



*THE VALUE OF PERFORMANCE.*

***NORTHROP GRUMMAN***

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**2012**

**CORPORATE  
RESPONSIBILITY REPORT**

# ***NORTHROP GRUMMAN***



## **OUR VALUES**

We, the women and men of **NORTHROP GRUMMAN**, are guided by the following Values. They describe our company as we want it to be. We want our decisions and actions to demonstrate these Values. We believe that putting our Values into practice creates long-term benefits for shareholders, customers, employees, suppliers and the communities we serve.

We take responsibility for **QUALITY**

Our products and services will be “best-in-class” in terms of value received for dollars paid. We will deliver excellence, strive for continuous improvement and respond vigorously to change. Each of us is responsible for the quality of whatever we do.

We deliver **CUSTOMER** satisfaction

We are dedicated to satisfying our customers. We believe in respecting our customers, listening to their requests and understanding their expectations. We strive to exceed their expectations in affordability, quality and on-time delivery.

We provide **LEADERSHIP** as a company and as individuals

Northrop Grumman’s leadership is founded on talented employees effectively applying advanced technology, innovative manufacturing and sound business management. We add more value at lower cost with faster response. We each lead through our competence, creativity and teamwork.

We act with **INTEGRITY** in all we do

We are each personally accountable for the highest standards of behavior, including honesty and fairness in all aspects of our work. We fulfill our commitments as responsible citizens and employees. We consistently treat customers and company resources with the respect they deserve.

We value Northrop Grumman **PEOPLE**

We treat one another with respect and take pride in the significant contributions that come from the diversity of individuals and ideas. Our continued success requires us to provide the education and development needed to help our people grow. We are committed to openness and trust in all relationships.

We regard our **SUPPLIERS** as essential team members

We owe our suppliers the same type of respect we show to our customers. Our suppliers deserve fair and equitable treatment, clear agreements and honest feedback on performance. We consider our suppliers’ needs in conducting all aspects of our business.

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## INTRODUCTION

We published our first Northrop Grumman Corporate Responsibility Report in 2008, which highlighted our environmental and social performance in 2007. Our reporting continues to focus on the environmental and social responsibilities critical to our key stakeholders, including shareholders, customers, employees, local communities, academic institutions, media, governments and suppliers.

We report consistent with the Global Reporting Initiative (GRI), a third-party organization that has developed a widely used environmental, social and governance reporting framework. To enhance technical quality, credibility and relevance of our reporting, the GRI reporting framework we follow is developed through a consensus-seeking process with participants drawn globally from business, civil society, labor and professional institutions. This is another step in our ongoing efforts to improve transparency and accountability in all we do.

This report will be submitted for a GRI Level Check, which evaluates the extent to which the GRI guidelines are used in the report. Further, for the second consecutive year we are assembling and engaging an independent External Review Panel to evaluate our reporting processes and level of transparency. Based on feedback from the Panel on our 2011 Corporate Responsibility Report, this edition features a “Goal-to-Performance” structure to reflect better accountability, along with other suggested enhancements.

To support our environmental and social performance, we work with several third-party organizations, including Conservation International, of which we are a member of their Business and Sustainability Council and a partner on ECO Classroom.

# INTRODUCTION



**“WE MUST CONTINUE TO HOLD OURSELVES TO THE HIGHEST STANDARDS AT ALL TIMES; IT TAKES YEARS TO BUILD A REPUTATION, AND ONLY A MOMENT TO TEAR IT DOWN. OUR PATH FORWARD COMPRISES TWO IMPORTANT DIMENSIONS: 1) VALUES, INCLUDING INTEGRITY, AND 2) SUSTAINABLE PERFORMANCE. OUR VALUES DEFINE HOW WE OPERATE AS A COMPANY, AND SUSTAINABLE PERFORMANCE REFLECTS WHAT WE ARE ABLE TO ACHIEVE.”**

A handwritten signature in blue ink, appearing to read 'Wes Bush', written in a cursive style.

*Wes Bush,  
Chairman, CEO  
and President*

## Corporate Responsibility Report – 2012

The 2012 Corporate Responsibility Report once again demonstrates our commitment to our values and maintaining the highest ethical standards, embracing diversity and inclusion, striving for quality through compliance and innovation and continuing to enhance our environmental sustainability. Northrop Grumman is dedicated to improving our environmental and social responsibility to contribute further to the well-being of the communities where we live and operate. It is the right thing to do and it makes good business sense.

Activities mentioned in this report highlight our commitment to achieving sustained top performance while conducting our business in accordance with high standards and values. Operation IMPACT – the Injured Military Pursuing Assisted Career Transition program we started in 2005 is but one example. It finds opportunities for wounded veterans to gain meaningful post-military employment, provides accommodations and training to help the veterans succeed in their new jobs, and provides us with a great talent pool.

This year the Northrop Grumman Foundation is again collaborating with Conservation International on ECO Classroom. The program takes middle school and high school science teachers to central Costa Rica for two weeks of environmental science field work – giving them resources and ideas they can bring back to the classroom to get our young people excited about pursuing science, technology, engineering and mathematics (STEM). Generating interest in STEM is critical for our nation’s economic future and national security and vital for the Northrop Grumman workforce of the future.

In the past years we have redoubled our efforts on performance, innovation and driving affordability for our customers. The results have been excellent. As we continue to apply that same focus to social and environmental responsibility, we continue to experience similar outcomes.

**Wes Bush**  
Chairman, CEO and President



## OUR COMPANY

### OUR BUSINESS

#### 2012 Highlights

- **Delivering solutions:** In 2012, we generated \$25.2 billion in sales by providing innovative systems, products and solutions to our customers in areas such as cyber security; unmanned systems; command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR); and logistics and modernization. (Please see “Our Values” on the inside front cover of this report.)
- **Risks and opportunities:** The risks and opportunities during 2012 continued to focus around the challenging budget environment for our U.S. government customers, as well as uncertain global economic conditions. While budgets are tighter, our customers’ missions have not been reduced. They continue to count on Northrop Grumman to be both innovative and more affordable in providing products and services. As the demands on customers increase, we are taking the actions necessary to ensure we are best prepared to continue to serve them well and sustainably. Our focus on delivering top performance, ensuring the highest level of quality, maintaining close communication with our customers and applying innovative approaches to deliver more affordable products and services contributes to our customers’ ability to address their global security missions.
- **Defense Industry Initiative:** In 2012, Wes Bush, our chairman, chief executive officer, and president completed his term as the chair of the Defense Industry Initiative (DII) on Business Ethics and Conduct steering committee, and Sandra Evers-Manly, vice president of corporate responsibility, stepped down as chair of the DII Working Group. We are pleased that during 2012, we saw greater involvement from executive leaders in the signatory companies and DII expanded its programs for small and mid-sized companies.

# OUR COMPANY

## WHO WE ARE

Northrop Grumman is a publicly traded company. Our stock is listed on the New York Stock Exchange under the symbol **NOC**. We are a leading global security company providing innovative systems, products and solutions in unmanned systems, cyber security, C4ISR, and logistics and modernization to government and commercial customers worldwide.

We apply our core competencies and innovative capabilities to address the diverse and complex issues facing our customers including the defense of our nation and allies, cyber security, homeland security, expanding the scientific frontiers of space, environmental and climate change and large-scale civil information systems that enhance government services.

As a prime contractor, principal subcontractor, partner, or preferred supplier, we participate in many high-priority national security technology programs in the United States and across the globe. We conduct most of our business with the U.S. government and principally the Department of Defense (DoD) and intelligence community. We also conduct business with local, state and international governments, and domestic and international commercial customers.

Revenue from the U.S. government, which includes foreign military sales, accounted for approximately 90 percent of total revenues from 2010 to 2012.

We operate in 25 countries around the world. While the majority of our facilities are in the United States, we also have significant operations in the United Kingdom, Italy, Germany and France. The data contained in this report relates to Northrop Grumman

and its wholly owned subsidiaries, wherever located.

## WE HAVE FOUR OPERATING SECTORS:

**Aerospace Systems:** Provides unmanned systems, manned aircraft, space systems and advanced enabling technologies for customers worldwide.

**Electronic Systems:** Provides airborne radar, navigation systems, electronic countermeasures, precision weapons, airspace management systems, space payloads, marine and naval systems, communications systems and government systems.

**Information Systems:** Provides advanced information solutions for defense, intelligence, civil agency and commercial customers, including cyber security solutions, command and control systems, network communications solutions, and intelligence, surveillance and reconnaissance systems.

**Technical Services:** Provides life-cycle solutions and long-term services for global customers. Key capabilities include platform sustainment and modernization, advanced training solutions, high technology engineering services and operationally responsive systems.

## CUSTOMERS

At Northrop Grumman, we are accountable to our customers. We take very seriously our commitment to global security and the tremendous responsibilities inherent in that duty. We recognize that the work we do matters to our world today and in the future. We embrace our partnership with U.S. and allied defense and security leaders to provide high-impact, affordable products and systems through a robust mission-assurance

process that emphasizes our company-wide focus on quality, innovation and superior program performance.

## 2012 Major Corporate Responsibility Report Goals

We work each day to serve our customers; and we work proactively with our business partners to be good stewards of the communities in which we work and live. To report on how we perform responsibly as we go about our work, we highlight below our major Corporate Responsibility Report's Goals for 2012.

### Goal

**Provide high-impact, innovative and affordable products and systems in support of the U.S. military and our allies in their mission to operate successfully anywhere on the globe.**

This involves confronting irregular warfare including terrorism and addressing global security challenges, with a focus in four primary categories:

- Unmanned Systems
- Cyber security
- Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)
- Logistics and Modernization

### Performance

Our efforts in 2012 met or exceeded financial performance goals as a corporation and in each of our four sectors. In total, our new business awards in 2012 were \$26.5 billion compared to \$25.3 billion in 2011.

We are consistently working to improve our performance in everything we do. We strive to be the top performing company in our industry, providing our customers with unique capabilities to continue to pursue their missions affordably.

## Goal

In our worldwide operations, focus on doing business consistent with our values and commitment to sustainability. Incorporate social responsibility and customer support into decision-making, including in the products we develop and manufacture and, in the markets we participate.

## Performance

We currently do not manufacture or develop antipersonnel mines, cluster munitions, depleted uranium munitions, chemical or biological weapons. We also do not operate in a business or country that would require us to compromise our company values and commitment to sustainability.

## Goal

**Generate high levels of customer satisfaction.**

## Performance

Throughout 2012, as part of our company's focus on sustainability, we pursued a series of coordinated initiatives to improve our customer satisfaction including our agility in responding to their needs. These initiatives strengthen our customer partnerships and make our delivery of solutions more seamless. The result: an improved ability to team with our customers, understand their global security objectives, and provide effective, affordable products and services. We rigorously assess and document customer satisfaction as objectively as possible so that we can take the necessary steps to improve.

In 2012, our company and our customers continued to operate in a challenging environment with increased pressure on the U.S. federal budget and evolving threats. Moving into 2013, we remain committed to providing high-quality and affordable products.

### Measuring Performance: Our Approach

To ensure we are meeting our goals, we measure both customer satisfaction and quality performance. Our customer satisfaction metrics include customer-generated performance scores such as the **Contractor Performance Assessment Reporting System (CPARS)** used by the Department of Defense and the Department of Energy, and the **Customer Performance Systems (CPS)** used by other U.S. government agencies. We also rely on award-fee scores on our contracts, and oral and written customer feedback.

## Mission Assurance

### Goal

**Ensure mission success for our customers, strong program performance for our shareholders, and a sustained focus on performance improvement.**

### Performance

In 2012, we maintained our focus on quality as one of our key strategic priorities to ensure strong performance outcomes for our customers and improved value for our shareholders. We continued using quality measures company-wide that reflect the performance of our key programs against quality expectations across the program life cycle, including engineering, manufacturing and supply chain.

We recognize that a holistic view of our quality performance, engaging all key stakeholders, drives successful performance outcomes for our customers. To identify and prioritize areas for continuous quality improvement, we implement a rigorous self-assessment process at both the business-unit and corporate level. We also target quality improvement initiatives to enhance the value we deliver to our customers.

We continue to foster the connectivity between the work of our individual employees and the success of our customers' critical missions, which we believe is foundational to sustained performance improvement and affordable global security solutions. We do this in part by instilling in our employees the concept that "Quality is Personal." From there, we encourage our employees to identify key quality issues in their work and strive continuously to improve in those areas.

We categorize our quality performance as strong. From time to time, however, we experience isolated program-specific quality issues that do not meet the performance expectations of Northrop Grumman or our customers. To minimize the potential for quality issues, we focus on:

- Improving the connection between the work of the individual and quality outcomes for our customers
- Using a robust focus on root-cause assessment
- Integrating a focus on quality early in a program life cycle to help avoid quality issues as programs mature
- Partnering with our suppliers to ensure clear understanding of quality expectations.

Our focus on quality is based on a fundamental tenet of continuous improvement; that is, we integrate lessons learned from the past.



## OUR ETHICS

### 2012 Highlights

- Developed “How to Challenge – How to Support,” an initiative to provide employees and managers helpful guidance on effectively bringing issues forward and addressing them.
- Awarded 10 “High Road” awards in 2012 to individuals who excelled in inspiring integrity and ethical behavior.
- Deployed the Defense Industry Benchmark Survey as an additional measure of the impact of our ethics program on behavior, which helped us focus on areas that may need further improvement.
- Re-translated our revised Standards of Business Conduct to German, Italian, French, Spanish, Flemish, Norwegian, Chinese and Japanese.

**NORTHROP GRUMMAN**



**ETHICS**

### TOP PERFORMANCE THROUGH ETHICS, INTEGRITY AND COMPLIANCE

At Northrop Grumman, we strive not only to deliver high quality products and services, but to do so using actions that demonstrate our commitment to ethics, integrity and compliance. We have a comprehensive values-based program to promote a strong ethical culture throughout the company. During 2012, Northrop Grumman employees received ongoing ethics communications from managers and company leaders, including an annual message from our CEO, Chairman and President Wes Bush. These regular communications set high expectations for ethical conduct with all of our employees. We keep abreast of regulatory changes and deploy focused and timely training to our employees on compliance obligations critical to their job responsibilities.

Key elements of our ethics and compliance program include:

- Training and communication
- Comprehensive compliance policies and procedures including anti-corruption policies
- Business conduct officers
- 24/7 OpenLine
- Strong enforcement of our policy against retaliation

### 2012 Major Goals

#### Goal

Receive a “green” rating on our annual internal ethics audit.

#### Performance

We conduct an annual internal audit of our Ethics program in 2012. We received a clean bill of health for the corporate ethics office and all sectors, with no findings or recommendations noted.

In 2012 we participated in the Defense Industry Benchmark survey conducted by the Ethics Resource Center. This is the fourth time we participated in the survey, which provides a tool for assessing the progress of our ethics program year over year, and also benchmarks our program against our peers. We are encouraged to find that fewer employees are observing misconduct and those who do observe transgressions are more likely to report the questionable actions than in past years. Also, over the last several years, employees appear to have gained more confidence in our reporting process and report less fear of retaliation.

Despite these positive findings, we still have several opportunities for improvement including building more trust between employees and their leadership and increasing confidence that reports of problems by employees are kept confidential to the greatest extent practicable.

#### Goal

Train 100 percent of our employee population on ethics and compliance topics.

#### Performance

Globally, Northrop Grumman employees were provided ethics and compliance training in 2012. We conduct various risk assessments throughout the year related to our ethics and compliance programs. In addition, we provide our employees with robust compliance training tailored to their roles and the associated risks. Our compliance training spans numerous areas and includes training on corruption, anti-competitive behavior, export/import and insider trading laws and regulations.

