2020
Sustainability Report

NORTHROP GRUMMAN

Our Values

Our Values form the foundation of our pioneering culture and commitment to deliver on what we promise. In 2020, we introduced newly stated values to reflect the culture we want to have and define our operating principles as we face an increasingly complex world. Our new Values reaffirm our dedication to our employees, customers, shareholders, suppliers and communities where we serve. They reflect who we are and how we behave, and they articulate what is important to us.

We Do the **Right Thing**

We earn trust, act with ethics, integrity and transparency, treat everyone with respect, value diversity and foster safe and inclusive environments.

We Do What We **Promise**

We own the delivery of results, focused on quality outcomes.

We Commit to **Shared Success**

We work together to focus on the mission and take accountability for the sustainable success of our people, customers, shareholders, suppliers and communities.

We **Pioneer**

With fierce curiosity, dedication and innovation, we seek to solve the world's most challenging problems.
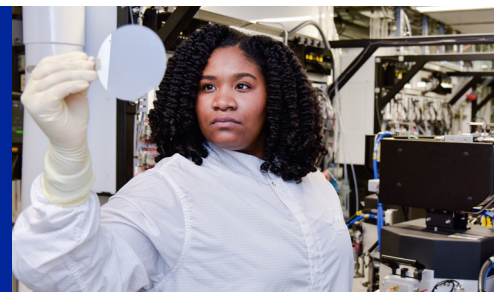
A Message to Our Stakeholders

2020 was an unprecedented year that challenged humanity in unimaginable ways. The COVID-19 pandemic, cries for social justice and multiple natural disasters changed all of our lives and reminded us what matters most—our people, families, communities. It also brought into focus the important role that business plays in supporting our employees, customers, shareholders and society as a whole. Creating a more equitable and sustainable world requires more than just a commitment—it demands taking responsibility and action to create lasting change. With determination and a spirit of innovation, the Northrop Grumman team is up to this challenge.

Our annual Sustainability Report provides transparency into the progress and actions we've taken across our environmental, social and governance (ESG) priorities. Throughout the report, we detail the many aspects of Northrop Grumman's culture and how we are driving towards a better future. We highlight our achievements in 2020, including the actions we took in response to the COVID-19 pandemic and calls for social justice and unity. I am so proud of how we supported our employees, families, communities, suppliers and customers, and created new ways to operate to fulfill our collective mission.

This Sustainability Report reflects our Values—who we are and how we behave. Last year, we restated and reaffirmed those Values, clearly defining what we should expect from our company and from one another in an increasingly complex world. It is through living our Values that we collectively deliver on our strategy and commitments.

I am proud of our progress and the leading sustainability practices that drive our company and help to drive our success. We emphasize our sustainability commitments and ensure accountability through our non-financial ESG performance metrics and share progress quarterly with our employees. Through a robust process of stakeholder engagement, we took a fresh look at our priority ESG topics and developed a materiality matrix that will help inform our sustainability strategies and initiatives.

Our strong culture is founded in ethics, integrity and our enduring commitment to diversity, equity and inclusion. We had a record year of new hires, bringing ever greater diversity, skills and capabilities to our team. Since 2010, we have focused on increasing diversity representation and in 2020, we established our third set of five-year diversity goals.

This report also highlights our commitment to make a difference for the environment and the actions we are taking to protect and preserve our planet. We completed our most recent environmental sustainability goals, marking an important milestone in this journey. We are currently developing updated strategies that will ensure we are taking meaningful actions to conserve natural resources and drive toward a climate resilient future.

We define possible every day at Northrop Grumman, and we are committed to our role in making this world safer, more equitable and sustainable. I join with my team across Northrop Grumman as we take bold steps and forge new paths to deliver on this vision.

Sincerely,

Kathy J. Warden

Kathy J. Warden
Chairman, Chief Executive Officer and President

9%

increase in sales; 2% increase in operating income over 2019

37%

of our domestic subcontractor spending went to small businesses ($4.8 billion)

2020 Highlights

$44.2 MILLION

direct giving to programs from Northrop Grumman, the Northrop Grumman Foundation and our employees

One of DiversityInc's **Top 50 Companies for Diversity** as well as a top company for veterans, people with disabilities, employee resource groups, and executive diversity councils

44%

reduction in greenhouse gas emissions (2010–2020)

20%

reduction in potable water use (2014–2020)

Included as one of Equileap's top 25 companies for **gender equality** on the S&P 500

13,361

external hires

One of the 100 **Best Corporate Citizens** in 2020 (3BL Media)

$1.1 BILLION

in R&D investments

Included on the **Dow Jones Sustainability** North America Index

AA rating from MSCI for environmental, social and governance management and performance

Leadership score of A– on 2020 CDP Climate Change disclosure

Achieved a **perfect score** on the CPA-Zicklin Index of Corporate Political Disclosure and Accountability

Achieved a perfect score on the Corporate Equality Index and designated a "Best Place to Work for **LGBTQ Equality**"

Total employee population

36% PEOPLE OF COLOR

25% WOMEN

For additional highlights, please see Selected Awards and Recognition in the report appendix.

Social Justice and Unity

At Northrop Grumman, we believe that every person has the right to be treated with fairness, dignity and equity.

Northrop Grumman's strong corporate culture of ethics and integrity is strengthened by our commitment to diversity, equity and inclusion (DEI). We value everyone for who they are, for the unique perspectives they bring to our team and for doing the right thing. We know diversity drives innovation and is a key factor in the success of our company. We believe in giving back by addressing critical needs and investing in the communities where we live and work.

As a company, a community and a nation, we stand together in solidarity and unity for one another. In 2020 and more recently, we witnessed senseless acts of violence within our communities. The outcry for change underscored the importance of coming together to take action and support one another, while realizing we still have work to do.

Northrop Grumman does not tolerate racism, discrimination, harassment, retaliation or hateful behavior. We have a responsibility to create a sense of belonging for everyone and to continue on our journey of building an inclusive culture. This last year was a greater call for change and accountability, and the following are some examples of the immediate actions that we took as a company. We are taking additional steps to continue our strong efforts and lead the way throughout our workforce, supplier base and communities. We hope you will join us on this journey.

"We are at our best, in the workplace and in our communities, when we welcome and celebrate our diversity of thought and diverse backgrounds. These factors make us human—all different and all alike at the same time."

Sandra Evers-Manly, Vice President, Global Corporate Responsibility and President, Northrop Grumman Foundation

Leadership Setting the Tone: Through a series of communications, our Executive Leadership Team underscored our commitment to DEI, denounced social injustice and hateful behavior and called for unity and solidarity. Leadership participated in our Social Injustice Stops with Me training to ensure they had the foundation to have courageous conversations with employees. Our Enterprise DEI Leadership Council developed working groups focused on priority topics such as talent acquisition, employee development and supplier diversity.

All Employee Town Hall: Our CEO, Kathy Warden, and members of the Board of Directors Ann Fudge and Mark Welsh held a town hall for all employees to discuss social justice and unity while providing examples of how employees can take action.

Social Justice and Unity Portal: We published and maintain an internal portal with resources on social justice and materials on allyship, microaggressions and how to start a team conversation about race and unity. Many employees and teams participated in our Social Justice 21 Day Challenge.

Listening and Feedback Sessions: More than 350 courageous conversations were held with leaders and employees through webinars, small groups, town halls, panels and one-on-ones. Sessions were hosted by leadership, Human Resources, our Diversity, Equity and Inclusion organization, functional teams throughout the company, Employee Assistance Program/NGCare and employee resource groups.

Talent Management: We assessed our programs and took several actions including establishing a new director of diversity sourcing and revising our mentoring programs to achieve greater diversity. We met with external diversity partners to accelerate greater diversity in recruiting, and we expanded engagement with historically black colleges and universities (HBCUs) and other minority serving institutions.

Community Support: The Northrop Grumman Foundation contributed $1 million to the NAACP Legal Defense and Educational Fund and matched $728,000 of employees' donations. Employees participated in numerous educational forums, panels and other activities.

Ethics OpenLine Investigations: To identify and address issues being raised through the OpenLine, we built on our processes to track, investigate and review all social justice-related allegations and take appropriate actions.

COVID-19 Response

At Northrop Grumman, we believe in defining possible—and 2020 has illustrated that we can do this within the Northrop Grumman walls, working six feet apart and virtually from home. Through strong leadership and our exceptional workforce, we have consistently learned new ways to operate, provided our employees with the tools and resources they need to work safely and effectively and supported our communities in innovative ways. The resilience and pioneering spirit of our employees ensured that our steadfast mission focus never wavered as we continued to deliver to our people, customers and communities.

Northrop Grumman's responses to the wide-ranging challenges the COVID-19 pandemic posed across the many dimensions of our operations are highlighted throughout this report. Specific actions we took include:

- Implementing strict workplace safety protocols to support the mission critical employees who continued working at our facilities, teleworking for those who could perform their work at home and arranging flexible work schedules for employees where possible

- Expanding backup childcare assistance, paid time-off options for those in high-risk categories, telemedicine and telephone counseling to support our employees' financial, physical and mental well-being

- Maintaining the integrity of our global supply chain, supporting small businesses with accelerated payments, providing personalized outreach to vulnerable suppliers and creating a COVID-19 Resource Center website for suppliers

- Recruiting, hiring and on-boarding employees and interns in a virtual setting

- Expanding 401(k) withdrawal and loan options, in alignment with the Coronavirus Aid, Relief and Economic Security Act, to employees experiencing hardship from COVID-19

- Empowering our employees to innovate, design and manufacture critical personal protective equipment

Our employees jumped in to assist each other and our communities. We donated surplus safety goggles, gloves, masks, hand sanitizer and other personal protective equipment (PPE) to healthcare and emergency responders in our communities. 3-D printers in our FabLabs and in employees' homes were used to produce thousands of face shield components and ear protectors that were donated to hospitals. Many took the initiative to sew cloth masks, assemble mask kits, donate hand sanitizer and support healthcare workers and food banks. In total, more than 68,000 items of PPE were donated to emergency response teams and healthcare professionals. Our employees also donated $921,000 for COVID-19 response efforts, which was matched by the Northrop Grumman Foundation.

HIGHLIGHTS

1,500
internships completed virtually
(more than half of our 3,000 interns)

$1.2 billion
payments advanced to suppliers

$6.2 million
pandemic response donations
(including employee giving)

68,000
items of PPE donated

Contents

Our Company

Northrop Grumman is a pioneering company. We solve the toughest problems in space, aeronautics, defense and cyberspace to meet the ever evolving needs of our customers worldwide. Our 97,000 employees are Defining Possible every day using science, technology and engineering to create and deliver advanced systems, products and services.

Our four operating sectors are Aeronautics Systems, Defense Systems, Mission Systems and Space Systems. In December 2020, the company announced an agreement to sell its IT services business to Peraton, an affiliate of Veritas. The sale closed on January 31, 2021.

Aeronautics Systems

Aeronautics Systems is a leader in the design, development, integration and production of autonomous and manned aircraft systems used for battle management, strike and intelligence, surveillance and reconnaissance (ISR). Aeronautics Systems' primary customers are the U.S. Air Force, the U.S. Navy, other U.S. government agencies and international customers.

Defense Systems

Defense Systems is a leader in the design, development, production, integration, sustainment and modernization of weapon and mission systems for U.S. military and civilian agency customers, and a broad range of international customers. Major products and services include integrated battle management systems, weapons systems, mission system sustainment and modernization, information technology services and intelligence operations.

Mission Systems

Mission Systems is a leader in advanced mission solutions and multifunction systems, primarily for the U.S. defense and intelligence community and international customers. Major products and services include C4ISR systems; radar, electro-optical/infrared (EO/IR) and acoustic sensors; electronic warfare systems; advanced communications and network systems; cyber solutions; intelligence processing systems; navigation; and maritime power, propulsion and payload launch systems.

Space Systems

Space Systems is a leader in delivering end-to-end mission solutions through the design, development, integration, production and operation of space, missile defense, launch and strategic missile systems for national security, civil government, commercial and international customers. Major products include satellites and payloads; ground systems; missile defense systems and interceptors; launch vehicles and related propulsion systems; and strategic missiles.

Our Solution Domains

Air

Cyber

Land

Sea
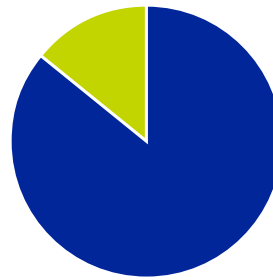
Space

2020 Revenue Breakdown

- **86**% U.S.
- **14**% International

$36.8 billion

in annual sales

97,000

employees

51 million

square feet of floor space

Company Performance

We use a holistic approach to measure the performance of our company and consider the financial and non-financial metrics important to our shareholders, customers and employees. Our financial performance metrics include measures of operating margin dollars and rate, net income growth and cash from operations. Since 2010, we have demonstrated our commitment to strong sustainability governance by incorporating non-financial performance metrics into our annual incentive compensation program. In 2020, we achieved 143% on our Company Performance Factor, reflecting performance that, in the aggregate, exceeded our financial and non-financial goals.

Non-Financial Performance Metrics

- Quality
- Customer Satisfaction
- Engagement and Inclusion
- Operational Efficiency
- Diversity
- Environmental Sustainability
- Safety

Reporting Approach

Through our annual Sustainability Report, our goal is to provide not only the information our stakeholders are seeking regarding our environmental, social and governance (ESG) practices, but also further insight into our priorities and the culture at Northrop Grumman. This report follows the Global Reporting Initiative (GRI) Standards, a voluntary framework widely used to promote transparency in ESG reporting. Our report is guided by the GRI Standards: Core requirements. Our GRI Index, along with our Sustainability Accounting Standards Board (SASB) Index and ESG Performance Data Matrix, are available in the Appendix. Visit our website to read our previous sustainability reports, or to view ESG-related Policies, Statements & Disclosures.

Throughout this report, we use the word "material" consistent with GRI terminology, which states material issues include those that "reflect the organization's significant economic, environmental and social impacts; or substantively influence the assessments and decisions of stakeholders." We do not use the term as defined by the U.S. Securities and Exchange Commission or other securities law.

Materiality Assessment

Conducting a formal materiality assessment is an important process that helps us to identify and prioritize the ESG topics which have the greatest significance to our stakeholders and our business. The materiality assessment results are utilized to help shape Northrop Grumman's sustainability strategies, goals, initiatives, risk management and more. We are committed to ongoing evaluation of emerging ESG issues to validate that our sustainability strategies address the topics that are important to our business and our many stakeholders.

Our Process

In 2020, we conducted a comprehensive refresh of our material ESG topics. The materiality assessment was led by a third party and utilized input from a diverse set of both internal and external stakeholders. Our process involved:

Identification: A list of potential topics was developed within four categories: Environmental, Social, Governance and Product. These were identified through the use of desktop research, third-party ESG analysis software, investor ESG disclosures and leading sustainability frameworks.

Prioritization: We interviewed both internal leaders and external stakeholders to determine the relative importance of our potential topics to both our stakeholders and Northrop Grumman. External discussions provided perspectives from investors, customers and industry partners, suppliers, academia and a diverse set of community organizations.

Finalization: The results from the assessment were reviewed by executive leadership and validated to ensure we had a complete list of topics that aligned with our business and reflected the feedback from our stakeholders.
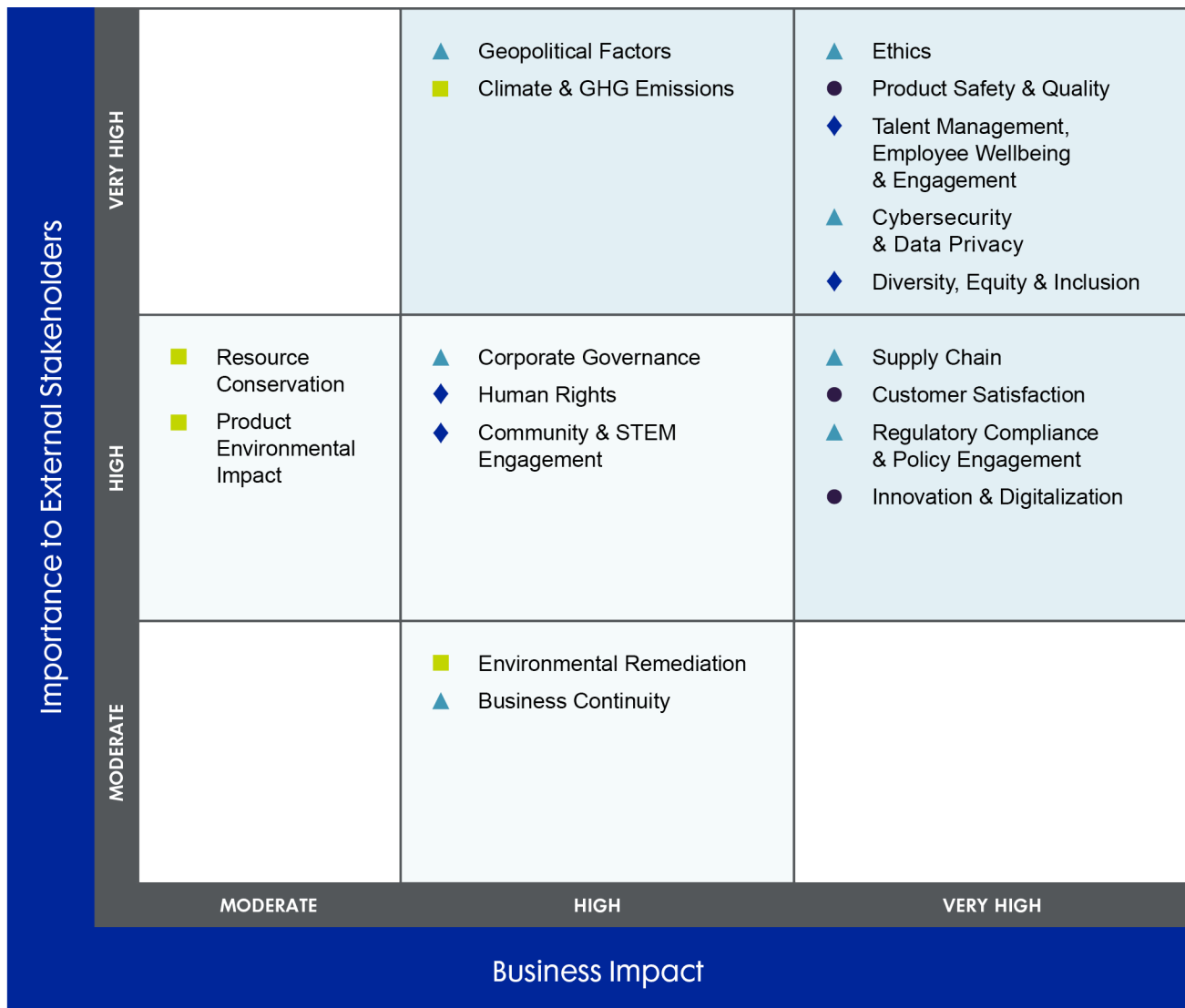
Our Results

Our ESG materiality matrix highlights the topics that are important to both Northrop Grumman and our stakeholders. The assessment identified our most material topics to be:

- Ethics
- Product Safety & Quality
- Talent Management, Employee Wellbeing & Engagement
- Cybersecurity & Data Privacy
- Diversity, Equity & Inclusion

The ESG topics identified within the matrix are viewed as material for the company. However, the prioritization may vary across different locations, operations or business sectors.

Northrop Grumman ESG Materiality Matrix

Importance to External Stakeholders

VERY HIGH

▲ Geopolitical Factors
■ Climate & GHG Emissions

▲ Ethics
● Product Safety & Quality
◆ Talent Management, Employee Wellbeing & Engagement
▲ Cybersecurity & Data Privacy
◆ Diversity, Equity & Inclusion

HIGH

■ Resource Conservation
■ Product Environmental Impact

▲ Corporate Governance
◆ Human Rights
◆ Community & STEM Engagement

▲ Supply Chain
● Customer Satisfaction
▲ Regulatory Compliance & Policy Engagement
● Innovation & Digitalization

MODERATE

■ Environmental Remediation
▲ Business Continuity

| MODERATE | HIGH | VERY HIGH |

Business Impact

■ Environmental ◆ Social ▲ Governance ● Product

Stakeholder Engagement

Our key stakeholders include academia, community, customers, employees, government, industry partners, policymakers, professional associations, shareholders and suppliers. We engage extensively with stakeholder groups through various means to promote understanding and dialogue regarding management of these material issues.

Annually, as part of our Sustainability Report preparation, we convene an External Review Panel to provide feedback on our ESG programs and transparency. This direct input is helpful as we continue to make improvements in our management and disclosure practices.

WHO WE ENGAGE	HOW WE ENGAGE
Community	■ Review programs and initiatives in collaboration with community partners and senior leadership; develop community engagement plans that align with strategic priorities ■ Collaborate with leaders from organizations in our targeted areas, including military and veterans, STEM education and diversity-focused organizations, to understand key issues and needs
Customers	■ Engage customers on establishing program goals and priorities ■ Collaborate with government and industry partners to develop and drive common strategies and standards that support program performance, foster innovation and reduce supply chain risk
Employees	■ Consult and collaborate with employees through a variety of ways, including annual employee survey, Employee Resource Groups, Global and Sector Diversity and Inclusion Committees and all hands and small group forums ■ Offer volunteer opportunities and programs in areas such as mentoring, STEM education, environmental conservation, military and veterans, matching gifts and payroll contributions to charities
Industry Partners	■ Engage with and represent the company on industry associations addressing security stakeholder topics such as critical technology protection, controlled unclassified information, insider threats and personnel security clearance ■ Participate in industry meetings with various nonprofit and government organizations
Shareholders	■ Engage with investment leads at actively managed shareholders ■ Meet regularly with the governance leads of our largest shareholders
Suppliers	■ Host supplier outreach events and offer mentoring programs ■ Sponsor academic, customer and industry activities that support small business growth and development

Governance

We are committed to maintaining the highest standards of corporate governance, ethics, integrity, equity and compliance. We provide our employees and business partners with tools and knowledge to take ownership of our ethical culture and to act with integrity and in compliance with all ethical and legal responsibilities.

Board of Directors

The Board of Directors represents a diverse group of accomplished individuals who bring a wide range of experience to the company. As of December 31, 2020, the Board was composed of 13 directors, 12 of whom are independent. Our shareholders, employees and other stakeholders benefit from our outstanding Board, including the reputation, education, professional background and particular skills and experiences of each of our Board members.

As of December 31, 2020

31%
women on the board

23%
people of color on the board

7.3 years
of average tenure on the board

The Board conducts annually a thorough self-assessment at the full board level, each committee level and at an individual level. These processes are intended to ensure and enhance the effective operation of the Board. The Lead Independent Director or the Chairman of the Board's Governance Committee meets with each non-employee director individually to discuss the results of his or her individual assessment.

Our directors are required to have a significant financial interest in Northrop Grumman through stock ownership to further align their interests with those of the company's shareholders.

The Board generally holds its meetings at company locations. These visits allow directors to interact with a broader group of our executives and employees to gain firsthand insights into our operations.

In 2020, the Board held three of its regularly scheduled meetings in person and two virtually because of the COVID-19 pandemic. The Board also met more frequently by telephone, including in executive session, to receive updates and to provide oversight on the impact of the pandemic and issues of social justice and the company's responses to both.
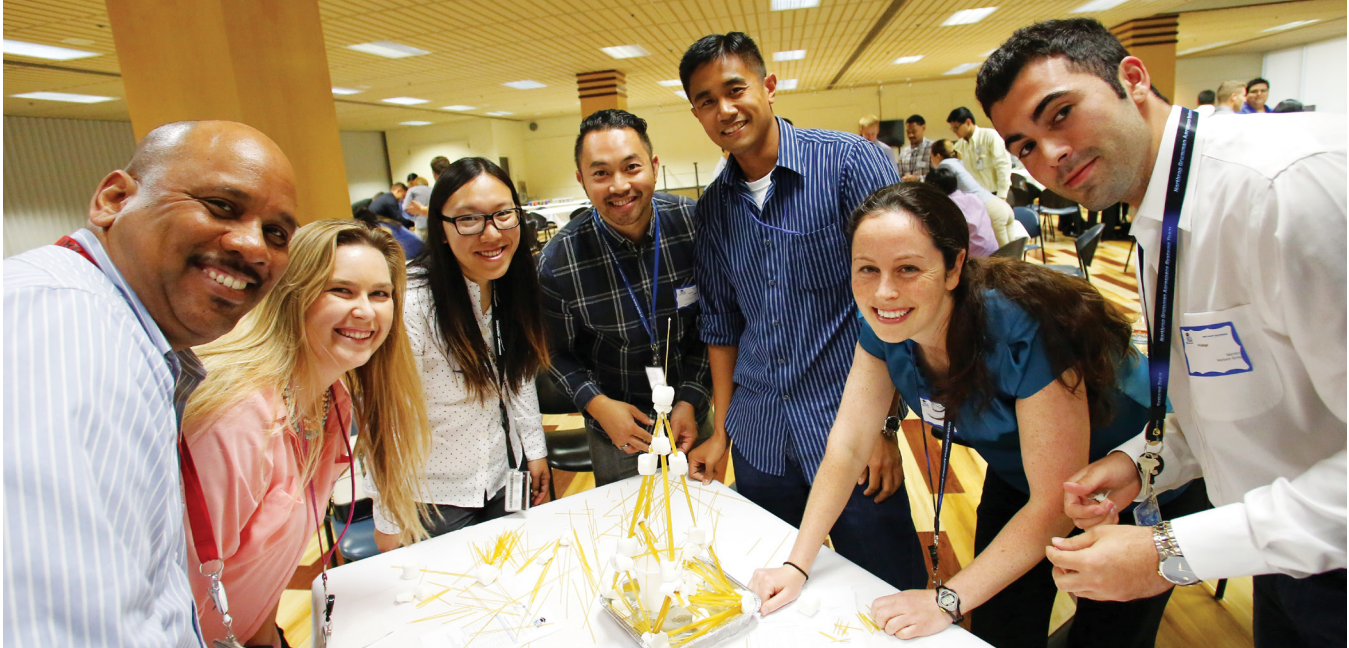
Risk Oversight

The Board is responsible for overseeing our enterprise risk management, and each of our Board committees assists the Board in this role. The Board also receives reports on the activities of our Enterprise Risk Management Council, which seeks to ensure effective mitigation measures are in place for each of the most significant risks to our business.

