

Raytheon



2015 CORPORATE
RESPONSIBILITY
REPORT

“I firmly believe that Raytheon’s vision, values and culture give us a competitive advantage worldwide. They provide us with a solid foundation for solving our customers’ toughest challenges, working to build stronger communities and helping shape a better future.”

—Thomas A. Kennedy
Chairman and CEO, Raytheon Company

ON THE COVER:

Raytheon employees work with second-generation weather forecasting technology developed by the company for the National Oceanic and Atmospheric Administration’s National Weather Service. Known as the Advanced Weather Interactive Processing System (AWIPS), it tracks weather from space to the ground, analyzing a steady stream of “environmental intelligence” data for civil agencies, businesses and citizens. We also developed online training modules to help citizens stay safe in weather-related disasters. Learn more at raytheon.com/news/feature/weather-ready.html.

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Dear Raytheon Stakeholders,

One of the reasons I am so proud to have been part of the Raytheon team for the last 33 years is because of our deep commitment to corporate responsibility. This commitment is embedded in our company values that emphasize trust, respect, collaboration, innovation and accountability. These values support our strong company culture, which unifies us as one team with one vision.

As stewards for Raytheon's shareholders and many stakeholders, we approach corporate responsibility strategically. We look for opportunities where we can really make a difference and have a lasting impact.

With this focus, we had many successes with our 2015 corporate responsibility efforts, which I am pleased to share in this Corporate Responsibility Report. It highlights how we are reaching new heights in helping people and communities thrive, focusing on performance that is aligned with our values and supporting a future full of promise.

OUR VISION

One global team creating trusted, innovative solutions to make the world a safer place.

PEOPLE

All of us need opportunities to achieve our goals and live better. That is why Raytheon is doing its part — by supporting veterans and military families through education; inspiring a new generation of students to pursue rewarding careers in science, technology, engineering and mathematics; and strengthening programs that boost our employees' health and well-being. In 2015, we pledged \$10 million to support initiatives aimed at empowering service members and their families through educational opportunities. This new five-year commitment will support STEM education and mentorship programs in partnership with Boys & Girls Clubs of America and Student Veterans of America®. These new programs build on the success of our flagship MathMovesU® STEM initiative, which marked its 10-year anniversary and is going strong as it enters its second decade.

PERFORMANCE

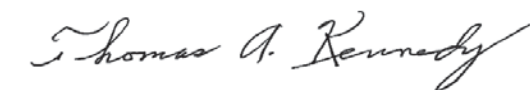
As a company, we strive for strong performance and results, but they need to be achieved the right way: consistent with our values. This requires a strong tone at the top from company leadership, a commitment to ethics, a culture of integrity and contemporary corporate governance practices. As a result, we strive to manufacture our products efficiently, safely and responsibly. We equip our employees and supply chain partners to excel. And we amplify the value of diversity and inclusion to drive innovation, growth and an environment where our people are best able to contribute to their fullest potential.

FUTURE

We envision a sustainable future of limitless possibilities, one where coming generations enjoy a healthy environment. Raytheon is leading the way — by reducing our impact on the planet and innovating ways to use natural resources in a responsible manner. In 2015, we met or exceeded 14 of our 15 long-term sustainability goals. This has yielded impressive results, such as a 58 percent reduction in the amount of solid waste sent to landfill or incineration, a 35 percent cut in water usage and 28 percent lower greenhouse gas emissions, all compared with 2008 baselines. Now we are building on this success by raising the bar. We have established a new set of 2020 sustainability goals — an ambitious five-year plan with 14 goals for integrating sustainability in virtually every product, service, solution and innovation we create.

The 61,000 members of the global Raytheon team are driven to make the world a safer place. As you will see in these pages, we also work to make it a better place.

Respectfully,



Thomas A. Kennedy
Chairman and Chief Executive Officer



OUR VALUES

Trust Respect Collaboration Innovation Accountability

THRIVING PEOPLE AND STRONG COMMUNITIES

Opportunities. Each of us needs them to achieve our goals and live better. That's why we step up — with resources that inspire students and teachers to reach higher, support for veterans and their families, and programs that boost our employees' health and well-being.

YOUNG MINDS GET INSPIRED

*Raytheon and BGCA team up to open
20 Centers of Innovation*



Skills and support to grow on

Boys & Girls Clubs of America members work with new Raytheon-supported computers at one of the new Centers of Innovation.

Chrissandra Jackson used to think college wasn't an option for her. Now she's studying neuroscience at American University in Washington, District of Columbia.

Her perspective began to shift when Jackson, whose father serves in the U.S. Army, became more involved with Boys & Girls Clubs of America. She took an introduction to engineering class at a Club in Texas and then went on to coach younger students building solar-powered cars and submarines in Maryland.

"Working at my local Club gave me the chance to teach other kids that science and technology careers are possible," she says. "I realized that if I was saying they could do better and go to college, then I could believe that for myself too."

Raytheon wants to ensure even more military children like Jackson grow up with the social, emotional and educational support they need — no matter where they go. We're helping BGCA open 20 Centers of Innovation as part of a \$10 million pledge to fund education initiatives for service members and their families over the next five years. Our work with BGCA is part of a broader commitment to promote science, technology, engineering and math — or STEM — education worldwide.

"Working at my local Club gave me the chance to teach other kids that science and technology careers are possible."

Located near U.S. military installations in U.S. cities and select locations around the globe, the Centers of Innovation provide access to technology and mentors — including Raytheon employees — who will focus on STEM skills. Young people can create objects with 3-D printing, reach out to friends and family through videoconferencing, learn how to run a business, and collaborate on projects to improve their communities.

"Raytheon is helping us make a tremendous difference for military-connected families," says Terrill D. McFarland, BGCA national vice president of Military & Outreach Services.



"Now, we have programs that help military kids build STEM skills, become more confident and resilient, and prepare for careers. Their lives are better because of that support."

Focus on STEM

Expanding STEM education opportunities is at the core of Raytheon's efforts to support local communities. We sponsor U.S.-based programs, such as Engineers Week®, Girl Day and Pi Day, that encourage students to explore careers in STEM fields.

In Australia, we partner with Questacon, the National Science and Technology Centre in Canberra, to create interactive experiences that build interest in STEM. For example, Innovation Factory lets kids investigate basic mechanical tools by turning cranks, pushing buttons and pulling levers.

In the United Kingdom, student teams in the Quadcopter Challenge build and fly a four-bladed, multirotor drone through an obstacle course with guidance from Raytheon.

We also focus on building the talents and passion of teachers to move STEM forward. In 2015, we recognized 25 standout

educators, with each receiving a \$2,500 award and a matching grant for his or her school to support progressive math education.

Through programs like Engineering is Elementary®, an award-winning curriculum developed at the Museum of Science in Boston, Raytheon provides materials and training for educators to create hands-on lessons in engineering concepts. We also committed \$2 million over five years to help teachers from Texas to Colorado to the Kingdom of Saudi Arabia develop the next generation of engineering problem solvers.

The impact shows in communities such as Washington, where the District of Columbia Public Schools has expanded Engineering is Elementary citywide. "Raytheon's infusion of funding allowed the district to try out this program and see how well it worked with students," says Christine Cunningham, founder and director of Engineering is Elementary and vice president of the Museum of Science. "Raytheon has helped us go national and reach over 10 million kids and 108,000 teachers so far." ▶▶

REAL ENCOUNTERS WITH STEM LEARNING

When Courtney Roberts joined a FIRST® — For Inspiration and Recognition of Science and Technology — Robotics team in middle school, it wasn't because she was interested in technology. "I signed up because the competition was being held in Disney World," she says, laughing.

In fact, Roberts had no plans to pursue a career in science, technology, engineering or math — the STEM fields — at all. Now, she's finishing up her Ph.D. in chemistry at the University of North Carolina at Chapel Hill.

Roberts traces her dramatic change of heart back to Matt Driggs, a Raytheon engineer who has been a FIRST Robotics mentor for 18 years. Driggs works with teams of high school students to build robots that go head-to-head in local, regional and national FIRST Robotics competitions through our MathMovesU program. In 2015, we gave \$1,000 scholarships to 40 high school seniors and college students who participated in FIRST Robotics and are pursuing a career in a related field.

"I wouldn't be where I am today if it wasn't for FIRST and the support of Raytheon," Roberts says.

We also support the prestigious National Collegiate Cyber Defense Competition, which gives students experience running a business system and fending off attacks.

"We need the next generation of engineers to be hands-on."

The 2015 winners, the University of Central Florida Knights, were challenged to keep the network of a utility company secure while taking customer complaints about power outages. Their coach, Tom Nedorost, cites practice and teamwork as the factors that set them apart. "Sometimes they didn't even have to speak to act," he says. "It was like they were reading each other's minds."