In 2012 our employees received ethics and compliance training through in-person sessions, computer-based tutorials and printed material. Training content in 2012 included programs targeted to employee job responsibilities and broadly applicable topics such as:

- “How to Challenge – How to Support” (newly released)
- “Time and Labor Charging”
- “Export Compliance”
- “Quality”
- “Preventing Workplace Harassment”

Employees also received “The High Road,” a company-wide ethics newsletter featuring articles about Northrop Grumman OpenLine, anti-corruption, procurement integrity, intellectual property and employee engagement. The newsletter also reports and highlights our OpenLine statistics and aspects of corrective actions to provide transparency to our employees.

## ENSURING ETHICS: POLICIES AND PROCEDURES

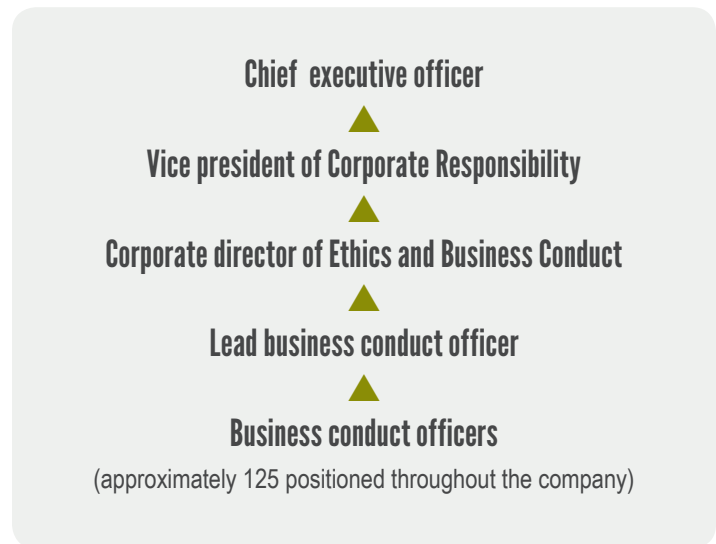
- We prohibit anyone conducting business on behalf of Northrop Grumman, including directors, officers, employees, consultants, representatives, distributors, suppliers and other third parties, from offering or making any improper payments of money or anything of value to any of our business associates including government officials, political parties, party officials, candidates for public office and commercial suppliers and customers.
- We maintain a robust compliance program that implements an internal system of reviews and approvals governing the retention of third parties that support the company’s business operations.
- We prohibit facilitating payments (those made to expedite or secure performance of a routine governmental action such as obtaining a visa or customs clearance), except in cases where there is an imminent threat to an individual’s life, health or safety.
- We remind our employees to avoid situations that would result in, or give the appearance of, a conflict between personal interests and the interests of the company. Employees are required to complete an annual conflict of interest disclosure form to ensure job performance is not improperly influenced by outside factors.

## BUSINESS CONDUCT OFFICERS

To support our high ethical standards, we utilize a Business Conduct Officer (BCO) network. As of 2012, the network consisted of approximately 125 full-time and part-time officers around the globe who promote visibility of the ethics program, answer management and employee questions regarding ethics and elevate the program at the site level. Throughout the year, these officers conduct meet and greet events to raise the awareness of the ethics program. We encourage our employees to participate in a variety of on-site and online awareness activities and contests to ensure ethical values are an integral part of their every-day behavior.

## REPORTING STRUCTURE: BUSINESS CONDUCT OFFICERS

The ethics office, led by the vice president of corporate responsibility, reports quarterly to the Audit Committee of the Board of Directors and annually to the Policy Committee of the Board of Directors. Each of our business sectors, along with the corporate office, has a lead business conduct officer who typically reports as follows:



We organize annual workshops for both our U.S. and international business conduct officers. These workshops include sharing best practices, program updates, compliance and skill training and networking. We hold a monthly webinar series to ensure our business conduct officers are knowledgeable on key topics such as global ethics, labor relations, Sarbanes-Oxley and ethical leadership.

# OUR COMPANY

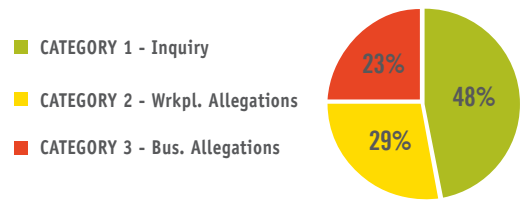
## EMPLOYEE RESOURCES: OPENLINE 24/7

**What:** The Corporate Office of Ethics and Business Conduct operates a toll-free phone number (1-800-247-4952) for both employees and third parties seeking guidance on ethics and business conduct, and for reporting suspected violations of law, regulation or company policy. Administered in most cases by a third-party company, this service offers 24/7 accessibility to trained specialists and the ability to report anonymously. In addition, an online reporting system is available to employees along with OpenLine phone numbers in Europe and Asia.

**How:** The OpenLine system allows us to track calls by total number and type of contacts, by sector, by allegations (with and without merit) and by disciplinary action rendered. Reports and metrics provide trending data to help us target training and communications. We publish ongoing results in our employee ethics newsletter.

**Result:** We had a total of 2,379 OpenLine contacts in 2012, including 1,148 questions on policies and procedures. The 2012 contacts included 684 workplace allegations and 547 business allegations, many of which required substantial investigation. In these investigations, we took various disciplinary actions including termination of 76 employees for their ethics and business conduct violations. This data does not include reports of allegations and concerns made through other channels.

## 2012 OPENLINE CONTACTS



| 2011/2012 Compared Data | 2011         | 2012         | +/-%       |
|-------------------------|--------------|--------------|------------|
| Category 1              | 1,097        | 1,148        | +5%        |
| Category 2              | 686          | 684          | 0%         |
| Category 3              | 564          | 547          | -3%        |
| <b>TOTAL</b>            | <b>2,347</b> | <b>2,379</b> | <b>+1%</b> |

*Almost Half of Contacts are Inquiries*

## Commitment

We are fully committed to complying with anti-corruption laws in every country in which we operate. We maintain a zero tolerance for corruption. We have long been committed to responsible corporate citizenship.

At Northrop Grumman, we regularly evaluate the breadth and strength of our internal anti-corruption program using external experts. We assess our program and performance against standards and benchmarks set by the U.S. government in Foreign Corrupt Practices Act (FCPA) settlement actions, the U.S. Federal Sentencing Commission, the Organization for Economic Co-operation and Development and the U.K. Ministry of Justice.

These standards cover a wide variety of governance matters including internal policies and procedures, business risk assessment, business courtesies, due diligence of third parties and partners, training and communication, monitoring, enforcement and continual process improvement.

## A Step Above

Abiding by the applicable anti-corruption laws of the countries in which we operate, and adhering to internal policies and procedures, is only the beginning. We continue to work to ensure a culture of ethical behavior that further reduces the risk of corrupt behavior.

We are active leaders and supporters of numerous initiatives and organizations with the primary purpose of elevating good corporate governance and eliminating corruption altogether.

We are proud to support the missions' study and review—and in some cases contribute to the work of— various initiatives and organizations, including:



- Defense Industry Initiative (DII) on Business Ethics and Conduct



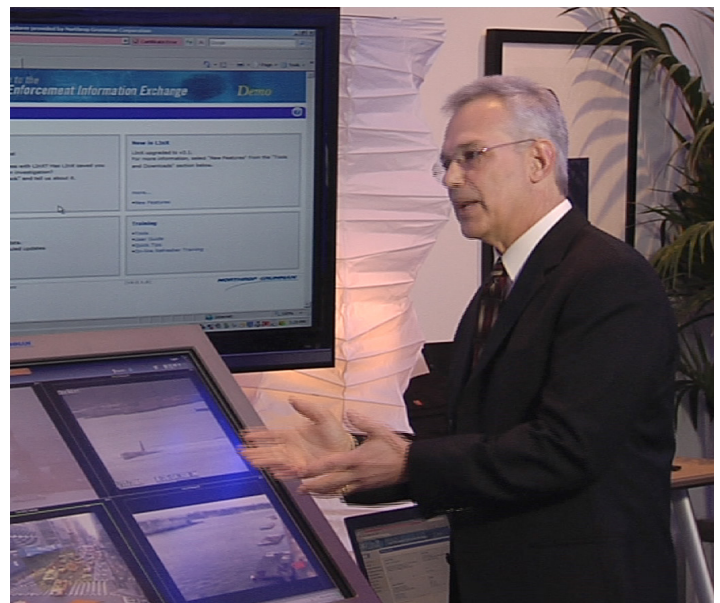
- International Forum for Business Ethical Conduct (IFBEC)



- TRACE International



- Transparency International – USA



# OUR COMPANY

## OUR GOVERNANCE

The Board of Directors has adopted [Principles of Corporate Governance](#) that are aligned with and reinforce our values and strong commitment to ethics and integrity. Our commitment ensures that integrity is at the center of all our actions, from our Board of Directors to company leaders and each employee. The Board's commitment to its shareholders is evident in the area of corporate responsibility.

### 2012 Major Goals

#### Goal

Foster the long-term success of the company, promoting the interests of stockholders, through best-in-class corporate governance.

#### Performance

We annually provide an overview of our corporate governance policies and procedures to our shareholders in our [proxy statement](#).

The Board has adopted [Principles of Corporate Governance](#) that reinforce the company's values and provide for effective and responsible business practices. These principles, along with our Certificate of Incorporation and Bylaws and charters of the committees of the Board, provide an overall framework for the company's governance.

The day-to-day business and affairs of the company are conducted by our officers and employees under the direction of the Chairman and CEO, with oversight by the Board.

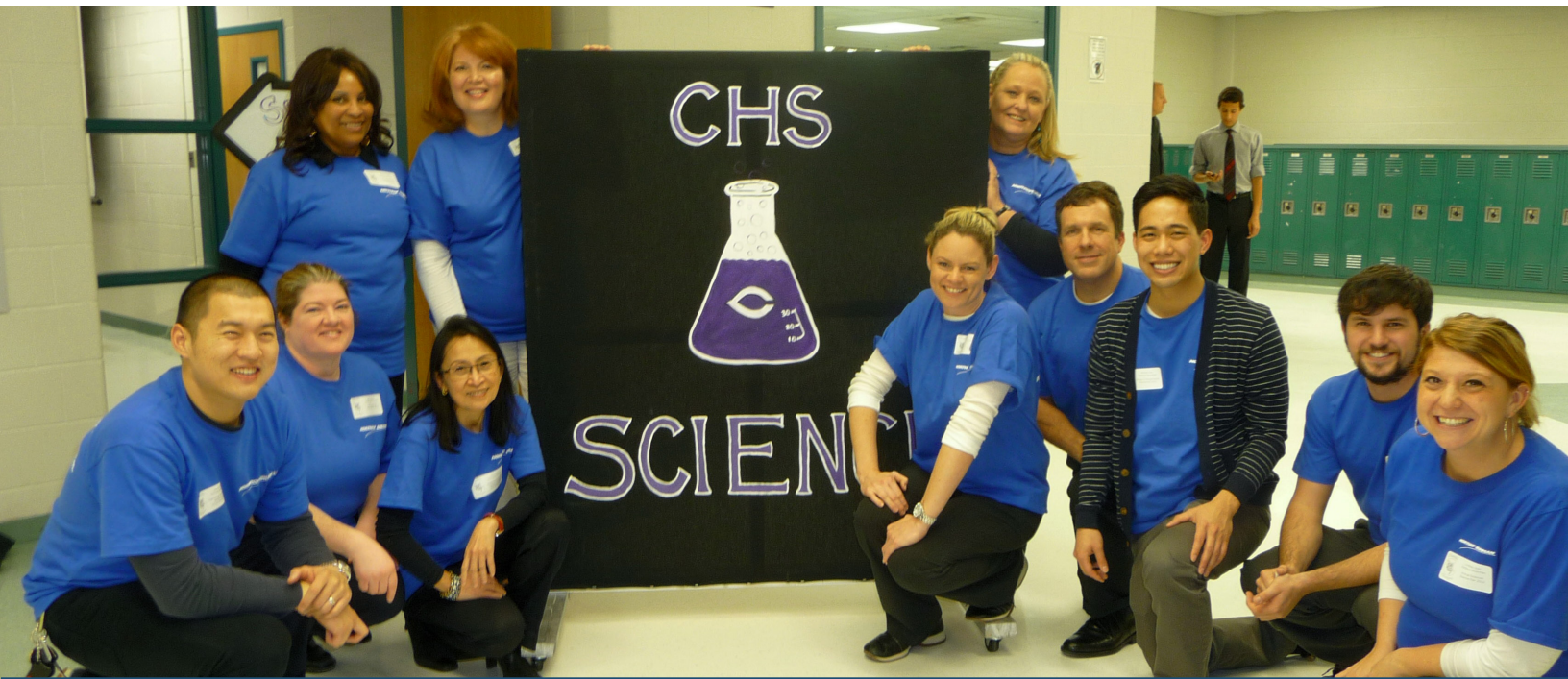
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### STANDARDS OF BUSINESS CONDUCT

- We have an OpenLine operated by an independent third party that is available 24 hours a day, seven days a week. Allegations of violations of law or company policy are investigated and appropriate discipline, up to and including discharge, is administered if the allegations are found to have merit.
- We participate in the political process at the federal, state and local level in the United States consistent with all legal requirements. We provide information regarding federal political contributions made by the Employees of Northrop Grumman Political Action Committee (ENGPAC), our policy regarding independent political expenditures and our trade Association memberships on the Northrop Grumman website, where information is quickly and easily accessible to our shareholders and the public.
- As reported on the [Northrop Grumman](#) website, the ENGPAC contributed \$1,475,250 to federal elections in calendar year 2012. All of ENGPAC's contributions to political parties, political candidates and related institutions were made within the United States.
- We disclose material issues related to litigation, investigations and penalties for non-compliance with laws and regulations as appropriate in our public filings.

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*





## GOVERNANCE OVERVIEW

- The Board reviews the Principles of Corporate Governance at least annually to determine whether they should be modified in response to changed circumstances or legal or other requirements, or otherwise to be made more effective. Over the years, the Board has modified these principles and will continue to do so if the directors believe that changes will advance the interests of the company's stockholders. You can find these principles in their entirety on our company website at [www.northropgrumman.com](http://www.northropgrumman.com). They also are available in print to any stockholder by request.
- The Board of Directors carefully considers all Board candidates for service on the Board on the basis of several factors, including personal integrity, professional reputation, education, professional background and particular skills, willingness to submit to a background check necessary for top secret clearance and experience most beneficial to serve on the Board of Directors.

- Diversity is a key criterion for Board composition. Although the Board does not have a formal policy outlining the diversity standards to be considered when evaluating director candidates, its objective is to foster diversity, including of thought, experience and contribution among our Directors. To accomplish that objective, the Board seeks to achieve a range of diversity including race, gender and national origin as well as perspective. The Board considers diversity amongst other important criteria for Board membership.
- All Board members are expected to act with integrity and to maintain high ethical standards at all times. The company's Standards of Business Conduct apply to all directors.
- One of the independent Board members has been designated as the Lead Independent Director. In that role, the Lead Independent Director presides at meetings of the Board of Directors at which the Chairman of the Board is not present, including executive

- sessions of the independent directors; approves the Board calendar and meeting agendas, interviews candidates for the Board of Directors; and has authority to call meetings of the independent directors.
- Each year the Board and Board committees conduct an assessment of their performance. The Board and committees will consider and discuss with management as appropriate how they have operated and performed. The Lead Independent Director also will discuss with each director on an individual basis an assessment of director performance.
- Interested parties may communicate with any of the directors by writing to them, c/o Secretary of the Corporation, 2980 Fairview Park Drive, Falls Church, VA, 22042.

