10-K Corporate Profile | F |
| EC2 | Financial implications and other risks and opportunities for the organization's activities due to climate change | 2012 CDP Report About this Report 2012 10-K | F |
| EC8 | Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement | Information Heritage Community Involvement | P |
| EC9 | Understanding and describing significant indirect economic impacts, including the extent of impacts | IT & Society | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
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| ENVIRONMENT PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach to environmental sustainability | Environmental Strategy | F |
| EN3 | Direct energy consumption by primary energy source | Data Dashboard | F |
| EN4 | Indirect energy consumption by primary source | Data Dashboard | F |
| EN5 | Energy saved due to conservation and efficiency improvements | Efficient Facilities | F |
| EN6 | Initiatives to provide energy efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives | Efficient Data Centers Efficient Products | F |
| EN7 | Initiatives to reduce indirect energy consumption and reductions achieved | Efficient Facilities Efficient Data Centers Employee Travel & Commuting | F |
| EN8 | Total water withdrawal by source | Water Use & Management | P |
| EN10 | Percentage and total volume of water recycled and reused | Water Use & Management | P |
| EN11 | Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | Biodiversity | P |
| EN12 | Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas | Biodiversity | P |
| EN13 | Habitats protected or restored | Biodiversity | P |
| EN14 | Strategies, current actions, and future plans for managing impacts on biodiversity | Biodiversity | P |
| EN16 | Total direct and indirect greenhouse gas emissions by weight | Data Dashboard | F |
| EN17 | Other relevant indirect greenhouse gas emissions by weight | Data Dashboard | F |
| EN18 | Initiatives to reduce greenhouse gas emissions and reductions achieved | Data Dashboard Efficient Data Centers Efficient Facilities Energy Use & Climate Change Strategy Employee Travel & Commuting 2012 CDP Report | F |
| EN23 | Total number and volume of significant spills | Recycling & Waste | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
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| ENVIRONMENT PERFORMANCE INDICATORS (CONTINUED) | | | |
| EN26 | Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation | Efficient Products Efficient Data Centers Product Material Content Supply Chain Social & Environmental Responsibility External Collaboration Employee Engagement Product End-of-life | F |
| EN27 | Percentage of products sold and their packaging materials that are reclaimed by category | Data Dashboard Packaging Product End-of-life | P |
| EN28 | Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations | Environmental Strategy | F |
| HUMAN RIGHTS PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach regarding human rights in its operations and throughout the supply chain | EMC Supplier Code of Conduct Ethics Supply Chain Human Rights and Global Labor Principles | F |
| HR1 | Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening | Ethics Supply Chain Social & Environmental Responsibility Human Rights and Global Labor Principles | F |
| HR2 | Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening, and actions taken | Supply Chain Social & Environmental Responsibility EMC Supplier Code of Conduct | P |
| HR3 | Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained | Ethics | F |
| HR5 | Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights | Supply Chain Social & Environmental Responsibility Ethics Human Rights and Global Labor Principles | P |
| HR6 | Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor | Ethics Human Rights and Global Labor Principles | P |
| HR7 | Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor | Supply Chain Social & Environmental Responsibility Ethics Human Rights and Global Labor Principles | P |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
|---|--|--|-------------------------------|
| LABOR PRACTICES & DECENT WORK PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach to workforce development, workplace safety, and employee advancement | Employees & Workplace | F |
| LA3 | Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation | Health & Wealth Benefits | F |
| LA7 | Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender | Data Dashboard Workplace Health & Safety | P |
| LA8 | Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases | Health & Wealth Benefits | P |
| LA10 | Average hours of training per year per employee, by gender, and by employee category | Employee Development Data Dashboard | P |
| LA11 | Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings | Employee Development Global Expansion | F |
| LA12 | Percentage of employees receiving regular performance and career development reviews, by gender | Employee Development | P |
| SOCIETY PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach to anti-corruption practices, good business practices, and participation in public policy and the political process | Ethics Public Policy Business Conduct Guidelines | F |
| SO2 | Percentage and total number of business units analyzed for risks related to corruption | Business Conduct Guidelines | F |
| SO3 | Percentage of employees trained in organization's anti-corruption policies and procedures | Ethics Business Conduct Guidelines | F |
| SO4 | Actions taken in response to incidents of corruption | Business Conduct Guidelines Ethics | F |
| SO5 | Public policy positions and participation in public policy development and lobbying | Public Policy | F |
| SO6 | Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country | Public Policy Corporate Political Contributions Disclosure Statement | F |

| INDICATOR | TOPIC | LOCATION | COVERAGE (FULL OR PARTIAL) |
|---|--|--|-------------------------------|
| PRODUCT RESPONSIBILITY PERFORMANCE INDICATORS | | | |
| 5.0 - DMA | Disclosure on the organization's management approach to product responsibility and safety and customer engagement | Product Material Content Efficient Products Product End-of-life Customers | F |
| PR1 | Lifecycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures | Product Material Content Efficient Products Product End-of-life | F |
| PR5 | Practices related to customer satisfaction, including results of surveys measuring customer satisfaction | Customers Stakeholder Engagement | F |