Sustainability Oversight

Our Board of Directors provides leadership and oversight with respect to environmental, social and governance (ESG) issues and practices, and it receives reports from management on these issues. The full Board regularly receives reports from its committees and management, meets with employees across our business and addresses in depth a full range of issues that fall within our sustainability program.

To enhance accountability for ESG performance, our corporate non-financial performance metrics influence the annual incentive compensation for Northrop Grumman's senior leaders. Please see the performance criteria listed in Company Performance section.

For more information regarding the Board and the roles and responsibilities of its standing committees, please see our committee charters on the Northrop Grumman website and our 2021 Proxy Statement, which also contains information on corporate responsibility and sustainability, human rights, company culture and other topics.

Governance Highlights

- All Board committees comprised entirely of independent directors

- Annual election of all directors

- Lead independent director with significant and clearly defined responsibilities

- Majority voting for directors in uncontested elections with a director resignation policy if a director fails to receive a majority of votes cast "for" his or her election

- Proxy access bylaw provision, providing for eligible shareholders to include their own director nominees in Northrop Grumman's proxy materials

- Annual Board, committee and director self evaluations

- Ability of shareholders to act by written consent

- Ability of shareholders to call a special meeting

- Ability of shareholders to communicate and meet directly with our management and directors

- Annual advisory vote on executive compensation

- Recoupment policy for incentive compensation

- Stock ownership guidelines for directors and executive officers

- Policy prohibiting hedging, pledging and other specified derivative transactions involving Northrop Grumman stock by directors, executive officers and those receiving performance-based compensation

Global Network of Business Conduct Advisors

Northrop Grumman has more than 140 business conduct advisors (BCAs) located at major company sites around the globe. BCAs promote ethics awareness to management and employees by assisting with communications about ethics, company Values, compliance and required training. While employees are encouraged to raise concerns and report issues to their managers, BCAs are an additional resource that can coach colleagues through ethical dilemmas using company policies, procedures, Standards of Business Conduct and the ethical decision making model. BCAs are the liaisons between the business sites, sectors and corporate ethics office. When issues arise, they raise concerns and potential risks to the sector or corporate ethics office.

In addition to monthly BCA meetings, we provide annual workshops to develop and sustain the expertise of our BCA network. In February 2020, we held our global BCA workshop at our Solystic site in Paris, France. BCAs from 11 countries participated in discussions on policies and procedures, country-specific laws and requirements, challenges, best practices and lessons learned. In early March, we had a similar event for U.S.-based BCAs at the corporate office in Falls Church, Virginia.

Ethics

Northrop Grumman's culture of innovation and trust is founded in our company Values. We place a strong focus on conducting ourselves with absolute integrity and living these Values at all times. Our ethical obligations extend to all employees and to Northrop Grumman business partners everywhere in the world. Our ethics program strives to create and sustain an open environment and a "speak up" culture that fosters trust, helps employees achieve goals and improves our performance.

The ethics organization at Northrop Grumman plays an important role in achieving and sustaining our company's ethical culture. We define and implement our ethics strategy and initiatives at the corporate level and have full-time ethics directors and advisors to assist in executing our program at the sector level.

Our company Values, Leadership Behaviors, Standards of Business Conduct and other companywide policies and procedures give our employees a foundation to do what is right. To align with our Values, these documents were refreshed in 2020 and translated into 12 languages to make them more accessible for our stakeholders. Visit our Ethics and Business Conduct webpage for more information on our policies and practices.

Throughout the year, we communicate regularly with employees to reinforce the importance of ethics and integrity to our customers and the success of our company. This includes leadership messages, ethics newsletters and other company-wide communications and brochures covering a variety of ethics issues.

In 2020, we consolidated our internal corporate U.S. and international ethics websites into a single intranet site. Northrop Grumman employees can access ethics-related content from this site, including business conduct advisor contact information, OpenLine metrics, links to ethics policies and procedures, ethics newsletters and annual training content.

ETHICS OWN IT LIVE IT LEAD IT

Our "Speak-Up Culture"

As a proactive approach to sustaining our shared responsibility to maintain and enhance our culture, we strive to ensure our employees feel that it is safe to speak up, share ideas, challenge how things are done and raise concerns without fear of retribution. Through our ethics training, workforce communications and OpenLine posters throughout the workplace, we continually encourage our employees to raise concerns or questions at any time.

Employees can raise concerns and ask questions through their managers, their business conduct advisors, members of our human resource or law department or through the OpenLine reporting system. These reporting channels provide resources for employees, business partners, suppliers and other stakeholders to seek guidance on ethics questions and report possible violations of law or company policy.

Our annual employee engagement survey, managed by a third party, gives employees the opportunity to anonymously provide candid feedback on many aspects of our culture including ethics and integrity. Northrop Grumman's non-retaliation policy—posted online, in our training and in brochures—clearly states our zero tolerance of direct or indirect retaliation against any individual who reports a concern in good faith and based on reasonable grounds.

Ethics Training

We have a robust interactive ethics and compliance training program to sustain our ethical culture, and to ensure and remain informed on our ethical and compliance obligation to our customers. Our program requires both onboarding for new employees and mandatory annual refresher training for all employees.

- The initial onboarding training covers key topics including our Standards of Business Conduct, time and labor charging, business courtesies, conflicts of interest and the revolving door policy. All new hires must complete this training within 30 days of their start date.

- Annual ethics training in 2020 covered our Standards of Business Conduct, conflicts of interest, gifts and gratuities, workplace harassment and the importance of speaking up when suspecting unethical or questionable behavior.

We require our U.S. and many of our international employees to disclose conflicts of interest on an annual basis. All employees must certify that they have read, understand and will comply with the Northrop Grumman Standards of Business Conduct.

More than 99% of our workforce completed ethics training in 2020.

All training materials are accessible on the ethics intranet homepage, with printed training materials available to manufacturing and production employees who do not have access to a work computer. Training content is available in Dutch, Flemish, French, German and Italian.

Northrop Grumman OpenLine

The OpenLine is a toll-free number available 24/7 where Northrop Grumman employees, business partners suppliers and other stakeholders can seek guidance on ethics questions and report suspected violations of laws, regulations and company policy. The OpenLine is administered by an independent third-party. Dedicated OpenLine numbers are available at most of our international locations so employees may speak to a representative in their native language. Web-based reporting is available to all employees in locations where it does not conflict with local laws.

We typically categorize concerns raised through the OpenLine into three categories: inquiries, business conduct allegations and employee relations.

- Inquiries are questions that typically call for a response based on Northrop Grumman policy or procedures. Most inquiries relate to business courtesies and conflicts of interest.

- Business conduct allegations include alleged violations of policy and law. They typically focus on waste, abuse or misuse of company resources, mischarging, quality, manufacturing and safety concerns or accounting matters. The majority of these cases involve allegations of time reporting violations. Our Ethics and Compliance Investigation Team typically addresses these unless they require a referral to the law department.

- Employee relations cases include harassment, retaliation and issues involving employee behavioral misconduct. These cases are usually investigated by a separate team of specialists with specific expertise and training in these areas.

We analyze OpenLine metrics quarterly to identify areas of concern and trends. We provide quarterly briefings to the Corporate Ethics Committee, which is made up of Executive Leadership Team and other senior leaders, external auditors and the Audit Committee of the Board of Directors. The number of inquiries, allegations and actions taken are shared with sector and site leadership and through the ethics website and internal newsletters. Identified trends are addressed through corrective actions, including targeted communications and additional training.

The OpenLine received a number of calls in 2020 related to issues stemming from the COVID-19 pandemic and social justice movement. During this period of increased activity, a team of leaders from ethics, the law department, security and employee relations met multiple times a week to analyze incoming cases to identify and address trending issues in a timely manner.

The company also saw an increase in allegations regarding employees' potentially inappropriate social media postings related to social justice events and public posts which may have expressed forms of discrimination or violence toward individuals or groups based on their race, religion, gender or sexual orientation. We have reaffirmed our existing values in this area and have updated our communications policy to outline clear expectations for our employees' social media posts and external communications.

OpenLine Contacts

We received 2,143 OpenLine contacts in 2020, including phone and web entries, as well as input from our business conduct advisors and human resources. Of these contacts, 642 were categorized as business conduct allegations, an increase of 7.5% from the previous year. Our overall number of inquiries decreased by 34.3%. Many inquiries typically involve business meals and conferences; therefore, it is likely this decrease reflects the shift by many employees to working from home during the year. In 2020, we continued to focus on improving the speed of our case investigations to reduce the overall time to close OpenLine cases. We are proud to report that we achieved a 26% reduction in the investigation cycle time over the previous year.

Thirty-four percent of the contacts categorized as allegations were substantiated, in whole or in part, compared to 36% in the previous year. There were 119 terminations related to OpenLine allegations. This number reflects a three-year upward trend, and demonstrates our continued commitment to take firm action in response to misconduct.

Callers may choose to raise concerns and remain anonymous (not identify themselves) where permitted by local law. In 2020, 41% of our contacts were anonymous compared to 42% in 2019. Generally, it is more difficult to substantiate allegations submitted anonymously, often due to the inability to follow up with the reporter to better understand the facts and circumstances or to gather evidence. In 2020, the substantiation rate for allegations with identified reporters was 39% compared with 26% for allegations that were reported anonymously. We continue our work to create and sustain a culture where employees feel safe to speak up, ask questions and raise issues without fear of retribution or retaliation.

2020 Allegations and Inquiries*

2,143
Total contacts

- **565** Openline Inquiries
- **642** Business Conduct Allegations
- **936** Employee Relations Allegations

*0 allegations and inquiries were related to corruption

Actions Taken as a Result of Substantiated Investigations

Coaching or Counseling	155
Written Warnings	102
Terminations	119
Memo of Expectations	76
Verbal Warning	9
Suspension	6
Demotion	3
Personnel Move	2
TOTAL	472

Responsible Business Practices

Our unwavering commitment to upholding a strong culture of integrity is at the heart of our compliance programs. We demonstrate this commitment through our communications and actions at every level of our business, from our employees to our executive officers and directors. Through a comprehensive set of policies and procedures, we seek to provide clear, written guidance to maintain strong internal controls and communicate standards to which we hold employees accountable. We have internal teams to provide us with the oversight and resources to support our compliance programs. We engage across functions and sectors to draw upon our collective subject matter expertise to anticipate and mitigate risks.

We devote significant resources to evaluating and carefully selecting third parties, including sales representatives, partners, consultants, suppliers and teammates. We require external partners to share our commitment to doing business with the highest levels of ethics and integrity and in compliance with applicable laws and regulations. We also work to improve the efficiency and effectiveness of our compliance programs.

Anti-Corruption Compliance

At Northrop Grumman, our unwavering commitment to anti-corruption compliance is a foundational element that supports our Values and culture. Our comprehensive global anti-corruption compliance program is a critical enabler for us to achieve our objectives of being a trusted supplier for our customers, a reliable performer for our shareholders, and an employer of choice for our talented workforce. We strive to conduct our business consistent with high ethical standards and in full compliance with applicable anti-corruption laws. We compete in the global marketplace based on the quality of our products and services and the value we create for our customers by offering those products and services at a competitive price. We have zero tolerance for bribes, kickbacks or any other illegal business practices and require our employees to ask questions or raise concerns on ethics and compliance issues that they believe may be contrary to our Values. Our Anti-Corruption Compliance webpage provides additional details.

Product Sales

Northrop Gruman remains mindful of the role our products and services play around the world. We have robust procedures to help ensure we do not do business in countries or sell products to customers that are not properly approved by the U.S. government, or, even if permissible, where the risk—to human rights or, more broadly, the reputation of the company—is too significant. Our focus globally is on doing business in a manner consistent with our Values, as well as all applicable laws. We work to incorporate our environmental, social and governance responsibilities and customer support into decision-making, including the products we design, develop, manufacture and sustain. Today, Northrop Grumman does not manufacture cluster munitions, anti-personnel mines, chemical or biological weapons.

Political Involvement

Northrop Grumman engages in the democratic process in a variety of ways. Political activities, including lobbying, are managed by the chief strategy and development officer, who reports directly to the chief executive officer. Our Board of Directors Policy Committee also reviews and monitors the company's political activities.

All political activities are carried out in accordance with applicable laws and are consistent with our company Values and ethical standards. Policies, approval procedures and required disclosures for involvement in political activities are clearly stated and available to employees.

We are proud to have been recognized by the Center for Political Accountability (CPA) and the Zicklin Center for Business Ethics Research for our transparency, policies and strong disclosure practices related to political expenditures.

Northrop Grumman was one of only five companies and the only aerospace and defense company to receive a 100% score in the CPA-Zicklin Index in 2020.

Additional information about the company's political activity practices as well as links to publicly available disclosure reports can be found on our Political Contributions webpage.

Human Rights

Northrop Grumman's Human Rights Policy highlights our deep respect for individuals and human rights and our commitment to treat all of our stakeholders—including our employees, customers, partners, shareholders, suppliers and the communities in which we operate—with dignity, respect and equity. We also partner with our stakeholders to help them do the same. Our policies not only address discrimination, harassment or retaliation, but also cover freedom of association, fair working conditions, ethical procurement practices, health and safety and protection of the environment. In 2020, we updated and strengthened our Human Rights Policy in accordance with our continued commitment to an inclusive and ethical business culture.

We require our partners and suppliers in our worldwide supply chain to share our commitment, including through our Standards of Business Conduct for Suppliers and Other Trading Partners.

Our Human Rights Working Group helps ensure we implement our human rights program effectively and achieve our goals in accordance with our Values. The general counsel or designee leads the Working Group, which consists of senior representatives from Global Corporate Responsibility, Human Resources, Legal, Global Supply Chain, Investor Relations, Contracts, Environmental, Health and Safety, Global Business Office, Government Relations, Communications and our Sectors.

The Board of Directors Policy Committee oversees our commitment to human rights and has specific oversight over our human rights program, including reviewing and making recommendations for enhancements, as appropriate. The Policy Committee receives reports from the chair of the Human Rights Working Group as well as our vice president, Global Corporate Responsibility, on how we are implementing our Human Rights Policy and to address any areas of concern.

Labor Relations

We are committed to upholding best management practices for our employees. Currently, collective bargaining agreements cover approximately 4.4% of Northrop Grumman employees in the U.S. At Northrop Grumman facilities, our employees are free to exercise their rights of freedom of association and collective bargaining. For our employees who are represented by third parties, we work to maintain positive relations with those organizations, and engage in constructive negotiations in reaching collective agreements to benefit our employees, including important worker topics like wages, schedules/hours, job progression, training/education, health and safety, benefits including employee assistance resources and non-discrimination.

Anti-Human Trafficking and Forced Labor

We fully support the elimination of human trafficking and forced labor from the supply chain and do not tolerate either. Our suppliers must comply with all applicable local laws in the country or countries in which they operate, as well as comply with all contractual terms and conditions, which expressly prohibit trafficking in persons and the use of forced labor. We provide our employees and suppliers with targeted training and awareness regarding the global problem of human trafficking and forced labor through online training modules, communication campaigns, newsletters, posters at applicable work sites and postings on Northrop Grumman websites. Both our Anti-Human Trafficking and Slavery Statement and Anti-Trafficking Supplier Letter and Training are publicly available on our corporate website.

Responsible Sourcing of Minerals/Conflict Minerals

We are committed to the responsible sourcing of minerals in our supply chain. We take steps to ensure that suppliers comply with applicable laws and regulations regarding conflict minerals (tin, tantalum, tungsten and gold) and assist us in meeting our obligations under law and regulation. As required, we report to the U.S. Securities and Exchange Commission regarding any known or potential use of conflict minerals. We review our process for opportunities to improve our conflict minerals due diligence and oversight. Please see our Conflict Minerals Statement as well as our 2020 Conflict Minerals Supplier Communication available online.

Business Continuity and Operational Resilience

The events of 2020 brought into sharp focus how important resilience is for a global company. Northrop Grumman already had systems and programs in place so we could quickly evolve and improve to address the challenges of the pandemic, natural disasters and supply chain disruptions.

We require each sector of our business to implement an effective security program that considers relevant risks and vulnerabilities such as emergency response, crisis management, IT disaster recovery and business recovery and resumption. These efforts are intended to enable us to respond effectively to unanticipated events with an emphasis on the protection of people, information, assets and brand as well as continuity of mission.

Our customers recognize our company-wide security compliance framework as an industry best practice, and we have shared our compliance program with sub-contractors and industry peers. Our security program functions to protect and secure our personnel, resources and information and, as required, that of our customers and suppliers. The program also complies with customer, federal, state, local and risk management requirements. We maintain program readiness by ensuring our staff members have expertise in a variety of customer requirements.

In 2020, we strengthened our physical security assets by implementing new standardized equipment, tools and processes across our U.S. locations. We also enhanced our virtual private network to accommodate additional secure traffic as a result of work-from-home orders during the COVID-19 pandemic.

Awards for Industrial Security Achievement

In 2020, the Defense Counterintelligence and Security Agency (DCSA) awarded the James S. Cogswell Outstanding Industrial Security Achievement Awards to Northrop Grumman's facilities in Irving, Texas, and Azusa, California. The two Northrop Grumman honorees are among just 61 facilities selected to receive this prestigious award among a field of approximately 12,500 eligible facilities. To qualify for nomination, a facility must have at a minimum two consecutive superior industrial security review ratings and show a sustained degree of excellence and innovation in its overall security program management, implementation and oversight.

Information Security

The Northrop Grumman Information Security organization protects the company's networks, systems, data, intellectual property and personal information wherever it resides. Successful protection from cyber threats to our products and computing environments is vital to Northrop Grumman's business operations. We conduct vulnerability assessments on systems continuously throughout the year and run random phishing training emails with employees on a regular basis to ensure data protection and integrity. Our comprehensive Information Security framework includes policies and standards governing computing environments. The vice president and chief information security officer reports on information security and cybersecurity matters to the Board of Directors Audit and Risk Committee at least four times a year. Key elements of our information security systems are described below.

- **Information Sharing and Collaboration:** Information sharing and engaging with government, customer, industry and supplier partners help protect our own networks and the overall security of those partners. We participate in multiple cybersecurity information-sharing initiatives to address cyber threats. Northrop Grumman has taken a leading role in the greater Defense Industrial Base community. We actively participate in the National Defense Information Sharing and Analysis Center as well as other government-industry partnerships that share cyber threat information, best practices, awareness and even product enhancements for improved cybersecurity.

- **Technology Investment:** We deploy multi-layered defenses to protect our computing environments and products from cyber threats and we further analyze available data to hunt for threats that are more insidious. We regularly evaluate new technologies to maintain our security posture. We have invested in sufficient storage and computing power to leverage data analytics to detect anomalies and hunt for known threats, which provides greater return for us to reinvest in our cybersecurity.

- **Insider Threat:** To safeguard against the potential theft and misuse of intellectual property and other sensitive information, we maintain an insider threat program designed to identify, assess and, as necessary, address potential risks. Our program evaluates potential risks consistent with industry leading practices, customer requirements and privacy considerations.

- **Third-Party Risk Assessments:** Before hosting sensitive data in a computing environment managed by a third party, we conduct an information security assessment and implement contractual provisions that mandate security protections.

- **Training and Awareness:** Our employees are the first line of defense in information security. We train our employees to identify, avoid and mitigate cyber threats as a crucial element of our information security program. Among the elements of our training and awareness program are mandatory annual training and email spear phishing exercises. Orientation for new employees includes basic Information Security instruction that includes company first-line-of-defense expectations and methods.

Data Privacy

Northrop Grumman is committed to implementing leading data protection standards. We have undertaken a comprehensive approach to data privacy to understand and remain in compliance with global, federal, state and local laws applicable to our business operations. Our Corporate Privacy Office manages our global commitment to respect the personal information of our employees, customers and other stakeholders.

We regularly look to enhance our Privacy Governance Framework through training and awareness initiatives, effective privacy notices, audits and self-assessments, access controls, international and third-party supplier risk assessments, compliant cross-border transfers of data and other risk mitigation measures. In 2020, we updated our Online Privacy Notice to reflect new requirements regarding cross-border data transfers to and from the European Economic Area, the United Kingdom and Switzerland. For more information on our data privacy practices, please see our Online Privacy Notice available on our corporate website.

Lake Charles Hurricane Relief

Business resilience is an important priority at Northrop Grumman. Our business resilience efforts are focused in our Global Assistance Center and our business continuity professionals. Together, they handle the company's business impact analysis, disaster recovery, business recovery and resumption, crisis management, emergency response and global threat monitoring around the world. In 2020, the team saw many crisis events impacting different geographical areas and thousands of Northrop Grumman employees. However, one location that most exemplified our crisis management planning, skills and creativity for response and recovery is our Lake Charles, Louisiana site, which suffered back-to-back damage and disruption due to Hurricanes Laura and Delta.

The Lake Charles site and Enterprise Crisis Management Team used several creative solutions to help our employees recover while also taking the steps needed to quickly bring our Lake Charles facility back online. In the days immediately following the storms, our teams worked together to find temporary shelter and supplies for employees in need. While much of the southeast Louisiana area had residential power outages for weeks, the Lake Charles site quickly created generator-powered workspaces for employees, providing them with an opportunity to stay connected while dealing with the aftermath of the hurricanes.

When Hurricane Laura impacted the city water supply, the recovery team repurposed water jugs from drinking fountains to provide freshwater to affected employees until the procurement team could bring portable showers and water supplies to the site. Another Northrop Grumman site donated office furniture to help reduce the cost of refurnishing the Lake Charles site. As a result of our team's tireless efforts, our Lake Charles facility partially re-opened three weeks after Hurricane Laura, allowing almost 40% of our employees on site to safely return to their jobs.

The Northrop Grumman Foundation offered a matching gift campaign to support communities impacted by the hurricanes and wildfires in the U.S. In addition, we activated the emergency contact center and provided small grants to employees who were impacted by the disasters. More than $500,000 in emergency aid was distributed to nearly 300 employees.

Northrop Grumman received Disaster Recovery Institute International's Award for Excellence in the category of Response and Recovery of the Year. Our business resilience and Lake Charles crisis management teams were recognized for their preparation and response to back-to-back hurricanes, optimizing employee safety and minimizing business disruption.

People and Culture

Our focus on building a world-class culture begins with our commitment to attracting and retaining the best and most diverse talent and providing them with an engaging and supportive workplace that encourages innovation and excellence. As technology evolves and changes the way our business operates, we continue to develop our people with the skills needed to succeed and reach our goals.