*For a full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*

## BOARD OF DIRECTORS 2012

*Note: In May 2012, the Board designated Donald E. Felsing as the lead independent director, replacing Lewis W. Coleman who resigned from the Northrop Grumman Board of Directors effective November 30, 2012. As of December 31, 2012, the Board had 12 members, 11 of whom are independent non-employee directors. As of December 31, 2012, 25 percent of the Northrop Grumman Board is made up of women and people of color. The directors are:*

**Wes Bush**

Chairman, Chief Executive Officer and President, Northrop Grumman

**Karl J. Krapek**

Retired President and Chief Operating Officer, United Technologies Corporation

**Victor H. Fazio**

Senior Advisor, Akin Gump Strauss Hauer & Feld LLP

**Richard B. Myers**

General, United States Air Force (Ret.) and Former Chairman of the Joint Chiefs of Staff

**Donald E. Felsing**

Lead Independent Director, Northrop Grumman, Former Chairman and Chief Executive Officer, Sempra Energy

**Aulana Peters**

Former Partner, Gibson, Dunn & Crutcher

**Stephen E. Frank**

Former Chairman, President and Chief Executive Officer, Southern California Edison

**Gary Roughead**

Admiral, United States Navy (Ret.) and Former Chief of Naval Operations

**Bruce S. Gordon**

Former President and CEO, NAACP and Former President, Retail Markets Group, Verizon Communications Inc.

**Thomas M. Schoewee**

Former Executive Vice President and Chief Financial Officer, Wal-mart Stores, Inc.

**Madeleine Kleiner**

Former Executive Vice President and General Counsel, Hilton Hotels Corporation

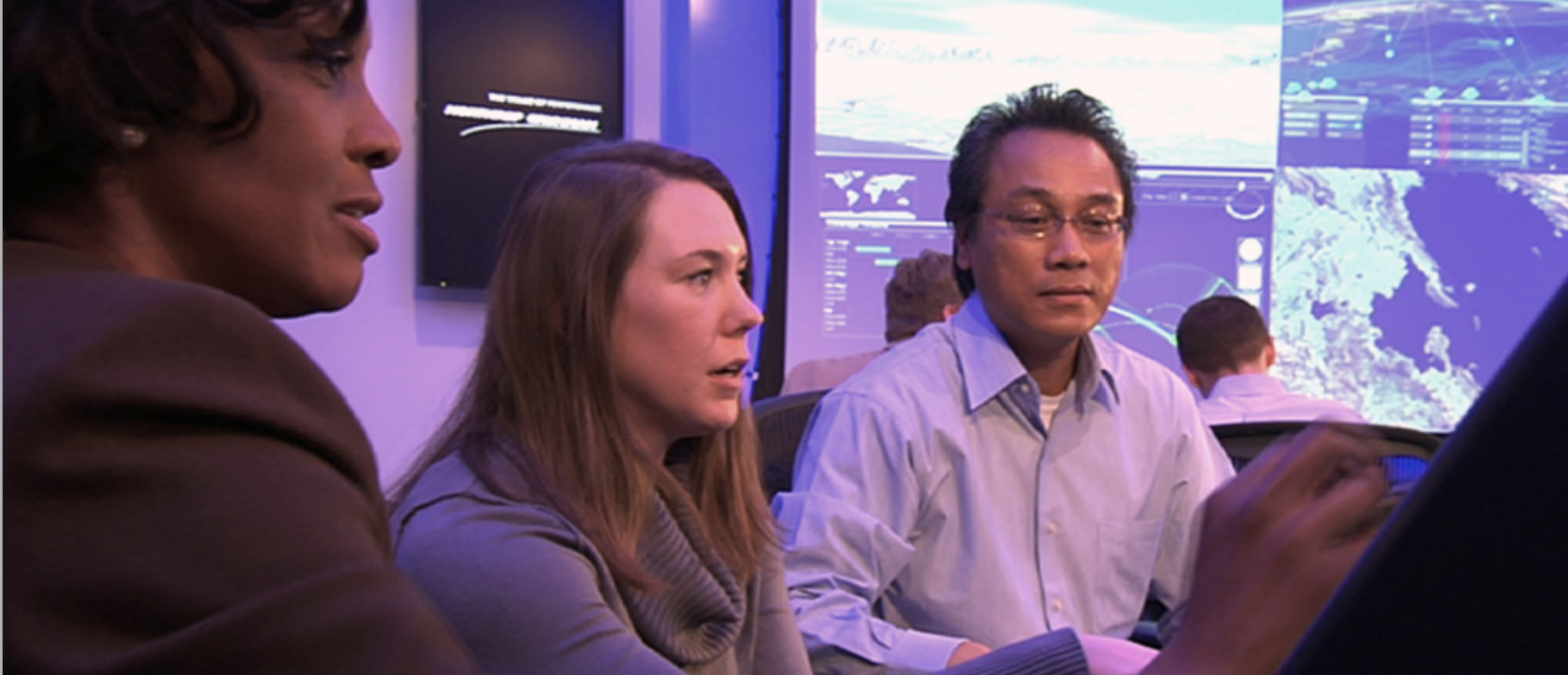
**Kevin W. Sharer**

Former Chairman and Chief Executive Officer, Amgen, Inc.

**Director Independence:** *The Board has established an objective that at least 75 percent of the directors be independent directors as defined by the NYSE rules and the company's principles of corporate governance. As of December 31, 2012, the Board of Directors is approximately 92 percent independent.*

**Board Protocol:** *The Board of Directors has approved Principles of Corporate Governance, which are well aligned with and support the company's values. The Board of Directors review the governance principles annually and seeks ways to enhance the principles based on evolving circumstances. The Principles of Corporate Governance were last revised on May 16, 2012 and are posted on Northrop Grumman's website.*

## BUILDING DIVERSITY AND INCLUSION



## OUR OPERATIONS IN FOCUS

At Northrop Grumman, we believe that creating a workplace that values diversity and inclusion is pivotal to fostering innovation, improving productivity, enhancing engagement and boosting profitability. Our goal is to continually nurture approximately 68,000 men and women across the company whose backgrounds, characteristics and perspectives are as diverse as the global communities in which we work and reside. The collective diversity of our people — in terms of culture, background, experience, thoughts, ideas and work styles — allows us to design and build some of the most sophisticated products and services for our customers.

We continue to support and develop partnerships with the National Society of Black Engineers, the Society of Hispanic Professional Engineers, the Society of Women Engineers, the American Indian Science and Engineering Society and other diversity-based professional associations including those for people with disabilities, veterans and LGBT. Additionally, we hire college graduates who reflect the diversity of college and university students nationally: half of our college new hires in the past four years have been women and people of color. And we will continue to recruit talented individuals through our partnerships with leading educational institutions and associations.

### 2012 Highlights

#### Enhancing Diversity and Leadership

We held our first Employee Resource Group Summit and Diversity and Leadership Conference in June in Falls Church, Virginia. More than 200 employees attended including company officers, middle managers, employee resource group (ERGs) leaders and human resources professionals. The successful event featured “best practices” and furthered our commitment to create a diverse and inclusive work environment.

#### Employee Resource Groups shine bright

- Based on a recommendation by the LGBT (lesbian/gay/bisexual/ transgender) employee resource group, PrIDA, we amended our health care plan to include transgender benefits.
- Our Hispanic, African American, and Asian Pacific Islanders employee resource groups initiated STEM (science, technology, engineering, math) projects with local middle schools to encourage and excite students about technical disciplines.
- Our employee resource group for people with disabilities, The Voice, worked with our human resources and facilities departments to build web-based accessibility initiatives.

# OUR OPERATIONS IN FOCUS

## 2012 Major Goals

### Goal

**For senior leadership positions, create a diverse pipeline of talented professionals.**

### Performance

In 2012, we continued work on our Organizational Leadership Review process to better identify high-potential women and people of color. We are also revising talent acquisition programs, including the implementation of a process to deliver a diverse slate of interview candidates for senior and middle management positions.

We are pleased to report that Northrop Grumman made progress against external benchmarks at the executive level. We will continue to focus our efforts on other areas of management representation including continuing to ensure people with disabilities and veterans and service-disabled veterans are integrated into the pipeline.

### Goal

**Improve the company's women and people of color representation.**

### Performance

For 2012, our workforce was comprised of 28 percent women and 29 percent people of color. We monitor our workforce representation and compare ourselves to external benchmarks.

## A POWERFUL FORCE: EMPLOYEE RESOURCE GROUPS

Throughout 2012 more than 13,000 Northrop Grumman employees engaged in Employee Resource Groups (ERGs), which play a key role in our diversity and inclusion strategy, assimilating and developing our workforce and leading community outreach efforts. These groups are open to all employees.

We promote and encourage these groups by providing funding to support events and development programs. Executive sponsors and human resources advisers also play a key role in the groups' success. Groups across the company include African Americans, Asian-Pacific Islanders, Hispanics, women, people with disabilities, veterans, lesbian/gay/bisexual/transgender employees and new hires.

Hundreds of employees have become active in the company's sustainability initiatives through the **greeNG** ERGs. These groups provide synergistic education and engagement opportunities that benefit employees, the company, the community and the environment. Employees are provided opportunities to learn about recycling, composting and green gardening, energy efficiency at home and local environmental issues.

## OUR DIVERSITY COMMITMENT

The company has implemented accountability measures tied to our annual incentive plan to ensure we are meeting annual objectives to increase the representation of women and people of color where we are underrepresented in senior leadership. Executive compensation is tied to our performance in this area.

## 2012 WORKFORCE DATA

| Job Category           | TOTAL         | % MEN         | % WOMEN       | % WHITE       | % BLACK/<br>AFRICAN<br>AMERICAN | % HISPANIC/<br>LATINO | % ASIAN       | % OTHER      |
|------------------------|---------------|---------------|---------------|---------------|---------------------------------|-----------------------|---------------|--------------|
| Executive              | 92            | 71.74%        | 28.26%        | 89.13%        | 6.52%                           | 0.00%                 | 3.26%         | 1.09%        |
| First/Middle Managers  | 11,895        | 77.44%        | 22.56%        | 81.47%        | 5.49%                           | 4.97%                 | 6.77%         | 1.30%        |
| Professionals          | 40,392        | 73.12%        | 26.88%        | 71.94%        | 7.46%                           | 6.31%                 | 12.16%        | 2.12%        |
| Technicians            | 5,176         | 82.46%        | 17.54%        | 65.03%        | 10.28%                          | 11.94%                | 10.20%        | 2.55%        |
| Administrative         | 5,450         | 31.05%        | 68.95%        | 62.68%        | 15.01%                          | 14.20%                | 5.54%         | 2.57%        |
| Craft Workers          | 3,930         | 92.01%        | 7.99%         | 60.76%        | 12.62%                          | 19.52%                | 5.22%         | 1.88%        |
| Operatives             | 1,901         | 66.91%        | 33.09%        | 55.34%        | 14.41%                          | 13.99%                | 12.84%        | 3.42%        |
| Laborers               | 160           | 77.50%        | 22.50%        | 39.38%        | 17.50%                          | 33.13%                | 1.88%         | 8.13%        |
| Service Workers        | 411           | 75.85%        | 24.15%        | 50.24%        | 26.34%                          | 18.05%                | 2.93%         | 2.44%        |
| <b>Total Workforce</b> | <b>69,407</b> | <b>72.17%</b> | <b>27.83%</b> | <b>71.07%</b> | <b>8.54%</b>                    | <b>8.20%</b>          | <b>10.11%</b> | <b>2.09%</b> |



\* Data as of August 2012



# OUR OPERATIONS IN FOCUS

## 2012 Diversity Highlights

- Scored 95 percent for creating a friendly work environment for lesbian, gay, bisexual and transgender (LGBT) employees by the Human Rights Campaign.
- Ranked #42 among **Top 50 Companies in Diversity** by DiversityInc. Magazine.
- Ranked #2 among **Top 50 Employers** by Minority Engineer magazine.
- Ranked **Top 3 Most Admired Companies** for minority engineers by Black Engineer magazine.

## Our Formal EEO/AAP Policy

At Northrop Grumman, a strong commitment to diversity and inclusion is founded in written policies and procedures that mandate a nondiscriminatory workplace supported by senior leadership. We adhere to Equal Employment Opportunity (EEO) and Affirmative Action (AA) principles and policies and build them into our operations across the company. We publish annual AA plans that document specific actions to improve the representation of minorities and women and to integrate veterans and people with disabilities. As of 2012, our AA plans meet the requirements of the U.S. Government's Executive Order 11246.

These AA plans also reflect our commitment to ensure equal employment opportunities for qualified applicants and employees without regard to race, color, religion, sex or national origin/ancestry. We adhere to a policy of nondiscrimination and no harassment consistent with applicable, federal, state, or local laws, including race/ethnicity, color, national origin, ancestry, sex/gender, gender identity/expression, sexual orientation, marital/parental status, pregnancy/childbirth or related conditions, religion, creed, age, disability, genetic information, military service/veteran status, disabled veteran, recently separated veteran, other protected veteran, Armed Forces service medal veteran, or any other protected status. All such discrimination will not be tolerated. We are committed to taking all reasonable steps to prevent discrimination from occurring.

## LA1-LA5, LA10-12, HR1, HR3-5, HR8

### HUMAN RIGHTS INCLUDING LABOR AND MANAGEMENT RELATIONS, NON-DISCRIMINATION, TRAINING AND EDUCATION, SECURITY AND INDIGENOUS RIGHTS.

At Northrop Grumman, developing our people goes beyond fulfilling a strategic priority — our values-based focus provides the framework to help each individual employee maximize their potential. Diversity and inclusion are fundamental for our business, and we take pride in recognizing that each individual's development needs are unique.

- **Employment:** Our employees who work 20 or more hours per week are eligible for health and welfare benefits under the Northrop Grumman plan. Qualified full-time and part-time employees are eligible for the 401(k) plan and pension plan. Temporary employees on the Northrop Grumman payroll are generally eligible only for savings benefits.
- **Agency Complaints:** In 2012, Northrop Grumman received 48 new external agency complaints of discrimination across the company. We investigate all complaints and take appropriate action. Of the investigations, 19 were closed and 29 are still open/pending.
- **Performance Reviews:** As of 2012, 80 percent or more of Northrop Grumman's employees receive a performance and career development review every 12-15 months. Based on scheduling, these reviews may not occur within each calendar year for every employee.
- **Human Rights Training:** Each year, our employees collectively receive hundreds of thousands of hours of training covering a variety of topics. Training on our Standards of Business Conduct emphasizes our culture, integrity, ethical behavior and treating all people fairly and with respect and dignity.
- **Collective Bargaining:** Currently 5 percent of Northrop Grumman employees are covered by collective bargaining agreements. There are no Northrop Grumman operations today where employees are at risk of not being able to exercise freedom of association and collective bargaining.
- **Security:** All Northrop Grumman security personnel receive comprehensive training on our policies and procedures and "Standards of Business Conduct."