We encourage middle school students to dig into STEM through the Raytheon MATHCOUNTS® National Competition, which last year awarded a \$20,000 Donald G. Weinart Scholarship to champion Kevin Liu. And in Paris, a Raytheon-sponsored U.S. team won the 2015 International Rocketry Challenge.

"We need the next generation of engineers to be hands-on," says Ric Roberts, another FIRST Robotics mentor and Raytheon employee. "These programs give us visibility into kids' interests early on and create a pipeline of future technology professionals." ➔



STEM CAN REALLY TAKE YOU PLACES

Retired NASA astronaut Robert Curbeam Jr., shown at left on one of his four spacewalks during the STS-116 mission in 2006, recently visited schools in the United Arab Emirates to help spur interest in STEM careers. Curbeam (below), vice president and deputy of Space Systems for Raytheon's Space and Airborne Systems business, told students that STEM skills are launchpads for a wealth of fast-growing career paths.



MATH GETS FUN

Our MathMovesU program recently celebrated its 10th anniversary of empowering students to pursue math and science education.

RAYTHEON awarded \$300,000 in MathMovesU scholarships and grants for middle school students



From live events and scholarships to contests and curricula, the program continues to deliver hands-on, interactive learning for kids. A number of our employees even say MathMovesU-supported initiatives are what first got them interested in STEM careers as students.

Last year, Raytheon awarded \$300,000 in MathMovesU scholarships and grants for middle school students to attend STEM learning camps or save for college. We also support a MathAlive!® touring exhibit that travels internationally and recently embarked on a U.S. tour of military bases to show kids that math and science shape much of what they already love — video games, sports, music and more. The tremendous popularity of MathAlive! inspired us to build a second touring exhibit.

Photo courtesy of NASA

MACHINES THAT

Malicious hackers and software attacks pose serious problems for society's information technology networks. Raytheon cybersecurity experts are using the power of supercomputers to help our customers fight back.

Seven of our engineers recently qualified for the finals of an elite national competition to create stronger lines of defense against human and computerized threats. In August 2016, Team DeepRed will match skills with six other finalists — from an initial field of 104 teams — in the Defense Advanced Research Projects Agency Cyber Grand Challenge, which exists to inspire faster and more automated security technologies.

“The technologies emerging from this competition could change the balance of power between hackers and defenders,” says Jack Harrington, vice president of cybersecurity and special missions at Raytheon Intelligence, Information and Services.

Beyond a shot at top honors and a \$2 million prize at the finals in August, the DARPA® Cyber Grand Challenge gives us an ideal environment for testing and refining new security solutions under real-world conditions. For example, DeepRed's automated cyber reasoning system can find and fix software vulnerabilities in seconds, compared with weeks or even months for a human analyst.

“We've been pushing to develop a system that combines the massive analytical power of supercomputers with the intuition and adaptability of human experts,” says team member Tim Bryant, a cybersecurity tech lead in Melbourne, Florida. “Win or lose, our experiences from the DARPA contest will make our real-world solutions better.”

More than a game

Engineers also take a competitive approach in our labs to help mimic — and stay ahead of — cybercriminals' actions. At our Cyber Operations, Development and Evaluation (CODE) Center and our Global Cyber Solutions Center in Virginia, teams mount simulated cyberattacks and defenses to hone their skills and assess how well Raytheon products respond under fire.



We extend this expertise internationally through our Cyber Innovation Centre in the United Kingdom, which drives research and development with partners across Europe and other regions. We also help U.K. students get in on the action through our support of the Cyber Security Challenge Schools Programme. Working with professional bodies, U.K. universities and other companies, we help develop teaching packs designed to hone students' skills and spark their interest in STEM careers.

Since 2013, we've invested upwards of \$3.5 billion in building stronger, more adaptive technologies and analytical services to safeguard national security, business networks and sensitive personal information.

“As more devices get connected to networks, the attack surface is growing so large that it's impossible for people alone to close every gap,” Harrington says. “The automated cybersecurity technologies coming out of our cyber centers and the DARPA competition are the first step toward having machines actively protect themselves.”

[Learn more at raytheoncyber.com](http://raytheoncyber.com)

'THINK' LIKE A HACKER

“The technologies emerging from this competition could change the balance of power between hackers and defenders.”

We've invested upwards of **\$3.5 billion** in building stronger, more adaptive technologies and analytical services

Forward without Fear™

Cybersecurity doesn't have to be scary. It shouldn't be clunky, either.

That's the idea behind Forcepoint™, a new joint venture combining Raytheon Cyber Products' cross-domain and insider threat solutions; Websense® malware protection, real-time content analysis and online threat detection capabilities; and Stonesoft next-generation firewall technology. Our cloud-centric approach stresses empowerment over anxiety and efficiency over complexity.

“We believe a secure Internet environment can be a powerful force for social as well as economic good,” says Forcepoint CEO Matthew Moynahan. “Our solutions protect users, data and networks so you can run your business fearlessly.”

Forcepoint melds all three organizations' very different yet highly complementary strengths in cybersecurity. “Websense has always been great at keeping hackers, viruses and other malicious code from coming in and preventing sensitive information from leaking out,” says Moynahan.

“Raytheon adds some very powerful technology against insider threats. And with Stonesoft, we layer in some of the most sophisticated network security technology on the market.”

Beyond simply monitoring network behavior and blocking unauthorized access, the technology we bring to Forcepoint can analyze people's risky actions and help determine whether they are accidental — such as clicking on a suspicious link in email — or a willful attempt to plant malware or save confidential files onto a flash drive. “Knowing what's behind the behavior lets you respond more appropriately, whether that's enacting new policies and training programs or taking legal action,” Moynahan says. Forcepoint solutions also automate nearly

all of an organization's routine security monitoring and threat mitigation tasks, reducing costs while letting IT professionals focus on mission-critical work. “We're improving the efficiency of a cybersecurity workforce that's already stretched pretty thin around the globe,” he adds.

It's all part of Forcepoint's 4D Security approach: Defend against attacks, detect suspicious activity sooner, decide what actions to take, and defeat attempts to steal valuable or sensitive data.

“Our new company brings together a wealth of experience developed on some of the toughest security front lines,” says Moynahan. “With fewer threats to worry about, the organizations we serve can do better things for their customers, communities and society.”

[Learn more at forcepoint.com](http://forcepoint.com)



ON THE ROAD TO RECOVERY

Raytheon employees support wounded and returning service members

Kelly McDonald remembers exactly when retired Lt. Col. Kathy Champion, a U.S. Army veteran who lost her sight while serving in Iraq, found joy on two wheels.

They were riding a tandem bicycle along the coast of Florida to train for a 400-mile event organized by Ride 2 Recovery, a nonprofit that helps injured service members restore hope and purpose through cycling. “We pedaled over a bridge and I told Kathy I saw dolphins out in the water,” says McDonald, a principal Planning and Production Control specialist at Raytheon Space and Airborne Systems in Largo, Florida. “She screamed with joy and came to life right in front of me.”

That moment ideally sums up why McDonald and many employees across Raytheon are so passionate about helping wounded and returning military personnel transition back to civilian life. Along with sponsoring programs like Ride 2 Recovery that aid emotional healing, we provide an array of job-skills training, educational opportunities and employment resources for veterans and their families. Every week on Raytheon campuses across the U.S., we join a national grass-roots movement as we pay tribute to military personnel through “RED Shirt Fridays” to remember everyone deployed.



A positive force in veterans' lives

Raytheon employee Kelly McDonald (front) organizes weekly Project HERO cycling events that help wounded and returning service members transition to civilian life.

“We pedaled over a bridge and I told Kathy I saw dolphins out in the water. She screamed with joy and came to life right in front of me.”

Cycling had helped McDonald kick her smoking habit, and she saw it could be a positive force in veterans' lives. “As soon as Kathy and I finished our challenge ride, I wanted to get more people involved in Florida,” she says. So McDonald attended Project HERO — Healing Exercise Rehabilitation Opportunity — camp, a Ride 2 Recovery training that teaches cyclists how to adapt bikes, stay safe, eat healthy and mentor injured veterans.

“You can adapt a bicycle to any physical challenge,” she says. “And that puts everyone on a level playing field.” Her first weekly Project HERO ride attracted six people; now, she consistently brings 15 to 20 cyclists along. Raytheon coworkers and other community members have also volunteered to organize and support these rides.

“That speaks volumes about the generosity of Raytheon and our employees. My entire plant is involved,” says McDonald. Raytheon has provided funding for rest stops, company-branded cycling jerseys and sponsorships that allow veterans to participate in challenge rides for free. We've also donated customized bikes that enable injured veterans to continue riding.