ABOUT THIS REPORT

BOUNDARY AND SCOPE

This is EMC's sixth annual Sustainability Report. We published our last report, "Transformation with Purpose" in 2012, and prior reports are available for download [here](#). This report covers EMC and its subsidiaries for the 2012 fiscal year (January 1, 2012 to December 31, 2012), except where otherwise noted or where intermediary updates are made, and indicated, prior to the next full report.

In areas where the scope is defined as "EMC," information includes all our subsidiaries, but does not include VMware unless otherwise specified. In 2012, we announced a joint venture with Lenovo in which we contributed certain assets and resources of the EMC Iomega® business. Since the partnership launched in late 2012, we included Iomega in our global facility portfolio and report associated GHG emissions.

Global greenhouse gas (GHG) emissions data from our operations include EMC subsidiaries and VMware. These emissions calculations were compiled according to the World Resources Institute Greenhouse Gas Protocol.

We continuously evaluate and identify areas to evolve and improve the scope of our sustainability reporting. This report focuses on the issues identified as most important to EMC, our industry, and our stakeholders, including supply chain responsibility, climate change mitigation, energy efficiency, business ethics, information privacy and security, eWaste, hazardous substances, and innovation. For more information, see the following Materiality for Sustainability section.

Where we refer to "owned and operated" facilities, we include buildings that we fully own, as well as buildings that we lease and over which we have operational control. These owned and operated facilities are situated around the globe including the following locations:

- Bedford, Franklin, Hopkinton, Southborough, and Westborough in Massachusetts, USA
- Apex and Research Triangle Park in North Carolina, USA
- Pleasanton, Santa Clara, and Palo Alto in California, USA
- Cork, Ireland
- Bangalore, India

The information on our workplace policies and programs is global and includes EMC and all of our subsidiaries.

DISCLOSURE AND ASSURANCE

This report was not externally assured or verified by an independent third party. We contracted with a third-party consultancy that specializes in sustainability reporting to assist us with the process and content development.

We engaged an independent third party to review our 2012 GHG inventory and received limited assurance of its accuracy and completeness. The scope of the review included all global Scope 1 and Scope 2 emissions as well as global business travel Scope 3 emissions. The Scope 1 and Scope 2 GHG inventory encompasses all our owned and leased facilities and mobile sources around the world.

This report was produced in accordance with the Global Reporting Initiative (GRI) G3.1 Sustainability Reporting Guidelines. EMC has self-declared an application Level B for this report. Please refer to the GRI Index for a listing of all disclosures covered in this report.

MATERIALITY FOR SUSTAINABILITY

To determine content for this report, we reviewed findings from our 2011 Sustainability Materiality Assessment to reaffirm issues previously identified as most important to EMC and our stakeholders. Our stakeholders advised that a minor refresh of the Assessment for 2012 would be appropriate, given our robust and comprehensive approach in 2011. EMC's process for defining materiality in the context of sustainability reporting is aligned with GRI Guidelines and complies with the AA1000 AccountAbility Standard (2008) on "the Principle of Materiality."

To ensure we evaluated emerging issues and topics that may have grown in importance since our 2012 report, we gathered input from external and internal stakeholders through the following channels:

- **Internal Impact Discussion:** We convened internal subject matter experts, including our Green Business Leadership Council, to review findings, provide insights, and prioritize issues based on internal and external views of materiality. We considered each issue's perceived impact to EMC, relationship to our values, importance to our organizational success, and relationship to our core competencies, as well as EMC's ability to influence change.
- **Stakeholder Conference Calls:** We hosted two stakeholder conference calls, facilitated by Ceres, to receive feedback and engage in discussion on two of our most material issues—Supply Chain Responsibility and Facility Energy Use and Climate Change.
- **Stakeholder Forum:** At our annual forum, facilitated by Ceres, stakeholders representing investors, academia, customers, and the NGO community provided constructive feedback on our materiality review and provided minor adjustments to the ranking of material issues along the stakeholder axis.