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*

# OUR OPERATIONS IN FOCUS

## SUPPLIER RESPONSIBILITY AND DIVERSITY

In 2012, we subcontracted \$7.9 billion to a broad base of approximately 9,500 suppliers. Collaborating with suppliers on better environmental and social performance is an important element of our responsibility efforts. A key starting point is the “One Northrop Grumman” charter we instill throughout the company and the procurement organization. The goal: to establish a single, consistent operational focus with the supplier base and customers. Our On-line Automated Supplier Information System ([OASIS](#)) supplier portal is one means of providing this focus.

Suppliers to our company are valued team members, so each one is expected to understand the need for top performance in all areas, including diversity, quality, occupational health and safety, human rights and labor, and environmental responsibility. Every Northrop Grumman supplier receives an [annual letter](#) outlining our ethics policies and [code of conduct](#).

Additionally, our employees with procurement authority are required to annually complete additional specialized ethics training and complete the C-196 Disclosure of Conflicts of Interest Certificate of Standards of Business Conduct certifying to their compliance and disclosing possible conflicts of interest.

### 2012 Highlights

- **Broad Base:** In 2012, we awarded \$7.9 billion to approximately 9,500 suppliers. We utilize local small businesses within the communities surrounding our operating facilities.
- **Mentor-Protégé:** We managed 16 Mentor-Protégé agreements and subcontracted more than \$8 million to these protégé organizations during 2012. Four small business firms graduated from the Northrop Grumman Mentor Protégé Program in 2012, and we currently have one pending Missile Defense Agency agreement that is awaiting contract modification and funding.

### 2012 Major Goals

#### Goal

**Improve the performance of the largest and most critical suppliers to Northrop Grumman.**

Each of these critical suppliers undergoes a semiannual performance evaluation based on procurement dollars, number of company business units impacted and number of programs. We use the industry-standard Cost Performance Index, the Schedule Performance Index and various qualitative measures to track program performance.

#### Performance

For 2012, we evaluated the cost, schedule, quality and program management performance of our top 11 suppliers who supported programs on more than 300 subcontracts with a value of more than \$8.7 billion. We can report that in 2012 only 1.8 percent of our subcontracts performed unsatisfactorily. This is a 50 percent reduction from 2011 to 2012. For those critical suppliers with lagging performance, we initiated a process to correct problems and implement joint improvement initiatives.

### Risk Management

Our customers have expressed awareness and concern regarding the defense industrial supply base because the supply chain impacts program cost and innovation and also serves as a growth pipeline for future prime contractors. The supply chain is vulnerable in times of budget reductions with a magnified impact on small businesses. We are monitoring the approximately 9,500 firms that serve as Northrop Grumman suppliers to understand the health of our supply base. We have corporate procedures governing Northrop Grumman supplier risk identification, management and mitigation.

As part of our corporate risk analysis process, we maintain a supplier watch list addressing supplier financial health risk. We seek to manage supplier performance with a robust improvement process and risk mitigation exchange with suppliers. Increasingly, past performance by a supplier is an important element in sourcing decisions with added consideration given to outstanding performing suppliers.

We monitor critical supplier risk when it is single source with particular focus on the risks associated from single-source small and foreign businesses. We address single-source risk mitigation with supplier management teams, in-sourcing or alternate design solutions, among others.

# OUR OPERATIONS IN FOCUS

Sensitive to the financial stresses of small businesses in the current economic environment, we continued in 2012 to monitor financial risk of those that are most vulnerable to catastrophic financial impact and to consider an array of mitigation measures.

Our Northrop Grumman Corporate “counterfeit material prevention” policy prescribes preventive measures, training, communication, counterfeit alert management and procedures for comprehensive material assurance. Our Enterprise Material Authenticity team, chartered by our Corporate Quality Council and composed of members from quality, engineering, supply chain, contracts and the law department, takes the lead on counterfeit parts protection efforts. This level of focus strengthens practices across the company to mitigate risk.

## Supply Chain Diversity

We participate with and sponsor industry, customer, academic and various other organizational activities that support the growth and development of the small business community. To that end, we seek collaboration with select universities through the Small Business Innovative Research and the Small Business Technology Transfer programs.

To further enhance opportunities with various organizations, we actively support Advancing Minorities Interest in Engineering (AMIE),

### WE SUPPORT NATIONAL DIVERSITY TRADE ASSOCIATIONS BY SPONSORING TARGETED OUTREACH THROUGH:

- Ability-One (nonprofit agencies that employ the physically challenged)
- Asian Business Association
- Black Business Association
- Capital Area Gay and Lesbian Chamber of Commerce
- Latin Business Association
- National Association of Women Business Owners
- National Center for American Indian Enterprise Development
- United States Hispanic Chamber of Commerce
- U.S. Department of Veterans Affairs Center for Veterans Enterprise

which consists of the Schools of Engineering at 13 ABET-accredited Historically Black Colleges and Universities (HBCU)/MIs (ABET is a nonprofit and non-government accrediting agency for academic programs in applied science, computing, engineering and technology.

Northrop Grumman employees participate on the boards of advisors of several universities including Prairie View A&M, Bowie State University, Alabama State University and California State University, Los Angeles. We have provided approximately \$50,000, collectively, to these universities in support of technical research projects. In addition, we

support the annual Fayetteville State HBCUs Technical Challenge convened by deans and professors from various HBCUs. We also contributed \$10,000 to the Minority On-line Information Service (MOLIS), which supports some 268 minority institutions. The service allows institutions to update and provide relevant information on university capabilities for use by personnel at government agencies and private-sector companies.

The Northrop Grumman Socioeconomic Business Programs (SEBP) Office acts as the liaison with small and disadvantaged businesses interested in working with Northrop Grumman. We have received national recognition for our efforts to increase the number of successful minority and women-owned subcontractors by providing outreach and mentorship.

During the 2012 White House conference celebrating National Historically Black Colleges and Universities Week in Washington, D.C., Northrop Grumman was an event sponsor with employee presenters awarding \$5,000 scholarships to two students participating in the “105 Voices of History” choir performance at the Andrew Mellon Stage. This choir consists of one student from each of 105 HBCUs throughout the United States.



## AT NORTHROP GRUMMAN, OUR PROCUREMENT EMPLOYEES' RESPONSIBILITIES INCLUDE:

- Annually review the procurement integrity policy and sign a certification specifying that they will never accept supplier gifts, bribes or kickbacks.
- Identify any conflicts of interest with current and potential suppliers.
- Perform due diligence assessing whether suppliers or potential suppliers have been debarred or suspended or and whether they have ties to terrorist organizations.

## ENSURING HIGH STANDARDS

### INTEGRATED STRATEGY

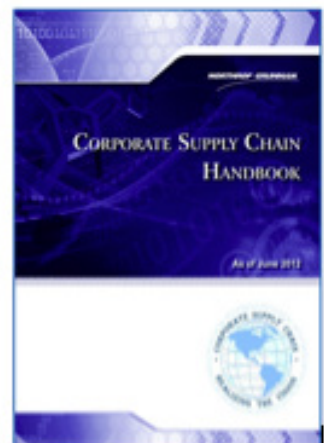
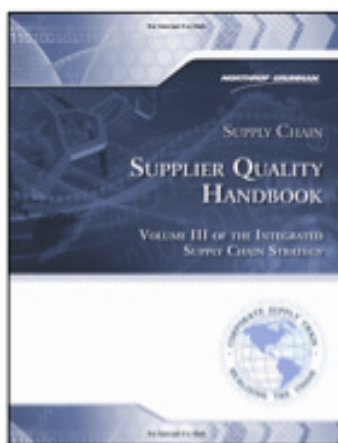
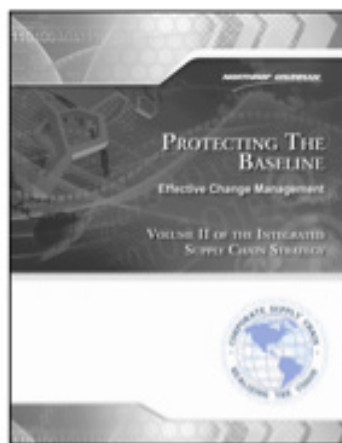
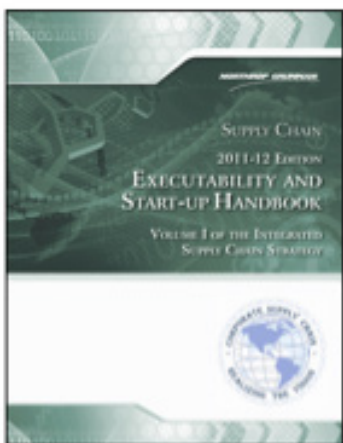
We have established an integrated supply chain management strategy throughout Northrop Grumman to address key success factors of the supply chain acquisition cycle. We continue to mature the strategy each year. We enhanced our Integrated Supply Chain Handbook series in 2012 with the publication of the Supply Chain Affordability Handbook. In addition, we developed training programs for our Protecting the Baseline – Effective Change Management and Executability and Start-Up handbooks. This handbook series helps lower risk and leverage supplier innovation.

## EC6, HR1-2, HR6, HR7 & HR9

### LOCAL SOURCING AND HUMAN RIGHTS INCLUDING CHILD AND FORCED LABOR AND INDIGENOUS RIGHTS

- Northrop Grumman standard terms and conditions require compliance with the Fair Labor Standards Act of 1938 (29 U.S. Code 201-219), as amended, and are consistent with the regulations and orders of the United States Department of Labor under Section 14.
- We established an organized approach to addressing the compliance requirements of Section 1502 of the Dodd-Frank Act, “Conflict Minerals.” We are on track to meet the due diligence and reporting requirements of the Act.
- Northrop Grumman has an integrated global supply chain. Each program and procurement activity aggressively sources from customer countries and regions.
- Our approximately 9,500 suppliers to Northrop Grumman receive an [annual letter](#) stating, “Strict adherence to ethical practices is a Northrop Grumman priority and is an essential element of all of our supplier relationships.” The letter links the supplier to the Northrop Grumman Associate brochure, which outlines our values and company standards for ethical behavior for employees and suppliers alike. It states: “Our company standards apply to anyone who represents or is affiliated with Northrop Grumman. Violating rules relating to our relationships with the U.S. Government or to our commercial customers may result in serious consequences up to and including termination of one’s relationship with the company.” We will not knowingly do business with suppliers that engage in human rights violations or use child or forced labor.
- No remedial measures were required in 2012 to eliminate forced or compulsory labor.

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*



# OUR OPERATIONS IN FOCUS

## ENVIRONMENTAL, HEALTH AND SAFETY

### INTRODUCTION

We are committed to protecting our environment as well as our employees, customers and people in the communities in which we operate. Our objectives are simple: reduce injuries and illnesses across the company, ensure environmental compliance and establish environmental sustainability as the way we do business.

### POLICY

It is our policy to conduct our operations in a manner that is both safe and environmentally responsible in accordance with applicable laws and regulations. To fulfill the intent of this policy, we seek to:

- Prevent injuries, illnesses and environmental impact to the extent practical.
- Develop and implement management systems to mitigate potential health, safety and environmental risks.
- Integrate safety and environmental requirements into planning, design, procurement, manufacturing and internal management activities throughout the company.
- Strive for continual improvement.

### EHS LEADERSHIP

To guide and oversee the company's Environmental, Health and Safety (EHS) program, we rely on the EHS Leadership Council, comprised of senior leaders from the corporate office and each operating sector. The Leadership Council's key strategic initiatives are to develop EHS strategies, goals and plans; monitor and report on EHS and environmental sustainability performance; promote management ownership of these efforts at all levels; engage employees in health, safety and environmental sustainability programs; and develop programs that support continual improvement.

We believe so strongly in these areas of performance that two safety and three environmental sustainability metrics are tied to our company's performance scorecard:

- Total Case Rate (TCR) Improvement
- Lost Work Day Rate (LWDR) Improvement
- Greenhouse Gas (GHG) Emissions Reduction/Avoidance in Metric Tonnes of Carbon Dioxide Equivalent (MTCO<sub>2e</sub>)
- Solid Waste Best Management Practices Implementation
- Water Management Best Management Practices Implementation

These non-financial metrics impact overall corporate performance assessments, which receive high level visibility within the company.

### 2012 Highlights

- Awarded the **2012 Cool Planet Award** from The Climate Registry's Cool Planet Project and Southern California Edison for excellence in energy efficiency in the aerospace and defense category.
- Received **Reasonable Assurance** for our 2010 and 2011 **greenhouse gas inventories** by Lloyd's Register Quality Assurance (LRQA), the highest level of assurance.
- Named to the **Carbon Performance Leadership Index**, by CDP, the top 10 percent of participating companies for exemplary performance related to climate change mitigation, adaptation and transparency.
- Identified as a **Leader** in the **Maplecroft Climate Innovation Indexes**, ranking 30 of 360 publicly listed companies.
- Received the **Aerospace Industries Associations (AIA) 2012 Safety Award for aircraft manufacturing** for our Aerospace Systems operation.

### EHS Operations: Compliance and Management

We have diverse operations with a range of materials and equipment, many of which require special handling. Our EHS Operations program provides guidance and support to ensure the safety and health of our employees, and the environment, during use of these materials and equipment.

Through written program guidance and procedures, training, periodic inspections and regulatory support, our EHS Operations program guides EHS programs and processes and supports our EHS professionals across the company. With responsibilities that include monitoring and implementing regulatory requirements and identifying and completing corrective actions, our EHS professionals support EHS compliance activities across a diverse array of operations and activities. To facilitate efficient and effective management of the applicable compliance requirements, we also implement environmental and safety management systems.

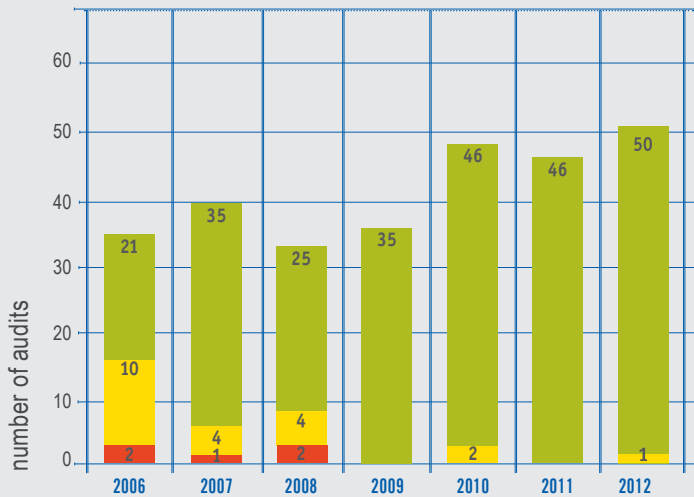
Consistent with our commitment to compliance and continual improvement, we conduct periodic internal audits of our operations to confirm we are performing at or above the required environmental, occupational health and safety standards. In addition, our EHS professionals often liaise with third-party organizations including regulatory agencies for on-site inspections and operational evaluations.

### The Internal Audit Process

Our EHS professionals conduct internal audits on a regular basis and promptly and systematically address deficiencies found. We use the audits as opportunities to share innovative and proven best practices and the results as learning experiences. Each year the Northrop Grumman Board of Directors reviews our program goals, achievements and overall performance.

# OUR OPERATIONS IN FOCUS

## Environmental, Health & Safety Audit Results 2006-2012



Each audited site receives a score (100 is the best), based on compliance and the maturity of the management system, along with an overall assessment rating:

- GREEN: satisfactory program
- YELLOW: marginal program
- RED: unsatisfactory program

The scope of EHS internal audits assesses compliance progress against goals and use of the company's EHS management systems criteria. We audit approximately one-third of our qualifying sites each year, a process that drives continual improvement through the prompt and systematic review and correction of deficiencies and opportunities for improvement as well as sharing of successful practices across sites and operations.