McDonald's latest work with Ride 2 Recovery includes opening a new regional cycling center near Largo to better the lives and experiences of veterans. A grant from Raytheon helped purchase bikes, tools and equipment for the center. “We'd been operating out of the trunks of our cars,” McDonald says. “Now we have a space where veterans who don't own a bike will be able to talk about issues, ride with the group or just spin and think.”

Riding with the veterans is an opportunity for her not only to answer their questions about what it's like to work at Raytheon, but also to express what their service means to her and other employees.

“That's very important to me,” she says. “They need to hear, ‘What you men and women have done is of great value. And you matter to us.’”

VETS GET HELP ALONG CAREER PATH

Henry Scott, a former Army IT technician, sees his service as a natural transition to a civilian career in cybersecurity. But he needs further education to break into the field.

As part of our \$5 million, multiyear commitment to Student Veterans of America, Scott received a Raytheon scholarship in 2015. He enrolled at Fayetteville State University in North Carolina to pursue his goal of protecting information for all people.

We support more than 1,300 SVA chapters nationally and internationally that help veterans transition to civilian life by providing resources, advocacy and a community of people who have experiences — and dreams — these students can relate to.



Our RAYVETS employee resource group and American Corporate Partners, an organization connecting veterans with business leaders — and advice — recently launched a mentorship program for student veterans. Raytheon volunteers, many of whom are veterans themselves, advise students on topics such as job interview skills and tips for networking with professionals in a desired career field.

“When employers hire a veteran, they add a unique set of skills to their company,” says Jared Lyon, president and CEO of SVA. “We're excited to work with Raytheon, a company who understands that value, to give veterans the support they need to land jobs, build careers and strengthen our workforce.”



Henry Scott

FROM WELLNESS TO WELL-BEING

When pharmacies in Abu Dhabi run out of Ritalin®, replenishing it can take time. Because Raytheon employee David Hambleton's daughter depends on this medicine, he sometimes must fly thousands of miles to fill a prescription.

"Local health care can be very unlike the U.S. model we're used to," says Hambleton, a communications engineer. Without a primary care physician, he adds, "We may have to explain our needs to a new doctor at each appointment."

Hearing stories like Hambleton's firsthand was invaluable for Dr. Sandra Stratford, M.D., MSc., our chief medical officer, who toured the United Arab Emirates capital in 2015 as a step toward improving health care access for our employees and their families around the world.

During her visit, Stratford spoke with over 80 employees at a town hall meeting and outlined health and well-being services they could access through our Benefits and Global Health Resources divisions. She toured local facilities, met with providers and learned about the systems and quality controls in the region.

"We see physical, mental and emotional health as tools to help our employees succeed in the workplace," Stratford says. "But we also must support employees' health and well-being needs outside of work."

In that spirit, we are broadening our concept of workplace wellness to promote overall well-being. For example, Raytheon offers backup child care and elder care support as well as employee assistance programs to help our people manage the demands on their time outside of work.

Since returning from Abu Dhabi, Stratford and her team have drafted medical service plans for 12 countries with a growing number of Raytheon employees. We are working with in-country management to establish a new physician "health care navigator" role in the United Arab Emirates to assist employees and provide insights about the region's health care systems.



"You can't manage global health issues on paper alone."

Dr. Sandra Stratford, our chief medical officer, toured Abu Dhabi last year to meet with employees.

"My time in Abu Dhabi showed me that you can't manage these global health issues on paper alone," says Stratford. "We need a 'boots on the ground' approach to find resources that help employees feel confident they can stay fit for the mission."

That's welcome news for the Hambletons and other families abroad. "It's good to know Raytheon is paying attention and has someone dealing with medical care at a high level," says David Hambleton. »

SMALL STEPS FOR BETTER HEALTH

Raytheon Healthy Worksite Awards and individual Wellness Rewards are another way we encourage employees to make time for wellness on a daily basis. Our 2015 winners included the Integrated Defense Systems site in Fullerton, California. Through events and programs, the Fullerton team helps employees take wellness to heart — and they've made a difference. An eight-member group began walking at lunchtime and lost a total of 100 pounds. That one small step inspired people to make a huge lifestyle change.



TALKING HELPS CURE, AND CALM

When a major outbreak of Middle East Respiratory Syndrome (MERS) virus hit South Korea in 2014, thousands of schools and public offices were closed and people were understandably panicked.

The incident underscored why providing accurate and actionable information during a crisis is so important. Dr. Sandra Stratford, M.D., MSc., our chief medical officer, and her team drew from previous experience with the 2012 MERS outbreak in the Kingdom of Saudi Arabia. But because the latest outbreak was in a new location, we needed to tailor our response to the culture, sites and even the varying roles of our employees. Beyond shipping masks, gloves and hand sanitizer to South Korea, timely and quick communication proved critical for us in reducing the impact of MERS on Raytheon employees and operations.

"The Global Health Resources teams' ability to rapidly execute the crisis action plan and collect needed medical supplies had a direct impact on our ability to protect Raytheon's people and their families," says Glenn Walker, president of Raytheon International Korea.

We focus on educating our people about wellness resources and issues year-round. Under our Travel Health Program, employees visiting a country identified by the World Health Organization as having an elevated health risk must first correspond with a Raytheon nurse to receive relevant information and medications. Plus, each employee carries a wallet-sized card with important phone numbers and tips to help them stay informed while abroad.

If an outbreak occurs, we work with local management to get messages and resources out fast — within 24 hours if possible. Plus, we constantly update our Health Issues in the News intranet site with resources to give our employees the power to stay well.

HIGHLIGHTS

Communities

\$10 million
commitment to support military families and veterans

Employees volunteered **125,000** hours at **1,780** organizations

450,000+ volunteer hours logged by employees over past three years

Education

\$125 million+ invested in STEM education since 2005

\$2.64 million in employee giving matched for education institutions

Wellness

34% of employees earned Wellness Rewards

82%

82% of participants in 2015 agree or strongly agree that Raytheon cares about their health and well-being

24%

24% of employees participated in on-site health screenings

34%

73% of participants in 2015 agree or strongly agree that their site leadership supports the wellness programs and resources

73%

3,018 workdays saved with help of backup care

36 sites received Healthy Worksite Awards



A SHIP DESIGNED AROUND THE SAILOR

Photo courtesy of U.S. Navy

Adm. Elmo Zumwalt Jr. is something of a legend in the U.S. Navy. The youngest-ever chief of naval operations, Zumwalt dedicated much of his career to improving sailors' lives and opening opportunities for female and minority service members.

These days, Zumwalt's name lives on in a three-ship DDG 1000 class of guided missile destroyers — some of the most sophisticated military vessels in the world. The first of these ships will be commissioned the USS Zumwalt.

As the prime mission systems equipment integrator for the ships' electronic and combat systems, we're proud to help continue Admiral Zumwalt's legacy with technology that supports sailors like never before.

NETWORK SECURE

One of the most dramatic advancements in the Zumwalt-class destroyers is Raytheon's secure network that controls everything on board, from radar and weapons systems to lights and machinery. It's called the Total Ship Computing Environment, and it comprises more than 6 million lines of software code.

"The TSCE integrates data from sensors all over the ship, processes that incredibly large amount of information, consolidates it for given mission areas, and presents it in a unified way," says Wade Knudson, Raytheon's DDG 1000 program manager. Sailors use touchscreens to access integrated data anywhere, anytime across the ship. "And for the first time, the commanding officer is presented with full situational awareness in a single picture."

But it's more than the network itself that is innovative. It's also the way the technology is packaged.

MODULAR EFFICIENCY

The Zumwalt ships' amazing technology comes packaged in ready-to-install containers — picture railroad cars — known as electronic modular enclosures. Inside each 18-ton EME are more than 235 cabinets filled with vital electronic equipment. A Zumwalt-class ship carries 16 EMEs.

Because the EME container is rugged enough to withstand the ship environment, says Knudson, "We can use off-the-shelf commercial equipment inside and deliver the EMEs fully populated and tested — ready to install on the ship." Standard equipment makes for simpler, less expensive upgrades as well.

CREW CUT

With the increased automation and efficiency provided by the TSCE, the DDG 1000 can be fully staffed with just 158 personnel. That's less than half the crew size of the destroyer USS Arleigh Burke, which is nearly 20 percent smaller. This will allow each sailor aboard the DDG 1000 to have more living space in addition to offering a world-class computing environment.