EMC's Office of Sustainability is responsible for the preparation and integrity of the information in this report. Through a system of internal controls, including a verification process we continue to strengthen each year, we believe this report fairly represents our sustainability activities and results in 2012.

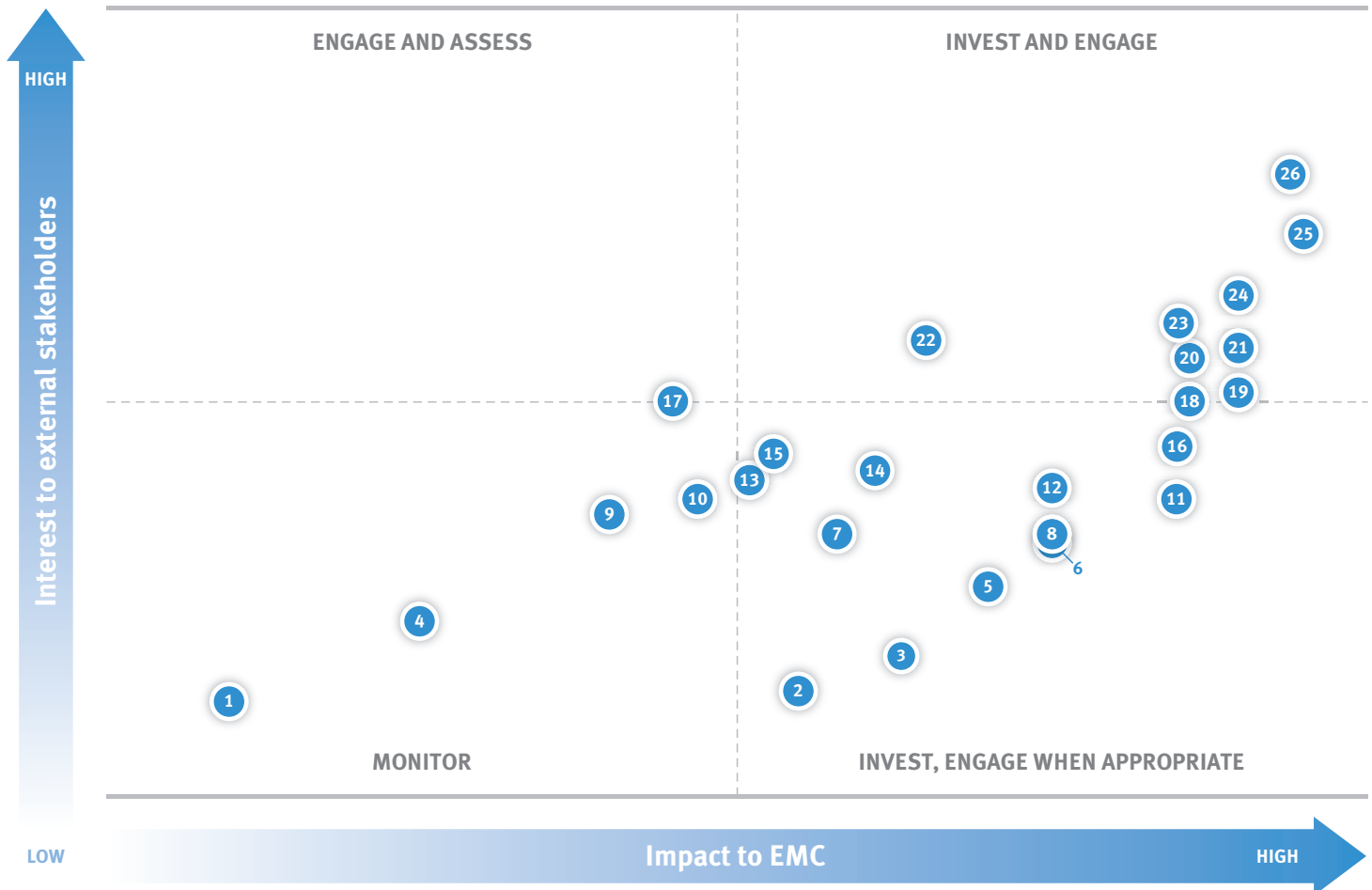
RESULTS OF 2012 SUSTAINABILITY MATERIALITY ASSESSMENT

The issues were ranked along two axes: importance to our stakeholders and relevance to EMC's business (see figure below). The quadrant into which each issue falls provides guidance for EMC's response to that issue.