97,000
Total Employee Population

84%
Employee Engagement Survey Participation

99%
Employees that Received Performance Reviews

3,000
Total Interns

28,000
Employees in Employee Resource Groups

Employee Demographics

People of Color Population

36%
Total People of Color Population
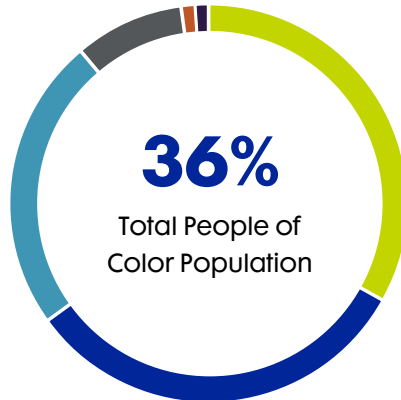
- ■ **12.2%** Hispanic
- ■ **11.3%** Asian
- ■ **8.0%** Black/African American
- ■ **3.3%** Two or More Races
- ■ **0.4%** American Indian/Native American or Alaska Native
- ■ **0.3%** Native Hawaiian/Other Pacific Islander

25%
Female Population

18%
Veteran Population

8%
Persons with Disabilities Population

Total Management Population

27%
Female

27%
People of Color

Vice President and Above Population

32%
Female

18%
People of Color
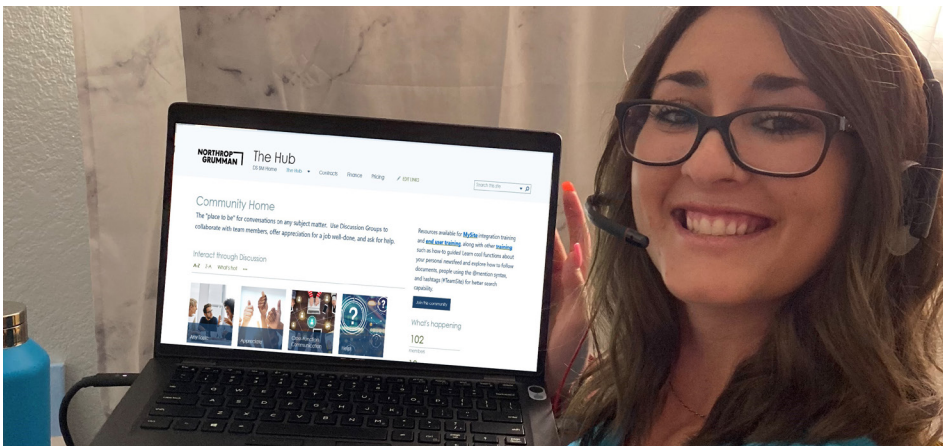
13,361
Total External Hires

3,111
Female External Hires

5,781
People of Color External Hires

2,876
Veteran External Hires

1,519
Persons with Disabilities External Hires

Talent Management

We structure our Talent Management strategy with the whole employee experience in mind. We utilize an employee experience continuum that focuses on key career milestones and helps us align our employee development, engagement and retention efforts with the specific needs of our employees throughout every step of their careers. This holistic approach to talent management results in a better experience for our employees, from recruiting and hiring to retirement.

Pipeline Development

We remain focused on providing the next generation of Northrop Grumman employees with the skills they need to succeed in their careers. We engage with students of all ages, beginning as early as pre-kindergarten. We work closely with colleges and universities to better attract a diverse, highly skilled cohort of candidates, prepared for the future of work. Our efforts focus on engineering- and technology-based programs and initiatives that excite, engage and educate students.

In 2020, we launched new Digital Credentials at 15 universities with the Greater Washington Partnership and Capital Collaborative of Leaders in Academia and Business (CoLAB), preparing more than 700 undergraduate students with the necessary digital skills for entry-level roles. The Digital Credentials program helps academic institutions develop stronger curricula that prepare students and make them more attractive candidates when entering the workforce.

Talent Acquisition

In 2020, we established a dedicated diversity talent acquisition director to lead our recruiting efforts. Going forward, this new function will focus on increasing the diversity of our hires and specifically within executive and technical roles. Examples of our diversity recruiting initiatives are highlighted below.

- We ensure a diverse slate of candidates is considered for all Northrop Grumman leadership opportunities.

- In 2020, we attended, sponsored and hired at 10 diversity conferences, including Black Engineer of the Year, National Society of Black Engineers, Disability:IN, Grace Hopper Celebration, Great Minds in STEM, Society of Asian Scientists, Out and Equal Workplace Summit, Society of Hispanic Engineers, Society of Women Engineers and oSTEM.

- We hosted our third annual HBCU Invitational in 2020, in partnership with our African American Task Group ERG. Through this invitational, we have hired 138 new graduates over the last two years.

- We continue to mature our relationships with historically black colleges and multicultural serving institutions.

- In partnership with the Society of Women Engineers, we launched the iReturn program. This program helps experienced professionals (both men and women) return to the workforce after a two-plus year career break by providing a 12-week returnship to prepare for a full-time career at Northrop Grumman. Since the program launched in 2017, Northrop Grumman has hired 69 participants.

- Through our work with the Business Roundtable Workforce Partnership Initiative, we identify new ways for companies to recruit skilled candidates without the need for specific degrees or credentials.

Internships

Our summer internship program is integral to building our talent pipeline and helping to develop the next generation of Northrop Grumman employees. In addition to charting a possible career path, the summer program provides interns hands-on experience with the opportunity to learn more about our company culture and how to build a network.

While the pandemic upended traditional internship approaches, Northrop Grumman persevered, restructuring our program to a hybrid virtual/in-person model. Like previous years' internship programs, we hosted more than 3,000 interns; unlike ever before, more than half completed their internships virtually.

APPROXIMATELY

70%

of our interns convert to full-time employees every year

96%

of our interns said they would recommend Northrop Grumman to others

On-Boarding

At onset of the COVID-19 pandemic, we developed new techniques to prioritize the health, safety and well-being of both our employees and our new hire candidates. This included adapting our hiring process to virtual interview settings to align with social distancing guidelines. We also redesigned several of our in-person processes to ensure the safe and effective on-boarding of new hires who are required to work on site. As a result of our team's efforts, we are now able to interview, hire and on-board new employees to the company in both an in-person and a virtual environment.

Hiring Military Veterans

Military veterans contribute greatly to our success as a company, and we are proud that 18% of our total workforce are veterans. With 200,000 service members transitioning out of the U.S. military each year, veterans represent an important talent pool for Northrop Grumman. Examples of our efforts to work with and recruit veterans are described below.

- Operation IMPACT is our unique, award-winning program focused on helping severely wounded service members in their transition to civilian careers.

- Our NG6 Partnership, in conjunction with Los Angeles County, assists homeless veterans in identifying employment opportunities and provides funding for housing.

- We began a partnership with Embry Riddle Aeronautical University to provide education and training as a primary hiring partner in their Aviation Maintenance Program that launched in 2020. Embry Riddle is located on over 100 U.S. military bases and provides education and training to more than 15,000 active duty service members.

- The Department of Defense (DoD) SkillBridge program provides transitioning service members with civilian work experience during their final six months in service. In partnership with the Office of the Secretary of Defense, Northrop Grumman offers internships to SkillBridge participants. Since solidifying our partnership, the company has hosted more than 105 interns and hired more than 60 interns as full-time employees.

2020 VETERAN HIRING HIGHLIGHTS

2,876

veterans hired, more than 20% of external hires

108

veterans hired through Operation IMPACT, the most in any calendar year to date

28

homeless veterans hired as a result of the NG6 Partnership program

Employee Development

We design our employee development programs to strengthen employee skills aligned to our current and future business needs, encourage knowledge transfer and support career growth and progression. Company leaders develop and grow talent for the company, including encouraging employees to gain diverse job experiences and to expand knowledge of our products and customers. Company leaders also provide feedback and opportunities to foster employee development.

Employee Engagement

The annual employee survey gives our employees the opportunity to provide feedback, playing into our ongoing efforts to make our company an even better place to work. We solicit feedback on topics including company leadership, work environment, operational efficiency, ethics, engagement, inclusion and career development. Performance is compared to the Global High Performance (GHP) Norm from the survey provider, Willis Towers Watson.

NON-FINANCIAL PERFORMANCE METRICS

Engagement & Inclusion
Perform at or above the GHP Norm

Operational Efficiency
Reach or exceed the GHP Norm

84%

of Northrop Grumman employees completed the annual employee survey, which is 5% more than in 2019. Respondents provided over 67,000 comments.

In 2020, we showed improvement in nine of the 10 main categories, and once again secured our designation as a High Performing Company.

Only 4% of companies earn the designation as a High Performing Company, which is based on financial performance and employee experience. In a year of challenges, this is a particular point of pride as it demonstrates our resilience during extraordinary circumstances, and our support for each other. Northrop Grumman also improved in areas where other companies struggled during the pandemic, including career development and operational efficiency.

Education Assistance

Northrop Grumman encourages employees to continue their education to enhance their skills and knowledge for their current role or future career opportunities across the company. Education Assistance benefits are available to employees who want to pursue a college degree or professional or technical certification that directly aligns with our present and future skills requirements. We also partner with a third-party firm to negotiate discounted tuition rates for our employees at several academic institutions. Northrop Grumman covers up to $10,000 per year for education at any accredited institution with manager approval.

$36,500,000

invested by Northrop Grumman
in 2020 for 6,552 employees

Dollars Invested

- **47%** Graduate degrees
- **33%** Non-degrees
- **20%** Undergraduate degrees

Training and Development

We support our employees in developing their career pathways to benefit each employee and our company as a whole. In 2020, we successfully redesigned several of our in-person training and development programs to meet the virtual needs of our employees during a global pandemic. We transitioned to virtual classrooms, leveraging collaborative software platforms to enable participants to engage in meaningful discussions and practice newly acquired skills. In addition, we tailored program content and resources to emphasize changes to leadership practices during the current pandemic.

Professional and Technical Development: We engaged with subject matter experts to identify and evaluate new development paths for a variety of critical skills across the company. Leveraging our newly launched AI-based platform, My Learning Experience, our training resources combined web-based modules with social interaction, enabling employees to easily share content and connect with subject matter experts across the company. Available training subjects include agile, cybersecurity, model-based systems engineering and data science. Expanding on our AI expertise development, we grew our AI Academy program to cultivate advanced technical resources and trained two cohorts, achieving nearly double the level of employee participation over the previous year.

Executive and Leadership Development: We undergo an annual succession planning process to identify and evaluate our high-potential employees for future leadership roles. We offer these individuals an opportunity to accelerate their development through leadership development cohort programs such as the Executive Leadership Program, Leadership Cohort Program, Women in Leadership and Affinity Forum. Within these programs, participants engage in strategic dialogue with senior leaders, external thought leaders and peers. In 2020, a total of 105 participants completed the Leadership Cohort program, and 69 participants completed our Women in Leadership program.

A critical piece of our leadership development portfolio is our Building the Best Culture program, which helps leaders hone inclusive leadership strategies essential for leading our diverse global workforce. Participants engage in learning exercises designed to sharpen their awareness of unconscious biases and privilege while strengthening their ability to proactively foster inclusion in the workplace.

Manager Development: Our Welcome to Leadership curriculum and New Manager Program equip employees with the information, skills and support they need as they transition into leadership roles. In 2020, 1,583 new managers completed these programs; 1,700 new managers and directors also completed the required Managers Legal and Ethical Obligations training course.

Apprenticeship Development: Through our apprenticeship programs, facilities can hire and train new talent and current employees can gain additional skills. We met our goal of expanding the program in 2020, with 100 registered apprentices across 16 locations and 14 subject areas.

Special Access Program Mentors

Special Access Program employees must follow strict guidance if they need to share information about their job, limiting their ability to discuss their statements of work outside of secure areas. Not being able to speak to classified statements of work in an unclassified environment typically makes mentorship very difficult. A systems engineer who worked in a secure area sought to address the professional development gap that these employees perceived. In partnership with program leaders and human resources, a supplemental mentorship program designed for Special Access Program employees was launched. Dubbed Mentoring Valuable People (MVP), it connects Special Access Program employees with mentors and resources where they work. MVP has garnered the interest of 80 prospective protégés and 53 prospective mentors.

Diversity, Equity and Inclusion

Northrop Grumman has a strong reputation for creating an inclusive, engaging work environment that fosters creativity and innovation among our people. We aim to strengthen diversity, equity and inclusion (DEI) by supporting social justice and unity around the world, and growing equity in the workforce among our women, people of color, LGBTQ+ employees, veterans and employees with disabilities.

We set our DEI strategy at the corporate level in collaboration with the Enterprise DEI Leadership Council (EDEILC). The council serves as Northrop Grumman's governing body over all DEI actions, and assists in developing company-wide strategic direction, objectives and vision for major policies and initiatives. Each of our business sector headquarters has a dedicated DEI expert and a sector-focused Diversity Council comprised of executive leadership, Human Resources vice presidents and working groups which manage priority topics from both a corporate and sector level. Each sector-based Diversity Council works in coordination with the EDEILC and serves as a link between our DEI organization and our employees.

NON-FINANCIAL PERFORMANCE METRICS

Diversity

Representation of females and people of color in all management level positions

Workforce Diversity

Northrop Grumman has implemented formal diversity plans since 2009, and 2020 marked the first year of our latest five-year diversity plan. The Compensation Committee of the Board of Directors reviews the company's progress in workforce diversity at least semi-annually.

DEI Priorities

To promote DEI, we emphasize the following:

- **Diversity Councils**: Lead our strategy from the top and foster a culture of understanding and commitment to DEI.

- **Employee Resource Groups:** Foster a sense of belonging and provide opportunities to actively support a diverse, inclusive workplace aligned with Northrop Grumman Values and goals.

- **Communications and Education:** Reinforce the value proposition of DEI, drive awareness, strengthen engagement and build skills to enhance leadership.

- **Initiatives and Conferences:** Implement programs that motivate all employees as well as lead and participate in diversity focused conferences tailored to support our workforce and our recruiting goals or priorities.

- **External Partnerships:** Champion new ideas and initiatives with our global partners to advance DEI in the workplace and local communities and strengthen our best-in-class programs.

Our focus on DEI also extends throughout our supply chain; please see the Supplier Diversity section in this report.

Employee Resource Groups

Our employee resource groups (ERGs) are an industry-leading example of workforce inclusion and a key part of our DEI strategy. We have a total of 14 ERGs with over 280 chapters across the United States, Australia and the United Kingdom. These volunteer-led groups have continued to grow in popularity over the last decade, and today more than 28,000 employees are active in our ERG network.

We launched our newest ERG, vERGe, in March of 2020, which coincidentally aligned with when many of our employees began working remotely due to the pandemic. With a mission to improve the virtual work experience and support our virtual employees, the vERGe launch event hosted an ergonomics expert that shared best practices for working from home. To learn more about our ERGs, visit our website.

Northrop Grumman is ranked #4 on DiversityInc's Top Companies for ERGs.

Women's Conference

The Northrop Grumman Women's Conference is a special event produced exclusively for Northrop Grumman women to enhance their leadership potential within our company. This year marked the ninth Women's Conference and 400+ women were selected by Northrop Grumman leaders to attend. To date, over 3,000 Northrop Grumman women have attended this bi-annual conference.

Due to COVID-19 restrictions, we transitioned the 2020 conference to a virtual format. The event featured inspirational guest speakers, engaging panels, workshops and wellness activities. As a demonstration of the importance and significance of this conference, attendees heard from our chairman, chief executive officer and president, members of our executive leadership team, our sector presidents, as well as members of our Board of Directors.

EMPLOYEE RESOURCE GROUPS

AATG
AFRICAN-AMERICAN TASK GROUP

ADELANTE

APPN
ASIAN PACIFIC PROFESSIONAL NETWORK

greeNG

NAC
NATIVE AMERICAN CAUCUS

NG FAMILY

NG REACH
RACE, ETHNICITY AND CULTURAL HERITAGE

NGWIN
NORTHROP GRUMMAN WOMEN'S INTERNATIONAL NETWORK

PrIDA
PRIDE IN DIVERSITY ALLIANCE

VERITAS
VETERANS, EMPLOYEES AND RESERVISTS INSPIRED TO ACT AND SERVE

C1NG CONNECT1NG

G2G GENERATION 2 GENERATION

vERGe VIRTUAL ERG

THE VOICE Allies for Disability Inclusion

Communication and Education

Our DEI organization partners with our Communications and Human Resources teams to manage a variety of communication channels and a robust education curriculum to raise DEI awareness among our employees. In 2020, in response to the COVID-19 pandemic, we shifted our efforts to a new virtual platform for hosting workshops, webinars and meetings. We distributed best practices for virtual meetings which benefited thousands of employees across the company and around the world. Through these new virtual resources, we continued to bring our workforce together to strengthen engagement and belonging, as well as demonstrate our commitment to our high-performing and innovative employee culture.

Equal Opportunity and Access

Equality and access are two important elements of our inclusive culture. We ensure equality through our Equal Employment Opportunity (EEO) compliance efforts as a federal contractor, as well as through U.S. and global government reporting related to gender, race/ethnicity, disability status and veteran status. Our EEO compliance team oversees equal opportunity efforts in each aspect of the employment selection process and develops annual affirmative action plans to ensure our programs comply with all EEO laws and regulations.

Our work goes beyond compliance-driven equality and access efforts. We benchmark pay using external salary surveys and utilize a performance-based incentive system.

We are committed to equitable pay for all employees, including for women and people of color, and we review our pay decisions in support of this goal.

As part of our efforts to maximize the inclusion and contributions of all employees, Northrop Grumman manages accommodation and adjustment requests from employees, applicants and visitors through the online ACCOMMODATE system. Employee accommodation requests vary from changes to accessibility and physical environment to deployment of job equipment and modifications to job duties and schedules.

940

individual accommodation requestors

Since 2015, more than 7,200 accommodation requests have been received from employees, applicants and visitors.

In 2020, we received a significant increase in accommodation requests related to the pandemic. Many of these involved support for working from home, such as deploying workstation equipment or services like captioning and sign language interpreters on virtual meeting and event platforms. Our team worked to respond to employee needs while maintaining workforce safety measures.

Adelante Earns National Recognition

The Society of Hispanic Professional Engineers (SHPE) selected Adelante as the Employee Resource Group of the Year in recognition of their technical achievement, dedication and commitment, and efforts to advance Hispanic people in STEM careers. More than 3,000 Northrop Grumman employees participate across 17 chapters of this ERG.

Inclusion and Accessibility Advocacy

Northrop Grumman systems safety engineer, William "Tipper" Thomas, is a fierce advocate, mentor and speaker for accessibility and inclusion in the workplace. During his senior year, William, a star athlete, survived a traumatic shooting at his high school that left him paralyzed. Through the inspiration of his grandmother, he shifted his dream of playing football to becoming an electrical engineer. He is now a champion for accommodations in the workplace and uses his systems safety expertise to conduct rigorous analysis and testing on a variety of Northrop Grumman systems before they reach the customer. Outside of work, William promotes violence prevention and STEM education in the community. In recognition of his efforts, he was invited to speak at the 30th anniversary of the Americans with Disabilities Act "Let the Shameful Wall of Exclusion Come Down" event, sponsored by the George H. W. Bush Foundation.

Employee Health, Safety and Well-Being

People are our most valuable resource, and we work diligently to protect the health, safety and well-being of our employees, customers, visitors and contractors.

Health and Safety

Safety is a core focus in everything we do. Risk and hazard identification, abatement and prevention are key components of Northrop Grumman's safety program. Everyone has a responsibility to identify workplace hazards, and we empower employees to report these hazards without fear of repercussion.

For tasks and operations that contain a significant element of risk, we require employees to conduct Job Hazard Analysis (JHA) reviews. We train our employees to review JHAs and identify hazards, and we instruct them on how to safely perform associated tasks. We empower our employees to stop any job or task they deem as hazardous, without fear of retribution or discipline.

Our environmental, health and safety (EHS) organization verifies the effectiveness of our hazard risk assessment program through periodic self-inspections and audits. The EHS team investigates the root cause of any findings, identifies potential preventive actions and recommends actions to prevent future safety incidents. We utilize internal and external industrial hygienists and other EHS partners to investigate, and reduce or eliminate workplace hazards and potential exposures.

Where possible, we strive to remove risks through engineering and process design changes. When removal of risks are not possible, we identify the hazard and enact measures to ensure protection of employee health and safety. At select locations, medical personnel are on site to treat injuries and illnesses when they occur.

We maintain a Safety Committee, with representation from each operating sector, to develop and manage safety initiatives. The Safety Committee not only represents the diversity of operations in which Northrop Grumman is engaged, but also the breadth of health and safety professionals supporting those operations.

Northrop Grumman strives to proactively prevent employee injuries. We review data on our safety incidents and other related events on a regular basis to identify injury trends by type and by location. The company invests in projects designed to keep employees from being injured.

Occupational health and safety training is integral to ensuring that job tasks can be performed safely. Each employee receives the required training tailored to their job duties, either in person or through an online training system. Supervisors are responsible for ensuring their employees have completed all assigned trainings.

Responding to COVID-19

When the pandemic started, our employees, like everyone, had a lot of questions and concerns. We immediately put new protocols in place and took proactive measures, such as reducing density and increasing separation distance where possible, teleworking, more frequent daily cleaning of our workplaces and disinfecting as needed. We also implemented a detailed communication plan to ensure our employees had the information and resources they needed. Our chairman, CEO and president, Kathy Warden, sent weekly emails to employees so they knew what the company was doing, and directed employees to an online portal to access additional information and resources of support as we all adapted how we worked.

It is important to note that our company performs mission-critical work for our customers, in support of national security and human discovery, requiring some of our employees to work on-site during the pandemic. We created a number of teams, comprised of our health and safety professionals, to work to create safe workspaces and address the specific needs and challenges of employees working on site. Using measures such as social distancing at work sites, staggered shifts, adjusted work areas and appropriate face coverings, we sought to protect the physical health of our employees.

The impact of the pandemic goes beyond the physical health risk. For more information on how we support our employees' emotional and social health, see the discussion of employee well-being.

Ergonomic Risk Reduction

Crane rigging equipment can range in weight from a few ounces up to hundreds of pounds. Switching out rigging equipment multiple times in a single shift can be strenuous, potentially causing ergonomic strain injury. At our site in Sunnyvale, California, one of our crane operators partnered with facilities engineers to create specialized rigging carts that reduce trip hazards and reduce the ergonomic risk associated with the operation.

Health and Safety Performance Summary

We evaluate the effectiveness of our health and safety programs externally, through benchmarking with industry peers and the U.S. Bureau of Labor Statistics. Internally, we determine program effectiveness by conducting trend analyses of our past performance.

In 2020, our rates reflect the impact of COVID-19 on the number of cases and lost workdays. U.S. Occupational Safety and Health Administration requires that we count illnesses contracted in the workplace, as well as the days away.

Safety

Total case rate, defined as the number of OSHA recordable injuries as well as lost work day rate associated with those injuries

Total Case Rate and Days Away Case Rate

TOTAL CASE RATE
2018: 0.85
2019: 0.90
2020: 0.96

DAYS AWAY CASE RATE
2018: 0.25
2019: 0.23
2020: 0.39

FATALITIES
2018: 0
2019: 0
2020: 0
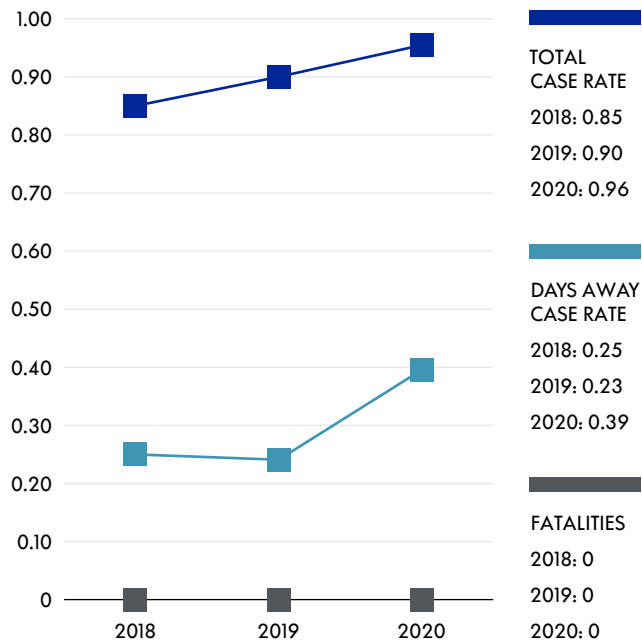
Safety statistics are for U.S. workforce only. For each metric, a lower value indicates better performance.

Lost Work Day Rate

LOST WORK DAY RATE
2018: 10.34
2019: 7.46
2020: 10.70
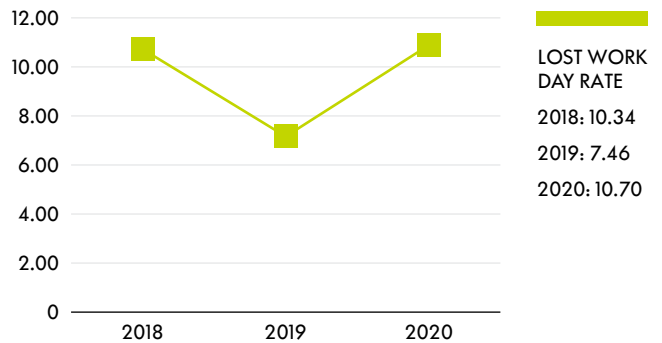
- Lost Work Day Rate: Total number of lost work days per 100 full-time workers

- Total Case Rate: Total recordable injury and illness cases requiring treatment beyond first aid per 100 full-time workers

- Days Away Case Rate: Cases resulting in lost or restricted days or job transfer because of work-related injury and illness per 100 full-time workers

- Fatalities: Death of an employee that results from a work-related incident or exposure

Employee Well-Being and Benefits

We support our employees' well-being in all facets of life. Northrop Grumman's My Well-Being program is designed to help employees and their families improve their physical, emotional, social and financial health. Our strategy focuses on increasing awareness around the program, communicating events to employees and using data analytics to promote, execute and evaluate the program. In 2020, we were able to alter the offering of our benefits to accommodate our employees. We hosted a virtual well-being expo that included live presentations from health and well-being experts, sessions on first aid and healthy eating as well as virtual chair yoga and Wealth Webinar Wednesdays. We partnered with Quest to offer at-home biometric screenings, provided vouchers for flu vaccines instead of hosting them on-site and increased our number of annual telemedicine visits by nearly 50%.