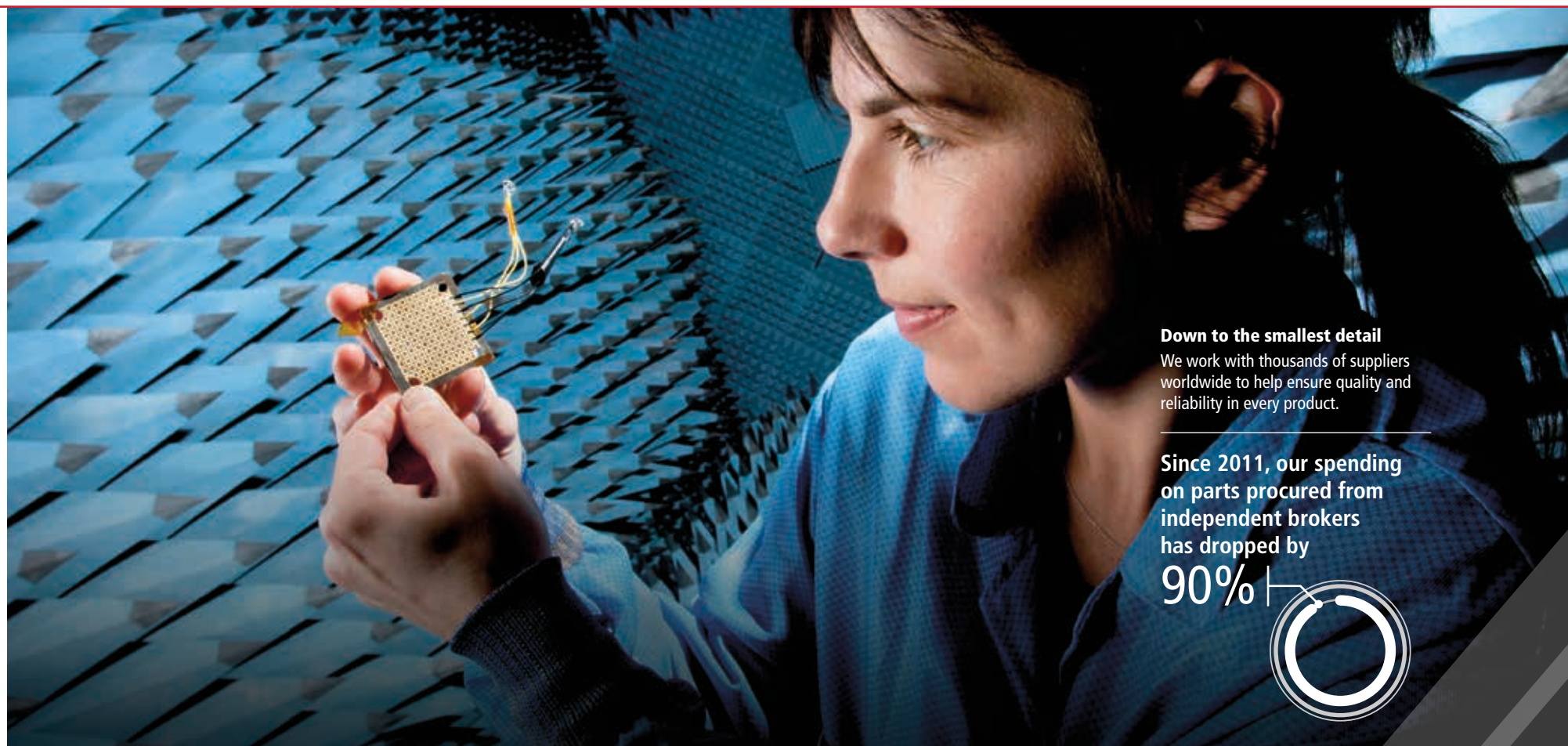
No wonder the DDG 1000 is being called the world's smartest ship. Like its namesake, this ship may be destined for legendary status. ➤

STRONG PERFORMANCE WITH SOUND PRINCIPLES

Trust. Confidence. Satisfaction. We know these are earned by acting with unwavering integrity. Manufacturing our products efficiently, safely and responsibly. And equipping our employees and supply chain partners to excel.

EVERY LINK MATTERS

Teams maintain trusted, sustainable supply chain



Down to the smallest detail
We work with thousands of suppliers worldwide to help ensure quality and reliability in every product.

Since 2011, our spending on parts procured from independent brokers has dropped by **90%**



The integrity of one small component can play a huge role in managing our supply chain responsibly. Just ask Ted Shpak, who leads our global efforts to keep counterfeit parts out of Raytheon products.

“It comes down to quality and reliability,” says Shpak, director of Supplier Quality Management. “Our customers depend on us to deliver system solutions, hardware or products that work the first time, every time.”

Detecting and eliminating counterfeits is only one part of our broad efforts to maintain an efficient, trusted and sustainable supply chain. Our teams work just as hard to comply with industry and government regulations, find alternatives to materials of concern, source raw materials responsibly and prevent human trafficking. We collaborate with thousands of suppliers worldwide to implement environmentally sustainable practices, conduct business with integrity and promote greater diversity in the ranks of our supply chain partners.

Better detection

As counterfeiting methods evolve, Shpak and his team stay a step ahead by creating more sophisticated methods and testing to prevent counterfeit parts from entering the supply chain. As recently as 2010, Raytheon experienced five to 10

cases of counterfeit parts a year. From 2013 through 2015, we had none — thanks to a concerted effort that extends from design to procurement.

When a part becomes obsolete, the only option may be to procure it from an independent broker. This raises the risk of the part being from a source other than the original manufacturer — and potentially being counterfeit. By better managing our designs and component part obsolescence, we’ve grown less dependent on independent brokers. Since 2011, our spending on parts procured from independent brokers has dropped by 90 percent.

A global view

Our global substances program focuses on product compliance and global regulatory challenges around substances and materials in the Raytheon supply chain. “We take a holistic approach,” says program manager Sally Gestautas. “As opposed to every program or business trying to figure out the requirements on their own, we create an enterprisewide view.”

Gestautas and her team collaborate across the company and the industry to address current and emerging substance-related requirements that affect the product life cycle. Our sustainable design goals, substance management compliance

requirements, and responsible materials sourcing standards form the basis for our programs and supply chain teams to assess risks and improve processes. Information management tools such as our product material content system help us collect and track vital compliance data.

Our efforts are paying off in areas such as reducing and eliminating materials of concern. For example, we have replaced hexavalent chromium with safer alternatives on more than 1,000 newly designed assemblies over the past few years (learn more about our MOC efforts on page 31).

Compliance, not conflict

We help ensure our suppliers are sourcing materials ethically and responsibly. This includes taking steps to avoid sourcing tin, tantalum, tungsten and gold (3TG minerals) originating in conflict regions such as the Democratic Republic of Congo.

Our latest filing with the Securities and Exchange Commission reaffirmed Raytheon’s commitment to the Dodd-Frank Act’s Section 1502, the conflict minerals rule. We also work closely with our global supply chain partners to ensure compliance.

Our direct contractual relationships with first-tier suppliers require that they hold their own suppliers and subcontractors in compliance as well.

A halt to human trafficking

With dozens of subcontractors working at sites around the world, we spread awareness among employees and suppliers of potential human rights issues that may arise in some locations. Our employee code of conduct condemns and prohibits human trafficking or exploitation.

We have developed an awareness campaign for employees and a comprehensive training effort for people in roles that have greater exposure to the risks of human trafficking or forced labor. Along with teaching employees about these critical issues, the campaign helps them communicate our policies to suppliers, representatives, consultants, recruiters and housing providers. We provide employees with access to a toll-free ethics line that handles questions and concerns about compliance with applicable laws.

Chain of values

We operate with integrity and seek to grow sustainably through our interactions with suppliers, customers and communities. The result is a supply chain built on a foundation of collaboration and trust. »

Learn more at raytheon.com/suppliers



SAFETY FROM EVERY ANGLE

Designing with care
CAVE2's realistic and immersive 3-D technology simulates product creation and helps engineers and designers spot and fix unsafe steps in the process. Sarah Clarke demonstrates the technology.

"It's changing our whole design process and the way Raytheon does business. You get a real sense of being present in the environment."

Raytheon's Integrated Defense Systems business released a video featuring Clarke to raise awareness and motivate people to embrace a safety mindset at work and at home. The video starts with Clarke describing her great-grandfather's traumatic workplace injury in which he lost all 10 fingers, an accident that led to her father's career in the U.S. Occupational Safety and Health Administration and ultimately to Clarke becoming a safety advocate for us.

"Growing up, there were countless times when my dad would point out a situation that needed more precautions," says Clarke. "And at Raytheon, we are constantly searching for ways to improve."

One of our future-focused ideas is what Clarke calls realistic "Call of Duty"-style training for service members. Technology can help make combat situations as realistic as possible so trainees can focus on what they're learning.