As the 2012 Assessment was only a review and adjustment, there were not a significant number of changes from the 2011 Assessment. The two key changes included:

- Removing "Conflict Minerals" and adding "Supply Chain Responsibility" (#19). Supply Chain Responsibility includes Conflict Minerals and is a more holistic category.
- Moving eWaste (#21) to the right, signaling an increased potential impact to EMC.

EMC SUSTAINABILITY MATERIALITY ASSESSMENT



- 1 Biodiversity
- 2 Preservation of cultural heritage
- 3 Volunteerism/community support
- 4 Nanomaterials
- 5 Healthcare and public health
- 6 Employer responsibilities
- 7 Resource consumption
- 8 Inclusion and diversity
- 9 Renewable energy

- 10 Digital inclusion
- 11 Employee engagement
- 12 Education
- 13 Occupational health and safety
- 14 Climate change adaption
- 15 Waste and emissions
- 16 Positive impact of IT
- 17 Water
- 18 Human rights

- 19 Supply chain responsibility
- 20 Climate change mitigation
- 21 eWaste
- 22 Hazardous substances
- 23 Innovation
- 24 Information privacy and security
- 25 Business ethics
- 26 Energy efficiency

- **Monitor:** Follow the issue to see how the issue trends and develops. Over time, if the relevance to EMC changes, then EMC has the foundation to address the issue more actively.
- **Engage and Assess:** Engage external stakeholders to ensure a common understanding and shape our approach. Evaluate EMC's position in light of high stakeholder interest to deepen understanding of potential risks and opportunities.
- **Invest, Engage when appropriate:** Devote resources toward mitigating and minimizing the issue and/or realizing the opportunity. Engage external stakeholders on a case-by-case basis.
- **Invest and Engage:** Devote resources toward mitigating and minimizing the issue and/or realizing the opportunity, and work with external stakeholders to ensure a common understanding and shape our approach.

The issues and definitions set forth below ranked highest in the 2012 Assessment, falling into the “invest and engage” category.

- **Energy Efficiency:** The ratio between the consumption of energy and a given production output or delivered service. An increase in energy efficiency is a change in energy use that results in an increase in net benefits per unit of energy. Includes: data center energy efficiency, product energy efficiency, and facility energy efficiency.
- **Business Ethics:** The moral value of human conduct and the rules and principles that ought to govern it. Acting through a set of principles of right conduct. Relates to how EMC conducts business with partners and customers, and how EMC interacts with governments, communities, and other stakeholders. Includes: anti-bribery and corruption, political contributions, and executive compensation, but does not include supply chain responsibility and employer responsibilities which are listed separately.
- **Information Privacy and Security:** Information privacy defines the relationship between collection and dissemination of data, technology, the public expectation of privacy, and the legal and political issues surrounding them. Information security refers to protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording, or destruction. Includes: physical and virtual security systems, end-of-life management of data, fraud and identity theft, hacking, and cyber warfare.
- **Innovation:** The creation of better or more-effective products, processes, technologies, or ideas that are accepted by markets, governments, and society, offering a substantial positive change compared to incremental changes.
- **eWaste:** Electronic equipment no longer desired by the user and/or no longer usable for one of its intended functions. Includes: manufacturing eWaste, recycling, end-of-life planning, transfrontier shipments of eWaste, illegal shipments, unsafe disassembly and recycling, data security, and environmental impact.

- **Climate Change Mitigation:** Act to lessen the force or intensity of the effects of climate change, through strategies such as reduction or stabilization of greenhouse gas (GHG) concentration in the atmosphere, or increasing the reflectivity of solar radiation. Includes: reduction of GHG emissions both directly and indirectly (through use of influence or advocacy), carbon sink management, and carbon markets and trading.
- **Human Rights:** The basic rights and freedoms to which all people are entitled, generally including the right to life and liberty, freedom of thought and expression, and equality before the law. Relates to how EMC treats and addresses individual human rights in the communities where EMC does business. Includes: freedom of expression and the press, anti-discrimination, and protection of civil liberties, but it does not include supply chain responsibility and employer responsibilities which are listed separately.
- **Hazardous Substances:** Issues related to solids, liquids, or gases that can harm people, other living organisms, property, or the environment. Includes: toxic substances in products and in manufacturing processes, full material disclosure, design for environment, and substance regulations.
- **Supply Chain Responsibility:** The social and environmental responsibility of companies that provide EMC with goods and services, and of the companies that supply them in turn. Includes labor practices, ethics, health and safety, environment, and management systems as well as more-focused issues such as conflict minerals.
- **Positive Impact of Information Technology (IT):** The positive impact of IT describes the many ways in which IT can help mitigate environmental and social impacts in all facets of government and economy, as well as provide new economic, environmental, and social opportunities. Examples include the use of IT to increase productivity; provide access to healthcare, education, and economic opportunity; and enhance communication and social understanding. New innovations with substantial potential to enable transformation to a sustainable economy include cloud computing which can be both more efficient and more resilient, and Big Data which is providing new approaches to previously intractable problems. IT, used intelligently, can continue to positively affect our lives and act as a catalyst for future advances.