NGCare: Response to the Pandemic

The early days of the pandemic were filled with uncertainty, stress, anxiety and financial worries. NGCare quickly responded by providing more than 40 webinars supporting personal and family resilience. These interactive webinars attended by thousands of employees provided them with a unique opportunity to share stories and coping strategies and to manage their isolation. Some of the topics included navigating change during uncertainty, staying productive while adjusting to new ways of working, dealing with grief and loss, when to reach out for professional help and how to manage stress while practicing self-care.

Our communication about NGCare during the pandemic increased significantly. NGCare is working to stop the stigma around seeking support for mental health. We encourage employees to take advantage of on-line support that includes eight virtual counseling sessions per employee, family member and household members.

Employees receive support for their everyday work-life challenges through personalized resources/referrals, financial and legal consultations. The financial support includes coaching with experts about student loan debt.

Support for Working Parents and Caregivers

Studies show that almost half of all working parents in the United States lost their childcare as a result of COVID-19 pandemic shutdowns. NGCare responded with an innovative solution to support business continuity. By providing employees with reimbursement to seek their own care, employees at 50 locations were able to be at work with the peace of mind knowing their children or adults/elders were safe. This back-up care solution resulted in more than 30,000 saved work days.

NGCare supported multiple family needs with the launch of enhanced family care including discounts for nanny search and placement, tutoring and homework help. To support children of all abilities, the Special Needs program was launched to provide parent coaching, a comprehensive website and webinars focused on topics such as attention issues, autism, Individual Education Programs, childhood stress and communicating with teachers. College Coach provided coaching, webinars and guidance for parents and families navigating the college admissions process in a pandemic.

As the stressors mounted, NGCare hosted 29 webinars for working parents that included working from home with children, explaining the pandemic in an age appropriate manner, children's mental health and maintaining well-being as a parent and caregiver. These webinars gave parents a valuable forum to share lessons learned for virtual schooling, managing work and family and finding childcare solutions.

Products and Innovation

Northrop Grumman applies a mindset of continuous improvement, systems thinking and a commitment to the highest quality standards to deliver an industry-leading portfolio of capabilities and technologies to our customers. Supported by our culture of innovation and pioneering spirit, we continue to drive increased speed and agility across our entire company to redefine what is possible.

Systems Engineering

Northrop Grumman's legacy of strong systems engineering is an essential differentiator for our business. Our engineers incorporate the newest technologies with proven best practices to drive program excellence. Through our commitment to continuous engineering improvement, we capture and share best practices and lessons learned to help us deliver value to our customers faster and in better alignment with their needs.

Our systems thinking culture forms the basis of our strong engineering performance. Northrop Grumman cultivates systems thinking through state of the art tools and centralized, adapted trainings for our engineers. Using systems thinking, Northrop Grumman engineers assess the overall systems impact of each individual decision during each stage of the development process. Systems thinking encourages engineers to incorporate stakeholder needs, mission objectives, operating environment and technology capabilities to design and deliver the best solutions for our customers.

Program Performance

Successful program management is a cornerstone of exceptional program performance at every stage of the product life cycle. Corporate program management provides cross-sector collaboration and support to program managers with the leadership of our cross-sector Enterprise Program Management Leadership Team, which works to drive company-wide initiatives through the various sectors. We work continuously to ensure our project teams have the processes, guidance, training and tools needed to deliver effective products and systems that meet or exceed customer needs.

Delivering quality products to our customers on time and on budget is critical to our continued success. We strive to exceed customer expectations for affordability, product quality and on-time delivery. Our Programs, Quality and Engineering (PQE) Team oversees our performance in these key areas and implements strategic initiatives to support each of our programs.

Customer Satisfaction and Quality Metrics

We hold our people accountable for quality performance excellence, which we believe is vital to customer satisfaction. Our corporate leadership reviews customer satisfaction and quality metrics on a monthly basis to ensure that Northrop Grumman remains mission driven. We may provide additional direct oversight and resources to programs that are not meeting expectations. This includes guidance on developing and executing a "return to green" plan, corporate engagement with partners and suppliers and regular meetings between corporate executives and program leaders. We are proud to report that our quality and customer satisfaction metrics exceeded our targets in 2020.

NON-FINANCIAL PERFORMANCE METRICS

Customer Satisfaction

Customer feedback, including customer generated performance scores, award fees and verbal and written feedback

Quality

Program-specific objectives, including defect rates, process quality, supplier quality, planning quality or other appropriate criteria for program type and phase
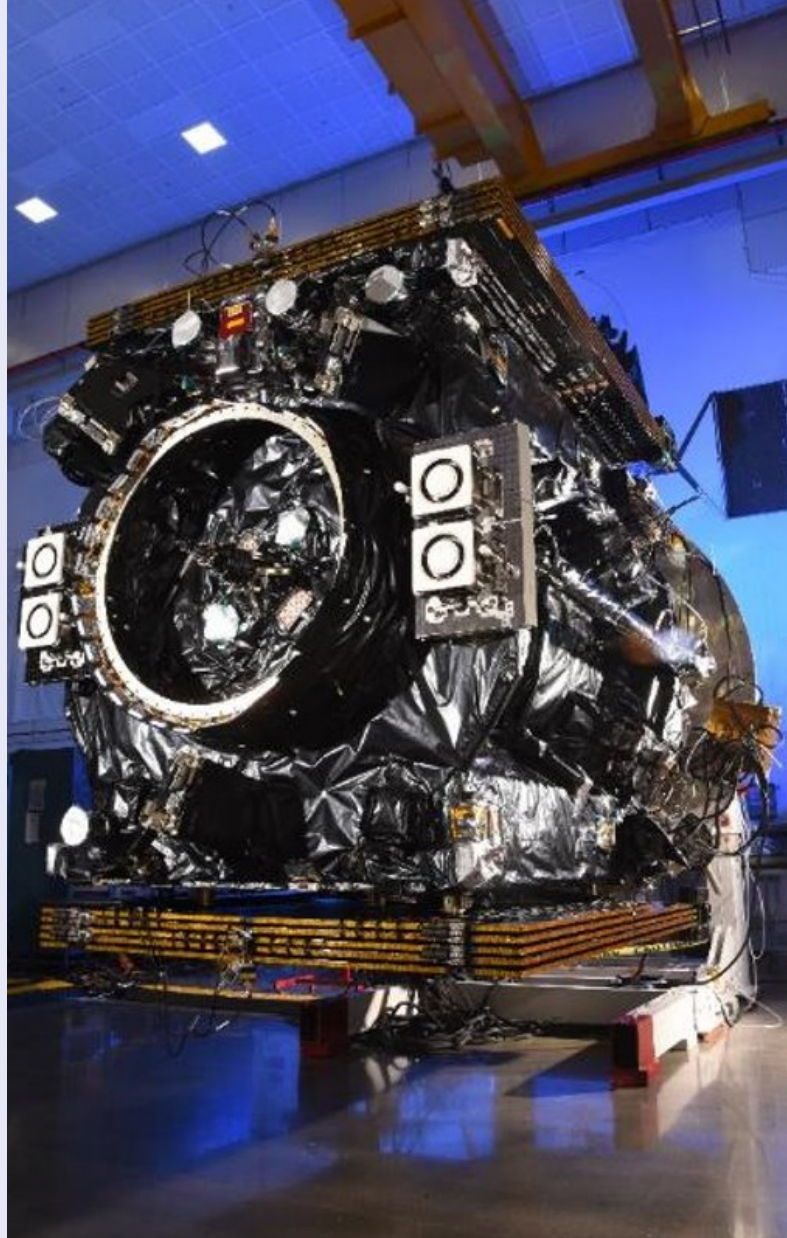
Quality

We provide critical systems and components that must work for our customers every time, without fail. Maintaining the highest possible quality in our products is essential to our continued success, and we have multiple mechanisms in place to promote quality and guarantee we meet or exceed our quality targets across the business.

Systems Engineering Excellence Award for MEV

Northrop Grumman is paving the way for novel and innovative engineering solutions in space. Northrop Grumman created a multi-use vehicle that can extend the life of many commercial satellites that otherwise would be retired due to fuel supply depletion. We demonstrated this capability when our Mission Extension Vehicle-1 (MEV) docked successfully with the IS-901 satellite in February of 2020, while moving at a rate of approximately 7,000 miles per hour.

Northrop Grumman is responsible for the mission architecture, technology maturation and capabilities-driven concept of operations and mission operations execution for the MEV. Systems engineering was a key to the success of this program. For their work, the team was awarded the company's highest systems engineering honor, the annual Simon Ramo Award for Systems Engineering Excellence.

We continually strive to enable a culture focused on quality. Our Quality Management Policy requires each sector and site to implement a Quality Management System (QMS) consistent with either ISO 9001 or the aerospace industry specific AS9100 standards, as appropriate. Leadership and quality professionals from across sectors convene on a quarterly basis. Together, they work to curate our quality management policy, report on quality metrics and share best practices.

In 2020, we updated our corporate and sector Principles and Operating Practices within the QMS. These improvements used employee survey feedback and focused on enabling speed, operational efficiency and agility. Through these updates, we improved our employees' accessibility to and understanding of our corporate policies, requirements and other key content.

Our dedication to quality is demonstrated through our annual Quality Month celebration where we highlight the achievements of employees who have portrayed exemplary leadership in quality. Despite the many challenges of the COVID-19 pandemic, we hosted a safe and successful Quality Symposium with the support of our CEO to highlight the theme of an "Unshakeable Focus on Quality."

Our enduring commitment to quality remained a priority for us throughout 2020 amidst the changes within Northrop Grumman and around the world due to COVID-19. We quickly transferred many of our in-person processes to accommodate a virtual work environment and were able to expand our remote inspections, verify suppliers and authenticate product materials virtually. Some of our customers shifted to accepting products through virtual methods.

Our robust infrastructure enhancements and improvements have increased our capacity from approximately 8,000 daily average users of our online systems to more than 42,000, with a peak of 70,000 users. These new capabilities have allowed our employees to contribute virtually and remain safe. Moreover, they represent lasting improvements that will provide our quality management teams with added flexibility and efficiencies well into the future.

Product Safety

Product safety is paramount to our processes, personnel, manufacturing and the systems we deliver. It is our duty to protect our customers by providing safe, reliable and quality systems from Northrop Grumman. We address product safety through our Quality Management System, corporate systems engineering policy and individual program system safety plans.

We adapt our system safety plans to the individual needs of each program to ensure we address hazard sources, including hardware, software, environmental and organizational. The system safety program also extends to partners and suppliers to help ensure the highest safety performance throughout our value chain.

Our team of experienced safety engineers oversees the system safety program, providing expert knowledge to design teams and applying industry best practices to identify, analyze and manage risk. Safety engineers conduct hazard analyses on programs, track safety risks, ensure compliance with applicable standards and work closely with customer and regulatory safety personnel to communicate and accept any residual risks.

Airworthiness

Airworthiness is a functional characteristic of all Northrop Grumman aviation products. In 2020, we consolidated oversight of this important area under the Northrop Grumman Aeronautics Systems Airworthiness Directorate. The Directorate leads interpretation of regulations, disseminates requirements and guidance, advises programs with airworthiness needs and serves as the official point of contact to regulatory authorities. In 2020, we received one Airworthiness Directive from the Federal Aviation Administration that did not impact any units or programs.

Our Digital and Agile Transformation

Northrop Grumman continues to streamline processes and efficiencies to become more agile to respond to the evolving needs and expectations of our customers. Our Corporate Operations Council (COC) provides the governance strategies to initiate change across the company. The COC consists of vice presidents representing each business sector, with additional collaboration from specific functions. In 2020, our COC increased focus on the digital transformation of our processes across all sectors by standing up a Digital Transformation Enterprise Team to drive the necessary changes company-wide and streamline the culture shift.

At Northrop Grumman, Lean and Six Sigma are the foundational pillars for sustainable performance and continuous improvement. Our Lean-Agile Centers of Excellence continued to build upon the progress made in the previous year in adopting Agile system development techniques and mindsets to reduce bureaucracy and enable continuous improvement in quality throughout our business.

We increased adoption and awareness across all sectors via employee and executive Agile training and targeted communications. Northrop Grumman is ingraining Agile into our culture through the creation of long-term Agile career paths and the establishment of an Agile ecosystem.

Recognizing Our Stand-Out Teams

Northrop Grumman's highest honors, the 2020 Awards for Excellence, spotlighted some of our high-achieving teams:

- **Operational Excellence:** Our COVID-19 support team stepped up and met the immediate requirement to exponentially increase our infrastructure and collaboration capabilities and services to enable a large remote workforce. With an unwavering commitment to the health, safety and well-being of all employees, they implemented a series of technological improvements, network capacity increases and process changes so Northrop Grumman could continue to meet mission requirements.

- **Program Excellence:** In 2020, our Ground Based Strategic Deterrent (GBSD) Support Team led the digital engineering environment portion of the proposal to the U.S. Air Force for the GBSD engineering and manufacturing development contract. The team delivered a model-based solution that paves the way for large-scale IT systems modeling in the future. Using such models, the proposal team could capture all key performance parameters in order to validate the design's ability to meet mission requirements.

Cygnus Program Honors Spaceflight Pioneers

Northrop Grumman has a tradition of naming each Cygnus spacecraft after an individual who has played a pivotal part in the legacy of human spaceflight. The NG-13 Cygnus spacecraft, launched on February 15, 2020, was named after Major Robert Henry Lawrence, Jr., in honor of his role as the first African-American astronaut. Later in the year, NG-14 was launched, named after former astronaut Kalpana Chawla, the first woman of Indian descent to go into space.

Innovation and Research & Development

Innovation is embedded in Northrop Grumman's DNA. We develop and integrate emerging technologies to identify, address and deploy agile solutions for the most complex mission challenges for national and global security.

Research & Development

Northrop Grumman's robust R&D program develops products and services that strengthen U.S. national security and supports our customers' mission demands for fielding emerging technologies. We empower our employees to innovate efficiently and creatively within a culture that encourages exploration and experimentation. Our innovation strategy includes significant R&D investments in cutting edge technologies and mission solutions.

The Northrop Grumman Corporate Technology Council and sector-level technology, strategy and functional offices work together to identify solutions that define success for our customers' most critical missions.

Northrop Grumman is actively shaping a modern digital workforce for global security by continuously fostering new relationships with our university and industry partner to shape the curricula, critical skills, credentials and research applications needed to technologically outpace our nation's adversaries. Northrop Grumman's partnerships create

2020 COMPANY-SPONSORED R&D INVESTMENT

$1.1 billion

3%
of total sales

$11,340
per employee

opportunities for our teams to work closely and exchange ideas with both students and professionals, and serve as potential pipelines for future talent growth at Northrop Grumman.

To reliably cultivate innovation, Northrop Grumman manages R&D through a centralized information system. This R&D management system serves a broad technology community within the company and enhances data driven decision making across our company-wide technology investments. In 2020, we completed the deployment of the R&D management system within each of Northrop Grumman's four business sectors, which allows employees to explore and gain new insights into the nature, direction and technology alignment of Northrop Grumman's complete R&D portfolio.

Natural Disaster Response Technologies

Northrop Grumman and Carnegie Mellon have partnered on an initiative to revolutionize Strategic, Operational and Tactical Emergency Recovery through Innovations in AI (SOTERIA). SOTERIA seeks to address five facets of natural disaster response through applying a range of technologies including video, search, human-machine teaming and AI response. The five SOTERIA projects are all in support of the Department of Defense's Joint Artificial Intelligence Center's National Mission Initiative, specifically, their push for humanitarian aid and disaster relief technologies.

Technology for Conservation

Our Technology for Conservation (T4C) innovation projects are a unique way to build on our emphasis of environmental sustainability, evolve partnerships with conservation organizations and provide new opportunities for employees. These projects bring together the expertise of our engineers with the conservation organizations' knowledge of Earth's ecosystems.

T4C projects enable our employees to apply their talents to new challenges and have a positive impact in their communities. These projects also provide an incubator for employees to develop new skills through short duration, start-to-finish systems development that can potentially be applied to their day-to-day work at Northrop Grumman. Our employees have developed technology solutions that support conservation efforts of polar bears in the Arctic, sea turtles in Florida and oysters in the Chesapeake Bay. For more information, visit our Technology for Conservation website.

Employee Innovation During the Pandemic

During the COVID-19 pandemic, employees quickly came together to help solve some of the immediate challenges being faced by healthcare and frontline workers.

Face Shields for Frontline Workers

When members of Northrop Grumman's Fabrication Laboratories (FabLabs) in California began recognizing a standout need for personal protective equipment for those on the COVID-19 frontlines, they put their engineering skills into service: helping produce face shields through 3-D additive manufacturing. Using designs approved by the National Institutes of Health, the FabLabs team made 3D-printed plastic headbands, procured clear plastic material for the face and assembled the face shields. In total, Northrop Grumman donated more than 16,700 face shields to healthcare workers across Arizona, California, Florida, New York, Texas and Utah. See our webpage for more information and a video link.

Innovative Ventilator Design

Early in the pandemic, the U.S. Department of Defense (DoD) issued a nation-wide design challenge seeking a quickly and easily manufactured ventilator that could support medical response teams treating a surge of COVID-19 patients who need respiratory assistance. Among other requirements, the ventilators had to be able to be assembled and operated by unskilled workers and comprised of readily available consumer parts and materials. When the Northrop Grumman SPARK team learned about this, they immediately created an internal challenge to develop a fully prototyped, inexpensive and easily produced ventilator within days. SPARK is a company-wide initiative to crowdsource ideas and challenges for the development of innovative ideas and projects. Over the course of two and a half business days, 150 employees participated and submitted more than 70 proposals—the largest SPARK challenge participation to date. We submitted our top five designs from the SPARK challenge to the DoD, and one of them, called the FieldVent ventilator solution, was among those that DoD selected for further development. Our team's groundbreaking design is the first of its kind to offer a mass producible ventilator that costs less than $1,000 to build.

Global Supply Chain

We foster strategic relationships with a diverse base of suppliers that support the growth of our global business. Our vision is to be a leader in supply chain management by leveraging our expertise in processes, people and systems to develop capabilities of our suppliers and generate shared value.

Supplier Responsibility

Northrop Grumman relies on a broad base of suppliers to provide high quality raw materials, products and services that meet requirements, on time at a fair and reasonable price. These products and services may include the delivery of sub-assemblies, end-products, development of software and intellectual property and the performance of other direct services we deliver to our customers.

We require each of our suppliers to act in compliance with all applicable laws, regulations and contract terms including adherence to our Standards of Business Conduct for Suppliers and Other Trading Partners. These standards establish requirements, including those related to ethics and integrity, labor and employment practices, human rights protection, sustainability and diversity and inclusion.

In 2020, we updated these standards to incorporate and reflect Northrop Grumman's newly stated corporate Values. To learn more, please see Our Values and the Responsible Business Practices section in this report.

We promote best practices in environmental management within our supply chain function and across our supply base with a focus on improved risk management, performance and transparency. As stated in our Standards of Business Conduct for Suppliers and Other Trading Partners, we expect our suppliers to support Northrop Grumman's commitment to operate as responsible stewards of the environment. Our Enterprise Terms and Conditions include a provision requiring compliance with our Standards of Business Conduct for Suppliers and Other Trading Partners, as a condition of doing business. In the event of a violation, we reserve the right to terminate our contract. These standards apply to suppliers at all tiers and those who work for them.

Additionally, as part of our supplier engagement and communication activities, we provided targeted supplier training, resources and awareness through our online Suppliers Portal. This portal serves as an extension of our commitment to building long-term, mutually beneficial relationships with our suppliers, and serves as a communication and collaboration hub for doing business with Northrop Grumman. We regularly communicate and engage with our suppliers regarding social responsibility and regulatory compliance in areas including, but not limited to: Equal Employment Opportunity, Affirmative Action, Cyber Security, Conflict Minerals, Counterfeit Parts, Anti-Human Trafficking, Harassment and Discrimination and International Trade.

Supporting Our Supply Chain During COVID-19

Northrop Grumman's work depends on a vast ecosystem of suppliers from across the U.S. and internationally. The COVID-19 pandemic has strained many aspects of our supply chain. Our Global Supply Chain organization monitors global conditions to assess risk and take action appropriately, leveraging internal expertise as well as external resources such as the Institute for Supply Management and the Aerospace Industries Association.

We surveyed our suppliers at the start of the pandemic to understand and help them with addressing the challenges they faced in ensuring our continuity of supply. Our efforts focused especially on small businesses, anticipated to be the hardest impacted in the supply base.

To ensure our critical industrial supply chain stays healthy beyond the COVID-19 crisis, we quickly stood up new work processes enabling continuity of operations in support of customer commitments. Examples include:

- Engaged more than 2,500 critical suppliers to provide personalized outreach in order to better understand their challenges and needs, and to develop strategies to provide assistance to our suppliers to help them manage through this crisis. For additional information, please see the highlight stories on Forrest Machining and Orizon Aerostructures.

- Accelerated approximately $1.2 billion in payments in 2020 to support the financial health of our critical defense industrial base suppliers for COVID-19 relief and response. For more information, please see Supporting Our Suppliers through COVID-19 and Suppliers See the Impact of Northrop Grumman's Support.

- Established Suppliers COVID-19 Resource Center webpage in order to provide an external resource to assist our suppliers regarding Northrop Grumman communications, visitor information, U.S. government communications and additional resources.

- Continued to place purchase orders, providing a steady flow of demand for our suppliers products and services.

- Initiated a Crisis Management Team (CMT) approach, engaging our business sectors in monitoring and analyzing the pandemic's impact on goods movement, predicting related challenges and mitigating risks. The CMT is engaged with other functional areas (i.e. Environmental, Health, Safety, and Fire Protection, Security, International Trade Compliance, Law Department), as well as external key transportation service providers including Ryder Logistics, Expeditors International and UPS. The CMT developed and deployed a mitigation framework that focuses on the following five strategic pillars: partnership; infrastructure; forecasting; agility; and communication to keep our cargo moving efficiently, securely and compliantly.

- Continued to engage with our U.S. government partners, suppliers as well as our internal customers and stakeholders to communicate the most current information of the global state of the virus, monitor COVID-19 impacts, assess current and potential risks and develop mitigation strategies as appropriate.

Throughout the rest of the COVID-19 pandemic and beyond, we will continue to monitor and assess the impact on our employees, communities, businesses and supply chain and remain committed to meeting our customer commitments for products, services and solutions.

Transportation and Logistics

Northrop Grumman has been a registered U.S. Environmental Protection Agency SmartWay Transport Partner since 2008, enabling us to increase our visibility into our freight transportation activities and optimize the modes of transportation that we use. SmartWay Carrier Partners account for more than 99% of our freight transportation requirements. Additionally, we have transitioned a significant portion of international shipments from air to surface modes. These initiatives have increased shipment efficiency, decreased fuel use and reduced Scope 3 greenhouse gas emissions.

Supplier Performance

We monitor and assess our current and potential suppliers across a variety of risk and resilience factors that measure their overall capability and capacity to meet current and expected supply chain demands. Our processes require that suppliers comply with applicable industry standards; are not excluded from U.S. Government-approved subcontracting; and uphold our Standards of Business Conduct for Suppliers and Other Trading Partners. To ensure our suppliers are responsible, capable and eligible for contract award, we evaluate supplier performance across several major categories including management, technical, schedule, cost, proposal, mission assurance, security and cyber security, supply chain management and customer satisfaction. We place an emphasis on those suppliers that are most critical to our core business requirements.

Critical supplier criteria include:

- Level of criticality of program
- Past performance
- Dollar value and total spending
- Open purchase order value and volume
- Sole-source versus single-source
- Multiple programs
- Affordability
- Risk/financial health
- Investments, business agreements and small business categories
- Unique technology and strategic partnering

Our supplier rating and evaluation processes help us to identify superior supplier performance to help drive future sourcing decisions and to address potential supplier performance issues, so we can proactively identify and strategically engage with suppliers. Evaluations can occur at several points, including: at initial onboarding; annually through certification reviews; triennially with full scope reassessments; and whenever a business experiences significant changes. These audits help to manage product supply chain risks, and enable the development of corrective action plans as required.

Throughout 2020, we upgraded our data analytics processes to improve our ability to proactively assess our supply chain performance. Future planning includes evaluation and enhancement to our supplier performance processes and tools to further strengthen our supply chain resiliency.