"The more we can take any guesswork out of whatever an operator or service member is doing," she says, "the safer they're going to be." ➤

Building a 20-foot-high radar or other large-scale product requires precautions. Railings must be in the right place to protect operators from falling. Also, workers must know how to safely move equipment from point A to point B.

That's why we bring in engineers, inspectors and operators to review product designs through lifelike simulations that use immersive CAVE2® technology to help resolve safety concerns. The CAVE2 design center in Andover, Massachusetts, employs a wall of 72 stacked, ultrahigh-definition television sets arrayed in a 320-degree arc, with hyperrealistic 3-D technology that makes objects and avatars appear to float in midair.

Everyone involved can more clearly see how products like the radar tower will be assembled and at what height the work will take place so that they can flag potential issues early. Simulating each step helps us refine our designs, eliminate risks for Raytheon teams and protect what matters most: our people.

"It's changing our whole design process and the way Raytheon does business," says Sarah Clarke, engineering operations lead in Raytheon's Immersive Design Center Operations. "You get a real sense of being present in the environment."

Our attention to safety goes well beyond CAVE2. We also provide in-depth training for all employees and encourage them to spearhead new approaches, such as our Total Employee Engagement Program in Indianapolis. In TEEP, front-line workers collaborate with management in creating their own safe workspace. We implemented over 2,100 safety ideas from these workers last year — and TEEP won a National Innovation Award from the Voluntary Protection Programs Participants' Association.

Part of creating better working conditions for employees is learning lessons from inspections done by federal, state and local regulatory agencies — and sharing them across Raytheon. Our efforts are making a difference. Out of 105 inspections conducted in 2015, only five notices of violation were issued — all related to minor environmental issues.

Employees who feel safe can focus on their jobs and work more efficiently, which means better products for our customers, lower operating costs and a more competitive business. What's more, 2015 was our safest year ever.

"Raytheon does a great job weaving the message about safety into the fabric of what we do," says Clarke. "Recently there's been a focus to make it more personal, and people really appreciate and remember it."



SAFETY FIRST(HAND)

A million \$1 ideas are better than a single 1 million-dollar idea.

That phrase keeps Kurt Vimont, director of safety at Marine Corps Base Quantico, focused on how to get more employees involved in improving workplace safety. It's part of the inspiration Vimont and his colleagues have gained from having Raytheon as a mentor on safety.

J.A. Rodriguez, senior manager of Environmental, Health, Safety and Sustainability at Raytheon Intelligence, Information and Services, is mentoring Quantico personnel as the base pursues Voluntary Protection Programs (VPP) Star certification from the federal Occupational Safety and Health Administration. The VPP Star program recognizes exemplary achievement in occupational safety.

36 Raytheon worksites are VPP Star-certified



Along with empowering Quantico employees to speak up and evolve safety procedures, the base has begun a Safety Assist Visit process to share best practices learned from Raytheon, which has 36 worksites that are VPP Star-certified.

"We're talking to an organization that has been through it and can help us learn from their experiences," Vimont says. Opportunities to tour Raytheon facilities and observe best practices "have shown our leadership that safety is a key component of our business."



POWERFULLY DIFFERENT

Employee resource groups amplify value of diversity

You're a skilled engineer from a nontraditional background, looking to put your talents to work at a place that not only welcomes diversity but genuinely values your unique perspective.

Why choose Raytheon over other global technology companies vying for your attention?

One of the many reasons might be our network of employee resource groups, which create opportunities to meet, collaborate, network and exchange ideas with people who share your interests, background, orientation or culture. Our nine ERGs contribute to an atmosphere where all employees feel empowered to contribute and succeed.

"Diversity is a foundation for growth," says Emanuel Brady, vice president and chief diversity officer for Raytheon. "More people from different backgrounds bring more and different ideas to the table. And those diverse ideas generate innovation."

"People from different backgrounds bring different ideas to the table. Diverse ideas generate innovation."

Network of support

Raytheon ERGs foster educational and professional development for more than 15,600 members. For the company, ERG-driven learning and leadership opportunities support people to embrace challenges, solve problems, spur innovation and drive growth.

As senior leader of the Raytheon Women's Network ERG, Diane Foley experiences the business value of diversity in all forms daily. "It extends beyond culture," Foley says. "Promoting a diverse environment generates real business benefits."

Employees reach out to colleagues more readily across the company. They hone communications and leadership skills. Employees also connect with disparate areas of the business they wouldn't normally engage.

ERGs also generate one of the most valuable assets that a global organization can offer: exposure. Employees gain insight into other businesses, access to senior leadership and executives, and a greater understanding of how to advance at Raytheon. "This is real-world experiential training," Foley says. "They learn how to get things done."

Plus, newer employees profit from time spent with experienced colleagues and leaders. Mentoring sessions provide guidance on career path development, and senior members offer feedback to address experience gaps for junior employees.

The ERG leadership team also receives ongoing training and development. At the 2015 ERG Leader Workshop, more than 140 participants exchanged best practices, attended an influential

communications coaching workshop and participated in skill-building sessions.

Bedrock of innovation

When diversity is foundational, employees grow more confident, engaged and connected. "It can be hard to break into a large organization, especially as a new employee from a diverse background," says Ingrid Jacobs, Raytheon's corporate diversity leader. "The ERGs offer a safe environment to engage, experiment and occasionally fail. But ultimately, to succeed and grow."

Our ERGs also are powerful tools to attract, recruit and retain employees from diverse backgrounds. "We continually have to explore ways of getting new talent into the organization," Jacobs says. "When potential employees meet successful professionals who are like them, they understand that Raytheon is a place where they can thrive as well."

Learn more at raytheon.com/diversity





UNCOMMON AND INVALUABLE PARTNER

Tracy Solomon sees every day in life-or-death terms.

“I remind our employees that we have no room for bad days,” says the founder and CEO of TEVET®, which supplies electronic test and measurement products to Raytheon. “Because we support those who support the warfighter, a bad day for us can leave a service member vulnerable.”

That insight is part of what makes Solomon, a service-disabled veteran of the U.S. Navy, so valuable as a partner and supplier. While in the service, he worked with the same type of equipment that he sells today — so he knows firsthand its real-world demands. Plus, the values, commitment and sense of duty Solomon learned in the Navy afford him a unique understanding of his ultimate customer: members of the armed services.

“Working with diverse-owned businesses like TEVET exposes us to a richer and more inclusive range of perspectives on what our customers need,” says Benita Fortner, Raytheon’s director of supplier diversity. “Tracy and his team are nimble, responsive and true experts.”

“Working with diverse-owned businesses like TEVET exposes us to a richer and more inclusive range of perspectives on what our customers need.”

In return, Solomon credits Raytheon with providing the spark that enabled him to strengthen his business. “They challenged me to re-evaluate how I wanted to show up,” he says. We offered mentorship, supplier diversity advocacy, small-business support, training in Raytheon best practices and extensive networking opportunities.

The results have provided both Raytheon and TEVET with what each was looking for: an invaluable strategic partner. »

Learn more at raytheon.com/suppliers/supplier_diversity

THE LESSONS IN THE STORIES

A team leader lands a sizable contract with an international customer and then learns the sales commission he promised his business partner is higher than local law allows. Can he save the deal without crossing an ethical line?

Based on actual cases like this one, Raytheon’s award-winning FCPAware and EthicSpace videos take a dramatic approach to helping employees recognize and resolve ethics challenges in their daily work. The storylines delve into such topics as how to handle gifts, uphold product integrity, avoid conflicts of interest and comply with legal requirements.

Additional resources such as our online CodeBreakers articles, which highlight real cases, also help decipher ethical issues. And we advise employees through the Ethics Checkpoint program, which also offers leadership courses. Providing anytime access to ethics guidance gives our people the confidence to meet Raytheon’s business goals with integrity. Open communication about ethics helps us identify policy gaps, strengthen our internal controls and develop more effective processes to maintain our customers’ and partners’ trust.



Ethics is important within our company — and across our industry. We earned a 2015 Transparency International® UK “A” ranking for our anti-corruption policies, and we continue to share advice and collaborate with aerospace and defense leaders across the globe.

We share best practices for ethics and business conduct in partnership with the Defense Industry Initiative and the Ethics & Compliance Initiative, and we sponsor a lecture series at Bentley University to help promote business ethics. Also, Raytheon Chairman and CEO Thomas A. Kennedy addressed ethics in the global marketplace as part of his remarks at the 2015 International Forum on Business Ethical Conduct.

Communication is crucial to identifying and resolving ethical concerns. We work to reduce risk in our company by encouraging people to speak up when they have questions or concerns about a course of action that might not feel right. »

Learn more at raytheon.com/ourcompany/ourculture/ethics

Leading responsibly and responsibly

Raytheon’s board of directors and senior leadership are always striving to become better.