At the conclusion of each audit, we implement and track a corrective action plan based on audit findings and recommendations. Sites that receive an overall rating of yellow or red are re-audited the following year to ensure that program deficiencies have been corrected.

For added assurance, we have a process to review our audit program and policies. In addition to evaluating operational controls and risk management protocols, our corporate internal audit program is designed to provide an objective evaluation of our performance.

### Performance

As a part of the internal audit process, we evaluate and score each site on management systems program maturity, with 100 percent being the highest achievable score. In 2012, our overall score was 93.1 percent.

## The External Audit Process

Like all businesses, we are subject to review and audits from regulatory agencies and other authorities, including Federal and state environmental and safety agencies, building inspectors and fire marshals. These reviews by external organizations provide an important perspective of operational compliance and effectiveness of our programs and procedures.

In 2012, regulatory agency representatives for occupational health and safety and environmental compliance visited and/or contacted Northrop Grumman sites 178 times, resulting in 18 enforcement actions. None of the enforcement actions resulted in significant fines.

## ISO 14001 – Environmental Management Systems

### Number of ISO 14001 Registered Sites

|      |    |      |    |
|------|----|------|----|
| 2000 | 2  | 2007 | 13 |
| 2001 | 2  | 2008 | 20 |
| 2002 | 4  | 2009 | 20 |
| 2003 | 5  | 2010 | 22 |
| 2004 | 8  | 2011 | 22 |
| 2005 | 9  | 2012 | 23 |
| 2006 | 11 |      |    |

We encourage conformance to the International Organization for Standardization (ISO) 14001 registration for Environmental Management Systems. Attaining and maintaining this designation is representative of our commitment to environmental management and continual improvement.



# OUR OPERATIONS IN FOCUS

## CASE STUDY: THE VALUE OF TEAMWORK

- Employees at our Buffalo, New York facility had no recordable injuries in 2012. This strong record resulted from a partnership among workers, supervisors and site management, with every member of the safety team making a commitment to increase awareness of safety issues and providing suggestions for improvements.
- Employees at our Huntsville, Alabama campus achieved more than three million hours worked without a recordable injury. The campus has an employee-driven process, with senior management directly involved in leading EHS initiatives and cross-functional councils comprised of employees from all levels.
- EHS professionals and process engineers at our Norwalk, Connecticut site collaborated to review job processes for ergonomics to reduce the risk of musculoskeletal stress and injuries to employees. The result: a Rapid Upper Limb Assessment for a targeted group of tasks, which dropped the number of musculoskeletal disorders from a high of four incidents per year to zero over the last five years. Likewise, there were zero sprains and strains in these same focused improvement areas.

## THE 2012 EHS FORUM

We held the 2012 EHS Forum at the corporate office, bringing together more than 75 EHS professionals from across the company for professional development and best practice sharing. The full-day gathering offered several workshops and seminars led by both internal and external environmental, health and safety experts.

## OCCUPATIONAL HEALTH AND SAFETY

Protecting employee health and safety is paramount to our mission and performance. We continue to emphasize and invest in programs and enhancements to reduce the number and severity of injuries and illnesses. We take accident prevention seriously; since 2010, safety performance has been incorporated into executive compensation metrics.

### Goal

**Our goal is to have an accident-free and safe workplace. We also aim to provide employees with the tools and resources to lead by example and take ownership of safety in the workplace.**

We monitor and report the following indicators to gauge the effectiveness of our occupational health and safety program:

- Total Case Rate (TCR): the total number of OSHA (Occupational Safety and Health Administration)-recordable occupational injuries and illnesses, i.e., cases requiring medical treatment beyond first aid, per 100 full-time workers
- Lost Work Day Rate (LWDR): the total number of lost work days per 100 full-time workers
- Days Away Case Rate (DACR): the total number of cases, per 100 full-time workers, that resulted in days away from work

### Performance

TCR and LWDR each account for 50 percent of the overall company safety performance metric. Through focused health and safety initiatives, such as regular equipment inspections, workplace health and safety evaluations, “slips, trips and falls” awareness training and behavioral risk improvement initiatives, we have achieved positive safety trends within our workplaces.

There were no work-related fatalities in 2012 at Northrop Grumman.

### Safety Metrics and Performance

|                            | 2011  | 2012  | Change |
|----------------------------|-------|-------|--------|
| Total Case Rate (TCR)      | 0.94  | 0.97  | 3.2%   |
| Lost Work Day Rate (LWDR)  | 14.97 | 14.17 | -5.3%  |
| Days Away Case Rate (DACR) | 0.31  | 0.30  | -3.2%  |

Northrop Grumman is committed to reducing the frequency and severity of occupational injuries. Working with loss prevention consultants, we are implementing preventive measures to reduce repetitive motion injuries and slips, trips and falls, the most frequent causes of serious injuries.

# OUR OPERATIONS IN FOCUS

## SPOTLIGHT ON REMEDIATION: The Full Story

The process of site remediation culminates in the return of impacted property to productive use. From early investigative phases through applying technical remedies and final long-term site monitoring, remediation consumes and impacts natural resources, creating its own environmental footprint and increasing costs. A remediation site can take decades to restore, with financial and environmental costs. Our experience tells us that the remediation process can, for some sites, be successfully accelerated as technologies and site conditions evolve. Through our remediation programs, we review and evaluate new and updated techniques that could effectively accelerate the overall site remediation process.

## Opportunities for Improvement

An ongoing challenge we face is to maintain our downward trend in injuries. While we strive for zero injuries, we understand that accidents sometimes happen. Our priority for each employee is to prevent accidents through training, awareness and promoting ownership of safety in every laboratory, design room, office and shop floor. This requires training, equipment, and staff to ensure workers are provided with the resources needed to work safely.

In response to the 2012 publication of OSHA's Globally Harmonized System, we are addressing the challenge of updating our safety data sheets and training employees on the new chemical labeling elements. We are taking advantage of this opportunity to engage employees about workplace hazards and further their safety awareness.



## THE ENVIRONMENT

### REMEDIATION

#### Goal

**Our goal is to effectively address environmentally impacted property in compliance with applicable regulatory requirements and return these sites to productive use. We pursue this outcome by working cooperatively with various governmental agencies, conservation groups, citizen groups and other stakeholders to address the impacts at our remediation sites in a manner that protects human health and the environment, and is cost-effective and efficient.**

#### Performance

In 2012, we were involved in more than 170 environmental remediation projects with an approximate annual budget of \$37 million. From 2004 to 2012, we successfully completed active remediation at 84 sites and removed them from the company's portfolio of impacted properties either by achieving regulation-based remediation objectives (subject to the approval of the relevant regulatory agencies) or through third-party settlements.

During the same time period, we accomplished life-cycle cost reductions totaling \$55 million through a variety of activities, including innovative engineering approaches to investigation methodologies and improvements in the application of remediation technologies.

## LA6-7, LA9

### SAFETY STEWARDSHIP

#### OSHA VOLUNTARY PROTECTION PROGRAM

We participate in the OSHA Voluntary Protection Program (VPP), an effort based on cooperative relationships among management, employees and OSHA. Under the program, participants provide mentoring to other companies striving to achieve VPP status. In 2012, our New Town, North Dakota facility was officially approved as a VPP Merit participant, bringing our total number of VPP sites to nine in 2012.

#### OHSAS 18001

Occupational Health and Safety Assessment Series (OHSAS) 18001 is an international health and safety management system that helps organizations manage occupational risks and improve health and safety performance. Three Northrop Grumman sites have implemented OHSAS 18001:

- Moss Point, Mississippi
- New Town, North Dakota
- Rancho Bernardo, California

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*



# OUR OPERATIONS IN FOCUS

## Opportunities for Improvement

We recognize that each phase of the remediation process can present opportunities for improvement. We monitor site conditions and test innovative technology to evaluate the effectiveness of such technology in improving site recovery time and minimizing ancillary environmental impacts. We evaluate the feasibility of various technologies for use at our sites and implement them where appropriate; however, challenges remain because of the unique and dynamic nature of each site.

### ENVIRONMENTAL SNAPSHOT:

#### Innovative Remediation techniques

In 2012, we continued to seek cost-effective alternatives to traditional resource- and impact-intensive remediation practices. Our experience has demonstrated that for certain site conditions, replacing traditional remediation practices, such as excavation and land disposal, with in-place enzyme and/or bacterial treatment, can reduce environmental disturbance and energy use while promoting ecosystem recovery. Highlights of innovative remediation techniques include:

- Electrodes to heat soil and groundwater in place of mechanical methods such as excavation.
- Permeable, underground barriers to destroy contaminants, eliminating the need for energy-intensive recovery wells and carbon treatment systems.
- Naturally occurring materials, including emulsified vegetable oil, chitin and cheese whey, to promote degradation of contaminants through bioremediation.

## EHS MANAGEMENT AND POLLUTION PREVENTION

### Goal

**Our goal is to comply with applicable regulations and reduce front-end sources of pollution rather than seeking post-process solutions.**

**Examples of our pollution prevention programs include source reduction, buy-as-needed strategies, material substitution and procurement of environmentally preferable products and services.**

### Performance

In 2011 (the most recent data available), we diverted 18.6 million out of a total of 35.7 million pounds generated - approximately 52 percent of our total waste - from landfills, through recycling and reuse programs. Across the company, we recycled paper, cardboard, scrap metal, wood, construction materials, computers and related equipment, batteries, tires, fluorescent light tubes, mercury thermometers, cables and other items.

We fund internal environmental technology activity teams who use a multi-disciplinary engineering approach to research and develop solutions and support our commitment to reducing pollution.

Examples of solutions implemented in 2012 include:

**Dicing Saw Water Savings:** Our laboratory scientists evaluated a water-intensive process within the silicon wafer production line for reduction opportunities and modified the wafer dicing saw to re-circulate cooling water instead of discharging it. The laboratory is reducing water use by approximately 280,000 gallons per year.

**F-35 Right-Sizes Solvent Use:** Our F-35 Integrated Assembly Line introduced pre-saturated wipes for wipe-cleaning, reducing volatile organic compound emissions and hazardous waste. By using pre-saturated wipes, employees no longer apply bulk solvent to cloths or directly to parts, thereby eliminating solvent overuse and reducing employee exposure to solvent emissions. In addition, this switch has improved quality, primarily because of lint-free wipes, which eliminate the tedious task of inspecting for lint "stringers" that the previously used cloths sometimes left on rough or tacky surfaces.

**Environmentally Preferable Chemical Use:** Teams at several of our California sites initiated their transition to environmentally preferable chemicals in manufacturing processes in support of the California Green Chemistry Initiative.

## Opportunities for Improvement

We have made changes throughout the company to reduce our waste streams and the hazards of the materials used in our products. We seek to improve our processes and environmental performance, and also to balance short- and long-term business interests, regulatory requirements and resource availability when evaluating options and opportunities. Our customers are providing leadership in this area by advocating life-cycle accounting to include evaluation of the costs, environmental impacts and value of products from cradle-to-grave.

# OUR OPERATIONS IN FOCUS

## Production-related Hazardous Waste and Reported EPA Toxics Release Inventory (TRI)

|      | Hazardous Waste (Tons) | Hazardous Waste Tons/100FTE | TRI (Tons) | TRI Tons/100FTE |
|------|------------------------|-----------------------------|------------|-----------------|
| 2005 | 1,602.2                | 2.2                         | 100.6      | 0.14            |
| 2006 | 1,982.6                | 2.7                         | 77.1       | 0.10            |
| 2007 | 1,608.7                | 1.9                         | 41.1       | 0.05            |
| 2008 | 1,469.9                | 1.8                         | 61.1       | 0.08            |
| 2009 | 1,459.7                | 1.8                         | 65.8       | 0.08            |
| 2010 | 1,198.3                | 1.5                         | 63.2       | 0.08            |
| 2011 | 1,040.6                | 1.4                         | 55.0       | 0.08            |

We continue to reduce the toxic and hazardous materials used in our manufacturing operations, for the benefit of our employees and the environment. As the figures illustrate, we are realizing positive effects in the overall reductions in our hazardous waste disposal amounts and TRI discharges. We understand that pollution prevention is an ongoing opportunity for improvement, as our products and services diversify and the types and intensity of product and service lines fluctuate in accordance with demand and other external factors.

## Professional Associations

To maintain currency with industry trends and initiatives and engage with peers on common EHS challenges, we are members of relevant professional associations. Our roles range from membership to leadership, where we fully engage in discussions work groups and committees relevant to our customer and program needs.

- The Auditing Roundtable
- Mercer Occupational Safety and Health Group
- Aerospace Industries Association
- International Aerospace Environmental Group
- Corporate EcoForum
- Conservation International’s Business and Sustainability Council

## ENVIRONMENTAL SUSTAINABILITY – greeNG

With the inception of our environmental sustainability program, greeNG, in 2009, we sought to better understand and define what sustainability means to Northrop Grumman and our customers, shareholders and employees. It has become clear that environmental sustainability is an objective that is both supportive of, and supported by, our core values—quality, customer satisfaction, leadership, integrity, people and suppliers. Allowing these core values to guide us on this journey is enabling us to achieve strategic integration of sustainability objectives throughout the organization.

With the support of our executive leadership, we launched greeNG with a balanced strategic plan that calls on employees to identify opportunities for efficiency and improvement — focusing first inside our own walls before instituting requirements on our

value chain. This poses challenges and opportunities for us, but having established this solid foundation internally, we believe we can leverage our experience and achievements to implement strategic initiatives that require a robust collaboration with diverse stakeholders. We are firm in our commitment to maintain a balanced, value-driven strategy for performance.

## Our Strategy

Our strategic elements include:

| Internal Collaboration        | External Collaboration           |
|-------------------------------|----------------------------------|
| Measurement and Reporting     | Transparency                     |
| Facilities Management         | Green Leasing                    |
| Green IT                      | Renewable and Alternative Energy |
| Engineering and Manufacturing | Business Process Optimization    |
| Procurement and Supply Chain  | Customers                        |
| Stakeholder Engagement        |                                  |

To successfully integrate environmental sustainability into our organizational culture, we developed our strategy to drive performance from the inside out.

We use environmental metrics (performance to goal) for reducing greenhouse gases and implementing solid waste and water best management practices (BMPs) as a measure of performance. These environmental sustainability metrics have been tied to executive compensation metrics, demonstrating the strong support from our Board of Directors and reinforcing support throughout the organization. This commitment is a critical element of our success.

### Goal

The greeNG program establishes specific goals for reducing greenhouse gases (GHGs) and solid waste generation and water use. By year-end 2014, we are committed to:

- Reduce our combined Scope 1 and 2 greenhouse gas intensity (metric tonnes of carbon dioxide equivalent [MTCO<sub>2</sub>e], normalized to sales) by 25 percent relative to the 2008 baseline.
- Implement at least 75 percent of our “best management practices” at all large owned and leased buildings (100,000 square feet and larger).