RESTATEMENTS OF PERFORMANCE INDICATORS

2010 and 2011 Global Water Withdrawal numbers have been adjusted due to improved water accounting methodologies and receipt of additional historical water withdrawal data. The 2011 value was adjusted downwards by 8.5 percent.

Historical GHG emissions and energy metrics have been restated based on improved global data collection and calculation methodologies. The modest increase in Scope 1 across the board can be attributed to more thorough coverage of fugitive refrigerant emissions on a global level.

- Scope 1 and 2 Emissions Intensity per \$1M was updated for 2005-2011, with 2011 increasing by 1.6%
- Global Absolute Scope 1 Emissions was updated for 2005-2011, with 2011 increasing by 28% from 34,987 to 44,799 metric tons CO₂e
- Global Absolute Scope 2 Emissions was updated for 2005-2011, with 2011 decreasing by 1%
- Energy Consumption per Employee was updated for 2005-2011, with negligible changes for 2011
- U.S. GHG Emissions per 1,000 ft² was updated for 2005-2011, with 2011 decreasing by 1.5%
 - U.S. GHG Emissions per 1,000 ft² including RECs increased by 27% in 2011 due to a methodology correction
- Global Facility Electricity Consumption was updated for 2005, 2010, and 2011, with 2011 decreasing by 1%
- Global Facility Natural Gas Consumption was updated for 2005, 2010, and 2011, with 2011 increasing by 5%
- Scope 3 GHG Emissions, Purchased Goods and Services, Direct Tier 1 suppliers decreased significantly from 307,554 to 120,706 metric tons CO₂e for 2011 due to more-accurate data collection
- Scope 3 GHG Emissions, Business Travel increased from 108,432 to 128,946 metric tons CO₂e in 2011

Percent Recycled material of outbound packaging for 2011 decreased from 15% to 10%.

MEASURES

Throughout this report, “tons” refers to metric tons and all monetary units are in U.S. dollars, unless otherwise noted.

CONTACT

EMC encourages its stakeholders to provide feedback on the topics covered in this report. Please submit any questions or comments about the report or its contents to the Office of Sustainability at Office_of_Sustainability@emc.com.

GLOSSARY

The following are select definitions and explanations of terms used in the EMC 2012 Sustainability Report. To learn more about other terms we use in our business, visit the [Glossary](#) on emc.com.

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| Adaptive Cooling | An energy-efficient cooling technology that continuously samples the external room temperature and adjusts blower and fan speeds in storage platforms accordingly. |
| Big Data | A general term that refers to the volume, velocity, variety, and complexity of data created by the rapid increase of digital information. |
| Center of Excellence (COE) | A business operation that makes available high-quality research and development, business process management, customer support, and remote professional services in support of all business units within the company to meet the demands of the worldwide market; uses specialized skills coordinated in a global network of centers that are matched to address diverse business requirements and processes; and enables local market presence and innovation based on market knowledge and community engagement. |
| Cloud Computing | Often referred to as the cloud—enables users to obtain IT resources from a shared pool over the Internet or a private network, with delivery on demand via self-service catalog, and payment based on usage. |
| Data Deduplication | Data deduplication looks for redundancy of sequences of bytes across very large comparison windows. Sequences of data (averaging 8 KB long) are compared to the history of other such sequences. The first uniquely stored version of a sequence is referenced rather than stored again. This process is completely hidden from users and applications so the whole file is readable after it's written. |
| Electronic Waste (eWaste) | Electronic equipment no longer desired by the user and/or no longer usable for one of its intended functions. |
| Enterprise Flash Drive | A disk drive that is solid state, meaning it does not spin like a conventional disk drive. EMC also uses the term “solid state disk drive.” |
| Flywheel Technology | A rotating mechanical device used to store energy. It helps reduce the need for batteries or other backup energy supplies in uninterruptable power systems. |
| Free Air Cooling | A process that uses natural, outside air to assist in controlling the temperature of a facility. This technology helps reduce the amount of electricity needed to cool a facility with traditional air conditioning and is used in many EMC locations. |
| Fibre Channel/Serial Attached SCSI (FC/SAS) Drive | A high-speed disk drive commonly used to store frequently-accessed information. It stores data faster than a high-capacity disk drive and, as a result, often requires more energy per unit of storage. |
| Fully Automated Storage Tiering (FAST) | EMC Fully Automated Storage Tiering (FAST) automatically moves active data to high-performance storage tiers and inactive data to low-cost, high-capacity storage tiers. The result is higher performance, lower costs, and a denser footprint than conventional systems. With FAST, enterprise Flash drives increase application performance by up to 800 percent, and serial advanced technology attachment (SATA) disk drives lower costs by up to 80 percent. |