Our dynamic approach includes regularly seeking shareholders’ views on governance and executive compensation — something we’ve done outside of proxy season for the past six years. In 2015, we spoke with shareholders who owned approximately 40 percent of Raytheon’s shares altogether.

More important, we put this feedback into action. Among the signs that it’s working: At our 2015 annual meeting, our executive compensation program received support from 96.5 percent of the shareholders who voted.

Our executive compensation program received support from 96.5% of the shareholders who voted

We’ve implemented a number of responsive initiatives in recent years, including a series of measures that promote shareholder access. Most recently, the board approved a proxy access bylaw permitting shareholders, under certain circumstances, to include director nominees in the company’s annual meeting proxy. Previously adopted measures allow shareholders to act by written consent and call special meetings. We also enhanced transparency by recently expanding our voluntary political and lobbying website disclosure that includes specific information on political contributions and trade association dues attributable to lobbying.

“The board values and carefully considers shareholder views, as well as keeping a keen eye on emerging best practices,” says Vernon Clark, the board’s lead director. “This has enabled us to keep on the leading edge of governance while positioning Raytheon competitively in both domestic and international markets.”

We continue to refresh our board, adding two new directors in 2015. Informed by the Governance and Nominating Committee, the board regularly assesses its profile — including attributes, skills and experience — and seeks to enhance its governance capabilities in a complex, evolving business environment.

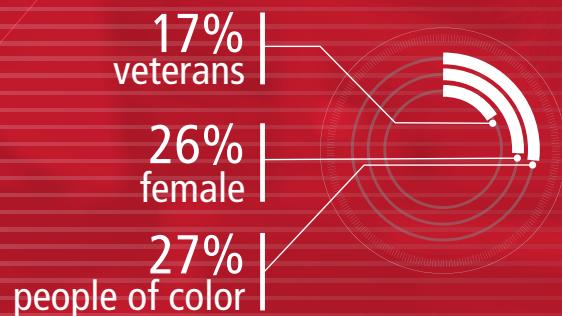
Learn more at investor.raytheon.com



HIGHLIGHTS

Diversity

OUR WORKFORCE



SUPPLY CHAIN PROCUREMENT

Minority-owned businesses

\$552 million

\$424 million

Women-owned businesses

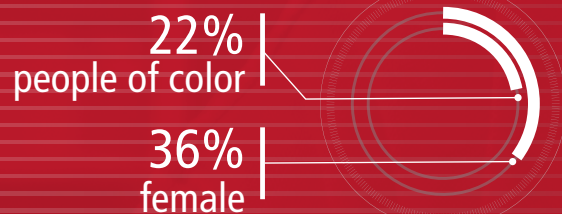
Veteran-owned businesses

\$477 million

\$2.6 billion

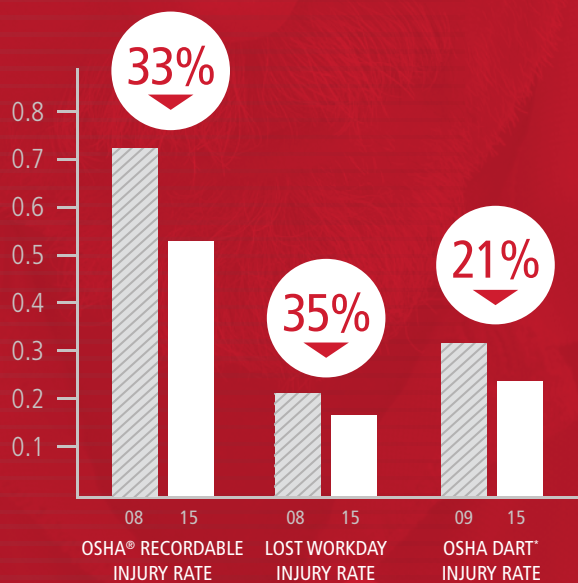
Small businesses

LEADERSHIP DEVELOPMENT PROGRAM



Environmental, Health, Safety and Sustainability

170,000 EHSS leadership engagements



37,000 employees work at **36** OSHA VPP Star-certified sites

Ethics and Governance

57,000+ employees participated in Ethics Checkpoint programs

18% of our board members are women

133,000+ compliance education modules completed

168,000 views of EthicSpace videos across 45 countries and 48 U.S. states

PARTNERS IN DEFENSE

In October 2015, naval vessels from nine nations gathered in the Hebrides test range off Scotland's north coast. A simulated ballistic missile streaked through space. The destroyer USS Ross tracked the incoming target, preparing to intercept it with a Raytheon SM-3[®] guided missile.

The SM-3 soared away from the deck of the ship, powered up beyond Earth's atmosphere, found the target, and rammed it with the force of a 10-ton truck traveling 600 mph — enough to shatter the incoming missile with no explosives needed.

It was the first time Raytheon's iconic SM-3 had flown outside the U.S. test range, and the first interception of a ballistic missile threat in Europe.

But a successful test is just the start of this story. "What's really exciting are the implications for regional defense," says Amy Cohen, program director for the SM-3 missile.

BRINGING NATIONS TOGETHER

For the first time ever, multinational ships taking part in a real-life simulation were communicating on a single network. And as the USS Ross tracked the incoming threat, a Dutch ship tracked it as well, relaying target and firing data.

At the close of the test, analysis showed that the USS Ross could have used the

Dutch ship's target and firing data to successfully intercept the threat.

"We're talking about foreign ships working in concert for regional defense," says Cohen. "That can free up U.S. ship resources because other countries can support the defense. This is something NATO has requested, and it was a big step."

The Hebrides test was just one of the important global partnerships for the SM-3 in 2015. We've worked with Japan to develop a larger SM-3 that can defend broader areas. We've also developed a land-based launch system soon to be deployed in Romania and Poland.

"Protecting nations from threats," says Cohen, "is a responsibility we take seriously."

Technology for building technology

The workers who build our high-tech missiles are safer than ever thanks to some high-tech tools.

It used to take six or more people to move a heavy missile between assembly stations. Now missiles travel on an automated guided vehicle. Lasers in the AGV interact wirelessly with sensors around the factory to steer between stations and stay clear of people and objects.

The AGV lifts the missile onto each workstation, where more technology guides the technician's work, verifies the position of each part and checks the torque of each screw.

AGVs offer benefits beyond safety: They allow a smaller factory footprint, and their digital communications help create a paper-free work environment.

A FUTURE FULL OF PROMISE

We envision a sustainable future of limitless possibilities. Where coming generations enjoy a healthy environment. We're leading the way — by reducing our impact on the planet and innovating ways to use natural resources in a responsible manner.

WHERE ZERO IS A PERFECT SCORE

When it comes to waste, you can't do much better than zero. So that's what we're aiming for.



In 2015, six Raytheon Integrated Defense Systems sites across Massachusetts achieved Zero Waste certification from the United States Zero Waste Business Council. Also, three Raytheon employees — who became certified as Zero Waste Business Associates — are contributing to the effort to certify another 14 Raytheon sites as Zero Waste facilities.

The Zero Waste certification requires that sites divert at least 90 percent of their solid waste away from landfill and incinerators. In addition, they must have robust programs that boost material recycling, reuse and composting, and promote the purchase of environmentally preferred products.

We strive for the highest and best use of all materials. Where we do generate waste, we reuse or recycle as much as possible to minimize what must be sent to landfill or incinerated. It's a simple but significant example of our environmental sustainability efforts — which extend from conserving natural resources and reducing impact to operating more efficiently.

A principled approach

Environmental responsibility is fundamental to our mission. From product design and internal engineering to process improvement and innovative resource management, we aim to integrate principles of sustainability and empower our employees and supplier partners to do the same.

We look for innovative solutions to reduce our impact on the environment. These include reducing energy use and greenhouse gas emissions in our buildings and processes, conserving water use, and minimizing solid and hazardous waste. We purchase office and other products containing recycled content and use renewable energy in our facilities. As shown with our 2020 sustainability goals, we challenge ourselves to continually improve on past performance.

Looking back

In 2015, we met or exceeded 14 of our 15 long-term sustainability goals. Our success came with the combined efforts of Operations; Engineering; Information Technology; Supply Chain; and Environmental, Health, Safety and Sustainability across the company.



Natural resources

Over the last year, our cross-business Energy and Water Conservation program met or exceeded each corporate goal around water conservation and energy management. Since 2008, we have reduced energy consumption by 18 percent through widespread employee engagement and education, adoption of LED lighting across Raytheon manufacturing and office facilities, installation of state-of-the-art building automation systems, central plant upgrades, improvements to compressed-air systems, and numerous process-related productivity improvements.

For the ninth straight year, we received the ENERGY STAR® Partner of the Year Sustained Excellence Award from the U.S. Environmental Protection Agency.