# EN16, EN17, EN19

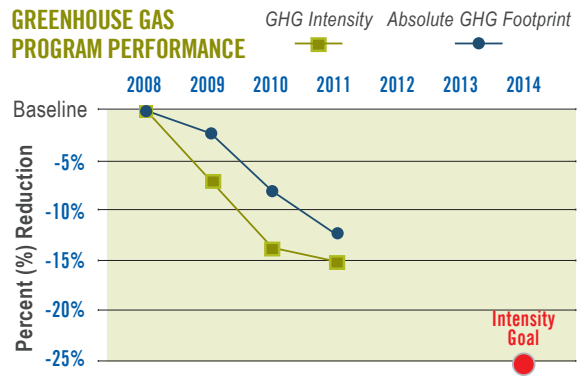
## GREENHOUSE GAS REDUCTION PERFORMANCE

|  | 2008<br>Baseline | 2009 | 2010 | 2011 | Performance<br>from Baseline |
|--|------------------|------|------|------|------------------------------|
| Carbon Intensity (MTCO <sub>2</sub> e/\$M Sales)     | 31.6             | 29.4 | 27.2 | 26.9 | -14.9%                       |
| Absolute GHG Emissions (Million MTCO <sub>2</sub> e) | 0.81             | 0.79 | 0.75 | 0.71 | -12.8%                       |

In accordance with the GHG protocol, we disclose our most up-to-date figures including mergers, acquisitions and divestitures. We disclose our annual environmental performance via CDP.

For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.

## GREENHOUSE GAS PROGRAM PERFORMANCE



### Performance

Our GHG emissions reduction performance is on track and remains a primary objective of our sustainability strategy.

In 2011, the most recent year for which data is available, we achieved a 14.9 percent reduction in our carbon intensity compared to our baseline year. We have progressed well against our GHG intensity reduction plan and are committed to achieving our goal of a 25 percent GHG intensity reduction by the end of 2014.

In 2012, the projects we executed exceeded our plan, anticipating an estimated greenhouse gas reduction of 43,098 MTCO<sub>2</sub>e. We expect that the impact of these projects will be reflected in our 2012 measurement, scheduled for release in the 2013 CDP response.

We are on track to achieve our companywide “best management practice” implementation goal of 75 percent by year-end 2014. In 2012, we achieved 63.3 percent implementation of water best management practices and 76.6 percent implementation level for solid waste best management practices. Examples of best management practices implemented in 2012 include:

- Expanding our recycling programs to include more products for diversion from our waste streams and landfills;
- Upgrading to energy - and water-efficient appliances;
- Expanded use of preventive maintenance practices to fix problems before they waste valuable resources; and
- Closing cooling system loops to reuse valuable potable water.

### Scope 3 Emissions Reduction Highlights

We continued our Scope 3 emissions reduction initiatives in 2012 to reduce the impact and emissions from our value chain activities, including:

**Business Travel:** In 2012, we implemented our green hotel initiative to reduce the environmental impact of our business travel. We identified hotels with environmental sustainability programs and policies in our travel database to alert our employees to these “green” hotel options.

**Employee Commuting:** We installed electric vehicle charging stations at several sites along with promoting employee use of electric vehicles. We continued to encourage employees to use carpools, ride-sharing, public transportation and bicycles in their commutes while also continuing to support tele-working and expansion of vanpools.

**Shipping:** We continued support of the EPA SmartWay Program, using EPA-certified shippers, to minimize the environmental impact of ground shipping our products.

*Note: Scope 3 emissions reduction initiatives and performance are also included in our annual CDP response.*

## EN10, EN21

Water use at Northrop Grumman is neither a significant component of our manufacturing operations nor a key element in our product lines. However, we have adopted water stewardship practices to upgrade and improve our infrastructure to achieve immediate reductions in our water use.

For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.

# OUR OPERATIONS IN FOCUS

Our commitment to transparency, ethics, quality processes and accurate disclosure was reviewed through third-party verification of our greenhouse gas inventory by Lloyd's Register Group (LRQA) for 2010 and 2011. We received reasonable assurance, the highest level of assurance issued within the aerospace and defense industry.

## Measurement and Reporting

For the **greenNG** program, we use quantitative analyses to identify opportunities and priorities to achieve our goals. We have a robust data collection, measurement and reporting process for our greenhouse gas (GHG) inventory, based on the Greenhouse Gas Protocol. Our strategic plan is sufficiently agile to enable us to incorporate elements related to emerging trends, customer needs and technological advancements while maintaining focus on core initiatives.

In 2012, we raised the bar on our commitment to data quality by implementing two initiatives: 1) Third-party verification of our GHG inventory for our two most recent years of data, 2010 and 2011, and 2) A comprehensive energy management system that facilitates utility bill processing, data management, and energy use optimization. With this system, we have data available on a monthly basis, enabling detailed analyses of our energy use, which will assist us in identifying inefficiencies and opportunities for improvement.

## Transparency

Integral to our balanced, value-driven strategy is our commitment to provide accurate information regarding our environmental sustainability performance. Our transparency efforts allow stakeholders and the general public to better understand our environmental sustainability program, goals and progress.

The results have been very positive. Respected, world-class third-party stakeholders have reviewed our environmental sustainability program and performance and issued positive assessments. In 2012, we achieved the following public recognition from a sampling of these external organizations:

- **CDP.** Ranked in the **Carbon Performance Leadership Index** includes companies in the highest performance band (A) with a range and quality of emissions reduction activities that are considered to be more fundamental to progress on combating climate change. In 2012, we earned a **disclosure score of 90** (100 is highest) and **performance level A** (A is highest).
- **Maplecroft Climate Innovation Indexes.** Ranked #30 out of 360 participating companies and received a "Leader" distinction for our technological innovation and new working practices to mitigate and adapt to climate change impacts.
- **Newsweek Green Rankings.** Ranked #73 among the **500 largest public companies** in the U.S., representing a relative drop in our ranking, despite an increase in our raw total score (Green Score) over our 2011 standing.

### CDP SCORES

|                    | 2009 | 2010 | 2011 | 2012       |
|--------------------|------|------|------|------------|
| <b>Disclosure</b>  | 42   | 68   | 80   | 90         |
| <b>Performance</b> | N/A  | C    | C    | A          |
| <b>Assurance</b>   | N/A  | N/A  | N/A* | Reasonable |

\*Reasonable Assurance received in 2012 for 2011 and 2012 data

### NEWSWEEK GREEN RANKINGS

|                    | 2009 | 2010 | 2011 | 2012 |
|--------------------|------|------|------|------|
| <b>Ranking</b>     | 337  | 173  | 51   | 73   |
| <b>Green Score</b> | 67.7 | 74.1 | 64.7 | 64.9 |

### MAPLECROFT CLIMATE INNOVATION INDEXES

|                | 2009 | 2010 | 2011 | 2012 |
|----------------|------|------|------|------|
| <b>Ranking</b> | 112  | 150  | 30   | TBD  |



# OUR OPERATIONS IN FOCUS

## Facilities Management

We are reducing the resource intensity of our physical footprint by emphasizing efficiencies and systems enhancements throughout our facilities. We are further optimizing our real estate portfolio to eliminate excess facilities and reduce our overall footprint.

In 2012, we had operations in seven buildings that are LEED (Leadership in Energy and Environmental Design) certified and five additional buildings that meet the Environmental Protection Agency's ENERGY STAR Building standards. As our real estate portfolio changes, we continue to explore new opportunities to reduce our environmental footprint by evaluating building envelopes and performance to meet these, or similar, energy efficiency standards.

In 2012, we achieved further resource efficiencies in our facilities by implementing the following improvements:

- **Installation of low-flow fixtures and closed-looped systems** to conserve water in our operations and fulfill our water conservation best management practice implementation goal.
- **Replacing potable water use for select industrial processes with treated groundwater**, reducing potable water use by 185,000 gallons per year.
- **Installing high-efficiency parking lot lighting**, reducing energy use and costs by 10 percent.
- **Replacing fleet vehicles with more fuel efficient models**, reducing more than 280 MTCO<sub>2</sub>e per year.

## Green Leasing

With our success reducing resource intensity in our owned facilities, we are working to achieve similar results in our leased spaces through collaborative efforts with our landlords. In 2012, we made progress in our initiative to incorporate "green leasing" language into lease contracts to encourage our landlords to support our sustainability goals. The green leasing language requires landlords to:

- Provide monthly utility data to support our comprehensive energy management system.
- Implement applicable solid waste and water best management practices.
- Require use of environmentally preferable cleaning products in janitorial service contracts.

This industry leading approach allows us to formally collaborate with our landlords to achieve our [greenNG](#) program sustainability goals.

## Green IT

Our expertise with information systems makes greening our information technology (IT) infrastructure a logical strategic focus. By rethinking the standard IT infrastructure, we successfully reduced our energy consumption through these fundamental improvements:

- **Data center consolidation:** To date, we have consolidated 18 of our 19 major data centers to three strategically located data centers.
- **Data center design:** Using hot and cold lanes to improve efficiency by directing cooler air closer to equipment inlets, we have enabled higher temperature set points in the data center itself.
- **Power management:** We carefully manage the balance of computing power with non-computing power needs to optimize facility use. We transitioned smaller server-hosting sites to non-IT operations, reducing energy demands in those facilities.

We deployed a power management tool to desktops across the company to perform after-hours power status checks that power down (into sleep mode) those computers not already shut down.

## Renewable and Alternative Energy

The [greenNG](#) program strategy includes the use of renewable energy and addresses our role in encouraging green power to be produced as part of the national grid. We support the development and sustainment of renewable energy, as well as smart and micro grids that enhance the stability of our energy infrastructure.

Our engagement in the renewable energy market, primarily via renewable energy certificates, is limited, as we prioritize decreasing our own emissions. We value the balance of a diversified energy market provides to society. In 2012, working with internal stakeholders, we developed a green power purchasing protocol to specify purchasing standards enhance the integrity and quality of purchased green power. For example, to balance strategic considerations, the protocol requires renewable energy certificates to be purchased for a minimum of eight years. We piloted the protocol and purchased renewable energy certificates in conjunction with traditional power and through vendors approved through our corporate procurement process.



## Engineering and Manufacturing

Our engineering and manufacturing operations present unique challenges and significant opportunities. The physical spaces, materials and processes used in these operations offer opportunities for energy and material use reduction, yet implementation is not always easy. As experts in Six Sigma, lean manufacturing principles and mission assurance, our engineering and manufacturing organizations have proven expertise in optimizing efficiency and quality while eliminating waste. Our challenge — opportunity as we see it — is to expand these core practices of optimization to incorporate and lessen environmental impacts and resource use.

In 2012, through innovations spurred by the need and opportunity to make material substitutions and process improvements, our engineering teams generated ideas to streamline processes and reduce environmental impacts.

The following examples highlight how our engineers improved processes and systems:

- **Sulfur Hexafluoride Abatement System:** Sulfur hexafluoride (SF6) is a greenhouse gas with significant global warming potential: one pound of SF6 equates to

23,900 pounds of carbon dioxide. The SF6 gas used in our laser saw systems for silicon wafer production cannot be replaced by an alternative gas. In 2012, we installed an abatement system that abates SF6 emissions at a rate of 95 percent, achieving an estimated reduction of 3,500 metric tonne carbon dioxide equivalent (MTCO2e) per year.

- **Leak Check for Composite Bonded Assemblies:** We revised the Leak Check tank line process, which reduced run time from 24/7 to 12 hours on, 12 hours off. This modification reduced our consumption of deionized water and energy use and overall costs, for an estimated GHG emissions reduction of 173 MTCO2e per year and approximately 87,000 gallons of deionized water per year.
- **Quicker Cure Topcoat:** Using a material substitution for a faster cure topcoat for the F-35 skins, doors and ducts improved cycle time, reduced energy costs and GHG emissions an estimated 162 MTCO2e per year.

- **Honeycomb Core Cleaning Oven:** We modified a bonding operation that previously ran 24/7 at 220 degrees

Fahrenheit to run as needed while maintaining product quality and integrity, and reducing run time by more than 18 hours per day. This modification is estimated to reduce GHG emissions by 158 MTCO2e per year.

- **Thermocouple (temperature sensors) Upgrade:** By replacing a “K” thermocouple with a “J” thermocouple, we reduced the run-time of a heat treatment furnace from 24/7 to just a few hours a day. This replacement is estimated to reduce GHG emissions by 509 MTCO2e per year.
- **Aerosol Impact Mitigation (AIM):** The AIM program was developed to reduce greenhouse gas emissions associated with commonly used aerosol products. Each product was ranked according to its global warming potential. Of the 27 products identified, our team replaced nine with non-aerosol alternatives, reducing GHG emissions by an estimated 31 MTCO2e per year.

## Innovative Solutions

National security is a complex and critical arena in our increasingly interconnected world. Northrop Grumman understands these complexities, including the role of environmental and energy security in providing solutions to assure security on land, at sea, in the air and in cyberspace. We apply our expertise to strengthen environmental and energy security, which also supports climate change adaptation planning. We are dedicated to providing scientists and decision makers worldwide with data and knowledge they need to understand climate trends and impacts so they can inform policy makers to mitigate risk and develop adaptation plans. The following are a few examples:

- Global monitoring sensors and satellites that provide data on topical issues, such as weather, disasters, climate, water, ecosystems, agriculture, biodiversity and energy to decision makers for improved impact assessments and preparedness and response.
- Web-based decision tools that analyze traditional and alternative energy sources for cost effectiveness and reliability optimization.
- Site optimization models that evaluate renewable energy options, including wind turbines and solar panel installations, to maximize reliability of energy generation, reduce risk, and minimize energy costs.

### CASE STUDY: Trash to Treasure

A wheat starch waste stream generated from stripping B-2 Spirit bombers yields precious metals.

Stripping B-2 Spirit aircraft coatings creates a waste stream that, until this year, had been disposed as hazardous waste. The team implemented a program to ship the waste to a recovery facility where precious metals are reclaimed, reducing hazardous waste disposal quantities and costs and generating economic value.

goals and strive to implement their recommended and required environmental sustainability practices. For example, we continued our support of the General Services Administration (GSA) and their efforts to identify effective methods for federal agencies to evaluate and incentivize environmental sustainability performance from their primary suppliers. We participated in broad and focused discussions regarding feasibility assessments of processes through which federal contractor emissions may be reduced and quantified.

## Shareholders

As a public company, providing value to our shareholders is a driving force in our decision-making processes. We at Northrop Grumman understand that value is defined in financial terms as well as the performance and sustainment of the business. The integration of environmental sustainability into our day-to-day operations strengthens our competitive performance today and in the future. We participate in the **CDP** and **Maplecroft Climate Innovation Indexes** to communicate our environmental performance to the investor community, highlighting our strategic initiatives that bridge environmental sustainability and business objectives.

## Industry

Our network of aerospace and defense companies, as well as public and private organizations, provides invaluable forums through which we track trends and lessons learned. In 2012, we participated in several conferences and forums attended by peer companies and thought leaders on topics ranging from meaningful integration of environmental sustainability into business operations, the criticality of water management, and energy security.

## Stakeholder Engagement

Underpinning our **greenNG** strategy is stakeholder engagement, which spans external and internal audiences ranging from customers and shareholders to partner organizations and employees. With the diverse interests of each audience, we are faced with the challenge and opportunity to engage in varied ways to ensure all of our stakeholders receive the support and information they need.

## Customers

In the simplest terms, our customers' goals are our goals, and our customers understand the value of environmental sustainability. They are encouraging our support. To align with our customers' goals, we have established complementary environmental performance

## EC2

### CLIMATE CHANGE RISK

**We incorporate predictive climate modeling into our risk management processes. We used this enhanced risk process and performed an analysis of major information systems and operations to identify those near volatile-weather locations. As a result of these analyses, high-risk data centers were identified and moved to lower risk locations.**

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*

# OUR OPERATIONS IN FOCUS



## Employees

Engaging our employees in environmental initiatives and expanding environmental awareness is essential to the success of our **greenNG** program. Many employees demonstrate a passion for and commitment to environmental sustainability — in the workplace and in their personal lives. Our engagement efforts focus on providing opportunities so employees are able to further their passion and learn new ideas, improve their communities and promote environmental sustainability in the workplace. This is primarily accomplished through employee-led, employee resource groups (ERGs).