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| Greenhouse Gas (GHG) Emissions | Emissions of gases that trap heat in the Earth’s atmosphere, causing the greenhouse effect and leading to changes in the Earth’s climate. Greenhouse gases include carbon dioxide, methane, and nitrous oxide. |
| Greenhouse Gas (GHG) Protocol | The most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The GHG Protocol is offered through a partnership between the World Resources Institute and the World Business Council for Sustainable Development . |
| Global Reporting Initiative (GRI) | A non-profit organization that develops and disseminates globally applicable “Sustainability Reporting Guidelines” for use by companies and organizations. Guidelines are used to report on economic, environmental, and social sustainability. |
| Hot and Cold Aisle Containment | A data center management approach that increases energy efficiency by using physical enclosures to separate cooling systems from air heated by data center equipment. It allows for more-efficient temperature control and regulation. |
| Information Technology Asset Disposal (ITAD) Suppliers | Suppliers used for the management or disposal of IT assets, including eWaste. |
| Lean Six Sigma | Lean Six Sigma is a managerial concept focused on streamlining processes and reducing costs by identifying critical improvements and minimizing variability in business processes. |
| Ozone-Depleting Chemicals (ODCs) | Chemicals identified as having a direct impact on the depletion of the ozone layer of the Earth’s atmosphere. ODCs are commonly used in refrigerants, cleaners, and solvents. EMC does not currently use any ODCs in their products. |
| Phthalates | A group of chemical compounds commonly used to increase the flexibility, transparency, and durability of plastic materials. |
| Power Usage Efficiency (PUE) | A standard metric defined by The Green Grid to measure the energy efficiency of data center infrastructure. |
| Recycled | Materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer) or after consumer use (post-consumer). |
| Renewable Energy | Any naturally-occurring, theoretically inexhaustible source of energy, such as biomass, solar, wind, tidal, or wavepower. |
| SATA Disk Drive | A high-capacity enterprise Flash drive that requires less power to store data than high-speed disk drives. It has slower performance than a high-speed disk drive, but is more energy efficient since it typically spins more slowly to accommodate a higher recording capacity on each track (higher areal density). |
| Scope 1 Emissions | Direct greenhouse gas (GHG) emissions from sources that are owned or controlled by the reporting company. |

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| Scope 2 Emissions | Indirect greenhouse gas (GHG) emissions from consumption of purchased electricity, heat, or steam by the reporting company. |
| Scope 3 Emissions | Other indirect greenhouse gas (GHG) emissions from sources that are not owned or controlled by the reporting company and are not covered by Scope 2 emissions. |
| Solid State Disk Drive | A disk drive that is solid state, meaning it does not spin like a conventional disk drive. At EMC, it is also known as a “Flash solid state disk drive” or an “enterprise Flash drive.” |
| Virtual “Thin” Provisioning | A strategy for efficiently managing physical storage needs and capacity by allocating physical storage only when it is actually needed. |
| Virtualization | A general term that refers to the various techniques, methods, or approaches of creating a virtual (rather than physical) version of information technology (IT) tools, such as operating systems, servers, storage devices, or network resources. |
| Volatile Organic Compound (VOC) | Refers to an organic chemical that has a high vapor pressure at room temperature conditions, enabling it to enter surrounding air easily. Some VOCs have been linked to potential human health risks. |

CONTACT

EMC encourages its stakeholders to read our full 2012 Sustainability Report, *Thinking Forward*, available at emc.com/sustainability and to provide feedback on topics covered. Please submit any questions or comments about the report or its contents to the Office of Sustainability at Office_of_Sustainability@emc.com.