Water is an increasingly scarce global resource that all companies must conserve and manage wisely. So we set an aggressive goal: Reduce our global water use by 25 percent from the 2008 baseline. In fact, we have reduced water use by 35 percent since 2008. We did this through cooling tower upgrades, low-flow restroom fixtures, advanced irrigation systems, native landscaping applications, and improved leak detection and repair efforts.

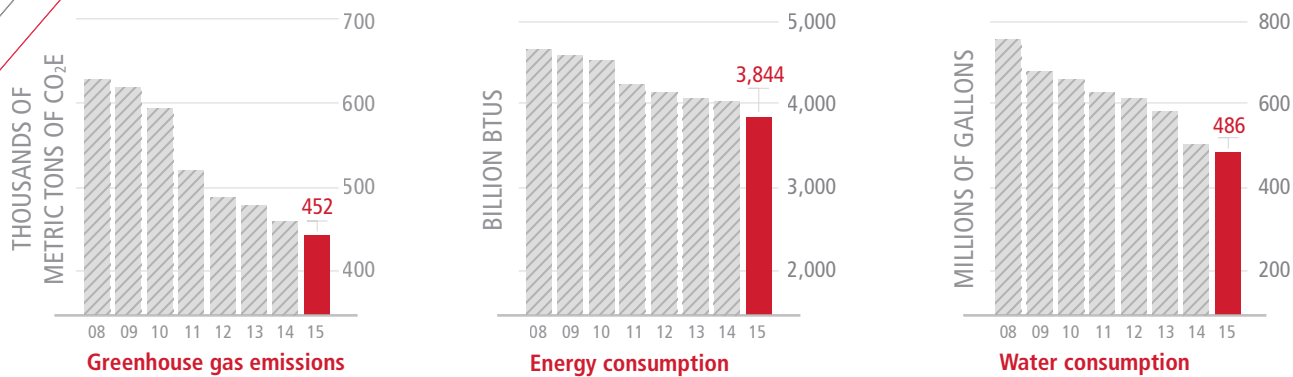
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2020 SUSTAINABILITY GOALS

We are working to achieve these objectives across our operations and supply chain over the next five years



	OPERATIONS	
	Energy consumption	-10% ▼
	Water use	-10% ▼
	EHSS	
	Sites with Zero Waste certification	20 ▲
	Solid waste diversion rate	82% ▲
	Greenhouse gas emissions	-12% ▼
	Impact of supplier packaging	-10% ▼
	Renewable energy	5% ▲
	SUPPLY CHAIN	
	Incorporate sustainability into supplier assessments	90% ▲
	Obtain sustainability commitments from key and preferred suppliers	90% ▲
	Enable e-processing of data packages	80% ▲
	IT	
	Deploy next-gen virtual collaboration environment	100% ▲
	Deploy advanced energy management in enterprise data centers	100% ▲
	ENGINEERING	
	Reduce materials of concern in design	
	Quantify hazardous substance content in products	



Continued from page 29

Emissions and waste

Since 2008, we've lowered our greenhouse gas emissions by 28 percent, and we look to continuously improve our performance. Ninety percent of Raytheon's emissions are associated with energy consumption, so our energy conservation and efficiency efforts play a critical role in reducing emissions. Electronic collaboration solutions such as video conferencing, instant messaging and peer-to-peer file sharing enable us to collaborate globally while reducing travel-related emissions.

We achieved our goal of 100 percent eco-responsible e-waste management — which included processing and responsibly recycling more than 600,000 pounds of e-waste. As an e-Stewards® Enterprise Member since 2015, we send our e-waste only to certified e-Stewards processors. And since 2008, we've reduced by 58 percent the amount of solid waste we send to incineration or landfill. In 2015, our solid-waste recycling rate was 77 percent. (See full results above and on page 32.)

Our commitment to environmental sustainability goes far beyond the efforts of a few teams. With active participation across functions, locations and business groups, we incorporate best practices and Raytheon Six Sigma principles of continuous improvement into our sustainability efforts.

The future of sustainability

Building on this success, we recently established our 2020 sustainability goals, an ambitious five-year plan driven by our sustainability materiality assessment. The formal goal-setting process — conducted in collaboration with third-party experts — identified issues most critical to Raytheon and our employees. The 14 goals that emerged provide our blueprint for integrating sustainability in virtually every product, service, solution and innovation we create. (See accompanying graphic on page 29.)

Sustainability inspires us to create and innovate. To challenge norms and the status quo. It is a driving force in our business, our operations, our culture and our people. We believe running our business in a sustainable manner is yet another way to create business value. »

Learn more at raytheon.com/responsibility/environment/goals

Information technology serves up sustainability

Sustainability is bigger than just information technology. But IT can help lead the way.

That's Brian Moore's approach. As program lead for our Green IT initiative, Moore sees our IT operations as a prime example of sustainability in action and an ideal opportunity to influence other areas of the company.

"It's a persistent, companywide application of best practices across each business," he says. "We're able to leverage technology, collaboration and Six Sigma continuous improvement thinking."

Green IT dramatically improves the efficiency of our computing systems and other operations. The program generated 550 kilowatts of power savings last year and has reduced more than 3 megawatts in IT-related infrastructure since 2010.

Our transition to more cloud-based computing has allowed Raytheon to decommission, consolidate or virtualize more than 6,000 servers since 2008 — significantly reducing energy and space requirements. We've worked with our facilities experts to create more efficient sites and buildings. Wireless sensors in data centers create optimal airflow and stabilize temperature settings, further reducing energy costs.

Insights from Green IT will influence even more sophisticated solutions for future energy savings. For example, we're exploring the use of predictive analytics in our data centers to reduce server energy use during low-demand periods.

While IT is an ideal place to start, Moore knows that opportunities across Raytheon are endless. "Sustainability is a really fertile area for process improvement," he says. "We can achieve it anywhere with a strategic approach."

SOLUTIONS WITH SUBSTANCE

"I never would have thought I could be a 'sustainability engineer' at a defense company. But every day I have a chance to bring my personal passion to my job."

A chemist and sustainability advocate, Dayna Lamb found a surprising match for her skills at Raytheon. "I never would have thought I could be a 'sustainability engineer' at a defense company," Lamb says. "But every day I have a chance to bring my personal passion to my job."

On the global substances engineering team at Raytheon Missile Systems in Tucson, Arizona, Lamb seeks new and better ways to eliminate materials of concern from our products and processes. She and her teammates work with customers, suppliers, government agency researchers, academia and our competitors to replace hazardous materials with safer alternatives that still meet quality and performance standards.

That process can include testing, reporting, data analysis, validation, qualification and, ultimately, implementation. It's challenging work, but crucial for the company and the environment. "We're looking for reliable performance in critical applications," Lamb says. "At the same time, it has to be safe for both workers and the planet."

A TEAM SPORT

David Pinsky, a senior engineering fellow who leads Raytheon's global substances engineering team, has pursued alternatives to virtually every material of concern during his 32-year career. In the early 2000s, when the Restriction of Hazardous Substances Directive was announced, Pinsky recognized that Raytheon needed to get out ahead of challenges from the coming regulations. "That's when I like to say I transitioned from firefighting to fire prevention," Pinsky says.

He started by developing an algorithm for evaluating the risks associated with the use of pure tin. Today that methodology is

"Blue Marble"

Image of Earth captured by Raytheon's Visible Infrared Imaging Radiometer Suite.

employed widely across industry. That success eventually resulted in Pinsky leading our work to reduce the use of toxic substances such as cadmium and hexavalent chromium, which is a known carcinogen. This work also attracted other like-minded problem solvers.

"What we do here is very much a team sport" — across Engineering, Supply Chain, IT, and R&D — says Pinsky. "Our networking approach allows us to share information, analysis and resources much more effectively." The result is an efficient and collaborative process with a shorter distance between the problem and workable solution.

LEADING AND LEARNING

Lamb, Pinsky and other global substances engineers are collaborating with NASA to find alternatives to the hexavalent chromium used in bond primers and conductive aluminum coatings. They work with the U.S. Air Force, conducting evaluation and qualification testing for viable and environmentally sustainable marking inks. And in 2015, they began a joint effort with Tuskegee University to evaluate alternatives for cadmium plating on electrical connectors.

Finding safe alternatives to hazardous substances is only half the challenge: Pinsky and his team also must ensure that those alternatives will perform reliably for our customers in critical situations — from combat to air and space travel.

"People's lives depend on our products, so we have to do this right," he says.