Supplier Diversity

Northrop Grumman has a wide ranging footprint across the globe and collaborates with many suppliers including local companies to support our business objectives. Recognizing that a diverse supply chain is critical to creating value for our customers, the Northrop Grumman Global Supplier Diversity Program (GSDP) focuses on expanding relationships with small and diverse suppliers. These include businesses owned by minorities, women, veterans, service-disabled veterans, people with disabilities, the LGBTQ+ community and businesses located in Historically Underutilized Business Zones (HUBZone Small Businesses). The GSDP also partners with Historically Black Colleges and Universities, Hispanic-Serving Institutions and Tribal Colleges and Universities.

Each year, the GSDP hosts outreach events for members of the small business community, offers mentoring programs and sponsors academic, customer and industry activities that support small and diverse business growth and development. For more information, please see the GSDP webpage.

Northrop Grumman spent more than $13 billion domestically on subcontractors during government fiscal year 2020. A total of $4.8 billion was awarded to small business suppliers, representing 37.2% of our total domestic spend. This marks the 15th consecutive year that Northrop Grumman has exceeded the U.S. government's 23% small business statutory goal. These expenditures represent important investments in local economies where our subcontractors operate.

Diverse Supplier Spend 2018–2020*

SMALL BUSINESS
2018: 37.3%
2019: 38.4%
2020: 37.2%

SMALL DISADVANTAGED BUSINESS
2018: 4.3%
2019: 3.7%
2020: 4.7%

WOMEN-OWNED SMALL BUSINESS
2018: 7.4%
2019: 7.5%
2020: 7.5%

HISTORICALLY UNDERUTILIZED BUSINESS ZONE
2018: 2.4%
2019: 3.4%
2020: 3.3%

VETERAN-OWNED SMALL BUSINESS
2018: 5.0%
2019: 4.7%
2020: 3.9%

SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
2018: 2.4%
2019: 2.0%
2020: 1.9%
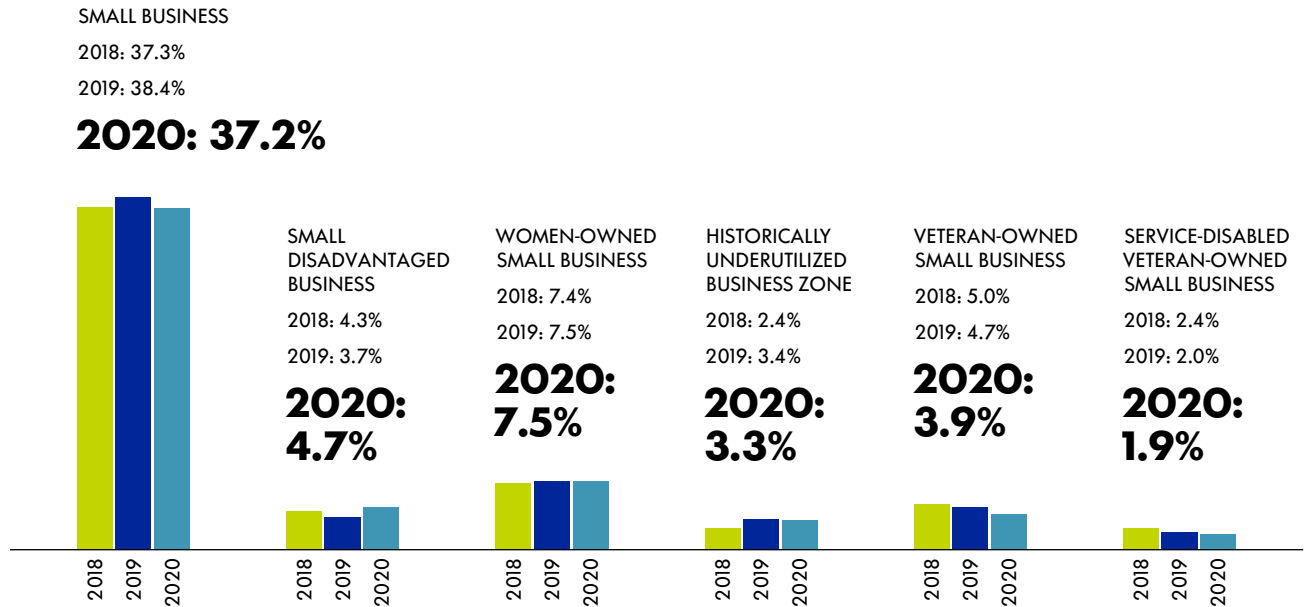
*The data herein is inclusive of operations formerly part of Orbital ATK, beginning with the 2019 government fiscal year.

Supply Chain Security

We proactively engage with our customers and industry partners to identify and define effective security policies without placing excessive burdens on small businesses. Northrop Grumman's robust security program protects and secures our personnel, resources and information, as well as those of our customers and suppliers. Two particular areas of focus continue to be material authenticity and cybersecurity as further discussed below.

Material Authenticity/ Counterfeit Parts

We design our procedures and procurement strategies to detect and prevent counterfeit material from entering our supply chain. Our suppliers are contractually required to maintain full compliance with our counterfeit parts prevention processes. We provide enterprise material authenticity training for our supply chain, quality, engineering, program management and receiving organizations. This training strengthens awareness and provides guidance on prevention, detection and mitigation practices and tools to keep counterfeit parts from entering our supply chain. Additionally, our Counterfeit Material Detection and Avoidance program requires Northrop Grumman to source materials from suppliers confirmed to have appropriate counterfeit prevention processes. If an approved supplier is not available, we apply additional quality control measures to validate the authenticity of parts received.

Supply Chain Cybersecurity

Our supply chain cybersecurity maturity model aligns with the National Institute of Standards and Technology (NIST) Special Publication 800-161, Supply Chain Management Practices for Federal Information Systems & Organizations. This maturity model includes targeted improvements in the areas of Risk Definition, Governance, Impact Levels, Support Process, Supplier Information Security, Supplier Management and Incident Response.

We maintain a public supplier cybersecurity resources website to assist our suppliers in implementing effective information security measures. Refer to our Cybersecurity Resources for Suppliers webpage for additional information.

We continue to collaborate with government and industry partners to develop and drive common strategies and standards to reduce the risk of counterfeit material and cyber attacks. Since 2015, Northrop Grumman has actively participated in the Aerospace Industries Association (AIA) Supplier Management Council Cybersecurity working group, which is a forum for sharing best practices and providing supplier resources and communications regarding management of cyber risk in the supply base. The group also provides feedback to U.S. government policy makers on the effectiveness and feasibility of proposed policy and its impact on small businesses.

Northrop Grumman also actively participates on the Defense Industrial Base Sector Coordinating Council Supply Chain Cyber Task Force aligned with the National Defense Information Sharing and Analysis Center. This task force develops products and guides to assist suppliers in enhancing their cyber security protections, available through the CyberAssist website.
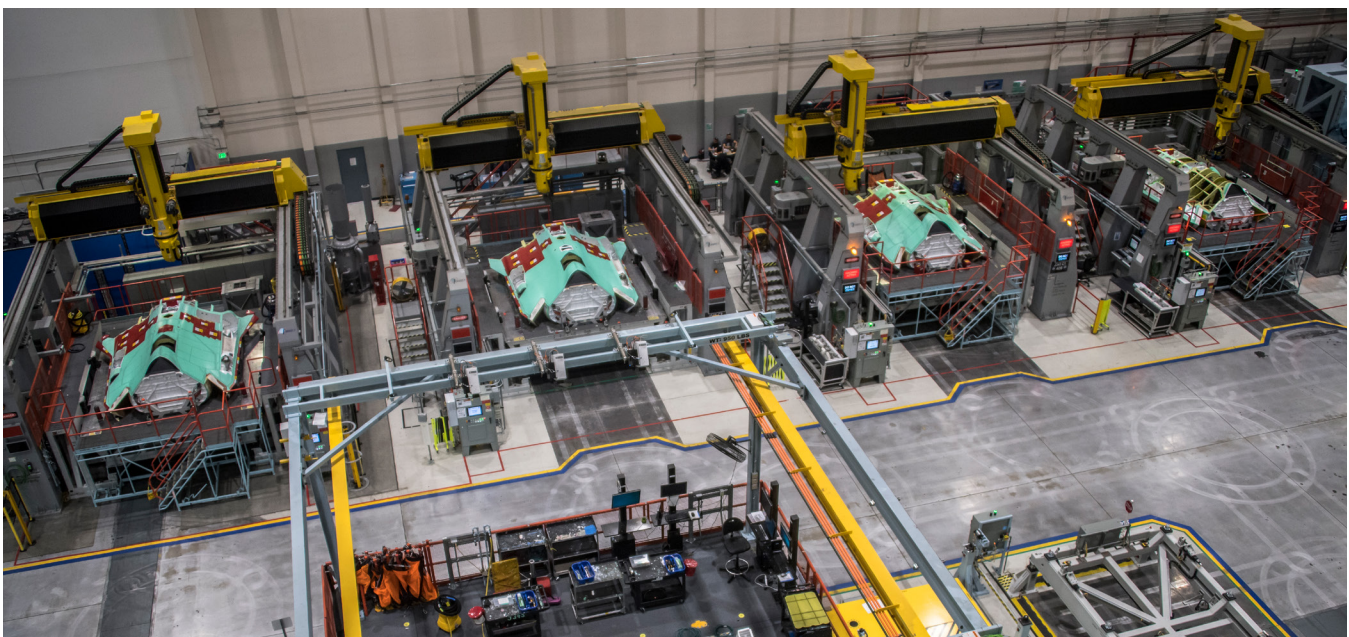
Environment

As a responsible corporate citizen, we emphasize the importance of environmental stewardship both locally and globally by embracing the role we play in protecting the planet. We are committed to addressing today's environmental and climate challenges by implementing sound management systems, minimizing our environmental impact and advancing environmental sustainability throughout our business.

2020 Environmental Sustainability Goals and Performance

Greenhouse Gas Emissions Reduction

2020 GOAL 30% FROM 2010

2020 PERFORMANCE

43.7%

Potable Water Use Reduction

2020 GOAL 20% FROM 2014

2020 PERFORMANCE

20.0%

Solid Waste Diversion

2020 GOAL 70% FROM LANDFILL

2020 PERFORMANCE

69.2%
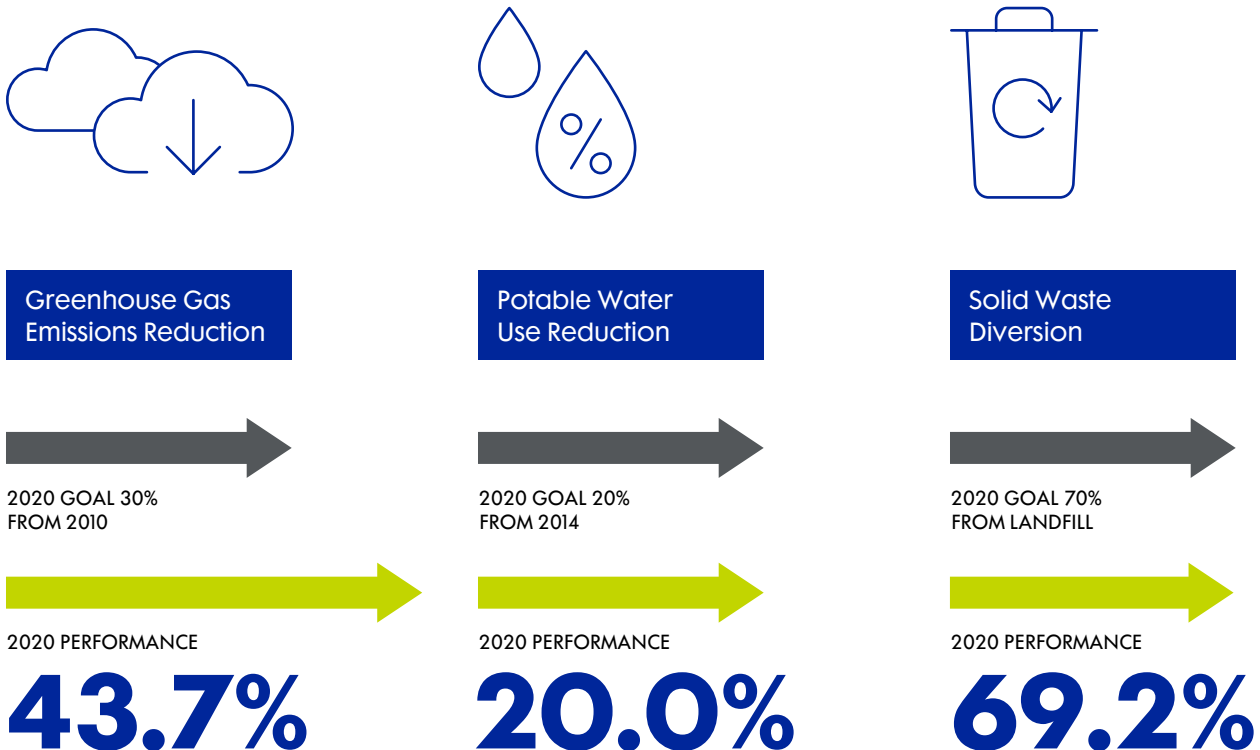
Achieving Our Goals

Northrop Grumman has been on its environmental sustainability journey for over a decade. This year marked the end of our second-generation goals, emphasizing greenhouse gas (GHG) emissions, potable water use and solid waste diversion. Since setting these goals, we have worked across the company to achieve substantive, positive change—reducing our environmental footprint and increasing, for the long term, the efficiency of our operations.

We saw significant progress around our GHG emissions, ultimately reducing our emissions by 43.7% from 2010, well beyond our reduction goal of 30%. We achieved success in this area by coupling strong energy management and efficiency practices with a commitment to implementing impactful emissions reduction projects. Our water use decreased by 20.0% from 2014, achieving our 2020 goal. By completing water assessments at our major manufacturing sites, we gained valuable insight into the water use patterns of our operations. We implemented water conservation projects estimated to save a total of 312 million gallons of water annually for years to come.

We also made strong progress in increasing our solid waste diversion from landfills, achieving a 69.2% diversion rate, and fell just short of our 70% goal. We were challenged by changes in collection methods and waste haulers at some sites, related to COVID-19 in some instances. Nevertheless, we enhanced our understanding of our waste streams and made long-lasting improvements in recycling, composting, reuse and donation practices throughout our operations.

Over the last six years, the company has made significant progress in reducing our environmental footprint. Although we fell short of our solid waste goal, we are encouraged by our accomplishments and our ability to better manage these resources for the long term. We are currently working to develop the next generation of environmental sustainability goals, further driving our company toward a more sustainable future. These new goals will also integrate the former Orbital ATK sites and operations.

ENVIRONMENTAL SUSTAINABILITY PROGRESS

$29.4 MILLION
invested in environmental sustainability projects since 2015

11,000
MTCO$_2$e of carbon offsets purchased annually since 2012

483
tons of food waste composted per year

$8.6 MILLION
annual cost savings from projects completed since 2015

63 MILLION
gallons of water recycled or reused annually

2,400
tons of solid waste diverted per year through projects since 2015

2.2 MILLION
square feet of LEED or ENERGY STAR certified buildings

74%
of water footprint assessed since 2015

312 MILLION
gallons of water saved per year through projects since 2015

243
LED lighting upgrade projects since 2015, reducing 11,100 MTCO$_2$e per year

32,000
MTCO$_2$e of annual GHG emissions reductions through projects since 2015

1.2 MILLION
kilowatt hours of on site renewable electricity used in 2020

Environmental Management

Northrop Grumman is committed to the proactive management of our environmental impacts. Through our Environmental, Health and Safety (EHS) policy, our environmental sustainability goals, and the programs and procedures we maintain, we promote continuous improvement. In 2020, the EHS program had additional responsibility regarding employee health and safety as we worked to control the effects of the pandemic on our employee populations. While, at the sector and site-level, EHS management spent more time implementing safeguards for employees, we remained focused on our environmental compliance obligations.

We maintain a corporate EHS Management System requirement based on the International Organization for Standardization (ISO) 14001 and ISO 45001 standards and implement the system at most of our major manufacturing sites. This systems-based approach to EHS management ensures that facilities across the company recognize the interrelation of our key EHS processes. Currently, 23 of our sites, which make up 24% of our global footprint, maintain an ISO 14001 certification for their Environmental Management System.

Our EHS professionals at all levels of the organization are critical to the implementation and success of our environmental programs. These professionals are responsible for compliance activities including conducting compliance reviews, maintaining EHS management systems and tracking our performance against established goals and targets. This year, travel restrictions and social distancing requirements impacted our ability to conduct planned in-person EHS compliance reviews. In response, we adapted our review processes to fit this new reality and to continue our strong commitment to compliance across the business. Although many in-person, sector-led EHS compliance reviews had to be deferred until 2021, alternative solutions were implemented to support site-level compliance. For example, virtual reviews were piloted to assess sites remotely, we increased touch points with site EHS staff on compliance issues, and we relied on robust site-level inspections as compliance checks for the year. Given the success of these solutions, we are exploring opportunities to leverage these new tools as part of our processes moving forward.

Improve

We focus on continual improvement to promote efficiency, affordability, innovation and forward thinking in our operations.

Prepare

We lay out environmental programs and procedures designed to address compliance obligations and identify opportunities to mitigate environmental impacts.

Environmental Management Program

Evaluate

We rely on our skilled environmental professionals to ensure compliance in day-to-day operations and to evaluate the effectiveness of environmental programs.

Implement

We effectively implement our environmental programs by ensuring employees are equipped with the knowledge, skills and resources needed to perform their roles.

Management of Hazardous Materials

Our EHS team oversees the responsible management, storage and disposal of hazardous materials from our operations. We train our employees on safe management practices and use trusted hazardous waste haulers to dispose of our materials safely. We also conduct regular evaluations of the treatment, storage and disposal facilities we use to confirm they are operating in an environmentally acceptable manner.

Our hazardous material use is influenced by fluctuations in our operations and the material specifications from our customers. Manufacturing activities, research and development, and facility infrastructure projects all contribute to hazardous waste generation. The nature of these diverse inputs make it challenging to establish near-term reduction targets. However, we continue to seek opportunities to reduce hazardous waste generation. For example, our facility in Radford, Virginia eliminated acetone as a major hazardous waste stream by treating and recovering the solvent instead of disposing properly of it offsite. This eliminated 8,500 pounds of hazardous waste annually.

In 2020, hazardous waste disposal total was 1,804 tons, of which 3% (54 tons) was classified as recycled. We registered no reportable spills of hazardous materials in 2020.

Environmental Sustainability

Strong leadership in environmental sustainability and climate change is a priority for Northrop Grumman. In addition to completing our second generation of goals, we link environmental sustainability performance to executive compensation, commit philanthropic giving to the environment and have a thriving environmentally focused employee resource group, greeNG. By managing and reducing our environmental impact, we have improved operational efficiencies and realized long-term cost savings. Our Business Continuity program is helping ensure that company operations and our employees are prepared for climate-related impacts of extreme weather and natural disasters.

NON-FINANCIAL PERFORMANCE METRICS

Environmental Sustainability

Reductions in absolute GHG emissions and potable water consumption, and improvement in solid waste diversion

Data Methodology

We manage our environmental sustainability goals and data for GHG, water and solid waste for Northrop Grumman global facilities where we have operational control. This includes our owned, leased and U.S. government owned/leased facilities, but excludes facilities that were part of the Orbital ATK acquisition. All facilities will be integrated into the company's reporting for these topics beginning in 2021.

We obtain third-party verification certifications for our GHG emissions and potable water use data in alignment with ISO 14064-3, to ensure accuracy of our methods and promote accountability. Please see verification statements on our website.

Total GHG Emissions (metric tons CO_2e)

Chart data — Total GHG Emissions:

Year	Scope 1 & 2	Reduction %
2010	732,736	
2015	565,002	22.9%
2016	522,274	28.7%
2017	500,078	31.8%
2018	488,766	33.3%
2019	474,060	35.3%
2020[1]	412,668	43.7%

2010 BASE YEAR
REDUCTION GOAL 30%

Legend: SCOPE 1 & 2 / REDUCTION
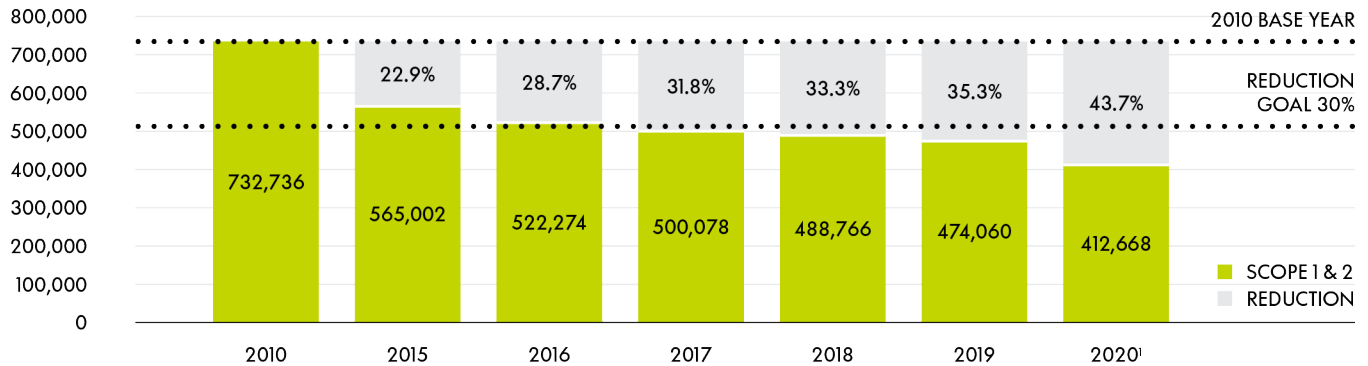
[1] Total emissions represents Scope 1 plus Scope 2 location-based emissions and include 11,000 $MTCO_2e$ of carbon offsets annually from 2012–2020.

GHG Emissions

In 2020, Northrop Grumman remained focused on implementing projects and initiatives that support the company's commitment to reducing our GHG emissions. This year, our total GHG emissions decreased 43.7% from our 2010 base year.

Although we met our GHG emissions target three years ahead of schedule, we continue to drive emissions reductions by investing in high-efficiency equipment, encouraging process improvements that eliminate inefficiencies and capitalizing on opportunities to diversify our energy portfolio with renewable energy. In 2020, we continued to decrease our energy use within our operations and despite the pandemic, we were able to implement all emissions-reduction projects that were planned for the year.

GHG emissions data presented is inclusive of: CO_2, CH_4, N_2O, HFCs, PFCs, SF6 and NF3. We develop our GHG emissions inventories in accordance with The GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance.

For detailed breakouts of our Scope 1 and Scope 2 emissions as well as renewable energy use and generation, please see our ESG Data Performance Matrix. Our 2019 CDP Climate Change response contains detailed data on our GHG emissions (including Scope 3) and energy consumption. The response also includes information about our climate-related risk management approach, in alignment with guidance of the Task Force for Climate Related Financial Disclosures (TCFD).

2020 GHG and Energy Highlights

- Implemented a total of 33 projects estimated to reduce 2,038 $MTCO_2e$ annually.

- Completed 30 LED lighting projects across 15 sites totaling 869 $MTCO_2e$ of GHG savings and reducing electricity use by 2,836,433 kWh.

- A team of engineers at our site in Rolling Meadows, Illinois, developed an innovative design to reduce consumption of solvents in a vapor degreaser resulting in an emissions reduction of 89 $MTCO_2e$.

- We continued our 2012–2020 commitment to purchase 11,000 $MTCO_2e$ of carbon offsets certified by the American Carbon Registry from the Mississippi Valley Reforestation Project.

- Joined the U.S. EPA ENERGY STAR program as a partner.

Energy Conservation

We are committed to energy conservation throughout our operations, and it is a key strategy for achieving our GHG emissions goal. Our Energy Management Committee brings together site representatives from across the company to share best practices and learn about new technologies that could drive further efficiencies. We furthered our commitment by joining the U.S. Environmental Protection Agency's (EPA) ENERGY STAR program as a partner.

While many employees were able to work from home due to COVID-19, a majority of our manufacturing operations were still operational. Our 2020 electricity consumption decreased by 0.9% and natural gas usage decreased by 13.7% from 2019.

Renewable Energy

In 2020, Northrop Grumman took a big step towards diversifying its energy portfolio. We entered into a 15-year virtual power purchase agreement (VPPA) with Dominion Energy that enables the construction of a 62.5 MW solar facility in Orange County, Virginia. Once the system is operational in 2022, this project will increase our renewable energy sourcing from 2% to 10% globally.

Beginning in 2022, 100% of our electricity use in Virginia will be matched with solar generation.

We are proud to add this project to our three existing company-owned on-site solar systems, one power purchase agreement with a landlord-owned system, and multi-year commitment to purchase Renewable Energy Certificates (RECs). In 2020, our renewable energy sources generated 1,227 MWh of electricity and our total renewable energy use was 22,084 MWh.