The **greenNG** ERGs have expanded over the years and with them, our network of employee eco-champions. The ERGs provide these individuals and other interested employees a medium to support and participate in the company's sustainability initiatives. The focus of the **greenNG** ERGs is to engage employees through activities, discussions and initiatives that benefit employees, the company, the community and the environment. Employees are offered diverse opportunities to learn more about topics such as recycling, composting, native gardening energy and water efficiency at home.

## Earth Hour

We continued our commitment to raise awareness of global climate change by participating in the global Earth Hour. Coordinated by our facilities departments, we turned off unnecessary building and signage lighting and encouraged employees to participate at home.

## Earth Day

We celebrated Earth Day 2012 across the company with the theme of Water: Conserve, Protect, Restore, emphasizing water security and conservation. As one of the three tenets of the **greenNG** program, the theme of water is consistent with the focus areas of our corporate initiatives.

We held Earth Day fairs across the company, with local suppliers and state agencies providing information to employees on environmental initiatives, green products, commuter services and water conservation equipment and techniques for use in landscaping and around the house.

## Community Connection: Community Investment

In 2012, we funded environmental protection projects and water-focused initiatives led by the following organizations:

- **Chesapeake Bay Foundation**
- **Heal the Bay**
- **National Fish and Wildlife Foundation**
- **Water Wells for Africa**

To support water availability and security, we sponsored the construction of a drinking water well for a rural community in Malawi, Africa through Water Wells for Africa, an organization committed to providing safe and clean drinking water to rural African communities.

## Community Investment

Another meaningful way in which our employees demonstrate their commitment to environmental protection is through volunteer activities.

Our locations in many communities across the United States allows Northrop Grumman employees to support diverse and important environmental and educational initiatives nationwide. Examples of our 2012 volunteer initiatives include:

- **Beach and Coastal Cleanups:** Volunteers participated in beach cleanup events on all three coasts (East, West and Gulf), collecting trash and debris and restoring protective sand dunes and habitat.
- **Reforestation:** Northrop Grumman employees celebrated Arbor Day by planting trees with the Youth Environmental Leaders "Tree Musketeers."
- **L.A. WORKs:** Volunteers overhauled an outdoor learning classroom and updated a demonstration garden with native plants to represent the various microhabitats within native scrub and grassland communities.
- **National Public Lands Day:** Across the company, employees supported this one day national event – by planting native trees and plants at the Tijuana River Estuary and restoring the demonstration gardens, trails, signage and plant life at the White Point Nature Preserve in California. In Maryland, employees removed debris from the Fort McHenry National Monument marsh and enhanced the area with beneficial native plant gardens. The team helped to collect more than 80 bags of debris, totaling nearly 4.5 tons from around the park. Other volunteers cleared out vines, cleaned up tree and flower beds and cut back old plants at Kenilworth Aquatic Gardens in the District of Columbia.







## OUR COMMUNITY INVESTMENT

The main focus of our corporate philanthropy is expanding and bettering the pipeline of talented mathematics, science, technology and engineering students nationwide. We bolstered this effort through our Cyber Summer Camp, participation in Department of Homeland Security Cyber security Critical Skills Task Force and the National Youth Science Foundation Camp. We engaged in collaboration with university staff and expanded our public-private partnerships all with the goal of filling the nation's pipeline with diverse, qualified cyber talent through programs such as the Cyber Scholars program at the University of Maryland Baltimore County.

One of our education efforts, sponsorship of the CyberPatriot program, succinctly captures the spirit and performance of all our 2012 community efforts. In 2012 through CyberPatriot, one of the nation's largest and fastest-growing high school competition designed to excite and draw students to technology, we hired 28 former participants of the program. This result demonstrates our multi-year commitment to be a leader in cyber security, especially in the areas of workforce development, education and outreach (see below for further details on CyberPatriot 2012).

This is just one example of our company-wide approach to community investment: We aim to invest in and implement programs that are comprehensive in scope, broad-based in reach and ongoing for the long term.

### 2012 Highlights

- We contributed \$22,790,486 in philanthropic donations (which included a \$10 million gift from Northrop Grumman to our charitable trust, the Northrop Grumman Foundation) through our Northrop Grumman charitable giving program. Funding from the Northrop Grumman Foundation added an additional \$10,674,380. Employees, through ECHO, our employees charity organization, contributed \$2,388,252 to a multitude of community-based and national nonprofit organizations.
- Throughout the year, we continued to refine teacher professional development endeavors under our company-wide umbrella program Teachers and Engineers for Academic Achievement (TEAACH).
- From July 8 to 21, Conservation International staff, as part of the ECO Classroom program, hosted 16 middle and high school life sciences teachers at La Selva Biological Station in Costa Rica.
- As part of our CyberPatriot program we hired 28 former participants, up from 11 in 2011, who are now performing critical functions in Northrop Grumman programs across the United States.
- Through Northrop Grumman Foundation funding, we increased our support of the VEX Robotics program, helping teams in several different communities and supported the world championship event.
- Nearly 1,000 Northrop Grumman employees volunteered to assemble more than 30,000 care packages for active troops overseas.
- Our corporate citizenship team developed an international engagement strategy that we began to implement in 2013.

# OUR COMMUNITY INVESTMENT

## 2012 Major Goals

### Goal

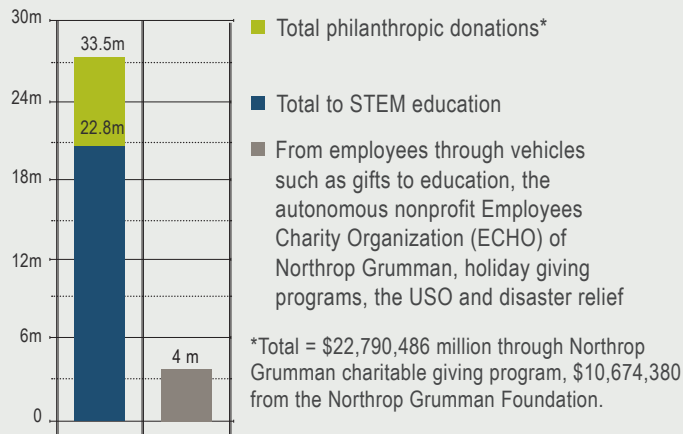
Support a wide array of programs and services for education, military and veterans, the environment and health and human services through broad-based philanthropy.

### Performance

In 2012 we directed community spending with the following target percentages:

- 50% on education: Focus on science, technology, engineering and math programming
- 20% on military and veterans
- 20% on health and human services
- 5% environment
- 5% all other

### TOTAL 2012 GIVING



In 2012, we contributed \$22,790,486 in philanthropic donations that included a \$10 million gift from Northrop Grumman to our charitable trust, the Northrop Grumman Foundation, through our Northrop Grumman charitable giving program. Funding from the Northrop Grumman Foundation added an additional \$10,674,380.

**Matching Gift for Education program**—The Northrop Grumman Foundation will match the first \$1,000 per employee for gifts made to education each year. Our total company outlay on matching gifts during 2012 was \$752,870 with 1,407 employees utilizing the resource. Of that total, \$374,415 went to K-12 programming and \$378,455 to higher education.

Our spending targets in each area are rough percentages. To that end, we were over and under our targets in various areas as might be expected. In the interest of transparency, here are the actual percentages for 2012: Education (54%), military and veterans (16%), health and human services (8%) and environment (3%). The remaining percentage of our giving fell into areas outside of these broad categories.

### Goal

Improve education at all levels, nationwide, with a focus on science, technology, engineering and math proficiency.

### Performance

We support programs and services for STEM education, military and veterans, the environment and health and human services through a strategic, targeted philanthropy program. Our key priority is to add to the pipeline of diverse talent for our future workforce nationwide. To that end, we focused 2012 efforts on improving the quality of science, technology, engineering and mathematics (STEM) education from early grades through the university level, and on developing interest, understanding and talent in those areas.

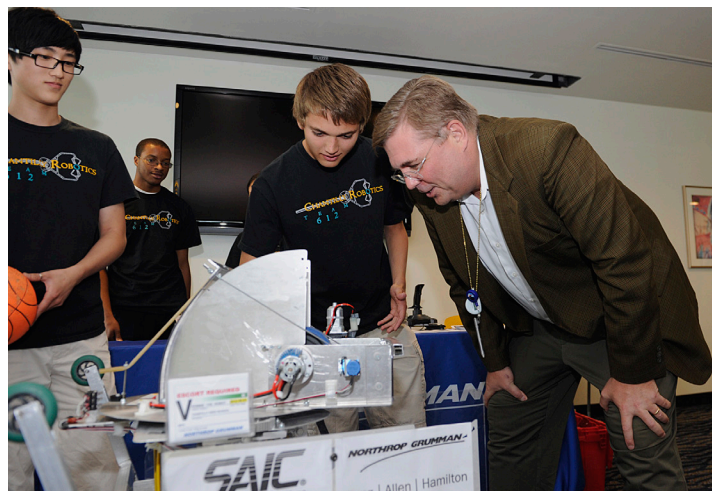
To accomplish this corporate citizenship mission, in 2012 we continued to implement the Northrop Grumman Education Strategy across the company. We detail our performance results below.

While we are starting to increase involvement with diversity programs such as Great Minds in STEM, Viva Technology and Summer Engineering Experience for Kids (SEEK), we are actively searching for more programs that focus specifically on young women. During 2012, we made strides towards identifying programming specifically for students of color, but we were not as successful with a program for female students.

### Performance

#### Highlighted Programs:

- ECO Classroom
- CyberPatriot
- VEX Robotics
- Wolf Trap Early Childhood STEM Learning Through the Arts
- High School Involvement Partnership
- Diversity Education Programs
- Higher Education



# OUR COMMUNITY INVESTMENT

**“WE ARE VERY EXCITED ABOUT THIS PROGRAM AND WE ARE THRILLED TO HAVE THESE VERY IMPRESSIVE SCIENCE TEACHERS AS OUR FIRST GROUP TO PARTICIPATE IN THE HANDS-ON ENVIRONMENTAL EXPERIENCE OF ECO CLASSROOM. THIS PROGRAM WILL GIVE THESE 16 TEACHERS THE INSIGHT AND INSPIRATION TO PASS ON REAL SCIENTIFIC OBSERVATION AND DISCOVERY DIRECTLY TO THEIR STUDENTS AND COMMUNITIES. THROUGH THE NORTHROP GRUMMAN FOUNDATION, WE HAVE BEEN PIONEERING PROGRAMS TO INSPIRE SCIENCE TEACHERS FOR MANY YEARS, AND HAVE ADDED ENVIRONMENTAL SCIENCE TO OUR PORTFOLIO, IN RECOGNITION OF THE IMPORTANCE OF INTERNATIONAL ENVIRONMENTAL SUSTAINABILITY TO THE HEALTH AND SECURITY OF FUTURE GENERATIONS.”**

—Sandra Evers-Manly, president of the Northrop Grumman Foundation

## ECO Classroom

With the goal of providing teachers with resources and learning opportunities in environmental science, we collaborated in 2012 with Conservation International to launch the ECO Classroom program. This unique, nationwide teacher professional development program equips teachers with knowledge and inspiration to impart to students. As with our other efforts, the focus is encouraging students at all levels to pursue science and technical careers and, eventually, become our next generation of environmental stewards and innovators.

### Performance

From July 8 to 21, 2012, Conservation International staff hosted 16 middle and high school life sciences teachers — biology, ecology, environmental and earth systems science — at the Conservation International’s Tropical Ecology Assessment and Monitoring (TEAM) Network’s field site at La Selva Biological Station in Costa Rica for an intensive field experience. The teacher teams traveled from Baltimore and Annapolis, Maryland; Long Island, New York; Chicago, Illinois; and San Fernando Valley, Los Angeles, California.

The teachers returned to their schools with a more in-depth understanding of the interrelationship between biodiversity, climate change and human activities, and are equipped with new techniques and resources to enhance teaching. On a survey, we asked “How applicable will your group project be in your classroom?” The group collectively rated the applicability “4.9” on a scale of 1 to 5 (5 being “extremely applicable”). We are planning additional teacher trips for 2013 and 2014.

## CyberPatriot IV: High School Competition

We continued in 2012, through Northrop Grumman Foundation, as presenting sponsor for this Air Force Association effort. CyberPatriot, which completed its fourth year in 2012, is one of the nation’s largest and

fastest growing high school cyber security defense competitions designed to excite, educate and motivate the next generation of cyber-defenders. Students competed at the CyberPatriot IV finals in conjunction with the Air Force Association CyberFutures Conference on March 23, 2012, in Washington, D.C.

### Performance

- We hired 28 CyberPatriots, up from 11 in 2011, who are now performing critical functions within Northrop Grumman programs across the United States. In addition, we maintain communication with many more CyberPatriot competitors as they consider careers in STEM disciplines.
- Well beyond our goal of 50, we had 128 volunteers from across the corporation mentor students and provide technical assistance to teams. CyberPatriot offered an opportunity for our employees to support a critical need for our nation’s continued security and economic prosperity.
- Through a robust communications campaign by both Air Force Association and Northrop Grumman volunteers, we increased the number of teams to 1,014 in CyberPatriot IV, up from 661 in CyberPatriot III. Enrollment for CyberPatriot V hit 1,225 teams, representing an 85 percent increase since our Northrop Grumman Foundation sponsorship began.
- We provided \$54,000 in scholarship funds to students from the top three teams per division, enabling many students to realize their dream of earning a college education in technical disciplines.

## VEX Robotics

In 2012, through Northrop Grumman Foundation funding, we increased our support of the VEX Robotics program, helped teams in several different communities and supported the world championship event.

# OUR COMMUNITY INVESTMENT

## Performance

- More than 6,000 students from 20-plus countries competed on 600 teams.
- In total, 87 new teams started at 62 new schools serving an estimated 870 students throughout the U.S. from schools in California, Maryland, Mississippi and Washington, D.C.

## Wolf Trap: Early Childhood STEM Learning Through the Arts

This unique program — based at the Wolf Trap Center for the Arts outside Washington D.C. — integrates elements of the performing arts into existing school curriculum to teach science and mathematics to young children. The program features multi-session classroom residencies; professional development workshops for administrators, teachers, and specialists; and family involvement workshops for parents and caregivers. In each of these sessions, Wolf Trap teaching artists provide instruction and collaborate with participants on ways to engage children in active learning.

## Performance

Our Northrop Grumman partnership with Wolf Trap served 840 children and 384 educators. We estimate an additional 380 parents and caregivers benefited from the program.

## High School Involvement Partnership

This intern program assists high school students with setting career and development goals and provides student internships, graduation incentives, a summer enrichment program and potential scholarships.

## Performance

In 2012, we connected Northrop Grumman mentors with 354 high school students from 78 schools. Additionally, Northrop Grumman Foundation funding combined with nearly 100 organizations, companies and federal agencies enabled the White House's Summer Jobs+ initiative. This program provided summer jobs and other employment opportunities for low-income and disconnected youth. Through this effort, more than 20 nonprofit agencies received funding to support 94 intern positions.