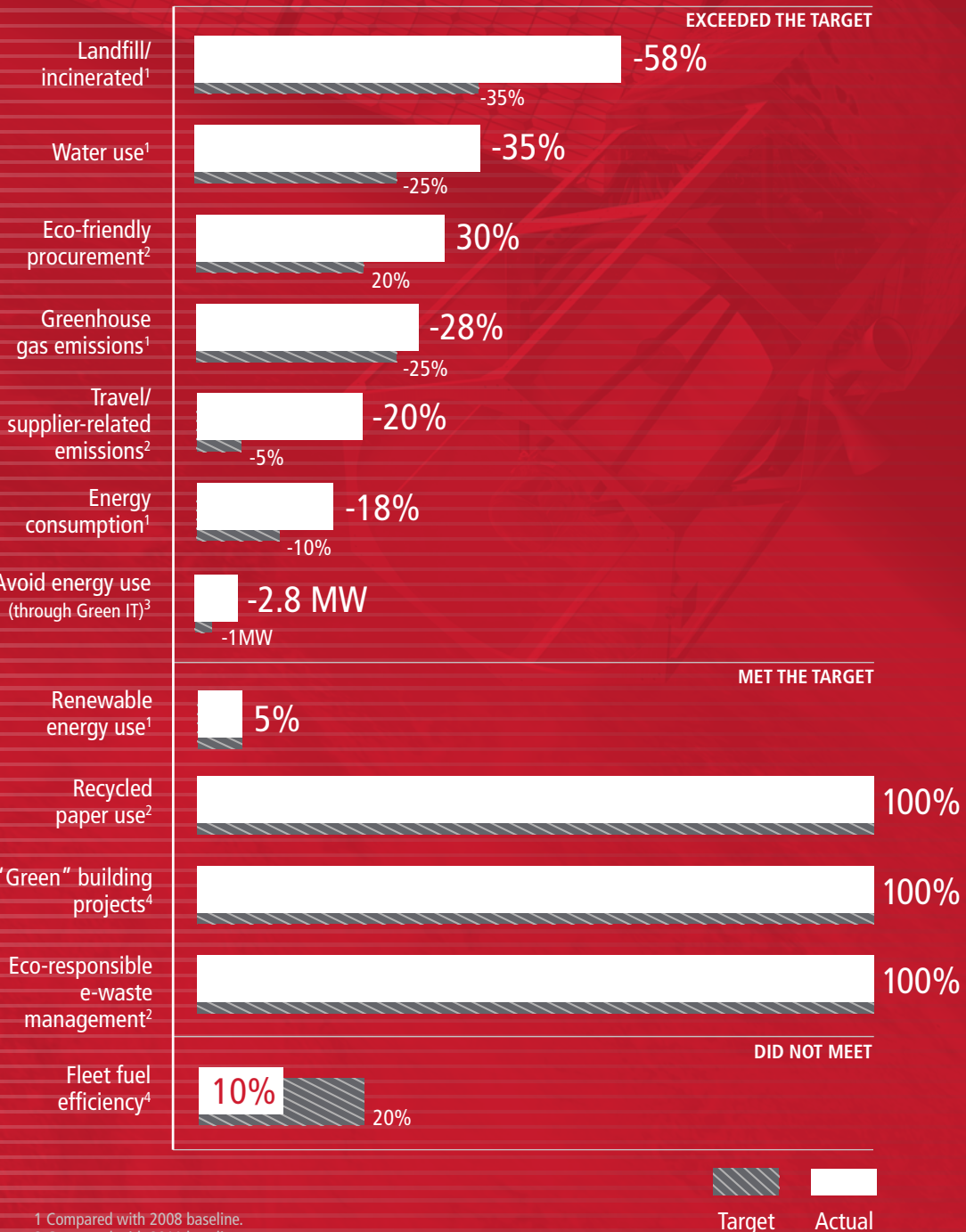
Lamb appreciates that delicate balance. And she finds it a perfect match with her gusto for solving thorny problems. "If it were easy," she says, "I wouldn't enjoy it as much as I do." »



HIGHLIGHTS

2015 Sustainability results

We exceeded or met 14 of our 15 sustainability goals



✓ Minimize materials of concern in product design¹

✓ Track hazardous substances in product parts¹

✓ Sustainability clauses in supply chain source selection documents¹

Target Actual

¹ Compared with 2008 baseline.
² Compared with 2011 baseline.
³ Compared with 2010 baseline.
⁴ Compared with 2009 baseline.



HIDING IN THE LIGHT

When Saikat Guha visits an ATM or buys a product on the Internet, he knows what types of security systems are running behind the scenes to keep his data safe. He also knows just how those systems could be breached.

"Most current security protocols rely on an adversary not having the computing power to factor huge numbers," says Guha, a senior scientist at Raytheon's BBN Technologies. As computers gain power, however, these common security approaches could leave data vulnerable.

That's what Guha is working to prevent — not just for consumers on the Internet but for military forces and governments sending and receiving highly sensitive security data. Guha and his Raytheon colleagues worldwide are making breakthroughs in secure communications using the principles of quantum physics.

STEPS TO SAFETY

"In quantum security," says Guha, "you want the data to be undecodable no matter how much computational power an adversary may have."

This super-secure communications method applies quantum physics to three main objectives. First, the intended receiver must be able to reliably decode the data you send. Second, unintended receivers must not

be able to decode the data, no matter how powerful their computing ability. And finally, for the highest level of security, an eavesdropping adversary should not even know you're communicating.

A technology known as quantum key distribution is central to achieving these requirements. With QKD, two distant parties connected by an optical channel can generate a shared random key based on quantum physics rather than on complex computations. The key generation process in QKD uses two-way communication over a standard communication channel that does not need to be secured. The quantum-secured shared keys can be used later to encrypt and decrypt communications.

Ultimately, security for the most sensitive data may involve a sort of invisibility cloak. "There's

a certain amount of noise in communication channels that you can't avoid," Guha explains. "So you hide your communication in that noise."

Here's how it works. Two parties use QKD to share a secret codebook. Then the sender embeds very small amounts of data into the noise of the communication channel. The receiver can then decode the data, but an adversary can't detect it. Using jammers to generate random noise can do even more to thwart eavesdroppers.

With this QKD approach, "You don't have to rely on any hard mathematical problem," says Guha. "You're secure against the most powerful adversary." ➔

AWARDS & RECOGNITION

Named among **100 BEST CORPORATE CITIZENS** by *Corporate Responsibility Magazine*[®]

For 9th consecutive year, received **ENERGY STAR PARTNER OF THE YEAR SUSTAINED EXCELLENCE AWARD** from the U.S. Environmental Protection Agency, for continued leadership in energy conservation and energy management

100% RATING FOR 11TH YEAR in a row, and named a "Best Place to Work" for lesbian, gay, bisexual and transgender employees, from Human Rights Campaign[®]

RANKED 8TH IN TOP 50 ORGANIZATIONS FOR MULTICULTURAL BUSINESS OPPORTUNITIES by DiversityBusiness.com

Named to the Carbon Disclosure Project's global **CLIMATE "A" LIST** for our actions and strategies to reduce greenhouse gas emissions to mitigate climate change

For 9th year, named among **100 BEST PLACES TO WORK IN IT** by IDG's *Computerworld*[®] magazine

2015 HEALTHY WORKSITE AWARD from Massachusetts Health Council recognizing Raytheon's commitment to employee health and well-being

OSHA VOLUNTARY PROTECTION PROGRAM STAR RECOGNITION for 36 worksites

STEMConnector recognized Mark Russell among **100 CIO/CTO LEADERS IN STEM**

Received two **NUNN-PERRY AWARDS**, which honor companies demonstrating performance excellence in conjunction with the DoD's Mentor-Protégé program

National Veteran Small Business Coalition **CHAMPIONS OF VETERANS ENTERPRISE** award

Ranked among the **TOP 500 "BEST EMPLOYERS IN AMERICA"** by *Forbes*[®]

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Chairman and Chief Executive Officer
Raytheon Company

VERNON E. CLARK*
Admiral, U.S. Navy (Ret.)
Former U.S. Navy Chief of Naval Operations

TRACY A. ATKINSON
Executive Vice President and Treasurer
State Street Corporation

ROBERT E. BEAUCHAMP
Chairman, President and Chief Executive Officer
BMC Software, Inc.

JAMES E. CARTWRIGHT
General, U.S. Marine Corps (Ret.)
Former Vice Chairman of the Joint Chiefs of Staff

STEPHEN J. HADLEY
Principal
RiceHadleyGates LLC

LETITIA A. LONG
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National Geospatial-Intelligence Agency

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Tyco International Ltd.

MICHAEL C. RUETTIGERS
Retired Chairman and Chief Executive Officer
EMC Corporation

RONALD L. SKATES
Retired President and Chief Executive Officer
Data General Corporation

WILLIAM R. SPIVEY
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Integrated Defense Systems

TAYLOR W. LAWRENCE
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