Turning Wastewater into a Resource

Our Advanced Technology Laboratories (ATL) site near Baltimore, Maryland completed implementation of a wastewater recycling solution that significantly reduced water consumption. At ATL, researchers develop some of the most technologically advanced microelectronics in the world, a process that is not only water intensive, but also requires ultra-pure, deionized water. The project team designed a sophisticated and highly focused water filtration system to ensure wastewater could meet the quality standards. After two years of reviewing technology, bench-scale testing designs and piloting the solution, the system was commissioned and brought online in April 2020.

The ATL project received the Industrial Environmental Association's 2020 Environmental Excellence Award. With the system fully operational, ATL operates at a roughly 50 percent water reuse rate, meaning half of each gallon used is treated and flows back into the water system. This system will save approximately 33 million gallons of potable water annually.

Potable Water Use (million gallons)

Bar chart showing potable water use from 2014 to 2020:
- 2014 (Base Year): 927
- 2015: 883 — 4.7%
- 2016: 870 — 6.1%
- 2017: 871 — 6.0%
- 2018: 881 — 5.0%
- 2019: 832 — 10.2%
- 2020: 742 — 20.0%

REDUCTION GOAL 20%
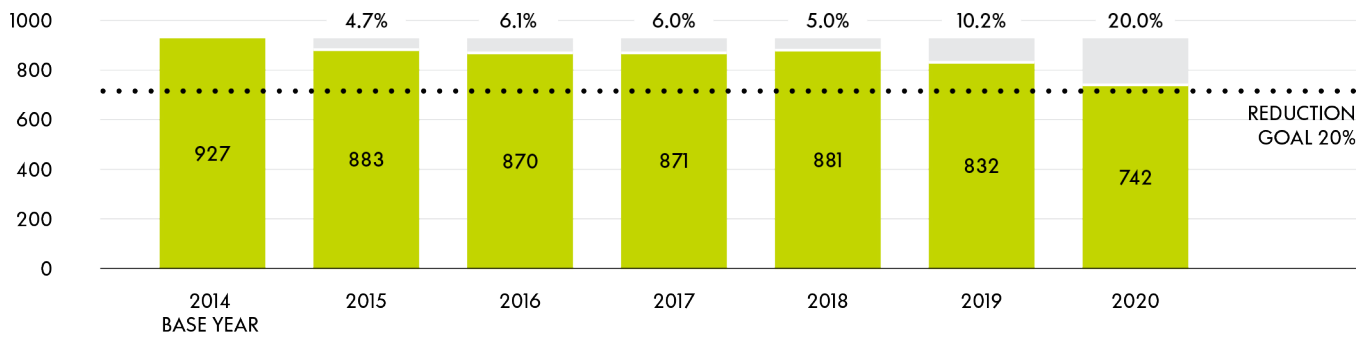
Water Management

Water is a shared resource and we recognize that some regions in which we operate have localized challenges with water availability. We work to better understand our water use patterns and risks. To promote water equity, we seek opportunities to implement conservation projects in water-stressed locations where we have concentrated operations like the southwestern U.S., California and parts of Australia.

From 2015–2020, we reduced water use in California by 26%.

Northrop Grumman facilities withdraw freshwater from municipal supplies and groundwater, and use some surface water through rainwater capture systems. Our operations do not use seawater or produced water sources. We primarily use our water withdrawals to support building evaporative cooling and humidification and manufacturing processes, as well as traditional domestic water uses. We discharge all wastewater from our operations directly to sanitary sewers and follow local regulatory requirements for quality.

New projects implemented in 2020, and additional benefit from projects implemented at year-end 2019, drove us to achieve our goal of 20% reduction from 2014. Our potable water use in 2020 was nearly 10% less than in 2019.

20%
water reduction goal achieved

2020 Water Management Highlights

- We implemented 28 water conservation projects estimated to conserve 66 million gallons of water annually, including 56 million gallons saved from the installation of onsite water reuse systems.

- Installed a wastewater recovery system at our Manhattan Beach, California site to treat and reuse 11 million gallons of wastewater as cooling tower make up.

- Implemented water projects at major sites in California expected to conserve 19 million gallons of water annually.

2020 Withdrawals

SOURCE	GALLONS OF WATER
TOTAL FRESHWATER WITHDRAWALS	
Third-Party, Municipal Supply	597 million
Groundwater	145 million
OTHER WATER WITHDRAWALS (OUT OF SCOPE OF OUR WATER GOAL)	
Third-Party, Municipal Reclaimed Water Supply	30 million
Surface Water, Onsite Rainwater Capture	0.04 million

Solid Waste Diversion Rate from Landfill*

DIVERSION GOAL 70%

- 2014: 52.2%
- 2015: 54.1%
- 2016: 59.9%
- 2017: 62.9%
- 2018: 62.7%
- 2019: 62.4%
- 2020: 69.2%
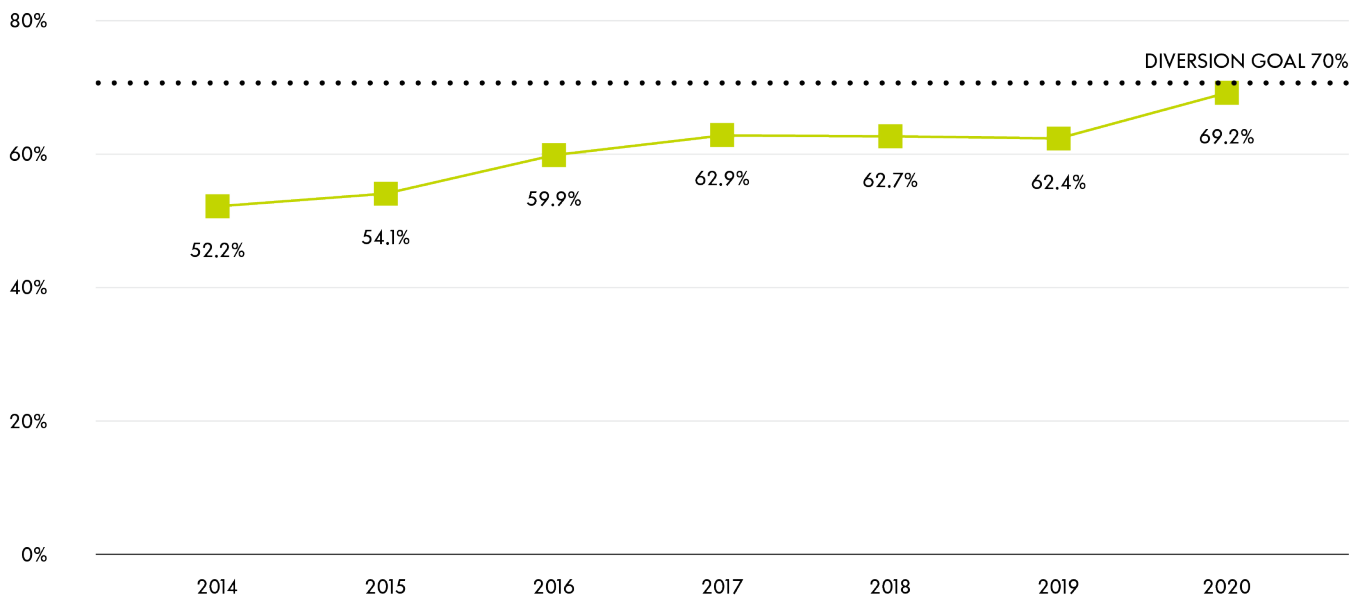
*Diversion rate represents non-hazardous waste and includes waste to energy, but does not include construction and demolition debris.

2020 Waste Diversion Highlights

- Implemented 41 solid waste-diversion projects estimated to divert 556 tons of solid waste annually.

- Engaged employees in educational campaigns such as recycling pilots, enhanced signage and online trainings saving over 80 tons of landfill waste annually.

- Increased composting by an additional 63 tons of organic waste annually through expanding composting at six sites.

- Focused on diverting hard-to-recycle commodities such as soft plastics, garnet and safety gear, avoiding 11 tons of landfill waste annually.

- Increased wood recycling at several sites capturing an additional 59 tons of wood annually.

Solid Waste Diversion

Our solid waste goal has provided us with the opportunity to improve understanding of our waste streams and our waste-generation trends, and to promote long-term sustained waste diversion. Waste assessments, dumpster visualization technology and frequent monitoring provide more precise waste generation data and better insights into opportunities for diversion.

In 2020, we achieved the biggest diversion gain (6.8%) of any single year in our goal period—a major improvement in our performance despite the challenges presented by COVID-19. For example, we saw a lower-than-normal volume of office recycling this year as many of our offices closed temporarily and employees were encouraged to work from home. Better accuracy in waste data and implementation of initiatives in other areas of our operations helped us make significant improvement over 2019 performance. Waste-management efforts in 2020 brought us within 0.8% of achieving our solid waste-diversion goal.

Employee Electric Vehicle Workplace Charging

In 2020, we experienced significant growth in our electric vehicle (EV) Workplace Charging Program in both access to chargers and employee use. This year, we nearly doubled the number of "level 2" charging connections and much of this expansion is attributable to increasing employee demand, which grew by 20% over 2019 to more than 1,600 EV drivers. One of the biggest additions was at our site in Azusa, California, which, in a partnership with the local utility, Southern California Edison, installed 39 new charging stations (66 new connections). We also opened our first ever fleet-only EV charging station in the company at one of our manufacturing sites located in West Virginia.

26
sites

239
connections

1,600
registered EV drivers

Extended Product Life Beyond Disposal

By design, our products are built for a long useful life and many have demonstrated the ability to operate for far longer. What happens, though, when it finally is time for those products to be retired or disposed? In some cases, we have been able to avoid disposal all together by uncovering unique opportunities to give the products new life as educational and training tools that will provide multi-generational benefit.

Retired Gulfstream Donated for Diver Training

We identified an opportunity to repurpose a Gulfstream 4 fuselage from our location in Melbourne, Florida. We donated the fuselage to the St. Johns County Sheriff's Office to use in their new underwater training facility at a local retention pond. The fuselage, which is cleaned and ready for water, will be outfitted by the Sheriff's Office with seat frames and other passenger aircraft features to be used by divers for rescue training exercises.

Solid Rocket Boosters Provided to California Science Center

Retired test and surplus Space Shuttle solid rocket boosters were given new life in 2020, when Northrop Grumman partnered with NASA to donate them to the California Science Center for an exhibit promoting STEM education. The refurbished booster cases were certified to fly up to 19 times, but ultimately, the segments of the assembled boosters flew on a combined 81 Space Shuttle flights. The California Science Center will be the only place in the world to see a complete Space Shuttle System—orbiter, external tank and solid rocket boosters—with all real flight hardware in launch configuration. The hardware was refurbished at our Clearfield, Utah, Refurbishment Center. Prior to donation, the booster casing and components were used as a test bed to assess multiple employee-designed improvement initiatives and support on-the-job skill building.

Environmental Remediation

Most of our remediation projects arise from operations conducted prior to the enactment of current federal, state or local laws and regulations. Northrop Grumman is committed to addressing its environmental remediation obligations safely and efficiently. In 2020, our progress toward completing planned remediation activities for the year was impacted at some sites by regulatory delays due to the COVID-19 pandemic. Scheduling changes were coordinated with the relevant oversight authorities, and we maintained regulatory compliance at our remediation sites. We expect to continue our progress toward meeting our planned obligations in 2021.

We are engaged in extensive remediation activities relating to environmental conditions allegedly resulting from historic operations at the former United States Navy and Grumman facilities in Bethpage, New York. For an update on the activities at Bethpage, please visit our Community Spotlight: Bethpage webpage.

We strive to pursue all cleanup activities in a scientifically sound and technologically proven manner, protecting human health and the environment. We strategically employ innovative technologies as alternatives to traditional resource-intensive remediation practices—minimizing environmental disturbance, reducing energy use and accelerating the resurrection of ecosystems to beneficial use. At the following sites, we employed an innovative and sustainable in-situ bioremediation technology using a natural additive and degrader, emulsified vegetable oil, to address contamination in groundwater. This approach replaced a conventional pump and treat alternative with an extended operational period.

Former Manufacturing Site, Eastern Texas

In eastern Texas, Northrop Grumman uses innovative, sustainable bioremediation practices to manage impacts from oil and mining equipment-manufacturing operations at a 41-acre legacy site. Historical remediation activities at the site included excavation of 54,000 tons of contaminated soils. To address groundwater contamination, we applied our sustainable groundwater alternative remediation approach over a one-acre area, treating 1.7 million gallons of groundwater. Due to the successful application of the bioremediation technology, Northrop Grumman achieved a "No Further Action" determination from the state of Texas.

Former Resistor Manufacturing Site, Southeastern Iowa

Northrop Grumman is addressing soil and groundwater impacts from resistor-manufacturing operations at a seven-acre legacy site in southeastern Iowa. Historical remediation activities at the site included the removal of a 10,000-gallon underground storage tank and excavation of 500 tons of contaminated soils and we used our sustainable groundwater remediation approach over a one-acre area, treating 1.4 million gallons of groundwater.

Former Semiconductor and Defense Manufacturing Site, Northern New Jersey

At a 19-acre legacy site in northern New Jersey, Northrop Grumman is addressing soil and groundwater impacts from semiconductor and defense-manufacturing operations. Historical remediation activities at the site included in-situ treatment of 55,000 tons of contaminated soils, on-site groundwater pump and treat operation over a six-year period. Currently a unique in-situ bioremediation technology, zero-valent iron permeable reactive barrier (ZVI-PRB) has been operating for 10 years to mitigate the migration of groundwater contamination from the site. To further address contamination in groundwater down gradient of the site, we employed our sustainable groundwater remediation approach, treating 1.3 million gallons of groundwater.

Corporate Citizenship

Corporate Citizenship at Northrop Grumman starts with people. Together with our employees, we help prepare students for the future and make the lives of people in our communities better, safer, successful and more resilient.

Charitable Giving and Strategy

We incorporate Northrop Grumman's core values as we develop sustainable, beneficial partnerships with our employees, customers, shareholders and communities. Our philanthropic strategy focuses on increasing science, technology, engineering and math (STEM) educational opportunities for students of all backgrounds; engaging employees through volunteerism; addressing community needs; advancing diversity, equity and inclusion; and enhancing Northrop Grumman's reputation as a valued community partner. These investments are thoughtful in nature and encompass organizations and programs that support education, service members and veterans, health and human services and the environment.

Direct Giving to Charitable Programs
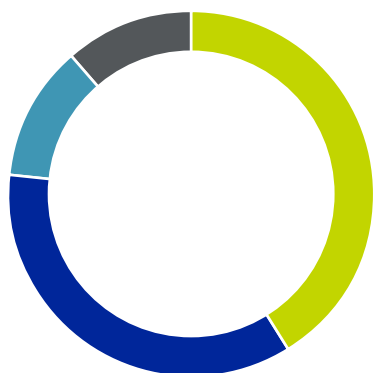
$44,166,267

Direct to programs from Northrop Grumman, the Northrop Grumman Foundation and our employees

- **$18,177,771*** Company
- **$15,735,230** Foundation
- **$5,233,882**** Employees
- **$5,019,384** In-Kind/Non-Cash

*In addition, Northrop Grumman donated $25 million to the Foundation.

**This includes ECHO workplace giving, fundraisers and gifts matched by the Foundation.

Our Corporate Citizenship team identifies critical community issues and works with Northrop Grumman leaders at the local level, as well as employee volunteers, to develop and implement programs and initiatives that align with our business strategy.

2020 brought unprecedented challenges, including calls for social justice, the COVID-19 pandemic and natural disasters, resulting in tremendous need in our neighborhoods and around the globe. The entire company worked diligently to deepen partnerships and establish new ones to support those most impacted in their communities.

Social Justice and Unity

The Northrop Grumman Foundation made a $1 million commitment to the NAACP Legal Defense and Educational Fund. In addition, the Foundation matched $728,000 of employees' donations to nearly 100 unique organizations focused on social justice and equity.

COVID-19

Our commitment in response to the global pandemic exceeded $6 million. The Corporate Citizenship team identified global, national and local organizations that supported healthcare, addressed food insecurity, increased student access to technology and benefited

vulnerable populations. Our contributions delivered critical resources into the hands of nonprofit organizations which desperately needed to serve their ever-expanding client base.

Disaster Relief

To support Northrop Grumman communities impacted by wildfires and hurricanes, Northrop Grumman and the Northrop Grumman Foundation donated nearly $1.5 million towards disaster relief. The Northrop Grumman Foundation created a matching gift campaign to support communities impacted by Hurricanes Laura and Delta, as well as those impacted by the wildfires in the western U.S.

Wildfires ravaged significant portions of Australia and the Western United States throughout 2020, forcing several of our facilities to temporarily close. Northrop Grumman supported the firefighting efforts through monetary contributions to organizations such as Volunteer Fire Brigades Victoria, NSW Wildlife Information, Rescue and Education Service, California Fire Foundation, Parks California and the Red Cross Western Wildfire Fund.

Northrop Grumman provided funds to Habitat for Humanity to aid earthquake relief efforts in Salt Lake City, Utah, to repair homes damaged by the event. We also donated to the World Central Kitchen to provide meals to people forced from their homes by an earthquake in Puerto Rico.

K—12 STEM Education

Northrop Grumman designs and manufactures some of the world's most advanced technologies. To continue to innovate and excel, it is imperative for us to help develop students' abilities and interest in STEM to place them on a path towards workforce readiness. Our giving strategy places top priority on increasing STEM literacy and STEM educational opportunities for students globally. These partnerships focus on engineering- and technology-based initiatives that excite, engage and educate students, with an emphasis on middle school programs. By connecting our employees to volunteer initiatives with these organizations, we make a greater impact.

We also support workforce-relevant professional development for middle school educators, helping them inspire students to explore STEM careers and increase their STEM skills proficiency.

U.N. Sustainable Development Goal #4

By 2030, we aim to help increase math and science proficiency for 350,000 students by providing professional development to middle school educators. Our goal is based on:

- Professional development provided to a minimum of 81 teachers per year

- Teachers stay in the field for two additional years after receiving the professional development, three years total

- Each teacher reaches approximately 100 students per year, 300 over the course of three years

2020 Impact:

- Professional development was provided to 151 new teachers, equating to an estimated 15,100 students

- The 586 teachers who participated in these programs in 2018 (251) and 2019 (335) impacted an additional 58,600 students this year

- In total, 73,700 students were reached

Since 2013, we have helped to increase math and science proficiency for approximately 272,000 students.

The criteria used to evaluate our partnerships that contribute to this goal include intensive training focused on at least one of the following: pedagogy, STEM, Next Generation Science Standards and Common Core Standards. Special consideration is given to programs that require classroom application and post-training implementation. Our current partnerships and programs that meet this criteria include: Code.org teacher professional development, EarthEcho International Expeditions, Great Minds in STEM: Viva Technology, National Science Teaching Association Professional Learning Institute, National World War II Museum: Real World Science, Northrop Grumman Foundation Teachers Academy, Space Foundation: Space Across the Curriculum and U.S. Space and Rocket Center: Space Academy.

APPROXIMATELY

$8 million

contributed by Northrop Grumman and the Northrop Grumman Foundation to STEM-related programs

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Cumulative Number of Students Impacted

ACTUAL

2015: 10,840
2016: 32,340
2017: 70,600
2018: 123,120
2019: 198,480
2020: 272,180

GOAL

2015: 10,840
2016: 32,340
2017: 43,340
2018: 65,340
2019: 98,340
2020: 131,340
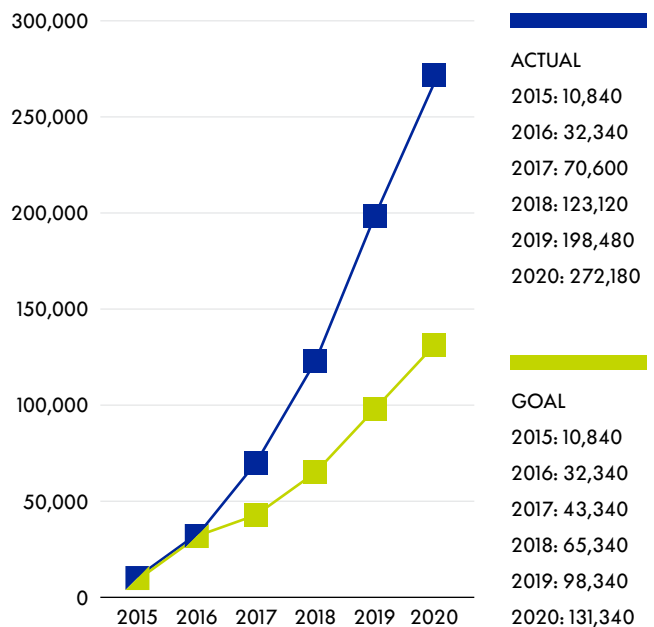
COVID-19 Impact on STEM Programs

Agility and problem solving is at the heart of what we do. We applied these same capabilities to adjust and adapt our STEM programs to comply with public health guidelines. In many cases, programs like VEX Robotics and CyberPatriot pivoted to virtual environments. Others were rescheduled or put on hold until 2021.

We transitioned our traditional in-person Take Your Child to Work Day to a virtual model with engaging webinars featuring Northrop Grumman STEM partners, programs and employees. Thousands of employees and their children participated in a series of webinars over the course of the week on a variety of topics, such as NASA's James Webb Space Telescope; protecting local water resources; tracking and protecting polar bears in the Arctic; sea turtle conservation; and a Q&A session with employees who are former astronauts (see photos above).

The excitement and engagement from these events planted the seed for the creation of additional online STEM education opportunities, which included employee-led webinars available to the public. We also developed an online STEM resources webpage for students, families and educators.

High School Involvement Partnership (HIP) Mentoring Program

The HIP mentoring program helps prepare high school students for STEM pathways and fill diverse workforce needs. With a focus on underserved students, high school juniors and seniors engage with employees who provide business environment exposure and hands-on experience in real-world environments. After students complete their senior year in the program, they have the opportunity to apply for paid internships—a critical step toward workforce readiness.

During the 2019-2020 school year, Northrop Grumman began a two-year pilot to refresh the HIP program to offer it to more communities. In the summer of 2020, eleven HIP participants were hired as interns and nine received and accepted offers to continue their internships.

The second year of the pilot began in the 2020–2021 school year and 183 students participated. These students attended high schools near Northrop Grumman facilities in California, Florida, Maryland, North Dakota and Oklahoma. Due to COVID-19 restrictions, adjustments were made to ensure students could engage virtually with their mentors in the engineering design process. By pivoting to a virtual model, we realized new opportunities to mentor beyond geographical boundaries previously set.

TryEngineering Together

This virtual mentoring program pairs employees with students in grades six through eight who attend Title 1 schools. These students often lack equitable access to STEM professionals and high-quality STEM learning experiences. The virtual nature of the programs allow employees and retirees to easily volunteer without limitations of where they work or live. Despite the challenges of COVID-19, we were able to continue with the program uninterrupted and pair 120 students with mentors.

Alnahda Society

Alnahda works to empower Saudi women economically and socially. They seek to ensure a social environment that values women's participation and preserves their dignity while building their capabilities to reach leadership positions.

This organization in Saudi Arabia provides students social and emotional support to reduce the stress of transitioning to a new, complex learning environment. Alnahda also supplements curriculum through tutoring sessions and teaching life skills to support students' learning abilities. Funding from Northrop Grumman assisted with critical educational technology to help efficiently connect students to virtual educational platforms.

National Society of Black Engineers (NSBE) Summer Engineering Experience for Kids (SEEK)

This evidence-based, engineering immersion program engages underserved students in activities proven to increase aptitude in math, science and the engineering design process. COVID-19 provided unexpected opportunities to expand SEEK volunteer engagement. The camp's new virtual format enabled 100 employees to connect with students across the U.S. and Canada.

During the course of the NSBE SEEK program, students submitted three design challenges. Students created short videos sharing what they had created and how it worked. Northrop Grumman employees reviewed the videos and provided their expertise and feedback to the students about their projects virtually.

Space Foundation

In partnership with the Space Foundation, we piloted an online teacher professional development opportunity for Northrop Grumman Foundation Teachers Academy fellows and educators in the U.K. Implemented as webinars, teachers received supporting pedagogy and learned practical classroom activities and lessons focused on cyber, aeronautics and the James Webb Space Telescope.

Young Astronauts Club of Japan (YAC)

The YAC has over 3,000 members in 140 chapters across Japan. Local chapters work with schools in the community to provide programs and events for students that teach them space education while developing important skills such as teamwork and critical thinking.

Some of their events include the Water Rocket, JAXA Space Camp and USA Space Tour. Through our partnership, we were able to lead a virtual STEM event for high school juniors in Japan focused on astronaut preparation and communication.

Innovation Games-Brevard Public Schools

Northrop Grumman is the presenting sponsor of this annual event for students in grades 4 through 12. Teams of students are challenged to develop and implement solutions to problems using a variety of STEM resources such as quad-drones, underwater remote submersibles, solar powered "drag race" cars and coding. Each challenge event is designed to support creative real world simulation-based inquiry, and authentic task performance. Over 40 employees volunteered to design the competitions and participate in meaningful ways, bridging the connection between students and the STEM workforce.