## HIGHER EDUCATION

**College Scholarships:** Funding from the Northrop Grumman Foundation provided more than 35 national diversity association and college fund scholarships (totaling more than \$248,000) to various organizations including the American Indian Science and Engineering Society, National Society of Black Engineers, Society of Women Engineers and Society of Hispanic Professional Engineers (SHPE). Additionally, the Northrop Grumman Foundation funded SHPE's National Institute for Leadership Advancement, Hispanic Scholarship Fund, United Negro College Fund and completed a multi-year commitment to the National Action Council for Minorities in Engineering in support of scholarships and pre-engineering programs.

**Education Grants:** Funding from the Northrop Grumman Foundation provided grants to 16 colleges and universities totaling nearly \$2.1 million to support diverse and academic student organizations and programs such as Women in Engineering, Computer Science Women's Network, Association of Computing Machinery and University of Maryland Baltimore County's Cyber Scholars Program. Education grants also included support for the STEM higher education workforce project and enhancing the STEM pipeline program.

**University and College Partnerships:** Northrop Grumman Corporation provided more than \$1.6 million in higher education grants to more than 80 colleges and universities. Recipients included engineering and computer science programs, academic and diversity student organizations, design projects, lab and education centers, career development and leadership programs and many others. Some of these programs included advancing Native American youth towards STEM careers, the transfer alliance program, cyber security student projects and the National Center for Women in Computing Award for Aspirations in Computing.

# OUR COMMUNITY INVESTMENT

## FOCUSING ON DIVERSITY EDUCATION

### Great Minds in STEM and VIVA Technology

As a step in continuing efforts to introduce middle school students to science, technology, engineering and math careers (STEM), employees at Northrop Grumman, including the Hispanic employee resource group One Adelante, partnered to bring the nationally acclaimed Viva Technology Program to Rogers Middle School in Lawndale, California, and Parkland Magnet Middle School in Rockville, Maryland.

Viva Technology is a national K-12 educational program sponsored by Great Minds in STEM that is designed to engage students, parents and teachers in technology-related activities that stimulate mathematics and science studies. The program consists of a teacher workshop, a parent session and a student program. Northrop Grumman volunteers supported the event as speakers and team leaders while college students from campuses near the schools assisted.

### National Society of Black Engineers and SEEK

In 2012, we provided support to the National Society of Black Engineers, Summer Engineering Experience for Kids program.

This three-week program provides learning to African American students, in science and mathematics, for grades three to 12. The program volunteers and mentors are young, African American college students majoring in engineering-related fields.

## VOLUNTEERISM: A STRONG TRADITION AT NORTHROP GRUMMAN

Northrop Grumman employees contributed at least 25,320 volunteer hours and qualified organizations, in turn, received \$126,600 in community service grants from Northrop Grumman. Further, employees generously supported a multitude of nonprofits through in-kind giving such as back-to-school supply drives, adopt a military family, winter coat drives and holiday giving.

Promoting education and participating in volunteerism go hand-in-hand at Northrop Grumman. During National Engineers Week hundreds of our employees volunteer nationwide in schools. To prepare for these "Connecting Educators to Engineering" events, we provide volunteers with tools and materials to assist with classroom demonstrations.

### Recognizing Excellence

We recognize employees who have demonstrated volunteer dedication through our Northrop Grumman volunteer recognition program. In August 2012, through Northrop Grumman's office of corporate citizenship, we announced the 10

"Excellence in Volunteerism" winners chosen from 647 nominations by an independent review panel (compared to 220 nominations in 2011). Each award winner's chosen organization received a \$5,000 grant that, collectively, helps students, those in need and families.

### Performance

- The volunteer management system is an internal Northrop Grumman program that connects employees to community volunteer opportunities in their local areas and allows them to log their volunteer hours.
- The Volunteer1NG site logged 1,510 individual employees who registered for volunteer events in 2012. The volunteers contributed 4,002 hours.
- The community impact of our employee volunteer hours for 2012 was more than \$40,000.\* Since inception, we value our volunteer total community impact at more than \$2.2 million.

\*Based on independent 2012 estimated value of volunteer time at \$10/hour.

## DISASTER RELIEF

We are members of the American Red Cross' Annual Disaster Giving Program. This

program helps secure a reliable funding base for disaster relief services and enables Red Cross personnel to respond immediately to the needs of individuals and families affected by disaster. Two major natural disasters, the Colorado wildfires and Hurricane Sandy, affected several communities with a strong presence of Northrop Grumman employees.

### Performance

Affected people will be able to receive food, shelter, emotional support and other essential assistance with less delay.

- Northrop Grumman employees donated \$100,492 in support of Hurricane Sandy victims. One hundred percent of those contributions was matched by the Northrop Grumman Foundation. Employees also contributed nearly \$20,000 through a separate online support program.
- The Northrop Grumman Foundation provided grants to organizations providing support to the Colorado wildfires and the Aurora, Colorado, theater shooting.

# OUR COMMUNITY INVESTMENT

## SUPPORTING MILITARY AND VETERANS

We are proud to offer continuing troop and veteran support through various programs. In 2012, the Corporate Citizenship Council developed a troops and veterans strategy that defines specific areas of focus. We plan to implement the strategy in 2013.

### Performance

In 2012, for example, nearly 1,000 employees volunteered their time to assemble more than 30,000 care packages to send to active troops overseas. Since 2003, Northrop Grumman employee giving has raised \$1.25 million for the USO, including \$293,650 in 2012.

### Operation IMPACT

Proposed by a Northrop Grumman employee in 2004, Operation IMPACT (Injured Military Pursuing Assisted Career Transition) provides personalized career transition assistance by identifying career opportunities within the company for returning service members who have been severely injured in combat. If the service member is unable to work, the program offers career support to a member of the individual's immediate family who will become the primary wage earner as well as to the widow or widower of fallen service members.

### Performance

To date, the program has helped 108 returning service personnel and their family members join the company. Since 2009 we have operated the Network of Champions, a group of more than 131 corporations and organizations as well as the federal government, following our example in the hiring of wounded warriors. The purpose of this network is to expand job placement opportunities for qualified candidates. Executives from the Department of Defense, Department of Labor and Department of Veterans Affairs recognize Operation IMPACT as an industry best practice, and the program has received several awards. To learn more click [Operation Impact](#).

## EC1

Although we do not track data for this specific metric at Northrop Grumman, the direct economic value generated through our various donations and community investments is significant. Collectively, for 2012, when totaling revenues, operating costs, employee compensation, retained earnings, company philanthropic contributions, employee giving and the value of total employee volunteerism hours, we provide a substantial direct economic value to our communities.

*For full listing of Global Reporting Initiative Performance Indicators, see pages 36-37.*



# GRI CONTENT INDEX

This 2012 Corporate Responsibility Report reflects the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI). The Standard Disclosures and the degree to which we have been able to report on each are detailed on this page.

| GRI STANDARD DISCLOSURE                      |   | PAGE REFERENCE | STATUS |
|--|---|----------------|--------|
| <b>STRATEGY AND ANALYSIS</b>                 |   |                |        |
| 1.1  | Statement from CEO.   | Forthcoming    | ✓      |
| 1.2  | Key impacts, risks and opportunities.                           |                | ✓      |
| <b>ORGANIZATIONAL PROFILE</b>                |   |                |        |
| 2.1  | Organization name.  |                | ✓      |
| 2.2  | Primary products and services.                                  |                | ✓      |
| 2.3  | Operational structure of the organization.                      |                | ✓      |
| 2.4  | Location of headquarters.                                       |                | ✓      |
| 2.5  | Countries with major operations.                                |                | ✓      |
| 2.6  | Ownership and legal form.                                       |                | ✓      |
| 2.7  | Markets served.   |                | ✓      |
| 2.8  | Scale of organization.  |                | ✓      |
| 2.9  | Significant operational changes.                                |                | ✓      |
| 2.10   | Awards received.  |                | ✓      |
| <b>REPORTING PARAMETERS</b>                  |   |                |        |
| 3.1  | Reporting period defined.                                       |                | ✓      |
| 3.2  | Date of most recent previous report.                            |                | ✓      |
| 3.3  | Reporting cycle defined.  |                | ✓      |
| 3.4  | Contact information.  |                | ✓      |
| 3.5  | Process for defining report content.                            |                | ✓      |
| 3.6  | Boundary of the report.   |                | ✓      |
| 3.7  | Specific limitations on scope or boundary.                      |                | ✓      |
| 3.8  | Reporting defined for joint ventures, etc.                      |                | ✗      |
| 3.9  | Data measurement techniques defined.                            |                | ✓      |
| 3.10   | Explanation of any re-statements from earlier reports.          |                | ✓      |
| 3.11   | Significant changes from previous reporting periods.            |                | ✓      |
| 3.12   | Standard Disclosures table provided.                            |                | ✓      |
| 3.13   | External assurance process defined.                             |                | ✓      |
| <b>GOVERNANCE, COMMITMENT AND ENGAGEMENT</b> |   |                |        |
| 4.1  | Governance structure.   |                | ✓      |
| 4.2  | Indicate whether Board Chair is also an executive officer.      |                | ✓      |
| 4.3  | Number of independent and/or non-executive Board members.       |                | ✓      |
| 4.4  | Mechanisms for providing recommendations to Board.              |                | ✓      |
| 4.5  | Linkage between compensation and performance.                   |                | ✓      |
| 4.6  | Processes for eliminating conflicts of interest.                |                | ✓      |
| 4.7  | Process for determining Board member qualifications.            |                | ✓      |
| 4.8  | Statement of values and codes of conduct.                       |                | ✓      |
| 4.9  | Procedures for compliance with standards, codes and principles. |                | ✓      |
| 4.10   | Processes for evaluating the Board's performance.               |                | ✓      |
| 4.11   | Precautionary approach explanation.                             |                | ✓      |
| 4.12   | External initiatives endorsed.                                  |                | ✓      |
| 4.13   | Memberships in associations and advocacy organizations.         |                | ✓      |
| 4.14   | Stakeholder groups identified.                                  |                | ✓      |
| 4.15   | Selection of stakeholders with whom to engage.                  |                | ✓      |
| 4.16   | Approaches to stakeholder engagement.                           |                | ✓      |

| GRI STANDARD DISCLOSURE                     |  | PAGE REFERENCE | STATUS |
|---|--|----------------|--------|
| <b>ECONOMIC PERFORMANCE INDICATORS</b>      |  |                |        |
| EC01  | Direct economic value generated.   | Forthcoming    | ✓      |
| EC02  | Financial implications due to climate change.                                |                | ✓      |
| EC03  | Defined benefit plan coverage.   |                | ✓      |
| EC04  | Government financial assistance.   |                | ✓      |
| EC05  | Wages compared to local minimum wage.  |                | ✓      |
| EC06  | Spending on locally based suppliers.   |                | ✓      |
| EC07  | Senior managers hired from the local community.                              |                | ✓      |
| EC08  | Investments for public benefit through in-kind/pro. bono.                    |                | ✓      |
| EC09  | Indirect economic impacts, including the extent of impacts.                  |                | ✓      |
| <b>ENVIRONMENTAL PERFORMANCE INDICATORS</b> |  |                |        |
| EN01  | Materials used by weight or volume.  |                | ✓      |
| EN02  | Percentage of recycled materials.  |                | ✓      |
| EN03  | Direct energy consumption.   |                | ✓      |
| EN04  | Indirect energy consumption.   |                | ✓      |
| EN05  | Energy saved through conservation.   |                | ✓      |
| EN06  | Energy-efficient based products and reductions in energy requirements.       |                | ✓      |
| EN07  | Initiatives to reduce indirect energy consumption.                           |                | ✓      |
| EN08  | Total water withdrawal by source.  |                | ✓      |
| EN09  | Water sources affected by withdrawal of water.                               |                | ✓      |
| EN10  | Percentage and total volume of water recycled and reused.                    |                | ✓      |
| EN11  | Land ownership and operations in protected areas of high biodiversity value. |                | ✓      |
| EN12  | Impacts on biodiversity in protected areas.                                  |                | ✓      |
| EN13  | Habitats protected or restored.  |                | ✓      |
| EN14  | Managing impacts on biodiversity.  |                | ✓      |
| EN15  | Habitats (Red List species) affected by operations.                          |                | ✓      |
| EN16  | Total direct and indirect greenhouse gas emissions.                          |                | ✓      |
| EN17  | Other relevant indirect greenhouse gas emissions.                            |                | ✓      |
| EN18  | Initiatives and results of reducing greenhouse gas emissions.                |                | ✓      |
| EN19  | Emissions of ozone-depleting substances.                                     |                | ✓      |
| EN20  | NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions.     |                | ✓      |
| EN21  | Total water discharge by quality and destination.                            |                | ✓      |
| EN22  | Total weight of waste by type and disposal method.                           |                | ✓      |
| EN23  | Total number and volume of significant spills.                               |                | ✓      |
| EN24  | Waste deemed hazardous under Basel Convention Annex I, II, III and VIII.     |                | ✓      |
| EN25  | Biodiversity value of water bodies and habitats affected.                    |                | ✓      |
| EN26  | Initiatives to mitigate environmental impacts.                               |                | ✓      |
| EN27  | Packaging materials reclaimed by category.                                   |                | ✓      |
| EN28  | Significant fines and non-monetary sanctions for non-compliance.             |                | ✓      |
| EN29  | Environmental impacts of transporting products and materials.                |                | ✓      |
| EN30  | Total Environmental protection expenditures.                                 |                | ✓      |

**Status:**  
 ✓ fully reported  
 ✓ partially reported  
 ✗ not reported

**AR=** Annual Report  
**WB=** Northrop Grumman website  
[www.northropgrumman.com](http://www.northropgrumman.com)

# GRI CONTENT INDEX

This 2012 Corporate Responsibility Report uses the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI). All of the Standard Disclosures and the degree to which we have been able to report on each are detailed on this page.

| GRI STANDARD DISCLOSURE   | PAGE REFERENCE | STATUS |
|---|----------------|--------|
| <b>SOCIAL PERFORMANCE INDICATORS: LABOR PRACTICE AND DECENT WORK</b>  |                |        |
| LA01  | Forthcoming    | ✓      |
| LA02  |                | ✓      |
| LA03  |                | ✓      |
| LA04  |                | ✓      |
| LA05  |                | ✓      |
| LA06  |                | ✓      |
| LA07  |                | ✓      |
| LA08  |                | ✓      |
| LA09  |                | ✓      |
| LA10  |                | ✓      |
| LA11  |                | ✓      |
| LA12  |                | ✓      |
| LA13  |                | ✓      |
| LA14  |                | ✗      |
| HR01  |                | ✓      |
| HR02  |                | ✓      |
| HR03  |                | ✓      |
| HR04  |                | ✓      |
| HR05  |                | ✓      |
| HR06  |                | ✓      |
| HR07  | ✓              |        |
| HR08  | ✓              |        |
| HR09  | ✓              |        |
| <b>SOCIAL PERFORMANCE INDICATORS: SOCIETY</b>   |                |        |
| S001  |                | ✓      |
| S002  |                | ✓      |
| S003  |                | ✓      |
| S004  |                | ✓      |
| S005  |                | ✓      |
| S006  |                | ✓      |
| S007  |                | ✓      |
| S008  |                | ✓      |
| <p><b>Status:</b></p> <ul style="list-style-type: none"> <li>✓ fully reported</li> <li>✓ partially reported</li> <li>✗ not reported</li> </ul> <p><b>AR=</b> Annual Report<br/> <b>WB=</b> Northrop Grumman website<br/> <a href="http://www.northropgrumman.com">www.northropgrumman.com</a></p> |                |        |





# GRI Application Level Check

Currently in Process.