Chandler Science Spectacular

For close to a decade, the Dream STEAM Team has organized the Chandler Science Spectacular. This annual event was developed to inspire students' interest in science, technology, engineering, art and math. Early in 2020, employees led five activities to teach kids about engineering, and over 100 employees led activities to teach an estimated 4,000 children who attended the event.

Alabama School for Cyber Technology and Engineering

The Northrop Grumman Foundation provided a grant for the first public, tuition-free magnet high school in North Alabama. The school focuses on developing cyber and STEM skills to grow a pipeline of high school graduates capable of advanced placement in post-secondary education and a highly technical workforce. In addition, they work to provide pathways for students to earn certifications while in school. Since the school's opening, leaders from our company have started to engage with the students through virtual career talks.

Smithsonian National Air and Space Museum

Northrop Grumman sponsors the Heritage Family Days, which celebrate diversity in the history of aviation and space exploration. Occurring several times a year, Heritage Family Days highlight the contributions of minority groups in aerospace history, engage families of all backgrounds in STEM learning activities and inspire children to become the next generation of innovators, engineers, pilots and explorers. Each year, employees from our African American Task Group volunteer to conduct hands-on STEM activities during the museum's African American Heritage Day.

Building Diverse Workforce Ready Talent

We are committed to creating education opportunities that foster workforce readiness for those who are underserved in STEM. Examples of some of these programs are listed in the table below.

✔ = APPLIES

PARTNER/PROGRAM	WOMEN/GIRLS	URM[1]	UNDERSERVED[2]	DISABILITIES
Air Force Academy Foundation: STEM and teacher professional development programs			✔	
Air Force Association: CyberPatriot and global cyber programs	✔	✔	✔	
Code.org: Teacher professional development		✔	✔	
DiscoverE: Engineers Week and engineering programs	✔	✔	✔	
Great Minds in STEM: Viva Technology		✔	✔	
Hopewell Fund: TryEngineering Together			✔	
National Center for Women and Information Technology: AspireIT	✔			
National Society of Black Engineers: Summer Engineering Experience for Kids		✔	✔	
New York City Foundation for Computer Science Education: CS4ALL			✔	✔
REC Foundation: VEX Robotics	✔	✔	✔	✔
Teach for America: STEM education		✔	✔	
Teach for All: STEM education	✔		✔	
University of Maryland, Baltimore County Community Program: Center for Minorities in Science and Engineering, diversity in STEM	✔	✔	✔	
U.S. Naval Academy Foundation: STEM programs	✔		✔	
U.S. Space and Rocket Center: Space Camp			✔	✔
Wolf Trap Foundation for the Performing Arts: Institute for Early Learning Through the Arts			✔	

[1]URM: Underrepresented Minorities in STEM: Black, Hispanic and Indigenous Peoples

[2]Underserved: Title 1 school community

Military and Veterans

We take great pride in supporting our veterans, military and their families. Through volunteerism, employee giving and charitable giving, we contribute to programs focused on workforce transition, homelessness, appreciation and services for the wounded, ill and injured.

American Corporate Partners (ACP)

ACP is dedicated to helping post-9/11 veterans and spouses of service members find their next job through one-on-one mentoring, networking and online career advice. Northrop Grumman leaders volunteer to serve as mentors and provide development guidance and networking opportunities. Since 2013, 234 employees have mentored more than 420 ACP protégés.

Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. (HJF)

There are more than 40,000 public sector programs designed to help ease the transition of service members from the military. However, there is often no way of knowing which veterans will benefit from these programs or how the programs made a positive impact on those transitioning. With Northrop Grumman support, HJF led the Veterans Metrics Initiative, a five-year study to research veterans' transition and reintegration experiences to determine the impact of various programs on long-term well-being of veterans. The study was an innovative research partnership that followed a representative sample of nearly 9,600 veterans.

JVS SoCal

JVS SoCal assists veterans by providing career coaching, training in high-growth career sectors, job search skills and placement assistance. The organization's approach is based on service integration and comprehensive case management, recognizing that veterans may have multiple barriers to employment and require multiple services and strategies. Northrop Grumman funding supported COVID-19 related emergency needs and technology to assist with virtual and distance learning platforms.

National Native American Veterans Memorial

The National Museum of the American Indian opened the new National Native American Veterans Memorial (pictured below) on November 11, 2020, honoring our country's Native American veterans. The memorial, which sits on the grounds of the museum, was commissioned by Congress to give "all Americans the opportunity to learn of the proud and courageous tradition of service of Native Americans in the Armed Forces of the United States."

Combat Stress

Combat Stress is the U.K.'s leading charity addressing veterans' mental health. For over a century, they've provided specialist treatment to former servicemen and women dealing with complex mental health issues like post-traumatic stress, anxiety and depression. Northrop Grumman's funding enabled the organization to enhance and expand their digital capabilities to engage with veterans even when in-person visits were not possible.

Arcadia Food

As many farmers age out of the workforce, there is a need for 700,000 new farmers over the next 20 years. Many veterans are looking for meaningful work that allows them to continue their public service. Northrop Grumman supports Arcadia's year-long training program for veterans at Arcadia Farm, which focuses on cultivating local food systems that prioritize health, equity and sustainability.

Hunger Action Month

In support of Hunger Action Month, we pivoted our usual in-person volunteering to offer virtual opportunities for employees. This included food drives, local fundraisers and matching gifts for employees' donations to Rise Against Hunger. In addition, we created weekly activities that employees and their families could easily complete from home to take action and learn about hunger, including a "Food Hero" drawing contest for kids.

Strengthening Communities

Northrop Grumman and the Northrop Grumman Foundation collaborated with and supported organizations in over 80 Northrop Grumman communities across the country. In addition, Northrop Grumman and the Northrop Grumman Foundation contributed $4.7 million to support communities outside of the U.S.

When developing our partnerships, we seek ways to connect the passions and talents of our employees to the community. In 2020, employees logged 55,893 volunteer hours valued at $1.5 million (based on Independent Sector's estimate of $27.20 as the average value of hourly volunteer time). Those employees who logged 40 or more hours within a calendar year received a $400 Community Service Grant to benefit the nonprofit or school where they volunteer. More than $121,000 was distributed to nonprofits and schools through this program.

As COVID-19 required us to cancel many in-person volunteer efforts, we created a platform for employees to easily find virtual volunteer activities and we adapted many of our traditional engagement opportunities so that employees could still give back to the community.

Employees Charity Organization (ECHO)

The Northrop Grumman ECHO workplace giving program makes it easy for employees to donate to their favorite charities directly through payroll contributions.

In the past, ECHO was structured as a 501(c)(3). In 2020, we reorganized the operating model to reduce costs, streamline program administration and expedite our charitable donations.

Adaptive Bike Build Day

High school students from Baltimore, Maryland, collaborated with Northrop Grumman engineers to complete a community project benefiting the IMAGE Center of Maryland. During the Adaptive Bike Build Day, students assembled bikes alongside employee engineers. The bikes were then donated to local individuals with special needs.

Walk/Ride Events

Northrop Grumman offers a 50% match for funds raised by Northrop Grumman employee teams for select events benefiting American Diabetes Association and American Cancer Society. Although many of the events moved to a virtual format this year, our employees still supported and raised approximately $80,000 for these organizations.

Grades of Green

Northrop Grumman provides financial support for the Grades of Green Climate Campaign, which seeks to improve the quality and sustainability of our environment by providing students in California with a broad knowledge of climate science. The campaign helps them understand the impact that climate change has on their communities and local infrastructure, and become aware of environmental inequality and the meaning of environmental justice.

The underserved and minority communities are less climate-resilient and, as a result, are more vulnerable to negative health effects of climate change. Low-income communities and minority ethnic groups often bear the most severe consequences of environmental degradation, access to safe water and sanitation and pollution and often bear a disproportionate share of environmental costs. More than 75% of participating students reside in low-income communities, communities of color and/or communities unfairly impacted by the environment.

Care and Share

Employees volunteer multiple times throughout the year at the Care and Share food bank, which serves southern Colorado, including large populations of underserved families living in impoverished areas in rural parts of the state. During one volunteer event, our employees cleaned and packed 2,432 pounds of potatoes to be provided at no charge to families facing food insecurity.

National Equity Fund, Inc. (NEF)

NEF is a nonprofit affiliate of Local Initiatives Support Corporation, a leading syndicator of low-income housing tax credits. NEF provides strategic financial and technical support to create permanent supportive housing and affordable housing options and social services. Through this initiative, NEF expedites the predevelopment phase by providing grant funds at critical junctures in the process. In 2020, we provided funding for five predevelopment grants for housing projects serving homeless families, Transition Age Youth and veterans and their families. Since 2013, we have supported 42 projects in 10 states, including Washington, D.C., that produced 3,526 affordable units.

Arbor Day Foundation

Arbor Day Foundation works to restore forests, improve tree cover in communities, and inspire the next generation of tree planters. Our funding went to help reforestation by planting a total of 13,405 trees throughout California, Florida, Hawaii, Utah and Honduras.

Engineers Without Borders (EWB)

Northrop Grumman supports EWB-USA to address a wide range of water- and sanitation-related challenges that confront the world's most vulnerable communities and positively impact the lives of tens of thousands of individuals. Funding enabled them to respond to the international impact of COVID-19 by helping to ensure that community members in Nicaragua, Guatemala and Uganda have access to essential water infrastructure, including handwashing stations and soap.

Habitat for Humanity Korea

Our support provided emergency hygiene kits to those who are living in poor housing conditions and group residential facilities. These settings carry a risk of mass COVID-19 infection due to dense residential environment and the kits help with prevention and preparedness for COVID-19.

Children's National Medical Center

Children's National Hospital has treated children from the UAE for more than 30 years. We provided support for their COVID-19 Emergency Action Fund, which assisted with screening patients, expanding telemedicine and maintaining a steady supply of PPE.

Family House

This organization provides support to families with children facing pediatric cancer who need treatment in specialized institutions in Tokyo. They provide accommodations and financial support to families who travel a long way to Tokyo to visit their children. Northrop Grumman funding also went to provide masks and other protective equipment to children in hospitals and their families.

Global Giving

Global Giving provides for basic needs to people who are vulnerable to the COVID-19 virus and its impacts, including those with pre-existing medical conditions, older adults, individuals experiencing homelessness, refugees and migrants, wage workers and those with inflexible jobs. Support includes hygiene awareness and prevention

efforts. In addition, meals are provided to children who rely on them for their only source of nutrition and essential items are given to struggling families and older individuals in quarantined cities and refugee camps.

Volunteer Fire Brigades Victoria

Victoria is one of the most fire-prone areas in the world. The Country Fire Authority's 60,000 dedicated volunteer firefighters devote their time to help others, but sometimes can find themselves in difficult financial crisis. Unforeseen emergencies such as loss of work, family illness or death, accidental injury, bushfires or even drought can place significant financial burden on volunteers. Northrop Grumman's funding allows the organization to provide small welfare grants, on a needs basis, to help alleviate stresses and maintain volunteers' availability and involvement.

Community Support Around the World

🎓 Education
★ Military and Veterans
✚ Health and Human Services
🌿 Environment
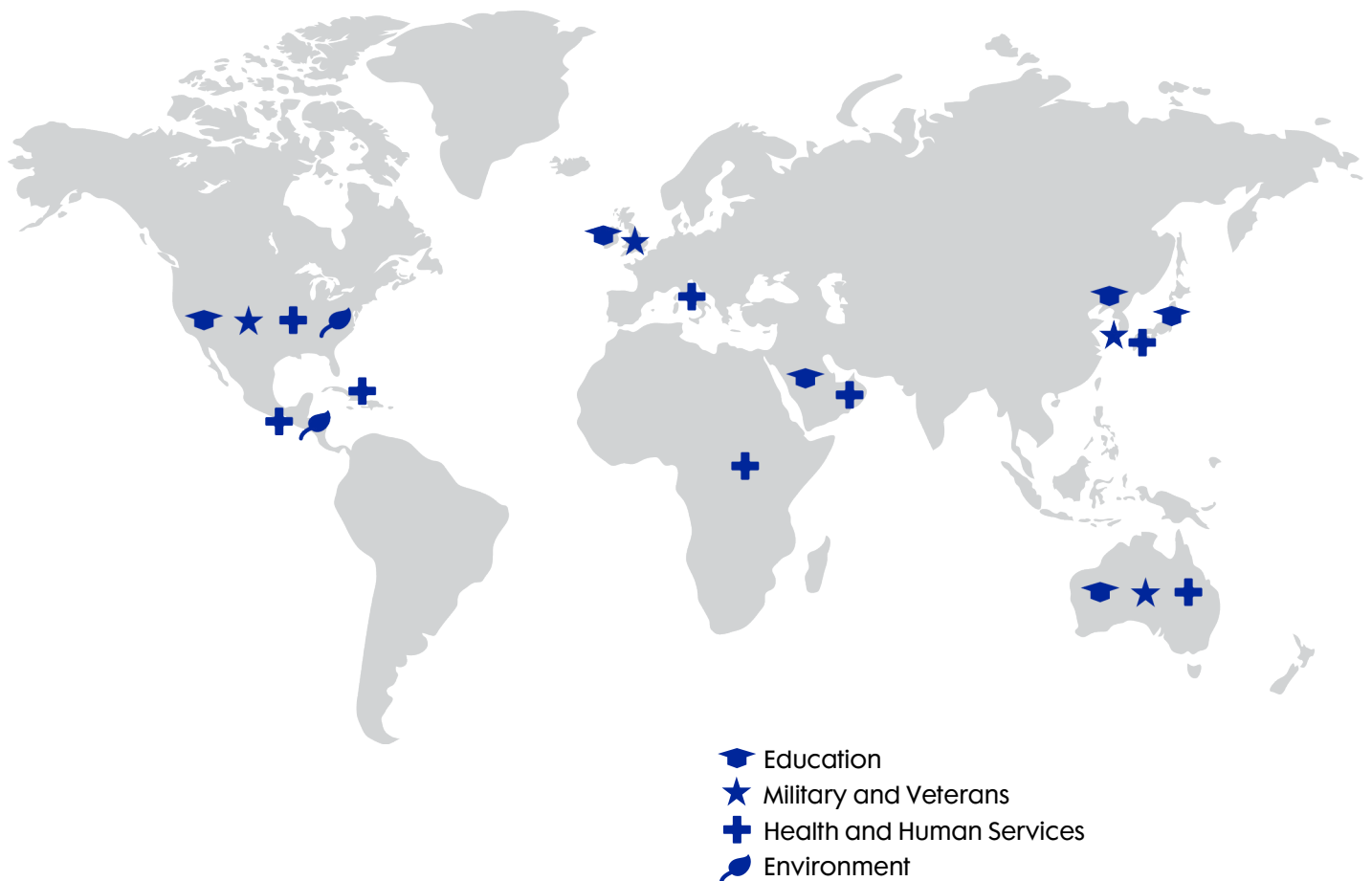
Appendix

Selected Awards and Recognition

- James S. Cogswell Outstanding Industrial Security Achievement Awards granted by the Defense Counterintelligence and Security Agency to Northrop Grumman facilities in Azusa, California, and Irving, Texas

- Pledge to America's Workers Presidential Award from the U.S. government, recognizing our workforce development program

- Platinum accreditation from Investors in People granted to Northrop Grumman subsidiary Park Air Systems Ltd.

- 100% rating for the fifth year in a row on the Disability Equality Index and named a "Best Place to Work for Disability Inclusion" by Disability:IN

- One of the top 10 industry supporters for engineering programs at Historically Black Colleges and Universities (ranked #3) by Career Communications Group, Inc.

- DiversityInc: Placed #15 Overall, #4 for Veterans, #2 for People with Disabilities; #4 for ERGs; #6 for D&I Councils; #23 for Philanthropy

- 100% rating for the seventh consecutive year on the Human Rights Campaign's Corporate Equality Index

- Leading Disability Employer recognition from the National Organization on Disability

- 2020 Gold HIRE Vets Medallion Award from the U.S. Department of Labor

- One of Top 50 Employers by CAREERS & the disABLED Magazine

- Military Friendly® (Gold) and Military Friendly Spouse awards from Victory Media

- 2020 Best of the Best Top Supplier Diversity Programs and Top Veteran-Friendly Employers by U.S. Veterans magazine

- Dwight D. Eisenhower Award of Excellence—Services category from the U.S. Small Business Administration

- NASA Marshall Space Flight Center FY2020 Large Business Prime Contractor of the Year

- America's Top Organizations for Multicultural Business Opportunities by Omni50—Ranked #2

- One of Top 50 Best of the Best Corporations for Inclusion by National LGBT Chamber of Commerce and National Business Inclusion Consortium

- Champion of Veterans Enterprise Award from the National Veterans Small Business Coalition

- 2020 Best of the Best Top Employers and Top LGBTQ+ Friendly Companies by Black Employment & Entrepreneur Journal

- 2020 Best of the Best Top Employers and Top LGBTQ+ Friendly Companies by Professional Woman's Magazine

- 2020 Environmental Excellence Award for wastewater reuse at Advanced Technology Laboratories, from the Industrial Environmental Association

- 100 Best Corporate Citizens, ranking #7 among capital good manufacturers (87 companies); this recognition is developed by 3BL Media in partnership with Institutional Shareholder Services (ISS) ESG.

Partnerships and Professional Associations

Northrop Grumman maintains affiliations with a variety of organizations and universities that inform and enhance our performance. In addition, our list of trade association memberships is available on our trade associations webpage.

Organizations

- Advancing Minorities Interest in Engineering (AMIE)
- Aerospace Industries Association
- American Association of Exporters and Importers
- American Society for Quality
- Americas Aerospace Quality Group
- Asian Business Association
- Association of Climate Change Officers
- Association of Corporate Citizenship Professionals
- Association for Supply Chain Management
- Aviation Week Network
- Black Business Association
- Black Engineer of the Year
- Boston College Center for Corporate Citizenship
- Boston College Center for Work & Family Workforce Roundtable
- Brookings Institution
- Business-Higher Education Forum
- Business Roundtable
- CAPS Research
- Catalyst
- Center for a New American Security
- Center for Strategic and Budgetary Assessments
- Center for Strategic and International Studies

- Conservation International Business and Sustainability Council
- Corporate Eco Forum
- Counterfeit Microelectronics Working Group
- Defense Industrial Association Integrated Program Management Division
- Defense Industry Initiative on Business Ethics and Conduct
- Disability:IN
- Equal Justice Works
- Ethics and Compliance Initiative
- Gartner Advisory Group
- Great Minds in STEM
- Greater Washington Partnership
- HUBZone Contractors National Council
- Human Rights Campaign
- Industrial Security Awareness Council
- Institute for Supply Management
- Institute of Business Ethics
- International Aerospace Environmental Group
- International Council on Systems Engineering
- International Forum on Business Ethical Conduct
- Latin Business Association
- Legal Aid Society of DC
- Military Spouse Employment Partnership
- National Association of Women Business Owners

- National Center for American Indian Enterprise Development
- National Classification Management Society
- National LGBT Chamber of Commerce
- National Military Family Association
- National Minority Supplier Development Council
- National Organization on Disability
- National Science Teaching Association
- National Society of Black Engineers
- National Veteran Small Business Coalition
- ORC Health, Safety, and Environmental Strategies
- Out & Equal Workplace Summit
- PsychArmor
- Renewable Energy Buyers Alliance
- Responsible Minerals Initiative (formerly Conflict-Free Sourcing Initiative)
- Society of Asian Scientists and Engineers
- Society of Experimental Test Pilots—SETP
- Society of Flight Test Engineers—SFTE
- Society of Hispanic Professional Engineers
- Society of Women Engineers
- The Conference Board
- Value of a Veteran

Universities

- Arizona State University
- Australia National University
- Bowie State University
- California Institute of Technology
- California Polytechnic State University, San Luis Obispo
- California State Polytechnic University, Pomona
- California State University, Long Beach
- California State University, Los Angeles
- Carnegie Mellon University
- Cornell University
- Dartmouth College, Tuck Minority Business Executive Program
- Florida A&M University
- Florida Institute of Technology
- George Mason University
- Georgia Institute of Technology
- Howard University
- James Madison University
- Massachusetts Institute of Technology
- Morgan State University
- North Carolina A&T State University
- Purdue University
- RMIT University, Melbourne
- San Diego State University
- Stanford University
- University of Alabama, Huntsville
- University of Bristol
- University of California, Los Angeles
- University of California, San Diego
- University of Central Florida
- University of Colorado, Boulder
- University of Florida
- University of Maryland, Baltimore County
- University of Maryland, College Park
- University of Michigan
- University of New South Wales
- University of Southampton
- University of Southern California
- University of Utah
- University of Virginia
- Utah State University
- Virginia Polytechnic Institute and State University
- Weber State University

GRI Standards Content Index

The GRI content index indicates the location of each disclosure within this report, externally on our website or other reports or provides the information directly in a statement.

We have also indicated how our reporting topic areas align with the United Nations Sustainable Development Goals (SDGs). The SDGs address global challenges and are designed to encourage active participation by corporations, governments and non-profit organizations to collaborate on finding solutions.

For more information see the United Nations SDGs website.

Index	**PR:** 2021 Proxy Statement **PCG:** Principles of Corporate Governance

General Disclosures

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
ORGANIZATIONAL PROFILE			
102-1	Name of the organization	Our Company	–
102-2	Activities, brands, products, and services	Our Company	–
102-3	Location of headquarters	Falls Church, Virginia, U.S.	–
102-4	Location of operations	See Northrop Grumman website, Contact Us	–
102-5	Ownership and legal form	Form 10-K, p. 1; NYSE: NOC	–
102-6	Markets served	Our Company	–
102-7	Scale of the organization	Our Company	–
102-8	Information on employees and other workers	People and Culture	–
102-9	Supply Chain	Global Supply Chain	–
102-10	Significant changes to the organization and its supply chain	No significant changes occurred during 2020	–
102-11	Precautionary Principle or approach	Governance: Risk Oversight; Environment	–

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
102-12	External initiatives	Stakeholder Engagement	–
102-13	Memberships of associations	Partnerships and Professional Associations	–
STRATEGY			
102-14	Statement from senior decision-maker	CEO Letter: A Message to Our Stakeholders	–
ETHICS AND INTEGRITY			
102-16	Values, principles, standards, and norms of behavior	Our Values; Ethics	SDG 16
102-17	Mechanisms for advice and concerns about ethics	Ethics: Northrop Grumman OpenLine	SDG 16
GOVERNANCE			
102-18	Governance structure	Governance	SDG 16
102-19	Delegating authority	Governance; PCG Section II.B	SDG 16
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder Engagement; PCG Section IV.G	SDG 16
102-22	Composition of the highest governance body and its committees	Board of Directors	SDG 5, 16
102-23	Chair of the highest governance body	Board of Directors	SDG 16
102-24	Nominating and selecting the highest governance body	Board of Directors	SDG 5, 16
102-25	Conflicts of interest	Ethics; PCG Section III.E; VII	SDG 16
102-26	Role of highest governance body in setting purpose, values, and strategy	Board of Directors; PCG Section I, II	–
102-28	Evaluating the highest governance body's performance	Governance; PCG Section VI.D	–
102-29	Identifying and managing economic, environmental, and social impacts	Board of Directors: Sustainability Oversight	SDG 16
102-30	Effectiveness of risk management processes	Governance	–

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
102-31	Review of economic, environmental, and social topics	Board of Directors	–
102-32	Highest governance body's role in sustainability reporting	PR 25	–
102-33	Communicating critical concerns	PCG Section IV.G	–
102-35	Remuneration policies	PR 29-32, 39-56	–
102-36	Process for determining remuneration	PCG Section V.A, B	–
102-37	Stakeholders' involvement in remuneration	PR 6, 38, 56	SDG 16
STAKEHOLDER ENGAGEMENT			
102-40	List of stakeholder groups	Stakeholder Engagement	–
102-41	Collective bargaining agreements	Talent Management	SDG 8
102-42	Identifying and selecting stakeholders	Stakeholder Engagement	–
102-43	Approach to stakeholder engagement	Stakeholder Engagement	–
102-44	Key topics and concerns raised	Stakeholder Engagement	–
102-45	Entities included in the consolidated financial statements	Northrop Grumman Corporation Note: Quantitative data for 2020 includes the integration of Orbital ATK with the exception of Environment, where 2020 represented the conclusion of a multi-year goal period. This exclusion is noted within the report where environmental data is discussed, and in our ESG performance data matrix.	–
102-46	Defining report content and topic boundaries	Reporting Approach; Materiality Assessment	–
102-47	List of material topics	Materiality Assessment	–
102-48	Restatements of information	We made minor restatements in environmental data as a result of error corrections in alignment with the GHG Protocol Corporate Standard methodology.	–

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
102-49	Changes in reporting	Reporting Approach	–
102-50	Reporting period	2020	–
102-51	Date of most recent report	July 2020 (reporting on 2019 data)	–
102-52	Reporting cycle	Annual	–
102-53	Contact point for questions regarding the report	See Northrop Grumman website, Contact Us	–
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option.	–
102-55	GRI content index	GRI Standards Content Index	–
102-56	External assurance	We externally assure our Emissions data. See our website.	–

Management Approach

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
	Financial Performance	Financial Performance	SDG 8
	Ethics and integrity	Ethics	SDG 12
	Regulatory and legal compliance	Responsible Business Practices	SDG 12
	Data privacy	Data Privacy	SDG 9
	Supply chain	Global Supply Chain	SDG 8
	Program performance	Products and Innovation	SDG 9
103-1,2,3	Product and service quality	Products and Innovation	SDG 9
	Customer satisfaction	Products and Innovation	SDG 12
	R&D and innovation	Products and Innovation: Innovation and Research & Development	SDG 9
	Environment	Environment	SDG 6, 7, 13, 14, 15
	Talent management	People and Culture: Talent Management	SDG 8
	Diversity and inclusion	People and Culture: Diversity, Equity and Inclusion	SDG 5, 10

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
103-1,2,3	Health and safety	People and Culture: Employee Health, Safety and Well-Being	SDG 3, 8
	Corporate citizenship	Corporate Citizenship	SDG 1, 2, 3, 4, 5, 11, 17

Topic-Specific Disclosures

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
ECONOMIC			
ECONOMIC PERFORMANCE			
201-1	Direct economic value generated and distributed	Financial Performance; Annual Report	SDG 2, 8, 9
PROCUREMENT PRACTICES			
204-1	Proportion of spending on local suppliers	Global Supply Chain: Supplier Diversity	SDG 12
ANTI-CORRUPTION			
205-1	Operations assessed for risks related to corruption	Responsible Business Practices: Anti-Corruption Compliance	SDG 16
205-2	Communication and training about anti-corruption policies and procedures	Responsible Business Practices: Anti-Corruption Compliance	SDG 16
ENVIRONMENTAL			
ENERGY			
302-1	Energy consumption within the organization	Data Matrix	SDG 7, 12, 13
302-3	Energy intensity	Data Matrix	SDG 7, 12, 13
WATER			
303-1	Interactions with water as a shared resource	Water Management	–
303-2	Management of water discharge-related impacts	Water Management	–
303-3	Water withdrawal	Water Management	SDG 6

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
EMISSIONS			
305-1	Direct (Scope 1) GHG emissions	Environmental Sustainability: GHG Emissions, Data Matrix 2020 CDP Response	SDG 12, 13
305-2	Energy indirect (Scope 2) GHG emissions	Environmental Sustainability: GHG Emissions, Data Matrix 2020 CDP Response	SDG 12, 13
305-3	Other indirect (Scope 3) GHG emissions	2020 CDP Response	SDG 12, 13
305-4	GHG emissions intensity	Data Matrix	SDG 12, 13
305-5	Reduction of GHG emissions	2020 CDP Response	SDG 12, 13
EFFLUENTS AND WASTE			
306-2	Waste by type and disposal method	Environmental Sustainability: Solid Waste Diversion, Data Matrix	SDG 12
ENVIRONMENTAL COMPLIANCE			
307-1	Non-compliance with environmental laws and regulations	Data Matrix	SDG 16
SOCIAL			
OCCUPATIONAL HEALTH AND SAFETY			
403-1	Occupational health and safety management system	Employee Health, Safety and Well-Being	–
403-2	Hazard identification, risk assessment, and incident investigation	Employee Health, Safety and Well-Being	–
403-3	Occupational health services	Employee Health, Safety and Well-Being	–
403-4	Worker participation, consultation, and communication on occupational health and safety	Employee Health, Safety and Well-Being	–
403-5	Worker training on occupational health and safety	Employee Health, Safety and Well-Being	–

DISCLOSURE		LOCATION (OR DIRECT INFORMATION)	SDG REFERENCE
403-6	Promotion of worker health	Employee Health, Safety and Well-Being: Employee Well-Being and Benefits	–
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Responsible Business Practices; Supplier Responsibility Supplier Standards of Business Conduct	–
403-9	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Data Matrix	SDG 8
TRAINING AND EDUCATION			
404-2	Programs for upgrading employee skills and transition assistance programs	Talent Management: Career Development	SDG 8
404-3	Percentage of employees receiving regular performance and career development reviews	Talent Management: Performance Management	SDG 8
DIVERSITY AND EQUAL OPPORTUNITY			
405-1	Diversity of governance bodies and employees	Governance; Data Matrix	SDG 5, 8
PUBLIC POLICY			
415-1	Political Contributions	Northrop Grumman Political Contributions	SDG 16

SASB Index

The table below identifies the Sustainability Accounting Standards Board (SASB) indicators for which we have publicly available information, relevant to the Aerospace & Defense Standard (Version 2018-10).

METRIC CODE	ACCOUNTING METRIC	LOCATION OR DIRECT INFORMATION
ENERGY MANAGEMENT		
RT-AE-130a.1	(1) Total energy consumed (in gigajoules, GJ) (2) Percentage grid electricity (3) Percentage renewable	(1) 5,867,684 GJ (2) 66% (3) 1%
HAZARDOUS WASTE MANAGEMENT		
RT-AE-150a.1	Amount of hazardous waste generated, percentage recycled	1,637 metric tons 3% recycled
RT-AE-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	0 reportable spills
DATA SECURITY		
RT-AE-230a.2	Description of approach to identifying and addressing data security risks in company operations and products	Information Security Supply Chain Security
PRODUCT SAFETY		
RT-AE-250a.2	Number of counterfeit parts detected — While this quantitative metric is not reported, we provide a qualitative description of our management approach to protecting the integrity of our supply chain.	Supply Chain Security
RT-AE-250a.3	Number of Airworthiness Directives received; total units affected	1 Airworthiness Directive received 0 units affected
FUEL ECONOMY & EMISSIONS IN USE-PHASE		
RT-AE-410a.1	Revenue from alternative energy-related products	$0
MATERIALS SOURCING		
RT-AE-440a.1	Description of the management of risks associated with the use of critical materials	Responsible Business Practices Supply Chain Security
BUSINESS ETHICS		
RT-AE-510a.3	Discussion of processes to manage business ethics risks throughout the value chain	Ethics Responsible Business Practices Supplier Responsibility

METRIC CODE	ACTIVITY METRIC	QUANTITATIVE DATA
RT-AE-000.B	Number of employees	97,000

ESG Performance Data Matrix

TOPIC	2018	2019	2020*	GRI	SASB
COMPANY DATA					
Sales (million USD)	30,095	33,841	36,799	102-7	–
Employees (as of December 31 of each calendar year)	85,000	90,000	97,000	102-7	RT-AE-000.B
Floor space (thousand square feet)	52,283	53,780	50,875	102-7	–
CORPORATE CITIZENSHIP/COMMUNITY					
Direct community investment through philanthropy (million USD)†	28.4	31.1	33.9	102-7	–
Company charitable grants—Education (Target 50%) (%)	54	55	50	102-7	–
Company charitable grants—Military and Veterans (Target 25%) (%)	16	17	13	201-1	–
Company charitable grants—Health and Human Services (Target 20%) (%)	10	8	20	201-1	–
Company charitable grants—Environment (Target 5%) (%)	3	4	3	201-1	–
Company in-kind and non-cash contributions (million USD)	3.1	0.309	5.0	201-1	–
London Benchmarking Group—Charitable donations (Company and Foundation) (%)	25	9.43	26	201-1	–
London Benchmarking Group—Community Investments (Company and Foundation) (%)	75	90.57	74	201-1	–
Employee giving (million USD)‡	3.7	3.4	5.2	–	–
Employee volunteerism (hours)	61,161	63,187	55,893	–	–
Paid volunteerism (hours)	512.5	20.5	0	–	–
Middle school students impacted by qualifying educator professional development programs in the year	25,100	33,500	15,100	–	–
Cumulative middle school students impacted by qualifying educator professional development programs since 2015 (Target 350,000 students by 2030)§	123,120	198,480	272,180	–	–

TOPIC	2018	2019	2020*	GRI	SASB
ENVIRONMENT*					
Sites with ISO 14001 certification	23	26	23	103	–
Significant fines and penalties (shown in year paid) ($)	15,000	30,500	0	307-1	–
Tons of Toxic Release Inventory	34.5	47	N/A	103	–
HAZARDOUS WASTE					
Hazardous waste generation (tons)	1,838	1,608	1,804	306-2	RT-AE-150a.1
Hazardous waste (number of reportable spills)	0	0	0	306-2	RT-AE-150a.2
Hazardous waste recycled (%)	N/A	N/A	3.0	–	RT-AE-150a.1
NONHAZARDOUS SOLID WASTE					
Reuse (tons)	145	101	964	306-2	–
Recycling (tons)	12,343	12,405	13,004	306-2	–
Composting (tons)	685	653	1,265	306-2	–
Recovery (including energy recovery) (tons)	344	407	191	306-2	–
Landfill (tons)	8,031	8,158	6,872	306-2	–
Diversion rate (%)	62.7	62.4	69.2	306-2	–
ENERGY[II]					
Energy consumption (GJ)	6,221,205	6,325,940	5,867,684	302-1	RT-AE-130a.1
Renewable energy consumption (GJ)	79,304	79,548	79,501	–	–
Percentage of energy that is renewable (%)	1	1	1	302-1	RT-AE-130a.1
Percentage of energy supplied from grid electricity (%)	63	61	66	–	RT-AE-130a.1
Energy intensity (Joules/USD sales)	231,970	N/A	N/A	302-3	–
Electricity consumption (MWh)	1,090,638	1,081,449	1,070,665	–	–
Renewable electricity consumption (MWh)	22,029	22,097	22,084	–	–
Onsite renewable electricity generation (MWh)	1,172	1,240	1,227	–	–
Percentage of electricity that is renewable (%)	2	2	2	–	–

TOPIC	2018	2019	2020*	GRI	SASB
EMISSIONS[II]					
Direct (Scope 1) greenhouse gas emissions (tonnes CO$_2$e)	134,173	145,156	109,741	305-1	–
Indirect (Scope 2) location-based greenhouse gas emissions (tonnes CO$_2$e)	365,593	339,904	313,927	305-2	–
Carbon offsets (tonnes CO$_2$e)	11,000	11,000	11,000	305-5	–
Total GHG Emissions (location-based, includes carbon offsets) (tonnes CO$_2$e)	488,766	474,060	412,668	305-5	–
Greenhouse gas emission intensity[¶] (Scope 1 and Scope 2—location-based) (tonnes CO$_2$e/USD sales)	0.00001624	N/A	N/A	305-4	–
Reduction of greenhouse gas emissions (from 2010 base year) (%)	33.3	35.3	43.7	305-5	–
WATER					
Water withdrawal (potable)—Total (gallons)	880,704,140	831,933,691	741,766,756	303-3	–
Water withdrawal source (potable)—Surface Water (gallons)	0	0	0	303-3	–
Water withdrawal source (potable)—Groundwater (gallons)	163,817,149	153,086,394	145,160,206	303-3	–
Water withdrawal source (potable)—Municipal Supply (gallons)	716,886,991	678,847,298	596,606,549	303-3	–
Water withdrawal (potable and nonpotable)—Total (gallons)	899,878,768	850,668,738	772,234,354	303-3	–
Water withdrawal source (nonpotable)—Municipal Reclaimed (gallons)	19,124,747	18,648,398	30,429,487	303-3	–
Water withdrawal source (nonpotable)—Rainwater (gallons)	49,881	86,648	38,112	303-3	–

TOPIC	2018	2019	2020*	GRI	SASB
ETHICS AND INTEGRITY					
OpenLine inquiries	1,011	863	565	102-17	–
OpenLine allegations	1,562	1,374	1,578	102-17	–
GOVERNANCE					
Members on Board of Directors	13	12	13	102-18	–
Independent Directors on Board	11	11	12	102-18, 102-22	–
Women/minority Directors	6 (46%)	6 (50%)	6 (46%)	102-22, 405-1	–
HEALTH AND SAFETY					
Work-related fatalities	0	0	0	403-9	–
Total Case Rate (per 100 workers)	0.85	0.9	0.96	403-9, 403-10	–
Lost Work Day Rate (per 100 workers)	10.34	7.46	10.70	403-9, 403-10	–
Days Away Case Rate (per 100 workers)	0.25	0.23	0.39	403-9, 403-10	–
PRODUCTS					
Number of Airworthiness Directives received	–	1	1	–	RT-AE-250a.3
Number of Airworthiness Directives, units affected	–	100	0	–	RT-AE-250a.3
Revenue from alternative energy-related products (million USD)	–	100	0	–	RT-AE-410a.1
RESEARCH AND DEVELOPMENT AND INNOVATION					
Company-sponsored R&D expenses (million USD)	764	953	1,100	201-1	–

TOPIC	2018	2019	2020*	GRI	SASB
SUPPLY CHAIN					
Percent of Small Business	37.3	38.4	37.2	102-9	–
Percent of Small Disadvantaged Business (SDB)	4.3	3.7	4.7	102-9	–
Percent of Women-Owned Small Business (WOSB)	7.4	7.5	7.5	102-9	–
Percent of HUBZone Small Business	2.4	3.4	3.3	102-9	–
Percent of Veteran-Owned Small Business (VOSB)	5.0	4.7	3.9	102-9	–
Percent of Service-Disabled Veteran-Owned Small Business (SDVOSB)	2.4	2.0	1.9	102-9	–
TALENT MANAGEMENT, DIVERSITY, EQUITY AND INCLUSION*					
Part-time employees	1,124	1,373	1,388	–	–
Temporary employees	2,027	2,171	1,939	–	–
Employee average age	44	44	43	–	–
Percent of U.S. employees covered by collective bargaining agreements	3.3	5.8	4.4	102-41	–
Total population—male (%)	73.5	73.8	74.9	405-1	–
Total population—female (%)	26.5	26.2	25.1	405-1	–
Total population—People of Color (%)	35.5	37.3	35.5	405-1	–
Total population—veterans (%)	19.6	19.6	18.0	405-1	–
Total population—persons with disabilities (%)	7.4	8.1	8.3	405-1	–
Management population—male (%)	72.9	72.4	73.4	405-1	–
Management population—female (%)	27.1	27.6	26.6	405-1	–
Management population— People of Color (%)	26.3	28.0	26.6	405-1	–

TOPIC	2018	2019	2020*	GRI	SASB
Vice president and above population—female (%)	33.2	32.6	32.0	405-1	–
Vice president and above population—People of Color (%)	17.6	18.0	18.0	405-1	–
Senior executive population—female (%)	33.7	32.5	31.8	–	–
Senior executive population—People of Color (%)	17.6	17.9	18.3	–	–
NEW HIRES (EXTERNAL)					
Veteran external hires (%)	22.3	22.5	21.5	–	–
Female external hires (%)	24.1	24.3	23.3	–	–
Persons with disabilities external hires (Target 7%) (%)	12.1	11.3	11.4	–	–
People of Color external hires (%)	43	43.1	43.3	–	–

*Regarding integration of Orbital ATK into ESG data:
    Quantitative data for 2018 (with the exception of sales, number of employees and floor space) represents Northrop Grumman prior to the acquisition of Orbital ATK.
    Quantitative data for 2019 includes Orbital ATK with the exception of Engagement, Diversity, Equity & Inclusion and Environment.
    Quantitative data for 2020 includes Orbital ATK with the exception of Environment.

**Starting in 2018, Company data (sales, number of employees and floor space) include Orbital ATK.

†Includes investments from Northrop Grumman and the Northrop Grumman Foundation; excludes donations from Northrop Grumman to the Northrop Grumman Foundation.

‡Includes giving through ECHO, matched gifts and employee fundraising.

§Calculation based on teacher maintaining active teaching status or in a school-based setting for three years post professional development experience.

‖Refer to CDP Climate Change disclosure for more detailed information.

¶Energy and greenhouse gas emissions data excludes Orbital ATK through year-end 2020. The 2019 and 2020 sales data is inclusive of Orbital ATK and cannot be separated out; thus accurate intensity figures for energy and greenhouse gas emissions cannot be calculated.

EXTERNAL REVIEW PANEL – SUMMARY DOCUMENT

Background

For the 10th consecutive year, Northrop Grumman convened an External Review Panel as part of the annual sustainability reporting process. The mission of the four-member group was to review the 2020 Northrop Grumman Sustainability Report for clarity, transparency and year-on-year comparability, as well as provide feedback for Northrop Grumman on the company's sustainability-related goals and activities.

Northrop Grumman contributors nominate External Review Panelists with significant professional background, knowledge and experience in key topics related to environmental, social and governance (ESG) topics. For the 2020 External Review Panel, three Panelists were returning members: Carolyn Berkowitz, James Haddow and Margret Hanley. Chris Cowton joined this year's panel, providing an integral perspective for the 2020 review (see Panelist biographies at the end of this summary document). Panelists' observations reflect individual points of view and not those of their respective organizations.

Each Panel member received the final 2020 Sustainability Report (hereafter "Report") in advance of a series of online discussion meetings. During these meetings, Panelists participated in conversations with Northrop Grumman senior leaders and content providers. Subject matter experts from Northrop Grumman highlighted key aspects of their respective Report sections and Panelists asked clarifying questions and provided feedback. The Panel did not review underlying data or relevant process documents; therefore, the review process does not represent independent verification of the performance data or other content within the Report. In recognition of the respective time, expertise and contribution of each Panelist, Northrop Grumman offered to make a grant in each Panelist's name to a designated, qualified nonprofit organization.

General Overview

Overall, the Panel observed clear progress in Northrop Grumman's reporting and strategy. The format and details throughout the Report incorporated Panel comments from the previous year's review cycle. The Report featured improvements in graphical representation throughout, with better use of call-outs, graphics, tables and photos.

The Panel found that the refreshed Values helped readers better understand Northrop Grumman's commitment—further highlighted by the introductory sections around the COVID-19 pandemic and Social Justice initiatives. Early pages of the report highlighted specific goals and summarized the benefits of the Sustainability program, while also demonstrating the ability to be proactive in addressing current issues.

Materiality

The updated report section detailing Northrop Grumman's recent materiality assessment highlighted the issues matrix and key stakeholders well. In the next report, the Panel recommends disclosing progress on each material topic, utilizing brief examples of specific improvements to help readers understand Northrop Grumman's commitment to continuous ESG improvement. Future reports should incorporate goals and targets, and progress toward goals, for all material issues.

Governance

The overall scope and progress in the Governance section is impressive, demonstrating the importance of business ethics and conduct in a day-to-day setting. Notably, the Report highlights the connection between compensation and ESG performance, as well as the scope of the company's investment and support of the Global Network of Business Conduct Advisors. The OpenLine data presentation, which includes additional details in this year's report, illustrates how seriously Northrop Grumman takes allegations. The Panel believes further integration of the Values and how they are operationalized into practice would be a powerful element in future reports and recommends adding commentary specific to each Value.

People and Culture

The Panel notes Northrop Grumman's extensive and impressive statistics, such as external new hires, and recommends continuing to work on presenting such information clearly and in a meaningful way. High employee participation in the annual employee survey demonstrates powerful engagement throughout the workforce. The Panel recommends highlighting more data around impact, for instance promotion rates for People of Color, to demonstrate Northrop Grumman's level of commitment to diversity, equity and inclusion (DEI). In next year's report, the company should address its ongoing response to social justice concerns expressed by employees during 2020. Clarifying DEI goals would help stakeholders better understand the company's DEI commitments. The Panel recommends a more integrated discussion of Equal Opportunity and Access within DEI priorities, as well as including statistics on pay parity between employees at all levels.

Panelists praised the Report's focus on employee health and wellness. In terms of occupational health and safety, suggestions include breaking out statistics on illness separately from injuries to perhaps differentiate COVID-19 impacts from other workplace incidents, and including industry benchmark information more clearly in the presentation of safety metrics.

Products and Innovation

This section highlighted many strong aspects of the Products and Innovation program, such as Customer Satisfaction and Commitment to Quality or Quality Management Systems. This content differentiates Northrop Grumman and puts forth important information to the readers. The highlight stories in this section were particularly impactful and strong, showing great tie-in with key themes (such as DEI, the COVID-19 pandemic, and commitment to quality). In future reports, the Panel recommends establishing a metric related to airworthiness. Additional details relating to how Northrop Grumman's products can impact climate change would tie well into environmental sustainability work.

Global Supply Chain

The global context in this section around cybersecurity and material authenticity/counterfeit parts provided an excellent perspective; given the recent global threats and privacy laws globally, this section highlighted several key actions to address challenges. The Panel appreciates the diverse supplier spend data, but believes it could be strengthened in order to convey the prioritization and impact of the program. This could also include an impact story in the report, for example Northrop Grumman's impact with a diverse supplier. The Panel recommends enhancing focus on conflict minerals (including cobalt) as part of the company's reporting on responsible sourcing efforts. The Report could include a more robust description of how the company works with suppliers, partners and customers to mitigate supply chain disruptions. Providing more information on a Scope 3 GHG emissions strategy in relation to Northrop Grumman's supply chain would also strengthen this section.

Environment

The achievement of target 2020 environmental goals is important to stakeholders and investors and it demonstrates Northrop Grumman's commitment to deliver beneficial results. Reporting on environmental data trends and including sustainability highlight stories help illustrate the long-term outlook and strategy. The Panel appreciated the Environmental Remediation section that highlighted beneficial environmental activities that are not frequently included in corporate filings, but are important to investors and other stakeholders. The Panel notes that future integration of climate change into Enterprise Risk Management and more work on monitoring Northrop Grumman's "carbon footprint" for specific products would enhance the company's climate response and environmental management. The company should report more fully on its climate strategy and approach to driving towards a net zero emissions future.

Corporate Citizenship

The Panelists appreciated the section's alignment with the overall business, and the use of graphics and charts further strengthened this section. Examples such as the vignette highlighting the COVID-19 impact on STEM programs was a timely and powerful example of Northrop Grumman's mission. The Panel suggested looking into the Annual Social Value metric, used to report in-kind, non-cash and employee volunteering, especially as other companies begin adopting it. Other Panel suggestions include organizing the section headings around the strategy focus areas, highlighting social justice impacts of corporate giving, and continuing to focus on Northrop Grumman employee volunteering.

EXTERNAL REVIEW PANEL BIOGRAPHIES

CAROLYN BERKOWITZ
President and CEO • Association of Corporate Citizenship Professionals

As CEO, Carolyn Berkowitz steers ACCP's efforts to empower corporate citizenship leaders to strengthen their companies, effectively engage their stakeholders, and improve their communities. She is an accomplished Corporate Citizenship professional, having led Capital One's initiatives to re-envision its corporate social impact strategy by developing and executing a $450 million, ten-year strategy that prepares people in low- and moderate-income communities for future success in a digital world. She has served as a Partner at Mission Partners, a consulting firm dedicated to guiding nonprofits, foundations and socially responsible corporations in realizing their greatest social impact. Prior to Capital One, Carolyn led field operations for America's Promise and created the Points of Light Institute, a business unit of the Points of Light Foundation.

CHRIS COWTON
Associate Director (Research) • Institute of Business Ethics

At the London-based Institute of Business Ethics (IBE), Chris Cowton leads not only on its research, but also on its training, advisory services and links with higher education. Having been a Trustee of the IBE, he joined the staff when he retired from an academic career that saw him appointed to a full professorship at the University of Huddersfield in his mid-30s, after teaching at the University of Oxford for ten years. He served Huddersfield variously as Professor of Accounting, Professor of Financial Ethics and Dean of the Business School. He is the author of more than 70 journal papers and many book chapters and other articles, mainly on accounting and business ethics, and he has edited three books. He holds a PhD from the University of Sheffield and a DLitt (higher doctorate) from the University of Huddersfield. He was Editor of the journal *Business Ethics: A European Review*, for a decade (2004-2013) and a member of the Ethics Standards Committee of the Institute of Chartered Accountants in England and Wales (2009-2018).

JAMES HADDOW
Director • Howard University School of Business

James Haddow is director of the Center for Excellence in Supply Chain Management at Howard University School of Business in Washington D.C. Along with teaching a range of supply chain management courses to both undergraduate and graduate students, he is also a faculty advisor to students during supply chain case competitions. Jim has 30 years of industry experience with specialties including strategic sourcing, supply chain assessment, project management, global security, expense management systems, performance measurement, strategic planning and financial analysis. He received a bachelor of science in business and management, as well as an MBA with a concentration in logistics, from the University of Maryland.

MARGRET HANLEY
Co-founder and Principal • The Isosceles Group

Margret Hanley is an expert in the management of environmental issues affecting the development and use of real estate. She has more than 28 years of experience in the integration of environmental management programs and the sale, redevelopment and use of industrial properties. At the Isosceles Group, she leads due diligence evaluation, asset management, and sustainability services. She is a Licensed Site Professional (LSP) in Massachusetts and has a B.S. in geology and geophysics from Boston College.

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